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YG1YECT190119005

**YE-CT19** EUROPE

A close-up photograph of a yellow HSS-E tap cutting a hole in a metal block. The tap is positioned vertically, and a chip of metal is being removed from the bottom of the hole. The background is a dark, industrial setting.

# **///G**

## **Combo** <sup>TAP</sup>

*HSS-E, HSS-PM TAPS FOR MULTI-PURPOSE*

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

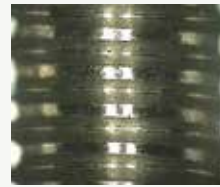


## TEST RESULT AGAINST COMPETITOR'S TAP COMBO TAP for Multi-Purpose

### ▶ TEST 1 - M8 x 1.25 (TC804366)

Cutting Condition	
Work Material	Carbon Steel DIN: C45 WR: 1.0503 JIS: S45C
Tapping Depth	20 mm
Coolant	Water Soluble Oil
Tapping Speed	10.0 m/min.

YG-1



▲ Total Tapping 204 Holes

Surface Roughness of Work Piece

COMPETITOR A



▲ Total Tapping 159 Holes

COMPETITOR B



▲ Total Tapping 204 Holes

### ▶ TEST 2 - M10 x 1.5 (TC804426)

Cutting Condition	
Work Material	Carbon Steel DIN: C45 WR: 1.0503 JIS: S45C
Tapping Depth	25 mm
Coolant	Water Soluble Oil
Tapping Speed	10.0 m/min.

YG-1



▲ Total Tapping 216 Holes

Surface Roughness of Work Piece

COMPETITOR A



▲ Total Tapping 99 Holes

COMPETITOR B



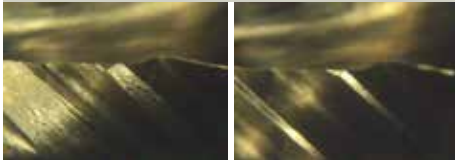
▲ Total Tapping 196 Holes

## COMBO TAP for Stainless Steels

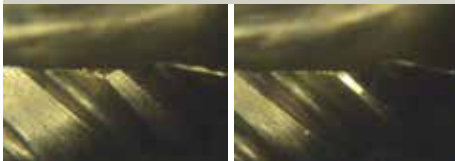
### ▶ TEST 1 - M4 x 0.7 (TQ744246)

Cutting Condition	
Work Material	Stainless Steel DIN: X5CrNi18 10 (X4CrNi18-10) WR: 1.4303 JIS: SUS304
Tapping Depth	10 mm
Coolant	Wet Cut
Tapping Speed	8 m/min.

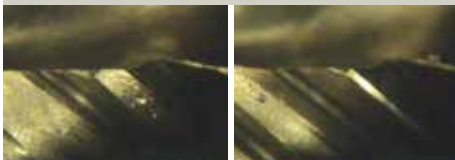
YG-1 (Total Tapping 170 Holes)



YG-1 (Total Tapping 170 Holes)



COMPETITOR A (Total Tapping 170 Holes)



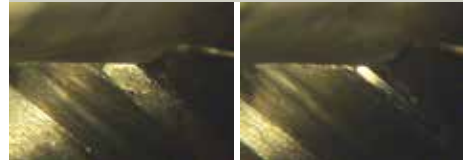
COMPETITOR B

Tool broke after 83 holes tapping

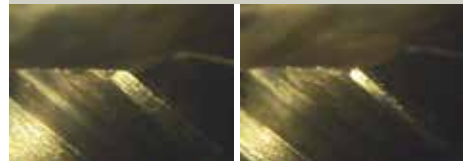
### ▶ TEST 2 - M6 x 1.0 (TQ744316)

Cutting Condition	
Work Material	Stainless Steel DIN: X5CrNi18 10 (X4CrNi18-10) WR: 1.4303 JIS: SUS304
Tapping Depth	15 mm
Coolant	Wet Cut
Tapping Speed	8 m/min.

YG-1 (Total Tapping 230 Holes)



YG-1 (Total Tapping 230 Holes)



COMPETITOR A

Tool broke after 92 holes tapping

COMPETITOR B

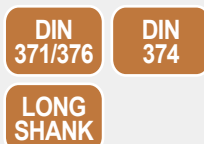
Tool broke after 98 holes tapping

## GUIDE LINE TO ICONS

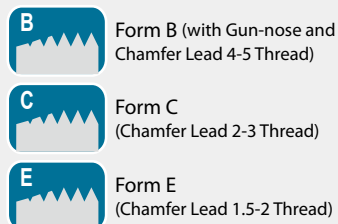
### Working Material



### Standard of Tools



### Chamfer Lead



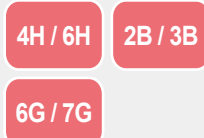
### Thread Angle



### Tool Raw Material



### Class of Thread



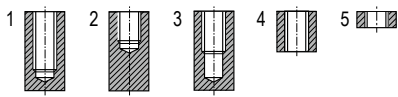
### Surface Treatment



### Helix Angle



## MACHINE TAPS RECOMMENDATION TABLE



MATERIAL GROUPS	MU	MU	MU	MU
SERIES	<b>TBE05 TCE05 TDE05</b>	<b>TB804 TC804 TD804</b>	<b>TBE06 TCE06 TDE06</b>	<b>TBE07 TCE07 TDE07</b>
FLUTE TYPE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE
PAGE	8	9	10	11
TAP MATERIALS	HSS-E	HSS-E	HSS-E	HSS-E
STANDARD	M	M	M	M
DIMENSIONS	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376
TOLERANCE	ISO 1/4H	ISO 2/6H	6H+0.1	ISO 3/6G
SPIRAL FLUTE ANGLE	R40	R40	R40	R40
CHAMFER	C	C	C	C
THREAD DEPTH	2.5D	2.5D	2.5D	2.5D
SURFACE TREATMENT	Vap Bright TiN	Vap Bright TiN	Vap Bright TiN	Vap Bright TiN
HOLE TYPE	1-2-3	1-2-3	1-2-3	1-2-3

### Combo<sup>TAP</sup>













HSS-E, HSS-PM TAPS FOR MULTI-PURPOSE

USE

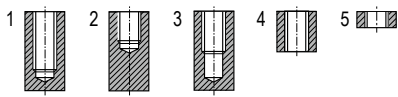
⊙ = EXCELLENT

○ = GOOD

MATERIAL GROUPS	LIST OF MATERIALS	TENSILE STRENGTH N/mm <sup>2</sup>	HARDNESS HB	CUTTING SPEED m/min.					
10. STEELS	11 Steel	Magnetic Soft Steels	< 400	< 120	15-20	⊙	⊙	⊙	⊙
	12 Steel	Structure Steels	< 700	< 200	15-20	⊙	⊙	⊙	⊙
	13 Steel	Plain Carbon Steels	< 850	< 250	12-18	⊙	⊙	⊙	⊙
	14 St. Alloy	Alloy Steels	< 850	< 250	10-15	⊙	⊙	⊙	⊙
	15 St. Alloy	Alloy Steels, Hardened Steels	≤1,200	< 350	6-10	⊙	⊙	⊙	⊙
	16 St. Alloy	Alloy Steels, Hardened Steels	> 1,200	> 350	3-5				
20. STAINLESS STEELS	21 INOX Free	Free Machining	< 850	< 250	7-10	⊙	⊙	⊙	⊙
	22 INOX Aust.	Austenitic	< 850	< 250	5-8	⊙	⊙	⊙	⊙
	23 INOX	Ferritic, Ferritic+Austenitic, Martensitic	< 1,000	< 300	4-6	⊙	⊙	⊙	⊙
30. CAST IRON	31 GG cast	Grey Cast Iron	< 500	< 150	10-15	⊙	⊙	⊙	⊙
	32 GG cast	Grey Cast Iron	< 1,000	< 300	5-8	⊙	⊙	⊙	⊙
	33 GGG cast	Nodular Graphite, Malleable Cast Iron	< 700	< 200	10-15	⊙	⊙	⊙	⊙
	34 GGG cast	Nodular Graphite, Malleable Cast Iron	< 1,000	< 300	5-8	⊙	⊙	⊙	⊙
40. TITANIUM	41 Ti	Titanium, Unalloyed	< 700	< 200	10-15				
	42 Ti Alloy	Titanium, Alloyed	< 900	< 270	8-12				
	43 Ti Alloy	Titanium, Alloyed	≤1,300	< 350	4-6				
50. NICKEL	51 Ni	Nickel, Unalloyed	< 500	< 150	8-12				
	52 Ni Alloy	Nickel, Alloyed	< 900	< 270	10-15				
	53 Ni Alloy	Nickel, Alloyed	≤1,400	< 410	2-4				
60. COPPER, BRASS, BRONZE	61 Cu	Copper, Unalloyed	< 350	< 100	8-12	⊙	⊙	⊙	⊙
	62 Cu Alloy (Short)	Short chip Brass, Bronze, Copper	< 700	< 200	25-35	⊙	⊙	⊙	⊙
	63 Cu Alloy (Long)	Long chip Brass, Bronze, Copper	< 700	< 200	15-20	⊙	⊙	⊙	⊙
	64 Cu-Al-Fe	Cu-Al-Fe Alloys	< 1,500	< 470	3-5				
70. ALUMINUM	71 Al / Mg	Aluminum, Magnesium, Unalloyed	< 350	< 100	10-15				
	72 Al Wrought	Aluminum, Alloyed, Si ≤ 1.5%	< 500	< 150	25-35	⊙	⊙	⊙	⊙
	73 Al (Si ≤ 10%)	Aluminum, Alloyed, Si ≤ 10%	< 400	< 120	15-20	⊙	⊙	⊙	⊙
	74 Al (Si > 10%)	Aluminum, Alloyed, Si > 10%	< 400	< 120	10-15	⊙	⊙	⊙	⊙
80. PLASTICS	81 Thermosoft	Thermoplastics			20-30				
	82 Thermoset	Thermosetting Plastics			8-12				
	83 FRP	Fiber Reinforced Plastics			5-7				

MU	MU	MU	MU	MU	MU	VA	VA	MU	MU	MU	MU
TBE08 TCE08 TDE08	TB844 TC844 TD844	TCE09 TDE09	TC814-IC	TC807	TC633	TQ744 TB744	TQ754 TB754	TB824 TC824 TD824	TCE01 TDE01	TB864 TC864 TD864	TCE02 TDE02
SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE	SPIRAL FLUTE
12	13	15	17	18	19	20	21	23	24	25	26
HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-PM HSS-E	HSS-PM HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
M	MF	MF	M	M	M	M	MF	UNC	UNC	UNF	UNF
DIN 371/376	DIN 374	DIN 374	DIN 371/376	DIN 371/376	LONG SHANK	DIN 371/376	DIN 374	DIN 371/376	DIN 371/376	DIN 371/374	DIN 371/374
7G	ISO 2/6H	ISO 3/6G	ISO 2/6H	ISO 2/6H	ISO 2/6H	ISO 2/6H	ISO 2/6H	2B	3B	2B	3B
R40	R40	R40	R40	R40	R40	R45	R45	R40	R40	R40	R40
C	C	C	C	E	C	C	C	C	C	C	C
2.5D	2.5D	2.5D	2.5D	2.5D	2.5D	2.5D	2.5D	2.5D	2.5D	2.5D	2.5D
Vap Bright TiN	Vap Bright TiN	Bright TiN	Bright	Bright	Bright	Vap	Vap	Vap Bright TiN	Bright TiN	Vap Bright TiN	Bright TiN
1-2-3	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3	1-2-3
											
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⊙	⊙	⊙	⊙	⊙	⊙			⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	⊙			⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	⊙			⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	⊙			⊙	⊙	⊙	⊙

## MACHINE TAPS RECOMMENDATION TABLE



MATERIAL GROUPS	MU	MU	MU	MU
SERIES	<b>TBJ05</b> <b>TCJ05</b> <b>TDJ05</b>	<b>TB814</b> <b>TC814</b> <b>TD814</b>	<b>TBJ06</b> <b>TCJ06</b> <b>TDJ06</b>	<b>TBJ07</b> <b>TCJ07</b> <b>TDJ07</b>
FLUTE TYPE	SPIRAL POINT	SPIRAL POINT	SPIRAL POINT	SPIRAL POINT
PAGE	27	28	29	30
TAP MATERIALS	HSS-E	HSS-E	HSS-E	HSS-E
STANDARD	M	M	M	M
DIMENSIONS	DIN 371/376	DIN 371/376	DIN 371/376	DIN 371/376
TOLERANCE	ISO 1/4H	ISO 2/6H	6H+0.1	ISO 3/6G
SPIRAL FLUTE ANGLE	-	-	-	-
CHAMFER	B	B	B	B
THREAD DEPTH	3.0D	3.0D	3.0D	3.0D
SURFACE TREATMENT	Vap Bright TiN	Vap Bright TiN	Vap Bright TiN	Vap Bright TiN
HOLE TYPE	4-5	4-5	4-5	4-5

### Combo<sup>TAP</sup>












HSS-E, HSS-PM TAPS FOR MULTI-PURPOSE

USE

⊙ = EXCELLENT

○ = GOOD

MATERIAL GROUPS	LIST OF MATERIALS	TENSILE STRENGTH N/mm <sup>2</sup>	HARDNESS HB	CUTTING SPEED m/min.					
10. STEELS	11 Steel	Magnetic Soft Steels	< 400	< 120	15-20	⊙	⊙	⊙	⊙
	12 Steel	Structure Steels	< 700	< 200	15-20	⊙	⊙	⊙	⊙
	13 Steel	Plain Carbon Steels	< 850	< 250	12-18	⊙	⊙	⊙	⊙
	14 St. Alloy	Alloy Steels	< 850	< 250	10-15	⊙	⊙	⊙	⊙
	15 St. Alloy	Alloy Steels, Hardened Steels	≤1,200	< 350	6-10	⊙	⊙	⊙	⊙
	16 St. Alloy	Alloy Steels, Hardened Steels	> 1,200	> 350	3-5				
20. STAINLESS STEELS	21 INOX Free	Free Machining	< 850	< 250	7-10	⊙	⊙	⊙	⊙
	22 INOX Aust.	Austenitic	< 850	< 250	5-8	⊙	⊙	⊙	⊙
	23 INOX	Ferritic, Ferritic+Austenitic, Martensitic	< 1,000	< 300	4-6	⊙	⊙	⊙	⊙
30. CAST IRON	31 GG cast	Grey Cast Iron	< 500	< 150	10-15	⊙	⊙	⊙	⊙
	32 GG cast	Grey Cast Iron	< 1,000	< 300	5-8	⊙	⊙	⊙	⊙
	33 GGG cast	Nodular Graphite, Malleable Cast Iron	< 700	< 200	10-15	⊙	⊙	⊙	⊙
	34 GGG cast	Nodular Graphite, Malleable Cast Iron	< 1,000	< 300	5-8	⊙	⊙	⊙	⊙
40. TITANIUM	41 Ti	Titanium, Unalloyed	< 700	< 200	10-15				
	42 Ti Alloy	Titanium, Alloyed	< 900	< 270	8-12				
	43 Ti Alloy	Titanium, Alloyed	≤1,300	< 350	4-6				
50. NICKEL	51 Ni	Nickel, Unalloyed	< 500	< 150	8-12				
	52 Ni Alloy	Nickel, Alloyed	< 900	< 270	10-15				
	53 Ni Alloy	Nickel, Alloyed	≤1,400	< 410	2-4				
60. COPPER, BRASS, BRONZE	61 Cu	Copper, Unalloyed	< 350	< 100	8-12	⊙	⊙	⊙	⊙
	62 Cu Alloy (Short)	Short chip Brass, Bronze, Copper	< 700	< 200	25-35	⊙	⊙	⊙	⊙
	63 Cu Alloy (Long)	Long chip Brass, Bronze, Copper	< 700	< 200	15-20	⊙	⊙	⊙	⊙
	64 Cu-Al-Fe	Cu-Al-Fe Alloys	< 1,500	< 470	3-5				
70. ALUMINUM	71 Al / Mg	Aluminum, Magnesium, Unalloyed	< 350	< 100	10-15				
	72 Al Wrought	Aluminum, Alloyed, Si ≤ 1.5%	< 500	< 150	25-35	⊙	⊙	⊙	⊙
	73 Al (Si ≤ 10%)	Aluminum, Alloyed, Si ≤ 10%	< 400	< 120	15-20	⊙	⊙	⊙	⊙
	74 Al (Si > 10%)	Aluminum, Alloyed, Si > 10%	< 400	< 120	10-15	⊙	⊙	⊙	⊙
80. PLASTICS	81 Thermosoft	Thermoplastics			20-30				
	82 Thermoset	Thermosetting Plastics			8-12				
	83 FRP	Fiber Reinforced Plastics			5-7				

MU	MU	MU	MU	MU	VA	VA	MU	MU	MU	MU
TBJ08 TCJ08 TDJ08	TB854 TC854 TD854	TCJ09 TDJ09	TC814-IC	TC445	TQ428 TB428	TQ438 TB438	TB834 TC834 TD834	TCJ01 TDJ01	TB874 TC874 TD874	TCJ02 TDJ02
SPIRAL POINT	SPIRAL POINT	SPIRAL POINT	SPIRAL POINT	SPIRAL POINT	SPIRAL POINT	SPIRAL POINT	SPIRAL POINT	SPIRAL POINT	SPIRAL POINT	SPIRAL POINT
31	32	34	36	37	38	39	41	42	43	44
HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-PM HSS-E	HSS-PM HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
M	MF	MF	M	M	M	MF	UNC	UNC	UNF	UNF
DIN 371/376	DIN 374	DIN 374	DIN 371/376	LONG SHANK	DIN 371/376	DIN 374	DIN 371/376	DIN 371/376	DIN 371/374	DIN 371/374
7G	ISO 2/6H	ISO 3/6G	ISO 2/6H	ISO 2/6H	ISO 2/6H	ISO 2/6H	2B	3B	2B	3B
-	-	-	-	-	-	-	-	-	-	-
B	B	B	B	B	B	B	B	B	B	B
3.0D	3.0D	3.0D	3.0D	3.0D	3.0D	3.0D	3.0D	3.0D	3.0D	3.0D
Vap Bright TiN	Vap Bright TiN	Bright TiN	Bright	Bright	Vap	Vap	Vap Bright TiN	Bright TiN	Vap Bright TiN	Bright TiN
4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5
										
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⊙	⊙	⊙	⊙	⊙	○	○	⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	○	○	⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	○	○	⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	○	○	⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	○	○	⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	○	○	⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	○	○	⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	○	○	⊙	⊙	⊙	⊙



# M SPIRAL FLUTE TAPS for Multi-Purpose

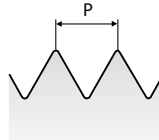
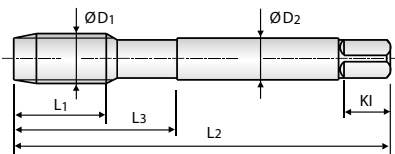
## ISO Metric coarse threads DIN 13

Vap  
Bright  
TiN

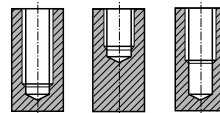
**TBE05** SERIES  
**TCE05** SERIES  
**TDE05** SERIES



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



Hole type 2.5xD



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

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	KI	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	2.1
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	3.7
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
M7	× 1.0	TBE05346	TCE05346	TDE05346	10	80	30	7	5.5	8	3	6
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	10.2
M14	× 2.0	TBE05546	TCE05546	TDE05546	20	110	44	11	9	12	3	12
M16	× 2.0	TBE05606	TCE05606	TDE05606	20	110	44	12	9	12	3	14
M18	× 2.5	TBE05656	TCE05656	TDE05656	25	125	50	14	11	14	4	15.5
M20	× 2.5	TBE05706	TCE05706	TDE05706	25	140	54	16	12	15	4	17.5
M22	× 2.5	TBE05746	TCE05746	TDE05746	25	140	54	18	14.5	17	4	19.5
M24	× 3.0	TBE05786	TCE05786	TDE05786	30	160	60	18	14.5	17	4	21
M27	× 3.0	TBE05866	TCE05866	TDE05866	30	160	60	20	16	19	4	24
M30	× 3.5	TBE05946	TCE05946	TDE05946	35	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.

Unit : N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

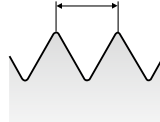
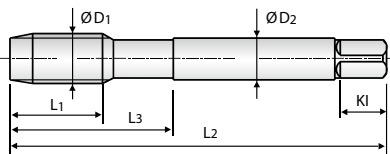
## M SPIRAL FLUTE TAPS for Multi-Purpose ISO Metric coarse threads DIN 13

Vap  
Bright  
TiN

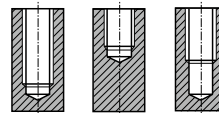
**TB804** SERIES  
**TC804** SERIES  
**TD804** SERIES



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



Hole type 2.5xD



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	KI	Z	Ød1
M2	× 0.4	<b>TB804136</b>	<b>TC804136</b>	<b>TD804136</b>	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	<b>TB804156</b>	<b>TC804156</b>	<b>TD804156</b>	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	<b>TB804196</b>	<b>TC804196</b>	<b>TD804196</b>	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	<b>TB804176</b>	<b>TC804176</b>	<b>TD804176</b>	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	<b>TB804496</b>	<b>TC804496</b>	<b>TD804496</b>	9	50	15	2.8	2.1	5	3	2.1
M3	× 0.5	<b>TB804206</b>	<b>TC804206</b>	<b>TD804206</b>	6	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	<b>TB804226</b>	<b>TC804226</b>	<b>TD804226</b>	7	56	20	4	3	6	3	2.9
M4	× 0.7	<b>TB804246</b>	<b>TC804246</b>	<b>TD804246</b>	7	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	<b>TB804266</b>	<b>TC804266</b>	<b>TD804266</b>	8	70	25	6	4.9	8	3	3.7
M5	× 0.8	<b>TB804286</b>	<b>TC804286</b>	<b>TD804286</b>	8	70	25	6	4.9	8	3	4.2
M6	× 1.0	<b>TB804316</b>	<b>TC804316</b>	<b>TD804316</b>	10	80	30	6	4.9	8	3	5
M7	× 1.0	<b>TB804346</b>	<b>TC804346</b>	<b>TD804346</b>	10	80	30	7	5.5	8	3	6
M8	× 1.25	<b>TB804366</b>	<b>TC804366</b>	<b>TD804366</b>	13	90	35	8	6.2	9	3	6.8
M9	× 1.25	<b>TB804396</b>	<b>TC804396</b>	<b>TD804396</b>	13	90	35	9	7	10	3	7.8
M10	× 1.5	<b>TB804426</b>	<b>TC804426</b>	<b>TD804426</b>	15	100	39	10	8	11	3	8.5
M11	× 1.5	<b>TB804466</b>	<b>TC804466</b>	<b>TD804466</b>	17	100	40	8	6.2	9	3	9.5
M12	× 1.75	<b>TB804506</b>	<b>TC804506</b>	<b>TD804506</b>	18	110	44	9	7	10	3	10.2
M14	× 2.0	<b>TB804546</b>	<b>TC804546</b>	<b>TD804546</b>	20	110	44	11	9	12	3	12
M16	× 2.0	<b>TB804606</b>	<b>TC804606</b>	<b>TD804606</b>	20	110	44	12	9	12	3	14
M18	× 2.5	<b>TB804656</b>	<b>TC804656</b>	<b>TD804656</b>	25	125	50	14	11	14	4	15.5
M20	× 2.5	<b>TB804706</b>	<b>TC804706</b>	<b>TD804706</b>	25	140	54	16	12	15	4	17.5
M22	× 2.5	<b>TB804746</b>	<b>TC804746</b>	<b>TD804746</b>	25	140	54	18	14.5	17	4	19.5
M24	× 3.0	<b>TB804786</b>	<b>TC804786</b>	<b>TD804786</b>	30	160	60	18	14.5	17	4	21
M27	× 3.0	<b>TB804866</b>	<b>TC804866</b>	<b>TD804866</b>	30	160	60	20	16	19	4	24
M30	× 3.5	<b>TB804946</b>	<b>TC804946</b>	<b>TD804946</b>	35	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.

Unit: N/mm<sup>2</sup>

◎:Excellent ○:Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si≤10%	Al Si>10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# M SPIRAL FLUTE TAPS for Multi-Purpose

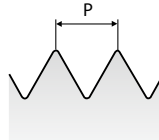
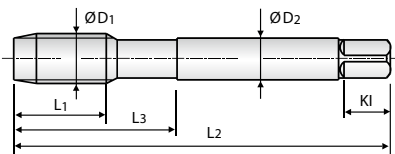
## ISO Metric coarse threads DIN 13

Vap  
Bright  
TiN

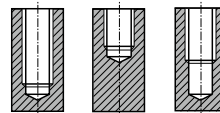
**TBE06** SERIES  
**TCE06** SERIES  
**TDE06** SERIES



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



Hole type 2.5xD



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

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	KI	Z	Ød1
M2	× 0.4	<b>TBE06136</b>	<b>TCE06136</b>	<b>TDE06136</b>	8	45	13	2.8	2.1	5	3	1.7
M2.2	× 0.45	<b>TBE06156</b>	<b>TCE06156</b>	<b>TDE06156</b>	8	45	13	2.8	2.1	5	3	1.85
M2.3	× 0.4	<b>TBE06196</b>	<b>TCE06196</b>	<b>TDE06196</b>	8	45	13	2.8	2.1	5	3	2
M2.5	× 0.45	<b>TBE06176</b>	<b>TCE06176</b>	<b>TDE06176</b>	9	50	15	2.8	2.1	5	3	2.15
M2.6	× 0.45	<b>TBE06496</b>	<b>TCE06496</b>	<b>TDE06496</b>	9	50	15	2.8	2.1	5	3	2.2
M3	× 0.5	<b>TBE06206</b>	<b>TCE06206</b>	<b>TDE06206</b>	6	56	18	3.5	2.7	6	3	2.6
M3.5	× 0.6	<b>TBE06226</b>	<b>TCE06226</b>	<b>TDE06226</b>	7	56	20	4	3	6	3	3
M4	× 0.7	<b>TBE06246</b>	<b>TCE06246</b>	<b>TDE06246</b>	7	63	21	4.5	3.4	6	3	3.4
M4.5	× 0.75	<b>TBE06266</b>	<b>TCE06266</b>	<b>TDE06266</b>	8	70	25	6	4.9	8	3	3.8
M5	× 0.8	<b>TBE06286</b>	<b>TCE06286</b>	<b>TDE06286</b>	8	70	25	6	4.9	8	3	4.3
M6	× 1.0	<b>TBE06316</b>	<b>TCE06316</b>	<b>TDE06316</b>	10	80	30	6	4.9	8	3	5.1
M7	× 1.0	<b>TBE06346</b>	<b>TCE06346</b>	<b>TDE06346</b>	10	80	30	7	5.5	8	3	6.1
M8	× 1.25	<b>TBE06366</b>	<b>TCE06366</b>	<b>TDE06366</b>	13	90	35	8	6.2	9	3	6.9
M9	× 1.25	<b>TBE06396</b>	<b>TCE06396</b>	<b>TDE06396</b>	13	90	35	9	7	10	3	7.9
M10	× 1.5	<b>TBE06426</b>	<b>TCE06426</b>	<b>TDE06426</b>	15	100	39	10	8	11	3	8.6
M11	× 1.5	<b>TBE06466</b>	<b>TCE06466</b>	<b>TDE06466</b>	17	100	40	8	6.2	9	3	9.6
M12	× 1.75	<b>TBE06506</b>	<b>TCE06506</b>	<b>TDE06506</b>	18	110	44	9	7	10	3	10.3
M14	× 2.0	<b>TBE06546</b>	<b>TCE06546</b>	<b>TDE06546</b>	20	110	44	11	9	12	3	12.1
M16	× 2.0	<b>TBE06606</b>	<b>TCE06606</b>	<b>TDE06606</b>	20	110	44	12	9	12	3	14.1
M18	× 2.5	<b>TBE06656</b>	<b>TCE06656</b>	<b>TDE06656</b>	25	125	50	14	11	14	4	15.6
M20	× 2.5	<b>TBE06706</b>	<b>TCE06706</b>	<b>TDE06706</b>	25	140	54	16	12	15	4	17.6
M22	× 2.5	<b>TBE06746</b>	<b>TCE06746</b>	<b>TDE06746</b>	25	140	54	18	14.5	17	4	19.6
M24	× 3.0	<b>TBE06786</b>	<b>TCE06786</b>	<b>TDE06786</b>	30	160	60	18	14.5	17	4	21.1
M27	× 3.0	<b>TBE06866</b>	<b>TCE06866</b>	<b>TDE06866</b>	30	160	60	20	16	19	4	24.1
M30	× 3.5	<b>TBE06946</b>	<b>TCE06946</b>	<b>TDE06946</b>	35	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.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

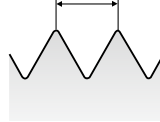
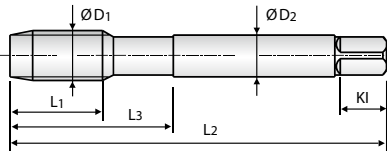
## M SPIRAL FLUTE TAPS for Multi-Purpose ISO Metric coarse threads DIN 13

Vap  
Bright  
TiN

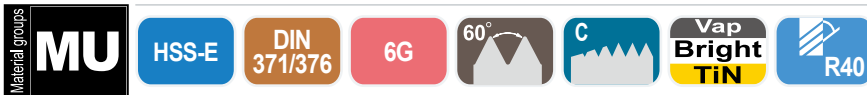
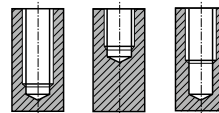
**TBE07** SERIES  
**TCE07** SERIES  
**TDE07** SERIES



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



Hole type 2.5xD



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	2.1
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	3.7
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
M7	× 1.0	TBE07346	TCE07346	TDE07346	10	80	30	7	5.5	8	3	6
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	10.2
M14	× 2.0	TBE07546	TCE07546	TDE07546	20	110	44	11	9	12	3	12
M16	× 2.0	TBE07606	TCE07606	TDE07606	20	110	44	12	9	12	3	14
M18	× 2.5	TBE07656	TCE07656	TDE07656	25	125	50	14	11	14	4	15.5
M20	× 2.5	TBE07706	TCE07706	TDE07706	25	140	54	16	12	15	4	17.5
M22	× 2.5	TBE07746	TCE07746	TDE07746	25	140	54	18	14.5	17	4	19.5
M24	× 3.0	TBE07786	TCE07786	TDE07786	30	160	60	18	14.5	17	4	21
M27	× 3.0	TBE07866	TCE07866	TDE07866	30	160	60	20	16	19	4	24
M30	× 3.5	TBE07946	TCE07946	TDE07946	35	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.

Unit: N/mm<sup>2</sup>

◎:Excellent ○:Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si≤10%	Al Si>10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# M SPIRAL FLUTE TAPS for Multi-Purpose

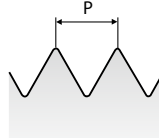
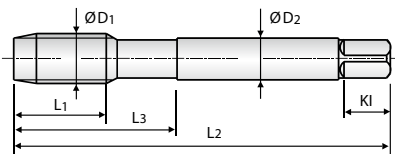
ISO Metric coarse threads DIN 13

Vap  
Bright  
TiN

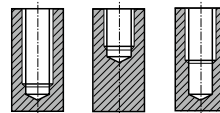
**TBE08** SERIES  
**TCE08** SERIES  
**TDE08** SERIES



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



Hole type 2.5xD



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

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	KI	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	2.1
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	3.7
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
M7	× 1.0	TBE08346	TCE08346	TDE08346	10	80	30	7	5.5	8	3	6
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	10.2
M14	× 2.0	TBE08546	TCE08546	TDE08546	20	110	44	11	9	12	3	12
M16	× 2.0	TBE08606	TCE08606	TDE08606	20	110	44	12	9	12	3	14
M18	× 2.5	TBE08656	TCE08656	TDE08656	25	125	50	14	11	14	4	15.5
M20	× 2.5	TBE08706	TCE08706	TDE08706	25	140	54	16	12	15	4	17.5
M22	× 2.5	TBE08746	TCE08746	TDE08746	25	140	54	18	14.5	17	4	19.5
M24	× 3.0	TBE08786	TCE08786	TDE08786	30	160	60	18	14.5	17	4	21
M27	× 3.0	TBE08866	TCE08866	TDE08866	30	160	60	20	16	19	4	24
M30	× 3.5	TBE08946	TCE08946	TDE08946	35	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.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

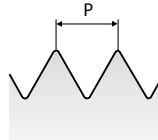
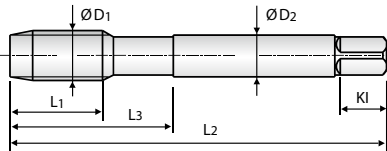
## MF SPIRAL FLUTE TAPS for Multi-Purpose ISO Metric fine threads DIN 13

Vap  
Bright  
TiN

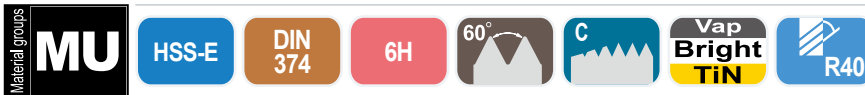
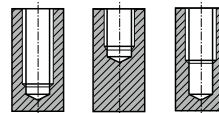
**TB844** SERIES  
**TC844** SERIES  
**TD844** SERIES



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



Hole type 2.5xD



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
M4	× 0.5	<b>TB844256</b>	<b>TC844256</b>	<b>TD844256</b>	5	63	21	2.8	2.1	5	3	3.5
M5	× 0.5	<b>TB844296</b>	<b>TC844296</b>	<b>TD844296</b>	5	70	25	3.5	2.7	6	3	4.5
M6	× 0.75	<b>TB844326</b>	<b>TC844326</b>	<b>TD844326</b>	8	80	30	4.5	3.4	6	3	5.2
M6	× 0.5	<b>TB844336</b>	<b>TC844336</b>	<b>TD844336</b>	5	80	30	4.5	3.4	6	3	5.5
M7	× 0.75	<b>TB844356</b>	<b>TC844356</b>	<b>TD844356</b>	10	80	30	5.5	4.3	7	3	6.2
M8	× 1.0	<b>TB844376</b>	<b>TC844376</b>	<b>TD844376</b>	10	90	36	6	4.9	8	3	7
M8	× 0.75	<b>TB844386</b>	<b>TC844386</b>	<b>TD844386</b>	8	80	30	6	4.9	8	3	7.2
M10	× 1.25	<b>TB844436</b>	<b>TC844436</b>	<b>TD844436</b>	16	100	40	7	5.5	8	3	8.8
M10	× 1.0	<b>TB844446</b>	<b>TC844446</b>	<b>TD844446</b>	10	90	36	7	5.5	8	3	9
M10	× 0.75	<b>TB844456</b>	<b>TC844456</b>	<b>TD844456</b>	10	90	36	7	5.5	8	3	9.2
M12	× 1.5	<b>TB844516</b>	<b>TC844516</b>	<b>TD844516</b>	15	100	40	9	7	10	3	10.5
M12	× 1.25	<b>TB844526</b>	<b>TC844526</b>	<b>TD844526</b>	15	100	40	9	7	10	3	10.8
M12	× 1.0	<b>TB844536</b>	<b>TC844536</b>	<b>TD844536</b>	11	100	40	9	7	10	3	11
M14	× 1.5	<b>TB844556</b>	<b>TC844556</b>	<b>TD844556</b>	15	100	40	11	9	12	3	12.5
M14	× 1.25	<b>TB844566</b>	<b>TC844566</b>	<b>TD844566</b>	15	100	40	11	9	12	3	12.8
M14	× 1.0	<b>TB844576</b>	<b>TC844576</b>	<b>TD844576</b>	11	100	40	11	9	12	3	13
M16	× 1.5	<b>TB844616</b>	<b>TC844616</b>	<b>TD844616</b>	15	100	40	12	9	12	3	14.5
M16	× 1.0	<b>TB844626</b>	<b>TC844626</b>	<b>TD844626</b>	12	100	40	12	9	12	3	15
M18	× 1.5	<b>TB844676</b>	<b>TC844676</b>	<b>TD844676</b>	17	110	44	14	11	14	4	16.5
M18	× 1.0	<b>TB844686</b>	<b>TC844686</b>	<b>TD844686</b>	13	110	44	14	11	14	4	17
M20	× 1.5	<b>TB844726</b>	<b>TC844726</b>	<b>TD844726</b>	17	125	50	16	12	15	4	18.5
M20	× 1.0	<b>TB844736</b>	<b>TC844736</b>	<b>TD844736</b>	14	125	50	16	12	15	4	19
M22	× 1.5	<b>TB844766</b>	<b>TC844766</b>	<b>TD844766</b>	17	125	50	18	14.5	17	4	20.5
M22	× 1.0	<b>TB844776</b>	<b>TC844776</b>	<b>TD844776</b>	14	125	50	18	14.5	17	4	21

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

► NEXT PAGE

Unit: N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# MF SPIRAL FLUTE TAPS for Multi-Purpose

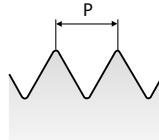
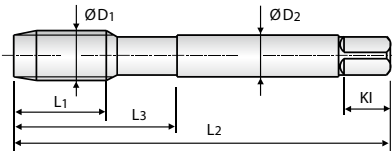
ISO Metric fine threads DIN 13

Vap  
Bright  
TiN

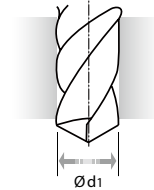
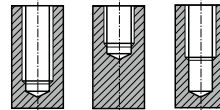
**TB844** SERIES  
**TC844** SERIES  
**TD844** SERIES



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



Hole type 2.5xD



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

Unit : mm

Size	Pitch	EDP No.			Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Vap	Bright	TiN								
M24	× 2.0	<b>TB844796</b>	<b>TC844796</b>	<b>TD844796</b>	L1	L2	L3	ØD2	K	KI	Z	Ød1
M24	× 1.5	<b>TB844806</b>	<b>TC844806</b>	<b>TD844806</b>	20	140	54	18	14.5	17	4	22
M26	× 1.5	<b>TB844856</b>	<b>TC844856</b>	<b>TD844856</b>	20	140	54	18	14.5	17	4	22.5
M26	× 2.0	<b>TB844876</b>	<b>TC844876</b>	<b>TD844876</b>	20	140	54	20	16	19	4	24.5
M27	× 1.5	<b>TB844886</b>	<b>TC844886</b>	<b>TD844886</b>	20	140	54	20	16	19	4	25
M27	× 2.0	<b>TB844876</b>	<b>TC844876</b>	<b>TD844876</b>	20	140	54	20	16	19	4	25.5
M28	× 1.5	<b>TB844916</b>	<b>TC844916</b>	<b>TD844916</b>	20	140	54	20	16	19	4	26.5
M30	× 2.0	<b>TB844966</b>	<b>TC844966</b>	<b>TD844966</b>	22	150	57	22	18	21	4	28
M30	× 1.5	<b>TB844976</b>	<b>TC844976</b>	<b>TD844976</b>	22	150	57	22	18	21	4	28.5

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

Unit : N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# MF SPIRAL FLUTE TAPS for Multi-Purpose

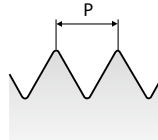
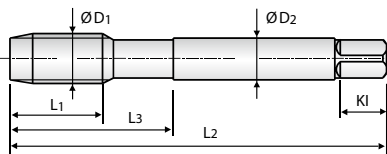
ISO Metric fine threads DIN 13

Bright  
TiN

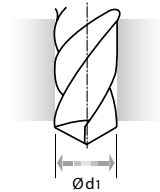
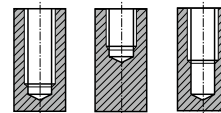
**TCE09** SERIES  
**TDE09** SERIES



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



**Hole type** 2.5xD



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

Unit : mm

Size	Pitch	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Bright	TiN								
ØD1	P			L1	L2	L3	ØD2	K	KI	Z	Ød1
M4	× 0.5	<b>TCE09256</b>	<b>TDE09256</b>	5	63	21	2.8	2.1	5	3	3.5
M5	× 0.5	<b>TCE09296</b>	<b>TDE09296</b>	5	70	25	3.5	2.7	6	3	4.5
M6	× 0.75	<b>TCE09326</b>	<b>TDE09326</b>	8	80	30	4.5	3.4	6	3	5.2
M6	× 0.5	<b>TCE09336</b>	<b>TDE09336</b>	5	80	30	4.5	3.4	6	3	5.5
M7	× 0.75	<b>TCE09356</b>	<b>TDE09356</b>	10	80	30	5.5	4.3	7	3	6.2
M8	× 1.0	<b>TCE09376</b>	<b>TDE09376</b>	10	90	36	6	4.9	8	3	7
M8	× 0.75	<b>TCE09386</b>	<b>TDE09386</b>	8	80	30	6	4.9	8	3	7.2
M10	× 1.25	<b>TCE09436</b>	<b>TDE09436</b>	16	100	40	7	5.5	8	3	8.8
M10	× 1.0	<b>TCE09446</b>	<b>TDE09446</b>	10	90	36	7	5.5	8	3	9
M10	× 0.75	<b>TCE09456</b>	<b>TDE09456</b>	10	90	36	7	5.5	8	3	9.2
M12	× 1.5	<b>TCE09516</b>	<b>TDE09516</b>	15	100	40	9	7	10	3	10.5
M12	× 1.25	<b>TCE09526</b>	<b>TDE09526</b>	15	100	40	9	7	10	3	10.8
M12	× 1.0	<b>TCE09536</b>	<b>TDE09536</b>	11	100	40	9	7	10	3	11
M14	× 1.5	<b>TCE09556</b>	<b>TDE09556</b>	15	100	40	11	9	12	3	12.5
M14	× 1.25	<b>TCE09566</b>	<b>TDE09566</b>	15	100	40	11	9	12	3	12.8
M14	× 1.0	<b>TCE09576</b>	<b>TDE09576</b>	11	100	40	11	9	12	3	13
M16	× 1.5	<b>TCE09616</b>	<b>TDE09616</b>	15	100	40	12	9	12	3	14.5
M16	× 1.0	<b>TCE09626</b>	<b>TDE09626</b>	12	100	40	12	9	12	3	15
M18	× 1.5	<b>TCE09676</b>	<b>TDE09676</b>	17	110	44	14	11	14	4	16.5
M18	× 1.0	<b>TCE09686</b>	<b>TDE09686</b>	13	110	44	14	11	14	4	17
M20	× 1.5	<b>TCE09726</b>	<b>TDE09726</b>	17	125	50	16	12	15	4	18.5
M20	× 1.0	<b>TCE09736</b>	<b>TDE09736</b>	14	125	50	16	12	15	4	19
M22	× 1.5	<b>TCE09766</b>	<b>TDE09766</b>	17	125	50	18	14.5	17	4	20.5
M22	× 1.0	<b>TCE09776</b>	<b>TDE09776</b>	14	125	50	18	14.5	17	4	21

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

► NEXT PAGE

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			



# MF SPIRAL FLUTE TAPS for Multi-Purpose

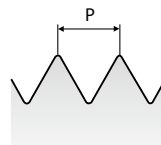
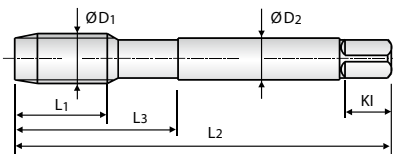
ISO Metric fine threads DIN 13

Bright  
TiN

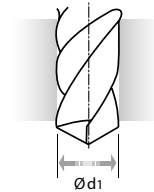
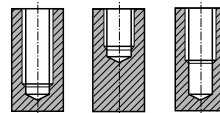
**TCE09** SERIES  
**TDE09** SERIES



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



Hole type 2.5xD



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

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	KI	Z	Ød1
M24	× 2.0	<b>TCE09796</b>	<b>TDE09796</b>	20	140	54	18	14.5	17	4	22
M24	× 1.5	<b>TCE09806</b>	<b>TDE09806</b>	20	140	54	18	14.5	17	4	22.5
M26	× 1.5	<b>TCE09856</b>	<b>TDE09856</b>	20	140	54	18	14.5	17	4	24.5
M27	× 2.0	<b>TCE09876</b>	<b>TDE09876</b>	20	140	54	20	16	19	4	25
M27	× 1.5	<b>TCE09886</b>	<b>TDE09886</b>	20	140	54	20	16	19	4	25.5
M28	× 1.5	<b>TCE09916</b>	<b>TDE09916</b>	20	140	54	20	16	19	4	26.5
M30	× 2.0	<b>TCE09966</b>	<b>TDE09966</b>	22	150	57	22	18	21	4	28
M30	× 1.5	<b>TCE09976</b>	<b>TDE09976</b>	22	150	57	22	18	21	4	28.5

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

Unit : N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# M SPIRAL FLUTE TAPS for Multi-Purpose

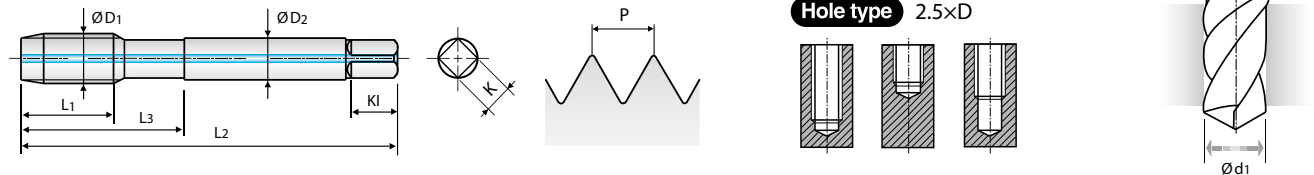
ISO Metric coarse threads DIN 13

Bright **TC804-IC** SERIES



with Internal Coolant

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



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

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	KI	Z	Ød1
M6	× 1.0	<b>TC804316IC</b>	10	80	30	6	4.9	8	3	5
M8	× 1.25	<b>TC804366IC</b>	13	90	35	8	6.2	9	3	6.8
M10	× 1.5	<b>TC804426IC</b>	15	100	39	10	8	11	3	8.5
M12	× 1.75	<b>TC804506IC</b>	18	110	44	9	7	10	3	10.2
M14	× 2.0	<b>TC804546IC</b>	20	110	44	11	9	12	3	12
M16	× 2.0	<b>TC804606IC</b>	20	110	44	12	9	12	3	14
M18	× 2.5	<b>TC804656IC</b>	25	125	50	14	11	14	4	15.5
M20	× 2.5	<b>TC804706IC</b>	25	140	54	16	12	15	4	17.5

- DIN 371 (M6~M10) and DIN 376 (M12~M20)
- The other coating (TiN, TiCN or TiAlN) or Surface Treatment (Steam Homo) is available on your request.

Unit: N/mm<sup>2</sup> ◎:Excellent ○:Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si≤10%	Al Si>10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# M SPIRAL FLUTE TAPS for Multi-Purpose

## ISO Metric coarse threads DIN 13

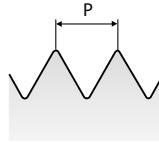
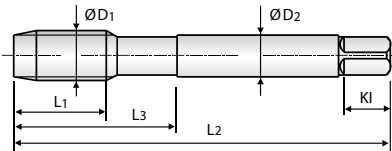
Bright

**TC807** SERIES

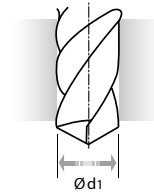
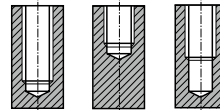
► For using multi-purpose and correct thread profiles & long tool life due to special tap geometry, YG-1 company has a patent.



Short Chamfer



Hole type 2.5xD



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

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	KI	Z	Ød1
M2	× 0.4	<b>TC807136</b>	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	<b>TC807156</b>	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	<b>TC807196</b>	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	<b>TC807176</b>	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	<b>TC807496</b>	9	50	15	2.8	2.1	5	3	2.1
M3	× 0.5	<b>TC807206</b>	6	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	<b>TC807226</b>	7	56	20	4	3	6	3	2.9
M4	× 0.7	<b>TC807246</b>	7	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	<b>TC807266</b>	8	70	25	6	4.9	8	3	3.7
M5	× 0.8	<b>TC807286</b>	8	70	25	6	4.9	8	3	4.2
M6	× 1.0	<b>TC807316</b>	10	80	30	6	4.9	8	3	5
M7	× 1.0	<b>TC807346</b>	10	80	30	7	5.5	8	3	6
M8	× 1.25	<b>TC807366</b>	13	90	35	8	6.2	9	3	6.8
M9	× 1.25	<b>TC807396</b>	13	90	35	9	7	10	3	7.8
M10	× 1.5	<b>TC807426</b>	15	100	39	10	8	11	3	8.5
M11	× 1.5	<b>TC807466</b>	17	100	40	8	6.2	9	3	9.5
M12	× 1.75	<b>TC807506</b>	18	110	44	9	7	10	3	10.2
M14	× 2.0	<b>TC807546</b>	20	110	44	11	9	12	3	12
M16	× 2.0	<b>TC807606</b>	20	110	44	12	9	12	3	14
M18	× 2.5	<b>TC807656</b>	25	125	50	14	11	14	4	15.5
M20	× 2.5	<b>TC807706</b>	25	140	54	16	12	15	4	17.5
M22	× 2.5	<b>TC807746</b>	25	140	54	18	14.5	17	4	19.5
M24	× 3.0	<b>TC807786</b>	30	160	60	18	14.5	17	4	21
M27	× 3.0	<b>TC807866</b>	30	160	60	20	16	19	4	24
M30	× 3.5	<b>TC807946</b>	35	180	70	22	18	21	4	26.5

► DIN371 (M2~M10) and DIN 376 (M11~M30)

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

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# M SPIRAL FLUTE TAPS for Multi-Purpose

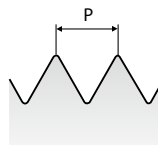
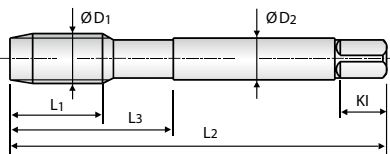
## ISO Metric coarse threads DIN 13

Bright **TC633** SERIES

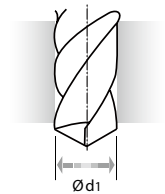
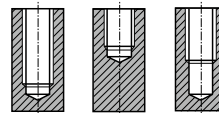


**Long Shank**

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



**Hole type** 2.5xD



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

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	KI	Z	Ød1
M3	× 0.5	<b>TC633206</b>	11	100	18	3.5	2.7	6	3	2.5
M4	× 0.7	<b>TC633246</b>	13	125	21	4.5	3.4	6	3	3.3
M5	× 0.8	<b>TC633286</b>	15	140	25	6	4.9	8	3	4.2
M6	× 1.0	<b>TC633316</b>	17	160	30	6	4.9	8	3	5
M8	× 1.25	<b>TC633366</b>	20	180	35	6	4.9	8	3	6.8
M10	× 1.5	<b>TC633426</b>	22	200	39	7	5.5	8	3	8.5
M12	× 1.75	<b>TC633506</b>	24	220	44	9	7	10	3	10.2
M14	× 2.0	<b>TC633546</b>	26	220	44	11	9	12	3	12
M16	× 2.0	<b>TC633606</b>	27	220	44	12	9	12	3	14
M20	× 2.5	<b>TC633706</b>	32	280	54	16	12	15	4	17.5

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

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

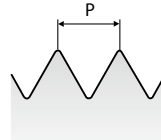
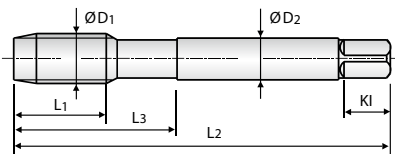
# M SPIRAL FLUTE TAPS for Stainless Steels

## ISO Metric coarse threads DIN 13

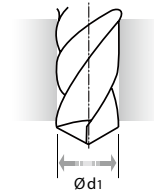
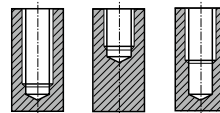
Vap  
Vap

**TQ744** SERIES  
**TB744** SERIES

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



Hole type 2.5xD



Material groups  
**VA**

**HSS-PM**  
up to M12

**HSS-E**  
over M12

**DIN 371/376**

**6H**

**60°**

**C**

**Vap**

**R45**

Unit : mm

Size	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	L1	L2	L3	ØD2	K	KI	Z	Ød1
M2	× 0.4	<b>TQ744136</b>	8	45	13	2.8	2.1	5	2	1.6
M2.2	× 0.45	<b>TQ744156</b>	8	45	13	2.8	2.1	5	2	1.75
M2.3	× 0.4	<b>TQ744196</b>	8	45	13	2.8	2.1	5	2	1.9
M2.5	× 0.45	<b>TQ744176</b>	9	50	15	2.8	2.1	5	2	2.05
M2.6	× 0.45	<b>TQ744496</b>	9	50	15	2.8	2.1	5	2	2.1
M3	× 0.5	<b>TQ744206</b>	6	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	<b>TQ744226</b>	7	56	20	4	3	6	3	2.9
M4	× 0.7	<b>TQ744246</b>	7	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	<b>TQ744266</b>	8	70	25	6	4.9	8	3	3.7
M5	× 0.8	<b>TQ744286</b>	8	70	25	6	4.9	8	3	4.2
M6	× 1.0	<b>TQ744316</b>	10	80	30	6	4.9	8	3	5
M7	× 1.0	<b>TQ744346</b>	10	80	30	7	5.5	8	3	6
M8	× 1.25	<b>TQ744366</b>	13	90	35	8	6.2	9	3	6.8
M9	× 1.25	<b>TQ744396</b>	13	90	35	9	7	10	3	7.8
M10	× 1.5	<b>TQ744426</b>	15	100	39	10	8	11	3	8.5
M11	× 1.5	<b>TQ744466</b>	17	100	40	8	6.2	9	3	9.5
M12	× 1.75	<b>TQ744506</b>	18	110	44	9	7	10	3	10.2
M14	× 2.0	<b>TB744546</b>	20	110	44	11	9	12	3	12
M16	× 2.0	<b>TB744606</b>	20	110	44	12	9	12	3	14
M18	× 2.5	<b>TB744656</b>	25	125	50	14	11	14	4	15.5
M20	× 2.5	<b>TB744706</b>	25	140	54	16	12	15	4	17.5
M22	× 2.5	<b>TB744746</b>	25	140	54	18	14.5	17	4	19.5
M24	× 3.0	<b>TB744786</b>	30	160	60	18	14.5	17	4	21
M27	× 3.0	<b>TB744866</b>	30	160	60	20	16	19	4	24
M30	× 3.5	<b>TB744946</b>	35	180	70	22	18	21	4	26.5

- DIN 371 (M2~M10) and DIN 376 (M11~M30)
- HSS-PM (M2~M12/TQ744) and HSS-E (M14~M30/TB744)
- The other coating (TiN, TiCN or TiAlN) is available on your request.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

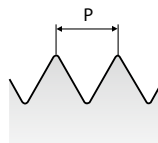
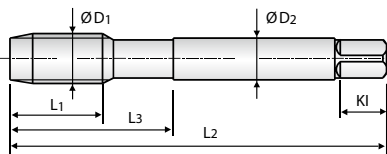
Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
	○		○			◎	◎							
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				○										

# MF SPIRAL FLUTE TAPS for Stainless Steels

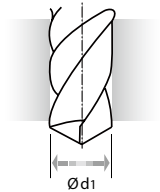
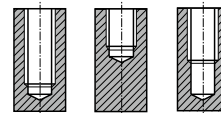
ISO Metric fine threads DIN 13

Vap **TQ754** SERIES  
Vap **TB754** SERIES

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



Hole type 2.5xD



Material groups: **VA** (up to M12), **HSS-PM** (over M12), **HSS-E**, **DIN 374**, **6H**, **60°**, **C**, **Vap**, **R45**

Unit : mm

Size	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	L1	L2	L3	ØD2	K	KI	Z	Ød1
M4	× 0.5	<b>TQ754256</b>	5	63	21	2.8	2.1	5	3	3.5
M5	× 0.5	<b>TQ754296</b>	5	70	25	3.5	2.7	6	3	4.5
M6	× 0.75	<b>TQ754326</b>	8	80	30	4.5	3.4	6	3	5.2
M6	× 0.5	<b>TQ754336</b>	5	80	30	4.5	3.4	6	3	5.5
M7	× 0.75	<b>TQ754356</b>	10	80	30	5.5	4.3	7	3	6.2
M8	× 1.0	<b>TQ754376</b>	10	90	36	6	4.9	8	3	7
M8	× 0.75	<b>TQ754386</b>	8	80	30	6	4.9	8	3	7.2
M10	× 1.25	<b>TQ754436</b>	16	100	40	7	5.5	8	3	8.8
M10	× 1.0	<b>TQ754446</b>	10	90	36	7	5.5	8	3	9
M10	× 0.75	<b>TQ754456</b>	10	90	36	7	5.5	8	3	9.2
M12	× 1.5	<b>TQ754516</b>	15	100	40	9	7	10	3	10.5
M12	× 1.25	<b>TQ754526</b>	15	100	40	9	7	10	3	10.8
M12	× 1.0	<b>TQ754536</b>	11	100	40	9	7	10	3	11
M14	× 1.5	<b>TB754556</b>	15	100	40	11	9	12	3	12.5
M14	× 1.25	<b>TB754566</b>	15	100	40	11	9	12	3	12.8
M14	× 1.0	<b>TB754576</b>	11	100	40	11	9	12	3	13
M16	× 1.5	<b>TB754616</b>	15	100	40	12	9	12	3	14.5
M16	× 1.0	<b>TB754626</b>	12	100	40	12	9	12	3	15
M18	× 1.5	<b>TB754676</b>	17	110	44	14	11	14	4	16.5
M18	× 1.0	<b>TB754686</b>	13	110	44	14	11	14	4	17
M20	× 1.5	<b>TB754726</b>	17	125	50	16	12	15	4	18.5
M20	× 1.0	<b>TB754736</b>	14	125	50	16	12	15	4	19
M22	× 1.5	<b>TB754766</b>	17	125	50	18	14.5	17	4	20.5
M22	× 1.0	<b>TB754776</b>	14	125	50	18	14.5	17	4	21
M24	× 2.0	<b>TB754796</b>	20	140	54	18	14.5	17	4	22

► HSS-PM (M4~M12/TQ754) and HSS-E (M14~M30/TB754)  
► The other coating (TiN, TiCN or TiAlN) is available on your request.

► NEXT PAGE

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
○	○	○	○	○	○	◎	◎							
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				○										

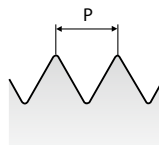
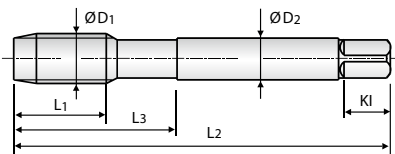
# MF SPIRAL FLUTE TAPS for Stainless Steels

ISO Metric fine threads DIN 13

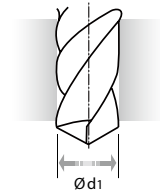
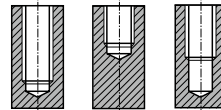
Vap  
Vap

**TQ754** SERIES  
**TB754** SERIES

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



Hole type 2.5xD



Material groups  
**VA**

**HSS-PM**  
up to M12

**HSS-E**  
over M12

**DIN 374**

**6H**

**60°**

**C**

**Vap**

**R45**

Unit : mm

Size	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	L1	L2	L3	ØD2	K	KI	Z	Ød1
M24	× 1.5	<b>TB754806</b>	20	140	54	18	14.5	17	4	22.5
M26	× 1.5	<b>TB754856</b>	20	140	54	18	14.5	17	4	24.5
M27	× 2.0	<b>TB754876</b>	20	140	54	20	16	19	4	25
M27	× 1.5	<b>TB754886</b>	20	140	54	20	16	19	4	25.5
M28	× 1.5	<b>TB754916</b>	20	140	54	20	16	19	4	26.5
M30	× 2.0	<b>TB754966</b>	22	150	57	22	18	21	4	28
M30	× 1.5	<b>TB754976</b>	22	150	57	22	18	21	4	28.5

► HSS-PM (M4~M12) and HSS-E (M14~M30)

► The other coating (TiN, TiCN or TiAlN) is available on your request.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
	○		○			◎	◎							
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				○										

## UNC SPIRAL FLUTE TAPS for Multi-Purpose

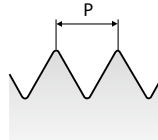
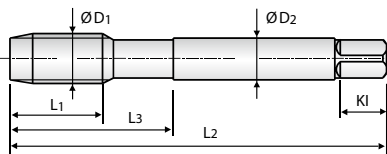
Unified coarse threads

Vap  
Bright  
TiN

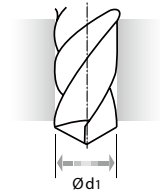
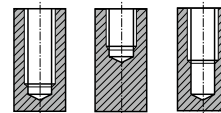
**TB824** SERIES  
**TC824** SERIES  
**TD824** SERIES



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



Hole type 2.5xD



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

Unit : mm

Size	TPI	EDP No.			Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Vap	Bright	TiN								
#4 - 40 UNC		<b>TB824162</b>	<b>TC824162</b>	<b>TD824162</b>	L1	L2	L3	ØD2	K	KI	Z	Ød1
#5 - 40 UNC		<b>TB824202</b>	<b>TC824202</b>	<b>TD824202</b>	6	56	18	3.5	2.7	6	3	2.3
#6 - 32 UNC		<b>TB824242</b>	<b>TC824242</b>	<b>TD824242</b>	7	56	18	3.5	2.7	6	3	2.6
#8 - 32 UNC		<b>TB824282</b>	<b>TC824282</b>	<b>TD824282</b>	7	56	20	4	3	6	3	2.85
#10 - 24 UNC		<b>TB824322</b>	<b>TC824322</b>	<b>TD824322</b>	8	63	21	4.5	3.4	6	3	3.5
#12 - 24 UNC		<b>TB824362</b>	<b>TC824362</b>	<b>TD824362</b>	10	70	25	6	4.9	8	3	3.9
1/4 - 20 UNC		<b>TB824402</b>	<b>TC824402</b>	<b>TD824402</b>	10	80	30	6	4.9	8	3	4.5
5/16 - 18 UNC		<b>TB824442</b>	<b>TC824442</b>	<b>TD824442</b>	13	80	30	7	5.5	8	3	5.2
3/8 - 16 UNC		<b>TB824482</b>	<b>TC824482</b>	<b>TD824482</b>	14	90	35	8	6.2	9	3	6.6
7/16 - 14 UNC		<b>TB824522</b>	<b>TC824522</b>	<b>TD824522</b>	16	100	39	9	7	10	3	8
1/2 - 13 UNC		<b>TB824562</b>	<b>TC824562</b>	<b>TD824562</b>	17	100	40	8	6.2	9	3	9.4
9/16 - 12 UNC		<b>TB824602</b>	<b>TC824602</b>	<b>TD824602</b>	20	110	44	9	7	10	3	10.75
5/8 - 11 UNC		<b>TB824642</b>	<b>TC824642</b>	<b>TD824642</b>	20	110	44	11	9	12	3	12.25
3/4 - 10 UNC		<b>TB824702</b>	<b>TC824702</b>	<b>TD824702</b>	22	110	44	12	9	12	3	13.5
7/8 - 9 UNC		<b>TB824742</b>	<b>TC824742</b>	<b>TD824742</b>	25	125	50	14	11	14	4	16.5
1 - 8 UNC		<b>TB824782</b>	<b>TC824782</b>	<b>TD824782</b>	27	140	54	18	14.5	17	4	19.5
		<b>TB824782</b>	<b>TC824782</b>	<b>TD824782</b>	30	160	60	20	16	19	4	22.25

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

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

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤10%	Al Si >10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			



# UNC SPIRAL FLUTE TAPS for Multi-Purpose

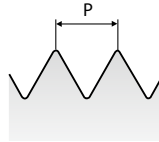
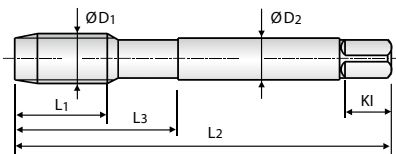
Unified coarse threads

Bright  
TiN

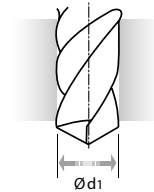
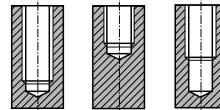
**TCE01** SERIES  
**TDE01** SERIES



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



Hole type 2.5xD



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

Unit : mm

Size	TPI	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Bright	TiN	L1	L2	L3	ØD2	K	KI	Z	Ød1
#4 - 40 UNC		TCE01162	TDE01162	6	56	18	3.5	2.7	6	3	2.3
#5 - 40 UNC		TCE01202	TDE01202	7	56	18	3.5	2.7	6	3	2.6
#6 - 32 UNC		TCE01242	TDE01242	7	56	20	4	3	6	3	2.85
#8 - 32 UNC		TCE01282	TDE01282	8	63	21	4.5	3.4	6	3	3.5
#10 - 24 UNC		TCE01322	TDE01322	10	70	25	6	4.9	8	3	3.9
#12 - 24 UNC		TCE01362	TDE01362	10	80	30	6	4.9	8	3	4.5
1/4 - 20 UNC		TCE01402	TDE01402	13	80	30	7	5.5	8	3	5.2
5/16 - 18 UNC		TCE01442	TDE01442	14	90	35	8	6.2	9	3	6.6
3/8 - 16 UNC		TCE01482	TDE01482	16	100	39	9	7	10	3	8
7/16 - 14 UNC		TCE01522	TDE01522	17	100	40	8	6.2	9	3	9.4
1/2 - 13 UNC		TCE01562	TDE01562	20	110	44	9	7	10	3	10.75
9/16 - 12 UNC		TCE01602	TDE01602	20	110	44	11	9	12	3	12.25
5/8 - 11 UNC		TCE01642	TDE01642	22	110	44	12	9	12	3	13.5
3/4 - 10 UNC		TCE01702	TDE01702	25	125	50	14	11	14	4	16.5
7/8 - 9 UNC		TCE01742	TDE01742	27	140	54	18	14.5	17	4	19.5
1 - 8 UNC		TCE01782	TDE01782	30	160	60	20	16	19	4	22.25

► DIN371 (#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.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# UNF SPIRAL FLUTE TAPS for Multi-Purpose

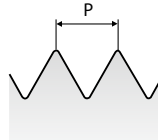
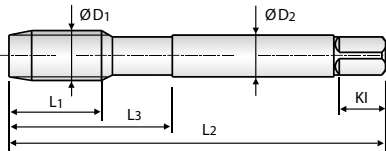
Unified fine threads

Vap  
Bright  
TiN

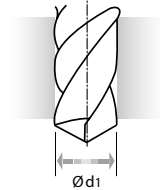
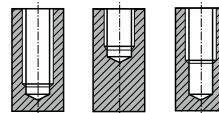
**TB864** SERIES  
**TC864** SERIES  
**TD864** SERIES



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



**Hole type** 2.5xD



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

Unit : mm

Size	TPI	EDP No.			Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Vap	Bright	TiN								
#4 - 48 UNF		<b>TB864182</b>	<b>TC864182</b>	<b>TD864182</b>	L1	L2	L3	ØD2	K	KI	Z	Ød1
#5 - 44 UNF		<b>TB864222</b>	<b>TC864222</b>	<b>TD864222</b>	6	56	18	3.5	2.7	6	3	2.4
#6 - 40 UNF		<b>TB864262</b>	<b>TC864262</b>	<b>TD864262</b>	7	56	18	3.5	2.7	6	3	2.7
#8 - 36 UNF		<b>TB864302</b>	<b>TC864302</b>	<b>TD864302</b>	7	56	20	4	3	6	3	3
#10 - 32 UNF		<b>TB864342</b>	<b>TC864342</b>	<b>TD864342</b>	8	63	21	4.5	3.4	6	3	3.5
#12 - 28 UNF		<b>TB864382</b>	<b>TC864382</b>	<b>TD864382</b>	10	70	25	6	4.9	8	3	4.1
1/4 - 28 UNF		<b>TB864422</b>	<b>TC864422</b>	<b>TD864422</b>	10	80	30	6	4.9	8	3	4.7
5/16 - 24 UNF		<b>TB864462</b>	<b>TC864462</b>	<b>TD864462</b>	10	80	30	7	5.5	8	3	5.5
3/8 - 24 UNF		<b>TB864502</b>	<b>TC864502</b>	<b>TD864502</b>	10	90	35	8	6.2	9	3	6.9
7/16 - 20 UNF		<b>TB864542</b>	<b>TC864542</b>	<b>TD864542</b>	10	100	39	9	7	10	3	8.5
1/2 - 20 UNF		<b>TB864582</b>	<b>TC864582</b>	<b>TD864582</b>	13	100	40	8	6.2	9	3	9.9
9/16 - 18 UNF		<b>TB864622</b>	<b>TC864622</b>	<b>TD864622</b>	13	100	40	9	7	10	3	11.5
5/8 - 18 UNF		<b>TB864662</b>	<b>TC864662</b>	<b>TD864662</b>	15	100	40	11	9	12	3	12.9
3/4 - 16 UNF		<b>TB864722</b>	<b>TC864722</b>	<b>TD864722</b>	15	100	40	12	9	12	3	14.5
7/8 - 14 UNF		<b>TB864762</b>	<b>TC864762</b>	<b>TD864762</b>	17	110	44	14	11	14	4	17.5
1 - 12 UNF		<b>TB864802</b>	<b>TC864802</b>	<b>TD864802</b>	17	125	50	18	14.5	17	4	20.5
		<b>TB864802</b>	<b>TC864802</b>	<b>TD864802</b>	20	140	54	20	16	19	4	23.25

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

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤10%	Al Si >10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# UNF SPIRAL FLUTE TAPS for Multi-Purpose

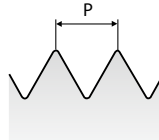
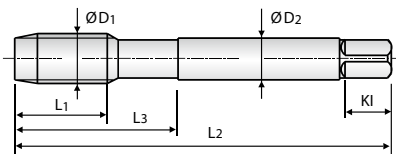
Unified fine threads

Bright  
TiN

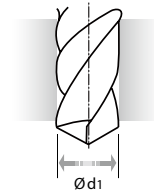
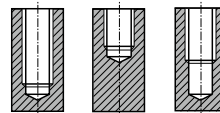
**TCE02** SERIES  
**TDE02** SERIES



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



Hole type 2.5xD



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

Unit : mm

Size	TPI	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Bright	TiN	L1	L2	L3	ØD2	K	KI	Z	Ød1
#4 - 48 UNF		TCE02182	TDE02182	6	56	18	3.5	2.7	6	3	2.4
#5 - 44 UNF		TCE02222	TDE02222	7	56	18	3.5	2.7	6	3	2.7
#6 - 40 UNF		TCE02262	TDE02262	7	56	20	4	3	6	3	3
#8 - 36 UNF		TCE02302	TDE02302	8	63	21	4.5	3.4	6	3	3.5
#10 - 32 UNF		TCE02342	TDE02342	10	70	25	6	4.9	8	3	4.1
#12 - 28 UNF		TCE02382	TDE02382	10	80	30	6	4.9	8	3	4.7
1/4 - 28 UNF		TCE02422	TDE02422	10	80	30	7	5.5	8	3	5.5
5/16 - 24 UNF		TCE02462	TDE02462	10	90	35	8	6.2	9	3	6.9
3/8 - 24 UNF		TCE02502	TDE02502	10	100	39	9	7	10	3	8.5
7/16 - 20 UNF		TCE02542	TDE02542	13	100	40	8	6.2	9	3	9.9
1/2 - 20 UNF		TCE02582	TDE02582	13	100	40	9	7	10	3	11.5
9/16 - 18 UNF		TCE02622	TDE02622	15	100	40	11	9	12	3	12.9
5/8 - 18 UNF		TCE02662	TDE02662	15	100	40	12	9	12	3	14.5
3/4 - 16 UNF		TCE02722	TDE02722	17	110	44	14	11	14	4	17.5
7/8 - 14 UNF		TCE02762	TDE02762	17	125	50	18	14.5	17	4	20.5
1 - 12 UNF		TCE02802	TDE02802	20	140	54	20	16	19	4	23.25

► 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.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

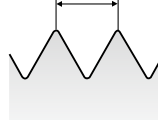
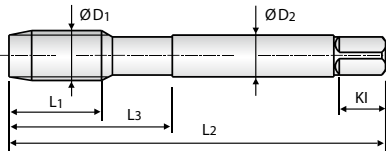
## M SPIRAL POINT TAPS for Multi-Purpose ISO Metric coarse threads DIN 13

Vap  
Bright  
TiN

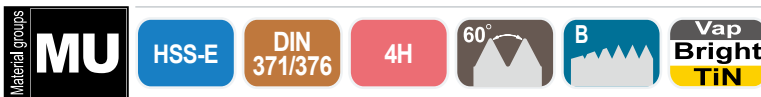
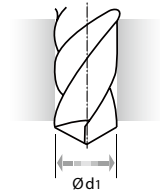
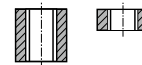
**TBJ05** SERIES  
**TCJ05** SERIES  
**TDJ05** SERIES



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



Hole type 3.0xD



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	KI	Z	Ød1
M2	× 0.4	<b>TBJ05136</b>	<b>TCJ05136</b>	<b>TDJ05136</b>	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	<b>TBJ05156</b>	<b>TCJ05156</b>	<b>TDJ05156</b>	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	<b>TBJ05196</b>	<b>TCJ05196</b>	<b>TDJ05196</b>	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	<b>TBJ05176</b>	<b>TCJ05176</b>	<b>TDJ05176</b>	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	<b>TBJ05496</b>	<b>TCJ05496</b>	<b>TDJ05496</b>	9	50	15	2.8	2.1	5	3	2.1
M3	× 0.5	<b>TBJ05206</b>	<b>TCJ05206</b>	<b>TDJ05206</b>	11	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	<b>TBJ05226</b>	<b>TCJ05226</b>	<b>TDJ05226</b>	12	56	20	4	3	6	3	2.9
M4	× 0.7	<b>TBJ05246</b>	<b>TCJ05246</b>	<b>TDJ05246</b>	13	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	<b>TBJ05266</b>	<b>TCJ05266</b>	<b>TDJ05266</b>	14	70	25	6	4.9	8	3	3.7
M5	× 0.8	<b>TBJ05286</b>	<b>TCJ05286</b>	<b>TDJ05286</b>	15	70	25	6	4.9	8	3	4.2
M6	× 1.0	<b>TBJ05316</b>	<b>TCJ05316</b>	<b>TDJ05316</b>	17	80	30	6	4.9	8	3	5
M7	× 1.0	<b>TBJ05346</b>	<b>TCJ05346</b>	<b>TDJ05346</b>	17	80	30	7	5.5	8	3	6
M8	× 1.25	<b>TBJ05366</b>	<b>TCJ05366</b>	<b>TDJ05366</b>	20	90	35	8	6.2	9	3	6.8
M9	× 1.25	<b>TBJ05396</b>	<b>TCJ05396</b>	<b>TDJ05396</b>	20	90	35	9	7	10	3	7.8
M10	× 1.5	<b>TBJ05426</b>	<b>TCJ05426</b>	<b>TDJ05426</b>	22	100	39	10	8	11	3	8.5
M11	× 1.5	<b>TBJ05466</b>	<b>TCJ05466</b>	<b>TDJ05466</b>	22	100	40	8	6.2	9	3	9.5
M12	× 1.75	<b>TBJ05506</b>	<b>TCJ05506</b>	<b>TDJ05506</b>	24	110	44	9	7	10	3	10.2
M14	× 2.0	<b>TBJ05546</b>	<b>TCJ05546</b>	<b>TDJ05546</b>	26	110	44	11	9	12	3	12
M16	× 2.0	<b>TBJ05606</b>	<b>TCJ05606</b>	<b>TDJ05606</b>	27	110	44	12	9	12	3	14
M18	× 2.5	<b>TBJ05656</b>	<b>TCJ05656</b>	<b>TDJ05656</b>	30	125	50	14	11	14	4	15.5
M20	× 2.5	<b>TBJ05706</b>	<b>TCJ05706</b>	<b>TDJ05706</b>	32	140	54	16	12	15	4	17.5
M22	× 2.5	<b>TBJ05746</b>	<b>TCJ05746</b>	<b>TDJ05746</b>	32	140	54	18	14.5	17	4	19.5
M24	× 3.0	<b>TBJ05786</b>	<b>TCJ05786</b>	<b>TDJ05786</b>	34	160	60	18	14.5	17	4	21
M27	× 3.0	<b>TBJ05866</b>	<b>TCJ05866</b>	<b>TDJ05866</b>	36	160	60	20	16	19	4	24
M30	× 3.5	<b>TBJ05946</b>	<b>TCJ05946</b>	<b>TDJ05946</b>	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.

Unit: N/mm<sup>2</sup>

◎:Excellent ○:Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si≤10%	Al Si>10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# M SPIRAL POINT TAPS for Multi-Purpose

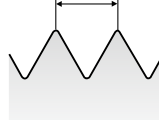
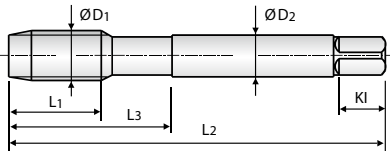
## ISO Metric coarse threads DIN 13

Vap  
Bright  
TiN

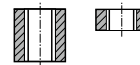
**TB814** SERIES  
**TC814** SERIES  
**TD814** SERIES



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



Hole type 3.0xD



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

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	KI	Z	Ød1
M2	× 0.4	<b>TB814136</b>	<b>TC814136</b>	<b>TD814136</b>	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	<b>TB814156</b>	<b>TC814156</b>	<b>TD814156</b>	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	<b>TB814196</b>	<b>TC814196</b>	<b>TD814196</b>	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	<b>TB814176</b>	<b>TC814176</b>	<b>TD814176</b>	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	<b>TB814496</b>	<b>TC814496</b>	<b>TD814496</b>	9	50	15	2.8	2.1	5	3	2.1
M3	× 0.5	<b>TB814206</b>	<b>TC814206</b>	<b>TD814206</b>	11	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	<b>TB814226</b>	<b>TC814226</b>	<b>TD814226</b>	12	56	20	4	3	6	3	2.9
M4	× 0.7	<b>TB814246</b>	<b>TC814246</b>	<b>TD814246</b>	13	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	<b>TB814266</b>	<b>TC814266</b>	<b>TD814266</b>	14	70	25	6	4.9	8	3	3.7
M5	× 0.8	<b>TB814286</b>	<b>TC814286</b>	<b>TD814286</b>	15	70	25	6	4.9	8	3	4.2
M6	× 1.0	<b>TB814316</b>	<b>TC814316</b>	<b>TD814316</b>	17	80	30	6	4.9	8	3	5
M7	× 1.0	<b>TB814346</b>	<b>TC814346</b>	<b>TD814346</b>	17	80	30	7	5.5	8	3	6
M8	× 1.25	<b>TB814366</b>	<b>TC814366</b>	<b>TD814366</b>	20	90	35	8	6.2	9	3	6.8
M9	× 1.25	<b>TB814396</b>	<b>TC814396</b>	<b>TD814396</b>	20	90	35	9	7	10	3	7.8
M10	× 1.5	<b>TB814426</b>	<b>TC814426</b>	<b>TD814426</b>	22	100	39	10	8	11	3	8.5
M11	× 1.5	<b>TB814466</b>	<b>TC814466</b>	<b>TD814466</b>	22	100	40	8	6.2	9	3	9.5
M12	× 1.75	<b>TB814506</b>	<b>TC814506</b>	<b>TD814506</b>	24	110	44	9	7	10	3	10.2
M14	× 2.0	<b>TB814546</b>	<b>TC814546</b>	<b>TD814546</b>	26	110	44	11	9	12	3	12
M16	× 2.0	<b>TB814606</b>	<b>TC814606</b>	<b>TD814606</b>	27	110	44	12	9	12	3	14
M18	× 2.5	<b>TB814656</b>	<b>TC814656</b>	<b>TD814656</b>	30	125	50	14	11	14	4	15.5
M20	× 2.5	<b>TB814706</b>	<b>TC814706</b>	<b>TD814706</b>	32	140	54	16	12	15	4	17.5
M22	× 2.5	<b>TB814746</b>	<b>TC814746</b>	<b>TD814746</b>	32	140	54	18	14.5	17	4	19.5
M24	× 3.0	<b>TB814786</b>	<b>TC814786</b>	<b>TD814786</b>	34	160	60	18	14.5	17	4	21
M27	× 3.0	<b>TB814866</b>	<b>TC814866</b>	<b>TD814866</b>	36	160	60	20	16	19	4	24
M30	× 3.5	<b>TB814946</b>	<b>TC814946</b>	<b>TD814946</b>	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.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

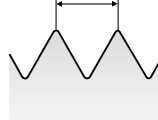
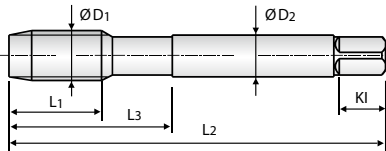
## M SPIRAL POINT TAPS for Multi-Purpose ISO Metric coarse threads DIN 13

Vap  
Bright  
TiN

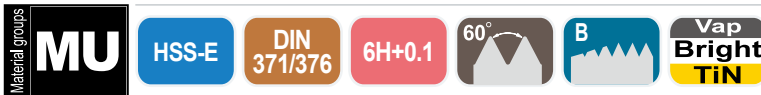
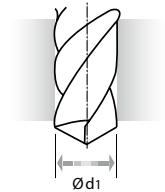
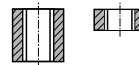
**TBJ06** SERIES  
**TCJ06** SERIES  
**TDJ06** SERIES



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



Hole type 3.0xD



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	<b>TBJ06136</b>	<b>TCJ06136</b>	<b>TDJ06136</b>	8	45	13	2.8	2.1	5	3	1.7
M2.2	× 0.45	<b>TBJ06156</b>	<b>TCJ06156</b>	<b>TDJ06156</b>	8	45	13	2.8	2.1	5	3	1.85
M2.3	× 0.4	<b>TBJ06196</b>	<b>TCJ06196</b>	<b>TDJ06196</b>	8	45	13	2.8	2.1	5	3	2
M2.5	× 0.45	<b>TBJ06176</b>	<b>TCJ06176</b>	<b>TDJ06176</b>	9	50	15	2.8	2.1	5	3	2.15
M2.6	× 0.45	<b>TBJ06496</b>	<b>TCJ06496</b>	<b>TDJ06496</b>	9	50	15	2.8	2.1	5	3	2.2
M3	× 0.5	<b>TBJ06206</b>	<b>TCJ06206</b>	<b>TDJ06206</b>	11	56	18	3.5	2.7	6	3	2.6
M3.5	× 0.6	<b>TBJ06226</b>	<b>TCJ06226</b>	<b>TDJ06226</b>	12	56	20	4	3	6	3	3
M4	× 0.7	<b>TBJ06246</b>	<b>TCJ06246</b>	<b>TDJ06246</b>	13	63	21	4.5	3.4	6	3	3.4
M4.5	× 0.75	<b>TBJ06266</b>	<b>TCJ06266</b>	<b>TDJ06266</b>	14	70	25	6	4.9	8	3	3.8
M5	× 0.8	<b>TBJ06286</b>	<b>TCJ06286</b>	<b>TDJ06286</b>	15	70	25	6	4.9	8	3	4.3
M6	× 1.0	<b>TBJ06316</b>	<b>TCJ06316</b>	<b>TDJ06316</b>	17	80	30	6	4.9	8	3	5.1
M7	× 1.0	<b>TBJ06346</b>	<b>TCJ06346</b>	<b>TDJ06346</b>	17	80	30	7	5.5	8	3	6.1
M8	× 1.25	<b>TBJ06366</b>	<b>TCJ06366</b>	<b>TDJ06366</b>	20	90	35	8	6.2	9	3	6.9
M9	× 1.25	<b>TBJ06396</b>	<b>TCJ06396</b>	<b>TDJ06396</b>	20	90	35	9	7	10	3	7.9
M10	× 1.5	<b>TBJ06426</b>	<b>TCJ06426</b>	<b>TDJ06426</b>	22	100	39	10	8	11	3	8.6
M11	× 1.5	<b>TBJ06466</b>	<b>TCJ06466</b>	<b>TDJ06466</b>	22	100	40	8	6.2	9	3	9.6
M12	× 1.75	<b>TBJ06506</b>	<b>TCJ06506</b>	<b>TDJ06506</b>	24	110	44	9	7	10	3	10.3
M14	× 2.0	<b>TBJ06546</b>	<b>TCJ06546</b>	<b>TDJ06546</b>	26	110	44	11	9	12	3	12.1
M16	× 2.0	<b>TBJ06606</b>	<b>TCJ06606</b>	<b>TDJ06606</b>	27	110	44	12	9	12	3	14.1
M18	× 2.5	<b>TBJ06656</b>	<b>TCJ06656</b>	<b>TDJ06656</b>	30	125	50	14	11	14	4	15.6
M20	× 2.5	<b>TBJ06706</b>	<b>TCJ06706</b>	<b>TDJ06706</b>	32	140	54	16	12	15	4	17.6
M22	× 2.5	<b>TBJ06746</b>	<b>TCJ06746</b>	<b>TDJ06746</b>	32	140	54	18	14.5	17	4	19.6
M24	× 3.0	<b>TBJ06786</b>	<b>TCJ06786</b>	<b>TDJ06786</b>	34	160	60	18	14.5	17	4	21.1
M27	× 3.0	<b>TBJ06866</b>	<b>TCJ06866</b>	<b>TDJ06866</b>	36	160	60	20	16	19	4	24.1
M30	× 3.5	<b>TBJ06946</b>	<b>TCJ06946</b>	<b>TDJ06946</b>	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.

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si≤10%	Al Si>10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# M SPIRAL POINT TAPS for Multi-Purpose

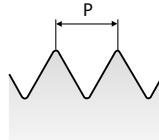
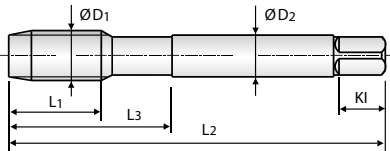
## ISO Metric coarse threads DIN 13

Vap  
Bright  
TiN

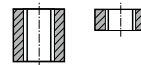
**TBJ07** SERIES  
**TCJ07** SERIES  
**TDJ07** SERIES



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



Hole type 3.0xD



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

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	KI	Z	Ød1
M2	× 0.4	<b>TBJ07136</b>	<b>TCJ07136</b>	<b>TDJ07136</b>	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	<b>TBJ07156</b>	<b>TCJ07156</b>	<b>TDJ07156</b>	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	<b>TBJ07196</b>	<b>TCJ07196</b>	<b>TDJ07196</b>	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	<b>TBJ07176</b>	<b>TCJ07176</b>	<b>TDJ07176</b>	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	<b>TBJ07496</b>	<b>TCJ07496</b>	<b>TDJ07496</b>	9	50	15	2.8	2.1	5	3	2.1
M3	× 0.5	<b>TBJ07206</b>	<b>TCJ07206</b>	<b>TDJ07206</b>	11	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	<b>TBJ07226</b>	<b>TCJ07226</b>	<b>TDJ07226</b>	12	56	20	4	3	6	3	2.9
M4	× 0.7	<b>TBJ07246</b>	<b>TCJ07246</b>	<b>TDJ07246</b>	13	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	<b>TBJ07266</b>	<b>TCJ07266</b>	<b>TDJ07266</b>	14	70	25	6	4.9	8	3	3.7
M5	× 0.8	<b>TBJ07286</b>	<b>TCJ07286</b>	<b>TDJ07286</b>	15	70	25	6	4.9	8	3	4.2
M6	× 1.0	<b>TBJ07316</b>	<b>TCJ07316</b>	<b>TDJ07316</b>	17	80	30	6	4.9	8	3	5
M7	× 1.0	<b>TBJ07346</b>	<b>TCJ07346</b>	<b>TDJ07346</b>	17	80	30	7	5.5	8	3	6
M8	× 1.25	<b>TBJ07366</b>	<b>TCJ07366</b>	<b>TDJ07366</b>	20	90	35	8	6.2	9	3	6.8
M9	× 1.25	<b>TBJ07396</b>	<b>TCJ07396</b>	<b>TDJ07396</b>	20	90	35	9	7	10	3	7.8
M10	× 1.5	<b>TBJ07426</b>	<b>TCJ07426</b>	<b>TDJ07426</b>	22	100	39	10	8	11	3	8.5
M11	× 1.5	<b>TBJ07466</b>	<b>TCJ07466</b>	<b>TDJ07466</b>	22	100	40	8	6.2	9	3	9.5
M12	× 1.75	<b>TBJ07506</b>	<b>TCJ07506</b>	<b>TDJ07506</b>	24	110	44	9	7	10	3	10.2
M14	× 2.0	<b>TBJ07546</b>	<b>TCJ07546</b>	<b>TDJ07546</b>	26	110	44	11	9	12	3	12
M16	× 2.0	<b>TBJ07606</b>	<b>TCJ07606</b>	<b>TDJ07606</b>	27	110	44	12	9	12	3	14
M18	× 2.5	<b>TBJ07656</b>	<b>TCJ07656</b>	<b>TDJ07656</b>	30	125	50	14	11	14	4	15.5
M20	× 2.5	<b>TBJ07706</b>	<b>TCJ07706</b>	<b>TDJ07706</b>	32	140	54	16	12	15	4	17.5
M22	× 2.5	<b>TBJ07746</b>	<b>TCJ07746</b>	<b>TDJ07746</b>	32	140	54	18	14.5	17	4	19.5
M24	× 3.0	<b>TBJ07786</b>	<b>TCJ07786</b>	<b>TDJ07786</b>	34	160	60	18	14.5	17	4	21
M27	× 3.0	<b>TBJ07866</b>	<b>TCJ07866</b>	<b>TDJ07866</b>	36	160	60	20	16	19	4	24
M30	× 3.5	<b>TBJ07946</b>	<b>TCJ07946</b>	<b>TDJ07946</b>	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.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

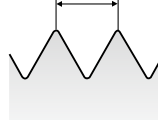
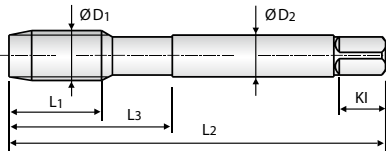
## M SPIRAL POINT TAPS for Multi-Purpose ISO Metric coarse threads DIN 13

Vap  
Bright  
TiN

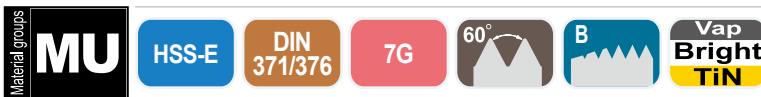
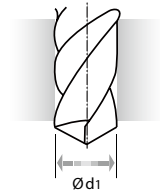
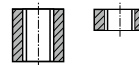
**TBJ08** SERIES  
**TCJ08** SERIES  
**TDJ08** SERIES



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



Hole type 3.0xD



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	KI	Z	Ød1
M2	× 0.4	<b>TBJ08136</b>	<b>TCJ08136</b>	<b>TDJ08136</b>	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	<b>TBJ08156</b>	<b>TCJ08156</b>	<b>TDJ08156</b>	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	<b>TBJ08196</b>	<b>TCJ08196</b>	<b>TDJ08196</b>	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	<b>TBJ08176</b>	<b>TCJ08176</b>	<b>TDJ08176</b>	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	<b>TBJ08496</b>	<b>TCJ08496</b>	<b>TDJ08496</b>	9	50	15	2.8	2.1	5	3	2.1
M3	× 0.5	<b>TBJ08206</b>	<b>TCJ08206</b>	<b>TDJ08206</b>	11	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	<b>TBJ08226</b>	<b>TCJ08226</b>	<b>TDJ08226</b>	12	56	20	4	3	6	3	2.9
M4	× 0.7	<b>TBJ08246</b>	<b>TCJ08246</b>	<b>TDJ08246</b>	13	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	<b>TBJ08266</b>	<b>TCJ08266</b>	<b>TDJ08266</b>	14	70	25	6	4.9	8	3	3.7
M5	× 0.8	<b>TBJ08286</b>	<b>TCJ08286</b>	<b>TDJ08286</b>	15	70	25	6	4.9	8	3	4.2
M6	× 1.0	<b>TBJ08316</b>	<b>TCJ08316</b>	<b>TDJ08316</b>	17	80	30	6	4.9	8	3	5
M7	× 1.0	<b>TBJ08346</b>	<b>TCJ08346</b>	<b>TDJ08346</b>	17	80	30	7	5.5	8	3	6
M8	× 1.25	<b>TBJ08366</b>	<b>TCJ08366</b>	<b>TDJ08366</b>	20	90	35	8	6.2	9	3	6.8
M9	× 1.25	<b>TBJ08396</b>	<b>TCJ08396</b>	<b>TDJ08396</b>	20	90	35	9	7	10	3	7.8
M10	× 1.5	<b>TBJ08426</b>	<b>TCJ08426</b>	<b>TDJ08426</b>	22	100	39	10	8	11	3	8.5
M11	× 1.5	<b>TBJ08466</b>	<b>TCJ08466</b>	<b>TDJ08466</b>	22	100	40	8	6.2	9	3	9.5
M12	× 1.75	<b>TBJ08506</b>	<b>TCJ08506</b>	<b>TDJ08506</b>	24	110	44	9	7	10	3	10.2
M14	× 2.0	<b>TBJ08546</b>	<b>TCJ08546</b>	<b>TDJ08546</b>	26	110	44	11	9	12	3	12
M16	× 2.0	<b>TBJ08606</b>	<b>TCJ08606</b>	<b>TDJ08606</b>	27	110	44	12	9	12	3	14
M18	× 2.5	<b>TBJ08656</b>	<b>TCJ08656</b>	<b>TDJ08656</b>	30	125	50	14	11	14	4	15.5
M20	× 2.5	<b>TBJ08706</b>	<b>TCJ08706</b>	<b>TDJ08706</b>	32	140	54	16	12	15	4	17.5
M22	× 2.5	<b>TBJ08746</b>	<b>TCJ08746</b>	<b>TDJ08746</b>	32	140	54	18	14.5	17	4	19.5
M24	× 3.0	<b>TBJ08786</b>	<b>TCJ08786</b>	<b>TDJ08786</b>	34	160	60	18	14.5	17	4	21
M27	× 3.0	<b>TBJ08866</b>	<b>TCJ08866</b>	<b>TDJ08866</b>	36	160	60	20	16	19	4	24
M30	× 3.5	<b>TBJ08946</b>	<b>TCJ08946</b>	<b>TDJ08946</b>	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.

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si≤10%	Al Si>10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			



# MF SPIRAL POINT TAPS for Multi-Purpose

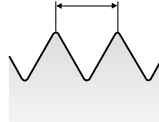
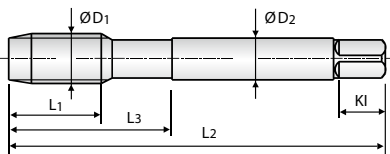
ISO Metric fine threads DIN 13

Vap  
Bright  
TiN

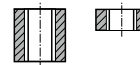
**TB854** SERIES  
**TC854** SERIES  
**TD854** SERIES



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



Hole type 3.0xD



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

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	KI	Z	Ød1
M4	× 0.5	<b>TB854256</b>	<b>TC854256</b>	<b>TD854256</b>	10	63	21	2.8	2.1	5	3	3.5
M5	× 0.5	<b>TB854296</b>	<b>TC854296</b>	<b>TD854296</b>	11	70	25	3.5	2.7	6	3	4.5
M6	× 0.75	<b>TB854326</b>	<b>TC854326</b>	<b>TD854326</b>	13	80	30	4.5	3.4	6	3	5.2
M6	× 0.5	<b>TB854336</b>	<b>TC854336</b>	<b>TD854336</b>	13	80	30	4.5	3.4	6	3	5.5
M7	× 0.75	<b>TB854356</b>	<b>TC854356</b>	<b>TD854356</b>	14	80	30	5.5	4.3	7	3	6.2
M8	× 1.0	<b>TB854376</b>	<b>TC854376</b>	<b>TD854376</b>	17	90	36	6	4.9	8	3	7
M8	× 0.75	<b>TB854386</b>	<b>TC854386</b>	<b>TD854386</b>	14	80	36	6	4.9	8	3	7.2
M10	× 1.25	<b>TB854436</b>	<b>TC854436</b>	<b>TD854436</b>	22	100	40	7	5.5	8	3	8.8
M10	× 1.0	<b>TB854446</b>	<b>TC854446</b>	<b>TD854446</b>	18	90	40	7	5.5	8	3	9
M10	× 0.75	<b>TB854456</b>	<b>TC854456</b>	<b>TD854456</b>	18	90	40	7	5.5	8	3	9.2
M12	× 1.5	<b>TB854516</b>	<b>TC854516</b>	<b>TD854516</b>	22	100	40	9	7	10	3	10.5
M12	× 1.25	<b>TB854526</b>	<b>TC854526</b>	<b>TD854526</b>	22	100	40	9	7	10	3	10.8
M12	× 1.0	<b>TB854536</b>	<b>TC854536</b>	<b>TD854536</b>	18	100	40	9	7	10	3	11
M14	× 1.5	<b>TB854556</b>	<b>TC854556</b>	<b>TD854556</b>	22	100	40	11	9	12	3	12.5
M14	× 1.25	<b>TB854566</b>	<b>TC854566</b>	<b>TD854566</b>	22	100	40	11	9	12	3	12.8
M14	× 1.0	<b>TB854576</b>	<b>TC854576</b>	<b>TD854576</b>	22	100	40	11	9	12	3	13
M16	× 1.5	<b>TB854616</b>	<b>TC854616</b>	<b>TD854616</b>	22	100	40	12	9	12	3	14.5
M16	× 1.0	<b>TB854626</b>	<b>TC854626</b>	<b>TD854626</b>	18	100	40	12	9	12	3	15
M18	× 1.5	<b>TB854676</b>	<b>TC854676</b>	<b>TD854676</b>	25	110	44	14	11	14	4	16.5
M18	× 1.0	<b>TB854686</b>	<b>TC854686</b>	<b>TD854686</b>	20	110	44	14	11	14	4	17
M20	× 1.5	<b>TB854726</b>	<b>TC854726</b>	<b>TD854726</b>	25	125	50	16	12	15	4	18.5
M20	× 1.0	<b>TB854736</b>	<b>TC854736</b>	<b>TD854736</b>	20	125	50	16	12	15	4	19
M22	× 1.5	<b>TB854766</b>	<b>TC854766</b>	<b>TD854766</b>	25	125	50	18	14.5	17	4	20.5
M22	× 1.0	<b>TB854776</b>	<b>TC854776</b>	<b>TD854776</b>	20	125	50	18	14.5	17	4	21

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

► NEXT PAGE

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

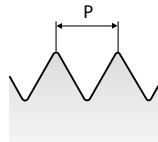
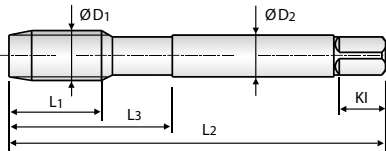
## MF SPIRAL POINT TAPS for Multi-Purpose ISO Metric fine threads DIN 13

Vap  
Bright  
TiN

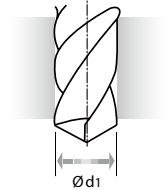
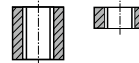
**TB854** SERIES  
**TC854** SERIES  
**TD854** SERIES



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



**Hole type** 3.0xD



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

Unit : mm

Size	Pitch	EDP No.			Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Vap	Bright	TiN								
M24	× 2.0	<b>TB854796</b>	<b>TC854796</b>	<b>TD854796</b>	L1	L2	L3	ØD2	K	KI	Z	Ød1
M24	× 1.5	<b>TB854806</b>	<b>TC854806</b>	<b>TD854806</b>	27	140	54	18	14.5	17	4	22
M24	× 1.5	<b>TB854806</b>	<b>TC854806</b>	<b>TD854806</b>	27	140	54	18	14.5	17	4	22.5
M26	× 1.5	<b>TB854856</b>	<b>TC854856</b>	<b>TD854856</b>	28	140	54	18	14.5	17	4	24.5
M27	× 2.0	<b>TB854876</b>	<b>TC854876</b>	<b>TD854876</b>	28	140	54	20	16	19	4	25
M27	× 1.5	<b>TB854886</b>	<b>TC854886</b>	<b>TD854886</b>	28	140	54	20	16	19	4	25.5
M28	× 1.5	<b>TB854916</b>	<b>TC854916</b>	<b>TD854916</b>	28	140	54	20	16	19	4	26.5
M30	× 2.0	<b>TB854966</b>	<b>TC854966</b>	<b>TD854966</b>	30	150	57	22	18	21	4	28
M30	× 1.5	<b>TB854976</b>	<b>TC854976</b>	<b>TD854976</b>	30	150	57	22	18	21	4	28.5

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

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# MF SPIRAL POINT TAPS for Multi-Purpose

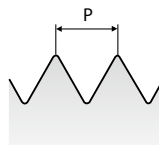
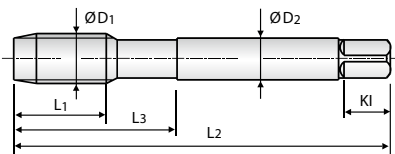
ISO Metric fine threads DIN 13

Bright  
TiN

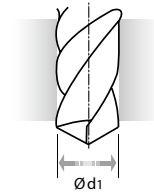
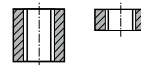
**TCJ09** SERIES  
**TDJ09** SERIES



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



**Hole type** 3.0xD



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

Unit : mm

Size	Pitch	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Bright	TiN								
ØD1	P			L1	L2	L3	ØD2	K	KI	Z	Ød1
M4	× 0.5	<b>TCJ09256</b>	<b>TDJ09256</b>	10	63	21	2.8	2.1	5	3	3.5
M5	× 0.5	<b>TCJ09296</b>	<b>TDJ09296</b>	11	70	25	3.5	2.7	6	3	4.5
M6	× 0.75	<b>TCJ09326</b>	<b>TDJ09326</b>	13	80	30	4.5	3.4	6	3	5.2
M6	× 0.5	<b>TCJ09336</b>	<b>TDJ09336</b>	13	80	30	4.5	3.4	6	3	5.5
M7	× 0.75	<b>TCJ09356</b>	<b>TDJ09356</b>	14	80	30	5.5	4.3	7	3	6.2
M8	× 1.0	<b>TCJ09376</b>	<b>TDJ09376</b>	17	90	36	6	4.9	8	3	7
M8	× 0.75	<b>TCJ09386</b>	<b>TDJ09386</b>	14	80	36	6	4.9	8	3	7.2
M10	× 1.25	<b>TCJ09436</b>	<b>TDJ09436</b>	22	100	40	7	5.5	8	3	8.8
M10	× 1.0	<b>TCJ09446</b>	<b>TDJ09446</b>	18	90	40	7	5.5	8	3	9
M10	× 0.75	<b>TCJ09456</b>	<b>TDJ09456</b>	18	90	40	7	5.5	8	3	9.2
M12	× 1.5	<b>TCJ09516</b>	<b>TDJ09516</b>	22	100	40	9	7	10	3	10.5
M12	× 1.25	<b>TCJ09526</b>	<b>TDJ09526</b>	22	100	40	9	7	10	3	10.8
M12	× 1.0	<b>TCJ09536</b>	<b>TDJ09536</b>	18	100	40	9	7	10	3	11
M14	× 1.5	<b>TCJ09556</b>	<b>TDJ09556</b>	22	100	40	11	9	12	3	12.5
M14	× 1.25	<b>TCJ09566</b>	<b>TDJ09566</b>	22	100	40	11	9	12	3	12.8
M14	× 1.0	<b>TCJ09576</b>	<b>TDJ09576</b>	22	100	40	11	9	12	3	13
M16	× 1.5	<b>TCJ09616</b>	<b>TDJ09616</b>	22	100	40	12	9	12	3	14.5
M16	× 1.0	<b>TCJ09626</b>	<b>TDJ09626</b>	18	100	40	12	9	12	3	15
M18	× 1.5	<b>TCJ09676</b>	<b>TDJ09676</b>	25	110	44	14	11	14	4	16.5
M18	× 1.0	<b>TCJ09686</b>	<b>TDJ09686</b>	20	110	44	14	11	14	4	17
M20	× 1.5	<b>TCJ09726</b>	<b>TDJ09726</b>	25	125	50	16	12	15	4	18.5
M20	× 1.0	<b>TCJ09736</b>	<b>TDJ09736</b>	20	125	50	16	12	15	4	19
M22	× 1.5	<b>TCJ09766</b>	<b>TDJ09766</b>	25	125	50	18	14.5	17	4	20.5
M22	× 1.0	<b>TCJ09776</b>	<b>TDJ09776</b>	20	125	50	18	14.5	17	4	21

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

► NEXT PAGE

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# MF SPIRAL POINT TAPS for Multi-Purpose

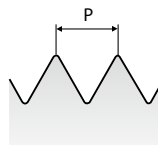
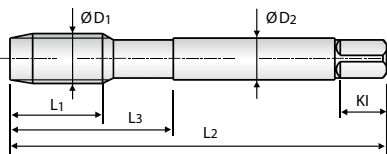
ISO Metric fine threads DIN 13

Bright  
TiN

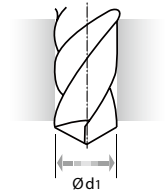
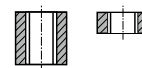
**TCJ09** SERIES  
**TDJ09** SERIES



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



Hole type 3.0xD



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

Unit : mm

Size	Pitch	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Bright	TiN								
M24	× 2.0	<b>TCJ09796</b>	<b>TDJ09796</b>	L1	L2	L3	ØD2	K	KI	Z	Ød1
M24	× 1.5	<b>TCJ09806</b>	<b>TDJ09806</b>	27	140	54	18	14.5	17	4	22
M26	× 1.5	<b>TCJ09856</b>	<b>TDJ09856</b>	27	140	54	18	14.5	17	4	22.5
M27	× 2.0	<b>TCJ09876</b>	<b>TDJ09876</b>	28	140	54	18	14.5	17	4	24.5
M27	× 1.5	<b>TCJ09886</b>	<b>TDJ09886</b>	28	140	54	20	16	19	4	25
M27	× 2.0	<b>TCJ09876</b>	<b>TDJ09876</b>	28	140	54	20	16	19	4	25.5
M28	× 1.5	<b>TCJ09916</b>	<b>TDJ09916</b>	28	140	54	20	16	19	4	26.5
M30	× 2.0	<b>TCJ09966</b>	<b>TDJ09966</b>	30	150	57	22	18	21	4	28
M30	× 1.5	<b>TCJ09976</b>	<b>TDJ09976</b>	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.

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# M SPIRAL POINT TAPS for Multi-Purpose

## ISO Metric coarse threads DIN 13

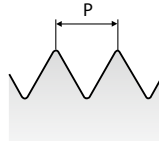
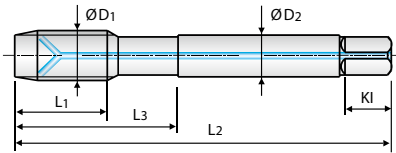
Bright

**TC814-IC** SERIES

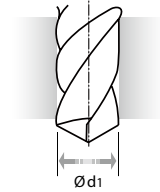
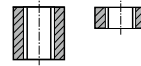


with Internal Coolant

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



Hole type 3.0xD



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

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	KI	Z	Ød1
M6	× 1.0	<b>TC814316IC</b>	17	80	30	6	4.9	8	3	5
M8	× 1.25	<b>TC814366IC</b>	20	90	35	8	6.2	9	3	6.8
M10	× 1.5	<b>TC814426IC</b>	22	100	39	10	8	11	3	8.5
M12	× 1.75	<b>TC814506IC</b>	24	110	44	9	7	10	3	10.2
M14	× 2.0	<b>TC814546IC</b>	26	110	44	11	9	12	3	12
M16	× 2.0	<b>TC814606IC</b>	27	110	44	12	9	12	3	14
M18	× 2.5	<b>TC814656IC</b>	30	125	50	14	11	14	4	15.5
M20	× 2.5	<b>TC814706IC</b>	32	140	54	16	12	15	4	17.5

► DIN 371 (M6~M10) and DIN 376 (M12~M20)

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

Unit : N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# M SPIRAL POINT TAPS for Multi-Purpose

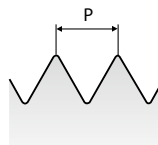
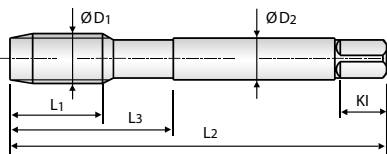
## ISO Metric coarse threads DIN 13

Bright **TC445** SERIES

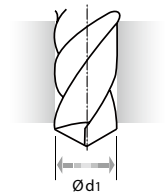
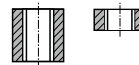


**Long Shank**

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



**Hole type** 3.0xD



Material groups **MU** **HSS-E** **LONG SHANK** **6H** **60°** **B** **Bright**

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	KI	Z	Ød1
M3	× 0.5	<b>TC445206</b>	11	100	18	3.5	2.7	6	3	2.5
M4	× 0.7	<b>TC445246</b>	13	125	21	4.5	3.4	6	3	3.3
M5	× 0.8	<b>TC445286</b>	15	140	25	6	4.9	8	3	4.2
M6	× 1.0	<b>TC445316</b>	17	160	30	6	4.9	8	3	5
M8	× 1.25	<b>TC445366</b>	20	180	35	6	4.9	8	3	6.8
M10	× 1.5	<b>TC445426</b>	22	200	39	7	5.5	8	3	8.5
M12	× 1.75	<b>TC445506</b>	24	220	44	9	7	10	3	10.2
M14	× 2.0	<b>TC445546</b>	26	220	44	11	9	12	3	12
M16	× 2.0	<b>TC445606</b>	27	220	44	12	9	12	3	14
M20	× 2.5	<b>TC445706</b>	32	280	54	16	12	15	4	17.5

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

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

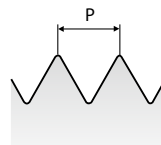
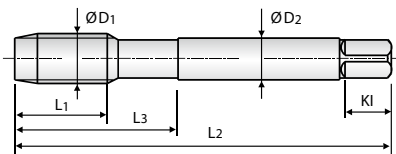
# M SPIRAL POINT TAPS for Stainless Steels

## ISO Metric coarse threads DIN 13

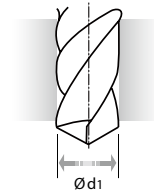
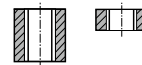
Vap  
Vap

**TQ428** SERIES  
**TB428** SERIES

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



**Hole type** 3.0xD



Material groups: **VA** (up to M12), **HSS-PM** (over M12), **HSS-E** (over M12), **DIN 371/376**, **6H**, **60°**, **B**, **Vap**

Unit : mm

Size	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	L1	L2	L3	ØD2	K	KI	Z	Ød1
M2	× 0.4	<b>TQ428136</b>	8	45	13	2.8	2.1	5	3	1.6
M2.2	× 0.45	<b>TQ428156</b>	8	45	13	2.8	2.1	5	3	1.75
M2.3	× 0.4	<b>TQ428196</b>	8	45	13	2.8	2.1	5	3	1.9
M2.5	× 0.45	<b>TQ428176</b>	9	50	15	2.8	2.1	5	3	2.05
M2.6	× 0.45	<b>TQ428496</b>	9	50	15	2.8	2.1	5	3	2.1
M3	× 0.5	<b>TQ428206</b>	11	56	18	3.5	2.7	6	3	2.5
M3.5	× 0.6	<b>TQ428226</b>	12	56	20	4	3	6	3	2.9
M4	× 0.7	<b>TQ428246</b>	13	63	21	4.5	3.4	6	3	3.3
M4.5	× 0.75	<b>TQ428266</b>	14	70	25	6	4.9	8	3	3.7
M5	× 0.8	<b>TQ428286</b>	15	70	25	6	4.9	8	3	4.2
M6	× 1.0	<b>TQ428316</b>	17	80	30	6	4.9	8	3	5
M7	× 1.0	<b>TQ428346</b>	17	80	30	7	5.5	8	3	6
M8	× 1.25	<b>TQ428366</b>	20	90	35	8	6.2	9	3	6.8
M9	× 1.25	<b>TQ428396</b>	20	90	35	9	7	10	3	7.8
M10	× 1.5	<b>TQ428426</b>	22	100	39	10	8	11	3	8.5
M11	× 1.5	<b>TQ428466</b>	22	100	40	8	6.2	9	3	9.5
M12	× 1.75	<b>TQ428506</b>	24	110	44	9	7	10	3	10.2
M14	× 2.0	<b>TB428546</b>	26	110	44	11	9	12	3	12
M16	× 2.0	<b>TB428606</b>	27	110	44	12	9	12	3	14
M18	× 2.5	<b>TB428656</b>	30	125	50	14	11	14	4	15.5
M20	× 2.5	<b>TB428706</b>	32	140	54	16	12	15	4	17.5
M22	× 2.5	<b>TB428746</b>	32	140	54	18	14.5	17	4	19.5
M24	× 3.0	<b>TB428786</b>	34	160	60	18	14.5	17	4	21
M27	× 3.0	<b>TB428866</b>	36	160	60	20	16	19	4	24
M30	× 3.5	<b>TB428946</b>	40	180	70	22	18	21	4	26.5

- DIN 371 (M2~M10) and DIN 376 (M11~M30)
- HSS-PM (M2~M12/TQ428) and HSS-E (M14~M30/TB428)
- The other coating (TiN, TiCN or TiAlN) is available on your request.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

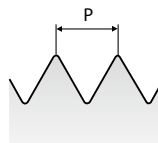
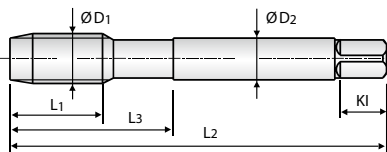
Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
○	○	○	○	○	○	◎	◎							
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				○										

## MF SPIRAL POINT TAPS for Stainless Steels ISO Metric fine threads DIN 13

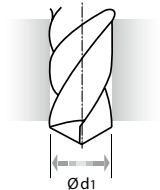
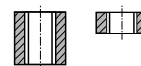
Vap  
Vap

**TQ438** SERIES  
**TB438** SERIES

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



**Hole type** 3.0xD



Material groups: **VA** (up to M12), **HSS-PM** (over M12), **HSS-E** (over M12), **DIN 374**, **6H**, **60°**, **B**, **Vap**

Unit : mm

Size	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	L1	L2	L3	ØD2	K	KI	Z	Ød1
M4	× 0.5	<b>TQ438256</b>	10	63	21	2.8	2.1	5	3	3.5
M5	× 0.5	<b>TQ438296</b>	11	70	25	3.5	2.7	6	3	4.5
M6	× 0.75	<b>TQ438326</b>	13	80	30	4.5	3.4	6	3	5.2
M6	× 0.5	<b>TQ438336</b>	13	80	30	4.5	3.4	6	3	5.5
M7	× 0.75	<b>TQ438356</b>	14	80	30	5.5	4.3	7	3	6.2
M8	× 1.0	<b>TQ438376</b>	17	90	36	6	4.9	8	3	7
M8	× 0.75	<b>TQ438386</b>	14	80	30	6	4.9	8	3	7.2
M10	× 1.25	<b>TQ438436</b>	22	100	40	7	5.5	8	3	8.8
M10	× 1.0	<b>TQ438446</b>	18	90	36	7	5.5	8	3	9
M10	× 0.75	<b>TQ438456</b>	18	90	36	7	5.5	8	3	9.2
M12	× 1.5	<b>TQ438516</b>	22	100	40	9	7	10	3	10.5
M12	× 1.25	<b>TQ438526</b>	22	100	40	9	7	10	3	10.8
M12	× 1.0	<b>TQ438536</b>	18	100	40	9	7	10	3	11
M14	× 1.5	<b>TB438556</b>	22	100	40	11	9	12	3	12.5
M14	× 1.25	<b>TB438566</b>	22	100	40	11	9	12	3	12.8
M14	× 1.0	<b>TB438576</b>	22	100	40	11	9	12	3	13
M16	× 1.5	<b>TB438616</b>	22	100	40	12	9	12	3	14.5
M16	× 1.0	<b>TB438626</b>	18	100	40	12	9	12	3	15
M18	× 1.5	<b>TB438676</b>	25	110	44	14	11	14	4	16.5
M18	× 1.0	<b>TB438686</b>	20	110	44	14	11	14	4	17
M20	× 1.5	<b>TB438726</b>	25	125	50	16	12	15	4	18.5
M20	× 1.0	<b>TB438736</b>	20	125	50	16	12	15	4	19
M22	× 1.5	<b>TB438766</b>	25	125	50	18	14.5	17	4	20.5
M22	× 1.0	<b>TB438776</b>	20	125	50	18	14.5	17	4	21
M24	× 2.0	<b>TB438796</b>	27	140	54	18	14.5	17	4	22

► HSS-PM (M4~M12/TQ438) and HSS-E (M14~M30/TB438)  
► The other coating (TiN, TiCN or TiAlN) is available on your request.

► NEXT PAGE

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
	○		○			◎	◎							
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				○										



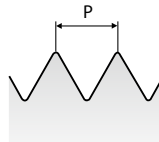
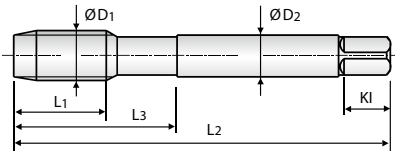
# MF SPIRAL POINT TAPS for Stainless Steels

ISO Metric fine threads DIN 13

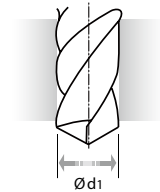
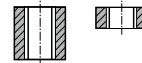
Vap  
Vap

**TQ438** SERIES  
**TB438** SERIES

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



**Hole type** 3.0xD



Material groups: **VA** (up to M12), **HSS-PM** (over M12), **HSS-E** (over M12), **DIN 374**, **6H**, **60°**, **B**, **Vap**

Unit : mm

Size	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	Vap	L1	L2	L3	ØD2	K	KI	Z	Ød1
M24	× 1.5	<b>TB438806</b>	27	140	54	18	14.5	17	4	22.5
M26	× 1.5	<b>TB438856</b>	28	140	54	18	14.5	17	4	24.5
M27	× 2.0	<b>TB438876</b>	28	140	54	20	16	19	4	25
M27	× 1.5	<b>TB438886</b>	28	140	54	20	16	19	4	25.5
M28	× 1.5	<b>TB438916</b>	28	140	54	20	16	19	4	26.5
M30	× 2.0	<b>TB438966</b>	30	150	57	22	18	21	4	28
M30	× 1.5	<b>TB438976</b>	30	150	57	22	18	21	4	28.5

- HSS-PM (M4~M12/TQ438) and HSS-E (M14~M30/TB438)
- The other coating (TiN, TiCN or TiAlN) is available on your request.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
	○		○			◎	◎							
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				○										

## UNC SPIRAL POINT TAPS for Multi-Purpose

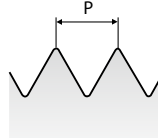
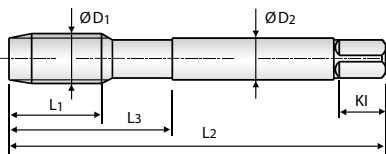
Unified coarse threads

Vap  
Bright  
TiN

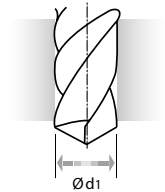
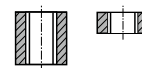
**TB834** SERIES  
**TC834** SERIES  
**TD834** SERIES



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



Hole type 3.0xD



Material groups **MU** HSS-E DIN 371/376 2B 60° B Vap Bright TiN

Unit : mm

Size	TPI	EDP No.			Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Vap	Bright	TiN								
#4 - 40 UNC		<b>TB834162</b>	<b>TC834162</b>	<b>TD834162</b>	L1	L2	L3	ØD2	K	KI	Z	Ød1
#5 - 40 UNC		<b>TB834202</b>	<b>TC834202</b>	<b>TD834202</b>	11	56	18	3.5	2.7	6	3	2.3
#6 - 32 UNC		<b>TB834242</b>	<b>TC834242</b>	<b>TD834242</b>	11	56	18	3.5	2.7	6	3	2.6
#8 - 32 UNC		<b>TB834282</b>	<b>TC834282</b>	<b>TD834282</b>	12	56	20	4	3	6	3	2.85
#10 - 24 UNC		<b>TB834322</b>	<b>TC834322</b>	<b>TD834322</b>	13	63	21	4.5	3.4	6	3	3.5
#12 - 24 UNC		<b>TB834362</b>	<b>TC834362</b>	<b>TD834362</b>	15	70	25	6	4.9	8	3	3.9
1/4 - 20 UNC		<b>TB834402</b>	<b>TC834402</b>	<b>TD834402</b>	16	80	30	6	4.9	8	3	4.5
5/16 - 18 UNC		<b>TB834442</b>	<b>TC834442</b>	<b>TD834442</b>	17	80	30	7	5.5	8	3	5.2
3/8 - 16 UNC		<b>TB834482</b>	<b>TC834482</b>	<b>TD834482</b>	20	90	35	8	6.2	9	3	6.6
7/16 - 14 UNC		<b>TB834522</b>	<b>TC834522</b>	<b>TD834522</b>	22	100	39	9	7	10	3	8
1/2 - 13 UNC		<b>TB834562</b>	<b>TC834562</b>	<b>TD834562</b>	22	100	40	8	6.2	9	3	9.4
9/16 - 12 UNC		<b>TB834602</b>	<b>TC834602</b>	<b>TD834602</b>	25	110	44	9	7	10	3	10.75
5/8 - 11 UNC		<b>TB834642</b>	<b>TC834642</b>	<b>TD834642</b>	26	110	44	11	9	12	3	12.25
3/4 - 10 UNC		<b>TB834702</b>	<b>TC834702</b>	<b>TD834702</b>	27	110	44	12	9	12	3	13.5
7/8 - 9 UNC		<b>TB834742</b>	<b>TC834742</b>	<b>TD834742</b>	30	125	50	14	11	14	4	16.5
1 - 8 UNC		<b>TB834782</b>	<b>TC834782</b>	<b>TD834782</b>	32	140	54	18	14.5	17	4	19.5
		<b>TB834782</b>	<b>TC834782</b>	<b>TD834782</b>	36	160	60	20	16	19	4	22.25

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

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤10%	Al Si >10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# UNC SPIRAL POINT TAPS for Multi-Purpose

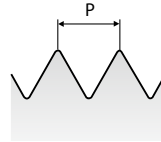
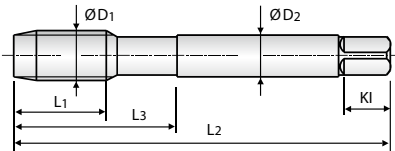
Unified coarse threads

Bright  
TiN

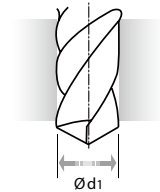
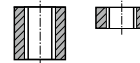
**TCJ01** SERIES  
**TDJ01** SERIES



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



Hole type 3.0xD



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

Unit : mm

Size ØD1	TPI	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Bright	TiN	L1	L2	L3	ØD2	K	KI	Z	Ød1
#4 - 40 UNC		<b>TCJ01162</b>	<b>TDJ01162</b>	11	56	18	3.5	2.7	6	3	2.3
#5 - 40 UNC		<b>TCJ01202</b>	<b>TDJ01202</b>	11	56	18	3.5	2.7	6	3	2.6
#6 - 32 UNC		<b>TCJ01242</b>	<b>TDJ01242</b>	12	56	20	4	3	6	3	2.85
#8 - 32 UNC		<b>TCJ01282</b>	<b>TDJ01282</b>	13	63	21	4.5	3.4	6	3	3.5
#10 - 24 UNC		<b>TCJ01322</b>	<b>TDJ01322</b>	15	70	25	6	4.9	8	3	3.9
#12 - 24 UNC		<b>TCJ01362</b>	<b>TDJ01362</b>	16	80	30	6	4.9	8	3	4.5
1/4 - 20 UNC		<b>TCJ01402</b>	<b>TDJ01402</b>	17	80	30	7	5.5	8	3	5.2
5/16 - 18 UNC		<b>TCJ01442</b>	<b>TDJ01442</b>	20	90	35	8	6.2	9	3	6.6
3/8 - 16 UNC		<b>TCJ01482</b>	<b>TDJ01482</b>	22	100	39	9	7	10	3	8
7/16 - 14 UNC		<b>TCJ01522</b>	<b>TDJ01522</b>	22	100	40	8	6.2	9	3	9.4
1/2 - 13 UNC		<b>TCJ01562</b>	<b>TDJ01562</b>	25	110	44	9	7	10	3	10.75
9/16 - 12 UNC		<b>TCJ01602</b>	<b>TDJ01602</b>	26	110	44	11	9	12	3	12.25
5/8 - 11 UNC		<b>TCJ01642</b>	<b>TDJ01642</b>	27	110	44	12	9	12	3	13.5
3/4 - 10 UNC		<b>TCJ01702</b>	<b>TDJ01702</b>	30	125	50	14	11	14	4	16.5
7/8 - 9 UNC		<b>TCJ01742</b>	<b>TDJ01742</b>	32	140	54	18	14.5	17	4	19.5
1 - 8 UNC		<b>TCJ01782</b>	<b>TDJ01782</b>	36	160	60	20	16	19	4	22.25

► 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.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# UNF SPIRAL POINT TAPS for Multi-Purpose

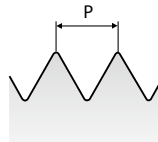
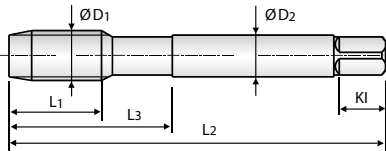
Unified fine threads

Vap  
Bright  
TiN

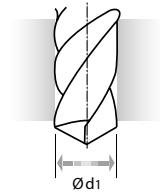
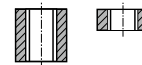
**TB874** SERIES  
**TC874** SERIES  
**TD874** SERIES



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



**Hole type** 3.0xD



Material groups **MU** **HSS-E** **DIN 371/374** **2B** **60°** **B** **Vap Bright TiN**

Unit : mm

Size	TPI	EDP No.			Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Vap	Bright	TiN								
#4 - 48 UNF		<b>TB874182</b>	<b>TC874182</b>	<b>TD874182</b>	L1	L2	L3	ØD2	K	KI	Z	Ød1
#5 - 44 UNF		<b>TB874222</b>	<b>TC874222</b>	<b>TD874222</b>	11	56	18	3.5	2.7	6	3	2.4
#6 - 40 UNF		<b>TB874262</b>	<b>TC874262</b>	<b>TD874262</b>	11	56	18	3.5	2.7	6	3	2.7
#8 - 36 UNF		<b>TB874302</b>	<b>TC874302</b>	<b>TD874302</b>	12	56	20	4	3	6	3	3
#10 - 32 UNF		<b>TB874342</b>	<b>TC874342</b>	<b>TD874342</b>	13	63	21	4.5	3.4	6	3	3.5
#12 - 28 UNF		<b>TB874382</b>	<b>TC874382</b>	<b>TD874382</b>	15	70	25	6	4.9	8	3	4.1
1/4 - 28 UNF		<b>TB874422</b>	<b>TC874422</b>	<b>TD874422</b>	16	80	30	6	4.9	8	3	4.7
5/16 - 24 UNF		<b>TB874462</b>	<b>TC874462</b>	<b>TD874462</b>	17	80	30	7	5.5	8	3	5.5
3/8 - 24 UNF		<b>TB874502</b>	<b>TC874502</b>	<b>TD874502</b>	17	90	35	8	6.2	9	3	6.9
7/16 - 20 UNF		<b>TB874542</b>	<b>TC874542</b>	<b>TD874542</b>	18	100	39	9	7	10	3	8.5
1/2 - 20 UNF		<b>TB874582</b>	<b>TC874582</b>	<b>TD874582</b>	22	100	40	8	6.2	9	3	9.9
9/16 - 18 UNF		<b>TB874622</b>	<b>TC874622</b>	<b>TD874622</b>	22	100	40	9	7	10	3	11.5
5/8 - 18 UNF		<b>TB874662</b>	<b>TC874662</b>	<b>TD874662</b>	22	100	40	11	9	12	3	12.9
3/4 - 16 UNF		<b>TB874722</b>	<b>TC874722</b>	<b>TD874722</b>	22	100	40	12	9	12	3	14.5
7/8 - 14 UNF		<b>TB874762</b>	<b>TC874762</b>	<b>TD874762</b>	25	110	44	14	11	14	4	17.5
1 - 12 UNF		<b>TB874802</b>	<b>TC874802</b>	<b>TD874802</b>	26	125	50	18	14.5	17	4	20.5
		<b>TB874802</b>	<b>TC874802</b>	<b>TD874802</b>	28	140	54	20	16	19	4	23.25

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

Unit: N/mm<sup>2</sup>

◎: Excellent ○: Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

# UNF SPIRAL POINT TAPS for Multi-Purpose

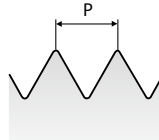
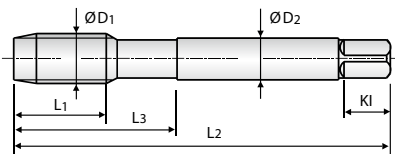
Unified fine threads

Bright  
TiN

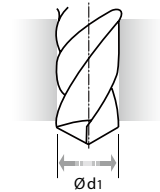
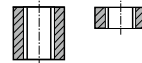
**TCJ02** SERIES  
**TDJ02** SERIES



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



Hole type 3.0xD



Material groups **MU** **HSS-E** **DIN 371/374** **3B** **60°** **B** **Bright TiN**

Unit : mm

Size	TPI	EDP No.		Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
		Bright	TiN								
#4 - 48 UNF		<b>TCJ02182</b>	<b>TDJ02182</b>	L1	L2	L3	ØD2	K	KI	Z	Ød1
#5 - 44 UNF		<b>TCJ02222</b>	<b>TDJ02222</b>	11	56	18	3.5	2.7	6	3	2.4
#6 - 40 UNF		<b>TCJ02262</b>	<b>TDJ02262</b>	11	56	18	3.5	2.7	6	3	2.7
#8 - 36 UNF		<b>TCJ02302</b>	<b>TDJ02302</b>	12	56	20	4	3	6	3	3
#10 - 32 UNF		<b>TCJ02342</b>	<b>TDJ02342</b>	13	63	21	4.5	3.4	6	3	3.5
#12 - 28 UNF		<b>TCJ02382</b>	<b>TDJ02382</b>	15	70	25	6	4.9	8	3	4.1
1/4 - 28 UNF		<b>TCJ02422</b>	<b>TDJ02422</b>	16	80	30	6	4.9	8	3	4.7
5/16 - 24 UNF		<b>TCJ02462</b>	<b>TDJ02462</b>	17	80	30	7	5.5	8	3	5.5
3/8 - 24 UNF		<b>TCJ02502</b>	<b>TDJ02502</b>	17	90	35	8	6.2	9	3	6.9
7/16 - 20 UNF		<b>TCJ02542</b>	<b>TDJ02542</b>	18	100	39	9	7	10	3	8.5
1/2 - 20 UNF		<b>TCJ02582</b>	<b>TDJ02582</b>	22	100	40	8	6.2	9	3	9.9
9/16 - 18 UNF		<b>TCJ02622</b>	<b>TDJ02622</b>	22	100	40	9	7	10	3	11.5
5/8 - 18 UNF		<b>TCJ02662</b>	<b>TDJ02662</b>	22	100	40	11	9	12	3	12.9
3/4 - 16 UNF		<b>TCJ02722</b>	<b>TDJ02722</b>	22	100	40	12	9	12	3	14.5
7/8 - 14 UNF		<b>TCJ02762</b>	<b>TDJ02762</b>	25	110	44	14	11	14	4	17.5
1 - 12 UNF		<b>TCJ02802</b>	<b>TDJ02802</b>	26	125	50	18	14.5	17	4	20.5
		<b>TCJ02802</b>	<b>TDJ02802</b>	28	140	54	20	16	19	4	23.25

► 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.

Unit : N/mm<sup>2</sup>

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
◎	◎	◎	◎	◎		◎	◎	◎	◎	◎	◎	◎		
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				◎	◎	◎			◎	◎	◎			

## SURFACE TREATMENT AND COATING

The High Speed Steels we use grant a good wear resistance and toughness. Therefore we normally deliver our taps with bright, untreated surface. In machining certain materials, various surface treatments are of advantage.

### STEAM TEMPERED - Vap

The Steam Tempered is a Fe<sub>3</sub>O<sub>4</sub>-oxyd-coating which reduces the friction between tool and workpiece and prevents cold welding.

### NITRIDING - NI

The Steam Tempered is a Fe<sub>3</sub>O<sub>4</sub>-oxyd-coating which reduces the friction between tool and workpiece and prevents cold welding.

The above surface finishes are suitable for many applications and will prove to be an added value to your machining strategy. All our surface treatments are made in-house using state of the art technology.

We also offer various coatings to enhance toughness and increase tool life.

### TiN-COATING

TiN-coating has a hardness of approx. **2,300 HV** and is temperature-resistant up to approx. **600°C**.  
TiN-coating is an excellent all-round coating for normal applications.  
Color: **Gold**      Coefficient of friction against steel: 0.4

### TiCN-COATING

TiCN takes place of TiN when the conditions require a coating to have a different hardness and toughness. TiCN brings advantage in machining very difficult steels or cutting interrupted bores. TiCN-coating hardness is approx. **3,000 HV** and its temperature resistance is approx. **400°C**.  
Due to its lower temperature resistance, tools using TiCN will need to be used in combination with an excellent cooling to ensure a longer tool life.  
Color: **Blue-Grey**      Coefficient of friction against steel: 0.4

### TiAlN-COATING

TiAlN-coating has been especially engineered for abrasive material applications such as grey cast iron, alu-alloys with silicon, fiber reinforced plastics etc. or machining under high temperatures with insufficient cooling or high speed  $\geq 600\text{m/min}$ .  
TiAlN hardness is approx. **3,000 HV** and its temperature resistance is approx. **800°C**.  
Color: **Violet-Grey**      Coefficient of friction against steel: 0.4

### HARDSLICK-COATING

Hardslick-coating combines the advantages of an extremely hard, thermally stable TiAlN-coating with the sliding and lubricating properties of an outer WC/C (tungsten carbide/carbon)-coating in a new technological way. Hardslick-coating has and its temperature resistance is approx. **800°C**.  
Color: **Violet-Grey**      Coefficient of friction against steel: 0.2

## TROUBLE SHOOTING GUIDE

Specific Problem	Cause	Solution
<b>Dimensional Accuracy</b>		
<b>Oversize Pitch Diameter</b>	Incorrect Tap	<ol style="list-style-type: none"> <li>1. Use proper limits of taps</li> <li>2. Use longer chamfered taps</li> </ol>
	Chip Packing	<ol style="list-style-type: none"> <li>1. Use spiral point or spiral fluted taps</li> <li>2. Reduce number of flutes to provide extra chip room</li> <li>3. Use larger hole size</li> <li>4. If tapping a hole, allow deeper hole where applicable or shorten the thread length of the parts</li> <li>5. Use proper lubricant</li> </ol>
	Galling	<ol style="list-style-type: none"> <li>1. Apply proper surface treatment such as Hardslick or chrome</li> <li>2. Use proper cutting lubricant</li> <li>3. Reduce tapping speed</li> <li>4. Use proper cutting angle in accordance with material being tapped</li> <li>5. Use large hole size</li> </ol>
	Operating Conditions	<ol style="list-style-type: none"> <li>1. Apply proper tapping speed</li> <li>2. Correct alignment of tap and drill hole</li> <li>3. Free cutting either tap or workpiece</li> <li>4. Use proper tapping speed to avoid torn or rough threads</li> <li>5. Use lead screw tapper</li> <li>6. Use proper tapping machine with suitable power</li> <li>7. Avoid misalignment of the tap and drill hole from loose spindle or worn holder</li> </ol>
<b>Oversize Internal Diameter</b>	Hole Size	<ol style="list-style-type: none"> <li>1. Use minimum hole size</li> <li>2. Avoid tapered hole</li> <li>3. Use proper chamfered taps</li> </ol>
	Galling	<ol style="list-style-type: none"> <li>1. Galling solutions 1 through 4 above can be applied to this specific problem</li> </ol>
<b>Undersize Pitch Diameter</b>	Incorrect Tap	<ol style="list-style-type: none"> <li>1. Use oversize taps</li> <li>2. Apply proper chamfer angle</li> <li>3. Increase cutting angle</li> </ol>
	Damaged Thread	<ol style="list-style-type: none"> <li>1. Use proper reversing speed to avoid damaging tapped thread on the way out of the hole</li> </ol>
	Left-over Chips	<ol style="list-style-type: none"> <li>1. Increase cutting performance to avoid any left over chips in the hole</li> <li>2. Remove left over chips from the hole for gage checking</li> </ol>
<b>Undersize Internal Diameter</b>	Hole Size	<ol style="list-style-type: none"> <li>1. Use maximum drill size</li> </ol>
<b>Breakage</b>	Incorrect Tap Selection	<ol style="list-style-type: none"> <li>1. Avoid chip packing in the flutes or on the bottom of the hole Use spiral pointed or spiral fluted taps or fluteless taps</li> <li>2. Apply correct surface treatment such as Hardslick or bright</li> </ol>
	Excessive Tapping Torque	<ol style="list-style-type: none"> <li>1. Use larger drill size</li> <li>2. Try to shorten thread length</li> <li>3. Increase cutting angle</li> <li>4. Apply a tap with more thread relief and reduced land width</li> <li>5. Apply correct surface treatment such as Hardslick</li> </ol>

**TROUBLE SHOOTING GUIDE**

Specific Problem	Cause	Solution
<b>Dimensional Accuracy</b>		
<b>Breakage</b>	Operating Conditions	<ol style="list-style-type: none"> <li>1. Reduce tapping speed</li> <li>2. Avoid misalignment between tap and the hole and tapered hole</li> <li>3. Use floating type of tapping holder</li> <li>4. Use tapping holder with torque adjustment</li> <li>5. Avoid hitting bottom of the hole with tap</li> </ol>
	Tool Condition	<ol style="list-style-type: none"> <li>1. Do not grind the bottom of the flute</li> <li>2. Avoid too narrow a land width</li> <li>3. Remove all worn sections when regrinding the flutes</li> <li>4. Regrind tool more frequently</li> </ol>
<b>Chipping</b>	Incorrect Tap Selection	<ol style="list-style-type: none"> <li>1. Reduce cutting angle</li> <li>2. Use a different kind of high-speed steel tap</li> <li>3. Reduce hardness of the tap</li> <li>4. Increase chamfer length</li> <li>5. Avoid chip packing in the flutes or in the bottom of the hole by using spiral fluted or spiral pointed taps</li> </ol>
	Operating Conditions	<ol style="list-style-type: none"> <li>1. Reduce tapping speed</li> <li>2. Avoid misalignment between tap and hole</li> <li>3. Avoid sudden return of reverse in blind hole tapping</li> <li>4. Avoid galling</li> <li>5. Use larger hole size</li> </ol>
<b>Wear</b>	Incorrect Tap Selection	<ol style="list-style-type: none"> <li>1. Apply specially designed tap for tapping heat treated material</li> <li>2. Change to a type of high-speed steel tap that contains vanadium</li> <li>3. Apply special surface treatment such as TiCN, TiAlN or Hardslick</li> <li>4. Increase chamfer length</li> </ol>
	Operating Conditions	<ol style="list-style-type: none"> <li>1. Reduce tapping speed</li> <li>2. Apply proper cutting lubricants</li> <li>3. Avoid work hardened hole</li> <li>4. Use larger hole size</li> </ol>
	Tool Condition	<ol style="list-style-type: none"> <li>1. Grind proper cutting angle</li> <li>2. Avoid hardness reduction from grinding process</li> </ol>
<b>Torn or Rough Thread</b>	Chamfer Too Short	<ol style="list-style-type: none"> <li>1. Increase chamfer length</li> </ol>
	Wrong Cutting Angle	<ol style="list-style-type: none"> <li>1. Apply proper cutting angle</li> </ol>
	Galling	<ol style="list-style-type: none"> <li>1. Use thread relieved taps</li> <li>2. Reduce land width</li> <li>3. Apply surface treatment such as Hardslick or chrome</li> <li>4. Use proper cutting lubricant</li> <li>5. Reduce tapping speed</li> <li>6. Use larger hole size</li> <li>7. Obtain proper alignment between tap and work</li> </ol>
	Chip Packing	<ol style="list-style-type: none"> <li>1. Use spiral pointed or spiral fluted taps</li> <li>2. Use larger drill size</li> </ol>
<b>Chattering on Tapped Thread</b>	Tool Free Cutting	<ol style="list-style-type: none"> <li>1. Reduce cutting angle</li> <li>2. Reduce amount of thread relief</li> </ol>
	Tool Condition	<ol style="list-style-type: none"> <li>1. Avoid too narrow land width</li> <li>2. Do not grind the bottom of the flute</li> </ol>



## CUTTING SPEED TABLE

Cutting Speeds m/min. into revolutions per minute

TOOL RPM (rev./min.)																
Tool Dia.	Cutting Speed (m/min.)															
	1	2	3	4	5	6	8	10	12	15	20	25	30	40	50	60
1	318	637	955	1274	1592	1910	2548	3185	3822	4777	6366	7962	9554	12739	15924	19108
2	159	318	478	637	796	955	1274	1592	1911	2388	3185	3981	4777	6369	7962	9554
3	106	212	318	425	531	637	849	1062	1274	1592	2123	2654	3185	4246	5308	6369
4	80	159	239	318	398	478	637	796	955	1194	1592	1990	2389	3185	3981	4777
5	64	127	191	255	318	382	510	637	764	955	1274	1592	1911	2548	3185	3822
6	53	106	159	212	265	318	425	531	637	796	1062	1327	1592	2123	2653	3185
8	40	80	119	159	199	239	318	398	478	597	796	955	1194	1592	1990	2388
10	31	64	96	127	159	191	255	318	382	478	637	796	955	1274	1592	1911
12	26	53	80	106	133	159	212	265	318	398	531	663	796	1062	1327	1592
14	23	45	68	91	114	136	182	227	273	341	455	569	682	910	1137	1365
16	20	40	60	80	100	119	159	199	239	299	398	498	597	796	995	1194
18	18	35	53	71	88	106	142	177	212	265	354	442	531	708	885	1062
20	16	32	48	64	80	96	127	159	191	239	318	398	478	637	796	955
25	13	25	38	51	64	76	102	127	153	191	255	318	382	510	637	764
30	11	21	32	42	53	64	85	106	127	159	212	265	318	425	531	637
35	9	18	27	36	45	55	73	91	109	136	182	227	273	364	455	546
40	8	16	24	32	40	48	64	80	96	119	159	199	239	318	398	478

RPM = rev./min.  
V = m/min.  
D = Dia.(mm)

$$V = \frac{\text{RPM} \cdot \pi \cdot D}{1000}$$

$$\text{RPM} = \frac{1000 \cdot V}{\pi \cdot D}$$

RECOMMENDED TAP DRILL SIZE (M / MF)

Unit : mm

Metric-ISO threads coarse pitch				Metric-ISO threads fine pitch				Metric-ISO threads fine pitch			
M	Pitch	Maximum Core Dia.	Drill Size	MF	Pitch	Maximum Core Dia.	Drill Size	MF	Pitch	Maximum Core Dia.	Drill Size
1	0.25	0.785	0.75	2.5	0.35	2.221	2.15	25	2.00	23.210	23.00
1.1	0.25	0.885	0.85	3	0.35	2.271	2.65	26	1.50	24.676	24.50
1.2	0.25	0.985	0.95	3.5	0.35	3.221	3.15	27	1.00	26.153	26.00
1.4	0.30	1.160	1.10	4	0.50	3.599	3.50	27	1.50	25.676	25.50
1.6	0.35	1.321	1.25	4.5	0.50	4.099	4.00	27	2.00	25.210	25.00
1.7	0.35	1.346	1.30	5	0.50	4.599	4.50	28	1.00	27.153	27.00
1.8	0.35	1.521	1.45	5.5	0.50	5.099	5.00	28	1.50	26.676	26.50
2	0.40	1.679	1.60	6	0.75	5.378	5.20	28	2.00	26.210	26.00
2.2	0.45	1.838	1.75	7	0.75	6.378	6.20	30	1.00	29.153	29.00
2.3	0.40	1.920	1.90	8	0.75	7.378	7.20	30	1.50	28.676	28.50
2.5	0.45	2.138	2.05	8	1.00	7.153	7.00	30	2.00	28.210	28.00
2.6	0.45	2.176	2.10	9	0.75	8.378	8.20	30	3.00	27.252	27.00
3	0.50	2.599	2.50	9	1.00	8.153	8.00	32	1.50	30.675	30.50
3.5	0.60	3.010	2.90	10	0.75	9.378	9.20	32	2.00	30.210	30.00
4	0.70	3.422	3.30	10	1.00	9.153	9.00	33	1.50	31.676	31.50
4.5	0.75	3.878	3.70	10	1.25	8.912	8.80	33	2.00	31.210	31.00
5	0.80	4.334	4.20	11	0.75	10.378	10.20	33	3.00	30.252	30.00
6	1.00	5.153	5.00	11	1.00	10.153	10.00	35	1.50	33.676	33.50
7	1.00	6.153	6.00	12	1.00	11.153	11.00	36	1.50	34.676	34.50
8	1.25	6.912	6.80	12	1.25	10.912	10.80	36	2.00	34.210	34.00
9	1.25	7.912	7.80	12	1.50	10.676	10.50	36	3.00	33.252	33.00
10	1.50	8.676	8.50	14	1.00	13.153	13.00	38	1.50	36.676	36.50
11	1.50	9.676	9.50	14	1.25	12.912	12.80	39	1.50	37.676	37.50
12	1.75	10.441	10.20	14	1.50	12.676	12.50	39	2.00	37.210	37.00
14	2.00	12.210	12.00	15	1.00	14.153	14.00	39	3.00	36.252	36.00
16	2.00	14.210	14.00	15	1.50	13.676	13.50	40	1.50	38.676	38.50
18	2.50	15.744	15.50	16	1.00	15.153	15.00	40	2.00	38.210	38.00
20	2.50	17.744	17.50	16	1.50	14.676	14.50	40	3.00	37.252	37.00
22	2.50	19.744	19.50	17	1.00	16.153	16.00	42	1.50	40.676	40.50
24	3.00	21.252	21.00	17	1.50	15.676	15.50	42	2.00	40.210	40.00
27	3.00	24.252	24.00	18	1.00	17.153	17.00	42	3.00	39.252	39.00
30	3.50	26.771	26.50	18	1.50	16.676	16.50	45	1.50	43.676	43.50
33	3.50	29.771	29.50	18	2.00	16.210	16.00	45	2.00	43.210	43.00
36	4.00	32.270	32.00	20	1.00	19.153	19.00	45	3.00	42.252	42.00
39	4.00	35.270	35.00	20	1.50	18.676	18.50	48	1.50	46.676	46.50
42	4.50	37.799	37.50	20	2.00	18.210	18.00	48	2.00	46.210	46.00
45	4.50	40.799	40.50	22	1.00	21.153	21.00	48	3.00	45.252	45.00
48	5.00	43.297	43.00	22	1.50	20.676	20.50	50	1.50	48.676	48.50
52	5.00	47.297	47.00	22	2.00	20.210	20.00	50	2.00	48.210	48.00
56	5.50	50.796	50.50	24	1.00	23.153	23.00	50	3.00	47.252	47.00
60	5.50	54.796	54.50	24	1.50	22.676	22.50	52	1.50	50.676	50.50
64	6.00	58.305	58.00	24	2.00	22.210	22.00	52	2.00	50.210	50.00
68	6.00	62.305	62.00	25	1.00	24.153	24.00	52	3.00	49.252	49.00
				25	1.50	23.676	23.50				

**RECOMMENDED TAP DRILL SIZE (UNC / UNF)**

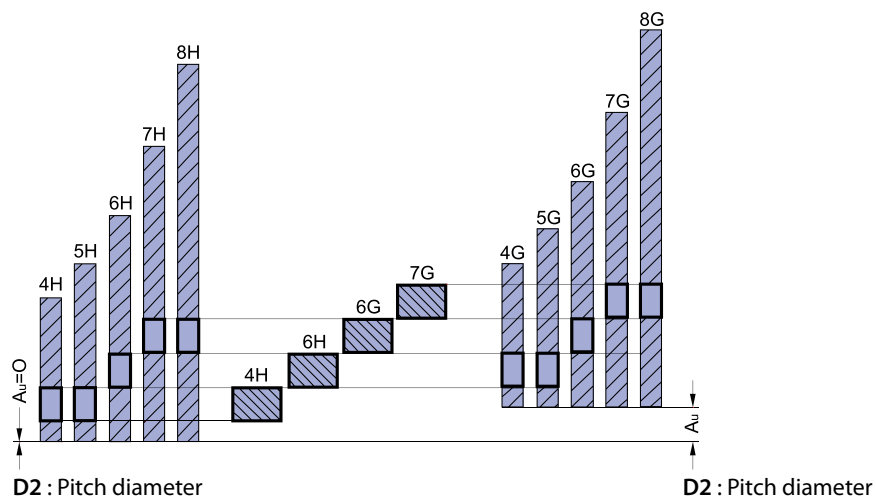
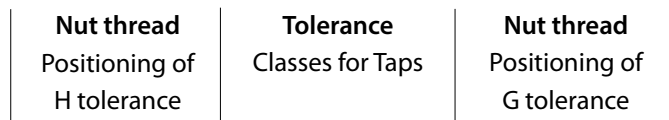
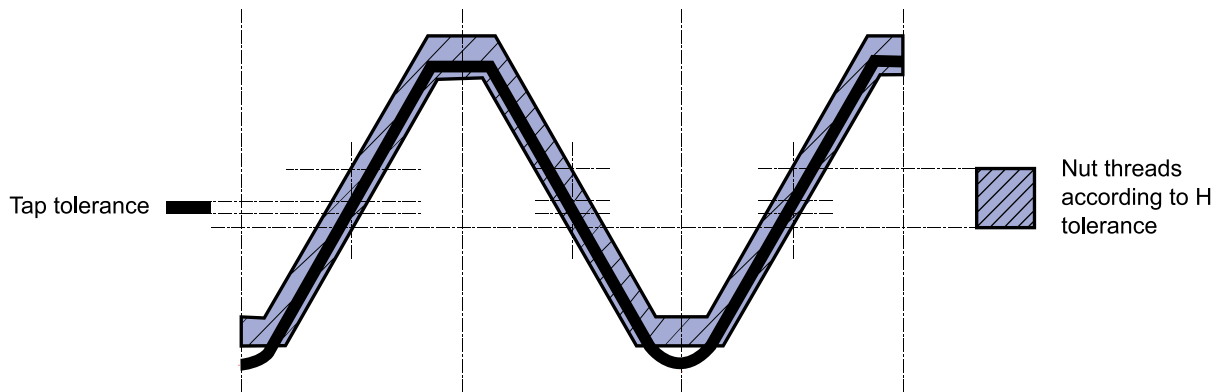
Unit : mm

American Unified coarse threads			
UNC	TPI	Maximum Core Dia.	Drill Size
#1	64	1.585	1.50
#2	56	1.872	1.80
#3	48	2.146	2.10
#4	40	2.385	2.30
#5	40	2.697	2.60
#6	32	2.896	2.85
#8	32	3.528	3.50
#10	24	3.950	3.90
#12	24	4.590	4.50
1/4	20	5.250	5.20
5/16	18	6.680	6.60
3/8	16	8.082	8.00
7/16	14	9.441	9.40
1/2	13	10.881	10.75
9/16	12	12.301	12.25
5/8	11	13.693	13.50
3/4	10	16.624	16.50
7/8	9	19.520	19.50
1	8	22.344	22.25
1-1/8	7	25.082	25.00
1-1/4	7	28.258	28.25
1-3/8	6	30.851	30.75
1-1/2	6	34.026	34.00
1-3/4	5	39.560	39.50
2	4.5	45.367	45.25

American Unified fine threads			
UNF	TPI	Maximum Core Dia.	Drill Size
#0	80	1.306	1.30
#1	72	1.613	1.60
#2	64	1.913	1.90
#3	56	2.197	2.10
#4	48	2.459	2.40
#5	44	2.741	2.70
#6	40	3.012	3.00
#8	36	3.597	3.50
#10	32	4.168	4.10
#12	28	4.717	4.70
1/4	28	5.563	5.50
5/16	24	6.995	6.90
3/8	24	8.565	8.50
7/16	20	9.947	9.90
1/2	20	11.524	11.50
9/16	18	12.969	12.90
5/8	18	14.554	14.50
3/4	16	17.546	17.50
7/8	14	20.493	20.50
1	12	23.363	23.25
1-1/8	12	26.538	26.50
1-1/4	12	29.713	29.50
1-3/8	12	32.888	32.70
1-1/2	12	36.063	36.00

## TAP TOLERANCES

► Tolerance classes of taps and tolerance positions for screw threads as per Metric ISO Standard.



► Taps tolerances and recommended classes

Tap tolerance ISO	Tap tolerance DIN	Correct class to obtain Nut thread with tolerance				
ISO 1	4H	4H	5H			
ISO 2	6H	4G	5G	6H		
ISO 3	6G			6G	7H	8H
	7G				7G	8G

## PERFECT HOLES FOR PRECISE THREADING

# YG DRILLING TOOLS

YG-1 Drilling tools are well known for its tight tolerance and high technology, continuously impressing various manufacturers around the world. Its advance designed geometry brings out extraordinary performances, creating a longer tool life with outstanding productivity. Also a variety of size and shapes are available for multiple applications.

## SOLID DRILLS

P M K

SOLID CARBIDE



**DREAM DRILLS  
GENERAL**

With/without Internal Coolant  
Wide range of sizes and flute lengths  
Perfect choice for general purpose

P K

SOLID CARBIDE



**DREAM DRILLS  
HIGH FEED**

3-Flute Drills with Internal Coolant  
Up to 1.6 times faster drilling  
compared to conventional 2-flute drills

P M N S

SOLID CARBIDE



**DREAM DRILLS  
INOX**

For drilling Stainless Steels  
Special geometry and flute shape  
for excellent chip evacuation and self-centering

N

SOLID CARBIDE



**DREAM DRILLS  
ALU**

For drilling Aluminum & Aluminum Alloys  
Good chip evacuation due to  
flute geometry & enough chip space

P M K N

SOLID CARBIDE



**DREAM DRILLS  
FLAT BOTTOM**

180° Point Angle with/without Internal Coolant  
Perfect choice for a various angled surface

P M K N S

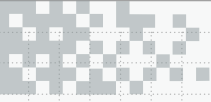
PREMIUM HSS-PM



**MULTI-1 DRILLS  
Multi-Purpose**

For Drilling various work materials;  
Carbon Steel, Alloy Steels, Cast Iron,  
Stainless Steels, Aluminum, Titanium, etc

MEMO



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MEMO



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# HIGH QUALITY PRODUCTS and ON TIME DELIVERY for WORLD-WIDE CUSTOMERS

Since 1982, YG-1 has been committed to quality, innovation and the unique customer experience. Our performance and experience have granted YG-1 the global impression of one of the leading manufacturers of high quality cutting tool solutions. This global footprint expands over 75 countries, with international logistic centers, pledging to our customers to give the best service available today - and tomorrow.

## EUROPE



## ASIA PACIFIC



## AMERICAS



## AFRICA



 **YG-1 CO., LTD.**

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