SYNCHRO

COMBO TAPS

YG TAP

YG TAP

YG TAP

YG TAP IRON

YG TAP

YG TAP

TECHNICAL



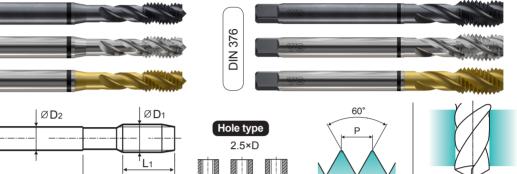
TBE07 SERIES TCE07 SERIES Bright **DE07** SERIES

DIN 371

ISO Metric coarse threads DIN 13

- Metrisches ISO-Gewinde DIN 13
- () ISO MÉTRIQUE DIN13
- ISO Metrico passo grosso DIN 13
- ▶ For using multi-purpose and correct thread profiles & long tool life due to special tap geometry. YG-1 company has a patent.









ΚI





12













 αd_1

Recommended Cutting Page: P.115 Unit: mm Tapping Drill Diameter Overall Square Length No. of EDP No. **SIZE Pitch** ØD1 Р Vap Bright TiN ØD2 Κ ΚI Ζ Ød1 L₁ 12 L₃ TBE07136 TCE07136 TDE07136 M2 $\times 0.4$ 8 45 13 2.8 2.1 5 3 1.6 $M2.2 \times 0.45$ TBE07156 TCE07156 TDE07156 5 1.75 8 45 13 2.8 2.1 3 $M2.3 \times 0.4$ 1.9 TBE07196 TCE07196 TDE07196 5 3 8 45 13 2.8 2.1 2.05 $M2.5 \times 0.45$ TBE07176 TCE07176 50 5 3 TDE07176 9 15 2.8 2.1 $M2.6 \times 0.45$ TBE07496 TCE07496 TDE07496 9 50 15 2.8 2.1 3 2.1 $M3 \times 0.5$ TCE07206 18 2.7 6 3 2.5 TBE07206 TDE07206 6 56 3.5 $M3.5 \times 0.6$ TBE07226 TCE07226 TDE07226 20 4 3 2.9 7 56 3 6 $M4 \times 0.7$ TBE07246 TCE07246 TDE07246 7 63 21 4.5 6 3 3.3 3.4 $M4.5 \times 0.75$ TBE07266 TCE07266 TDE07266 8 70 25 6 4.9 8 3 3.7 $M5 \times 0.8$ TBE07286 TCE07286 TDE07286 8 70 25 6 4.9 8 3 4.2 M6 × 1 TBE07316 TCE07316 TDE07316 10 80 30 6 4.9 8 3 5 M7 × 1 TBE07346 TCE07346 TDE07346 10 80 30 7 5.5 8 3 6 MA $\times 1.25$ TBE07366 TCE07366 TDE07366 13 90 35 R 6.2 9 3 6.8 3 M9 × 1.25 TBE07396 TCE07396 TDE07396 13 90 35 9 10 7.8 TBE07426 TCE07426 $M10 \times 1.5$ TDE07426 15 100 39 10 8 11 3 8.5 $M11 \times 1.5$ TBE07466 TCE07466 TDE07466 17 100 40 8 6.2 9 3 9.5 TCE07506 TBE07506 $M12 \times 1.75$ TDE07506 18 110 44 g 10 3 10.2 $M14 \times 2$ TBE07546 TCE07546 TDE07546 44 9 3 12 20 110 11 12 $M16 \times 2$ TBE07606 TCE07606 TDE07606 20 110 44 9 12 3 14 12 $M18 \times 2.5$ TBE07656 TCE07656 TDE07656 25 125 50 14 11 14 4 15.5 $M20 \times 2.5$ TBE07706 TCE07706 TDE07706 140 25 54 12 15 4 175 16 $M22 \times 2.5$ TBE07746 TCE07746 TDE07746 25 140 54 18 14.5 17 4 19.5 $M24 \times 3$ TBE07786 TCE07786 TDE07786 18 14.5 30 160 60 4 21 17 $M27 \times 3$ 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 TiAIN) is available on your request.

⊚:Excellent (∵ Good
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ISO	P												M K								
Material Description	Non-alloy steel Low alloy steel					el	High alloyed steel, and tool steel			Stainless steel			Grey cas	Nodul	ar cast on		Malleable cast iron				
VDI 3323	1	2	3	4	5	6	7	8	9	10		12	13	3 1	4	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15		15	23			10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	24	0 18	30	180	260	160	250	130	230
Recommended	0	0	0	0	0	0	0	0	0	0		0	0)	0	0	0	0		
ISO					N									S						Н	
	Aluminum- Aluminum cast alloyed Copper and Copper Alloys N																				
Material Description			Aluminu	ım-cast, a	alloyed C				Non Met Materia		Heat	Resista	ant Sup	er Alloys	3	Titaniu	m Alloys	Hard ste			Hardened Cast Iron
			Aluminu 23	ım-cast, a 24	alloyed C				Materia			Resista 32	33	34	35	Titaniu 36	m Alloys 37			Cast Iron 40	Cast Iron 41
Description	wrough 21	nt alloy 22		24	25	(Bro	nze / Bras 27	28	Materia	als	31 15	32	33 25	34 38	35 34	36	37	38 55	39 60	Cast Iron 40 42	Cast Iron 41 55
Description VDI 3323	wrough	nt alloy			alloyeu	(Bro	nze / Bras	s)	Materia	als	31 15	32	33	34	35		37	38 55	eel 39	Cast Iron 40	Cast Iron 41

HSS



RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

THREAD MILLS

SYNCHRO TAPS

> COMBO TAPS

YG TAP GENERAL

> YG TAP STEEL

YG TAP HARDENED

> YG TAP INOX

> > YG TAP CAST IRON

> > YG TAP ALU

YG TAP Ti Ni

YG TAP FORMING

NUT TAPS

STI TAPS

PIPE TAPS

TECHNICAL DATA

					TC804 TC844 TC824 TC864	TD804 TD844 TD824 TD864	TB804 TB844 TB824 TB864	TCE05 TCE09 TCE01 TCE02	TDE05 TDE09 TDE01 TDE02	TBE05	TCE06	TDE06
ISO	VDI 3323	Material Description	НВ	HRc				Vc (m	/min)			
	1		125		15-20	20-25	15-20	15-20	20-25	15-20	15-20	20-25
	2		190	13	15-20	20-25	15-20	15-20	20-25	15-20	15-20	20-25
	3	Non-alloy steel	250	25	12-18	18-24	12-18	12-18	18-24	12-18	12-18	18-24
	4		270	28	10-15	15-20	10-15	10-15	15-20	10-15	10-15	15-20
	5		300	32	6-10	10-14	6-10	6-10	10-14	6-10	6-10	10-14
Р	6		180	10	10-15	15-20	10-15	10-15	15-20	10-15	10-15	15-20
	7	Low alloy steel	275	29	10-15	15-20	10-15	10-15	15-20	10-15	10-15	15-20
	8	Í	300	32	6-10	10-14	6-10	6-10	10-14	6-10	6-10	10-14
	9		350	38	3-5	5-7	3-5	3-5	5-7	3-5	3-5	5-7
	10	High alloyed steel, and tool steel	200	15	3-5	5-7	3-5	3-5	5-7	3-5	3-5	5-7
	11	and tool steel	325	35	7.40	10.15	7.10	7.10	10.15	7.10	7.10	10.15
8.4	12	6	200	15	7-10	10-15	7-10	7-10	10-15	7-10	7-10	10-15
M	13	Stainless steel	240	23	5-8 4-6	8-11 6-8	5-8 4-6	5-8 4-6	8-11 6-8	5-8 4-6	5-8 4-6	8-11 6-8
	15		180 180	10	10-15	15-20	10-15	10-15	15-20	10-15	10-15	15-20
	16	Grey cast iron	260	26	5-8	8-11	5-8	5-8	8-11	5-8	5-8	8-11
	17	Nodular cast iron	160	3	10-15	15-20	10-15	10-15	15-20	10-15	10-15	15-20
K	18		250	25	5-8	8-11	5-8	5-8	8-11	5-8	5-8	8-11
	19		130			0			0			0
	20	Malleable cast iron	230	21								
	21	Aluminum-	60									
	22	wrought alloy	100									
	23		75		15-20	20-25	15-20	15-20	20-25	15-20	15-20	20-25
	24	Aluminum- cast, alloyed	90									
N	25	cust, anoyed	130									
N	26	Copper and	110		25-35	35-40	25-35	25-35	35-40	25-35	25-35	35-40
	27	Copper Alloys	90		8-12	12-17	8-12	8-12	12-17	8-12	8-12	12-17
	28	(Bronze / Brass)	100		15-20	20-25	15-20	15-20	20-25	15-20	15-20	20-25
	29	Non Metallic										
	30	Materials										
	31		200	15								
	32	Heat Resistant	280	30								
	33	Super Alloys	250	25								
S	34		350	38								
	35		320	34								
	36	Titanium Alloys	400 Rm									
	37		1050 Rm									
	38 39	Hardened steel	550	55								
Н	40	Chilled Cast Iron	630	60								
	40	Hardened Cast Iron	400 550	42 55								
	41	Hardened Cast IIOII	330	- 33								





RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

	TBE06	TCE07	TDE07	TBE07	TCE08	TDE08	TBE08	TC804-IC	TC633	TC807			
VDI 3323					Vc (m	n/min)							
1	15-20	15-20	20-25	15-20	15-20	20-25	15-20	15-20	15-20	15-20			
2	15-20	15-20	20-25	15-20	15-20	20-25	15-20	15-20	15-20	15-20			
3	12-18	12-18	18-24	12-18	12-18	18-24	12-18	12-18	12-18	12-18			
4	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	10-15	10-15			
5	6-10	6-10	10-14	6-10	6-10	10-14	6-10	6-10	6-10	6-10			
6	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	10-15	10-15			
7	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	10-15	10-15			
8	6-10	6-10	10-14	6-10	6-10	10-14	6-10	6-10	6-10	6-10			
9	3-5	3-5	5-7	3-5	3-5	5-7	3-5	3-5	3-5	3-5			
10	3-5	3-5	5-7	3-5	3-5	5-7	3-5	3-5	3-5	3-5			
11													
12	7-10	7-10	10-15	7-10	7-10	10-15	7-10	7-10	7-10	7-10			
13	5-8	5-8	8-11	5-8	5-8	8-11	5-8	5-8	5-8	5-8			
14	4-6	4-6	6-8	4-6	4-6	6-8	4-6	4-6	4-6	4-6			
15	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	10-15	10-15			
16	5-8	5-8	8-11	5-8	5-8	8-11	5-8	5-8	5-8	5-8			
17	10-15	10-15	15-20	10-15	10-15	15-20	10-15	10-15	10-15	10-15			
18	5-8	5-8	8-11	5-8	5-8	8-11	5-8	5-8	5-8	5-8			
19													
20													
21													
22													
23	15-20	15-20	20-25	15-20	15-20	20-25	15-20	15-20	15-20	15-20			
24													
25													
26	25-35	25-35	35-40	25-35	25-35	35-40	25-35	25-35	25-35	25-35			
27	8-12	8-12	12-17	8-12	8-12	12-17	8-12	8-12	8-12	8-12			
28	15-20	15-20	20-25	15-20	15-20	20-25	15-20	15-20	15-20	15-20			
29													
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40													
41													

YG TAP STEEL

YG TAP HARDENED

YG TAP INOX

YG TAP CAST IRON

YG TAP ALU

YG TAP Ti Ni

YG TAP FORMING

NUT TAPS

PIPE TAPS

TECHNICAL DATA

SURFACE TREATMENT AND COATING

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

STEAM TEMPERED - Vap

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

NITRIDING - NI

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

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

TIN-COATING

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

Colour: Golden Coefficient of friction against steel: 0.4

TICN-COATING

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

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

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

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

TIAIN-COATING

A special coating for machining abrasive materials such as grey cast iron, alu-alloys with silicon, fiber reinforced plastics, etc., or machining at high temperatures with insufficient cooling, or at high speeds \geq 600m/min. TiAIN has a hardness of approx. 3.000 HV and is heat resistant up to approx. 800°C.

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

Hardslick-COATING

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

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

HSS

THREAD

SYNCHRO

COMBO TAPS

YG TAP **GENERAL**

YG TAP

YG TAP

YG TAP INOX

YG TAP

Please visit

globalyg1.com/mat

for material search

Non-alloy steel

Low alloy steel

High alloyed steel, and tool steel

Stainless steel

Grey cast iron

Nodular cast iron

Malleable cast iron

Aluminum-

wrought alloy

Aluminum-

cast, alloyed

Copper and Copper Alloys

(Bronze / Brass)

Non Metallic Materials

Heat Resistant

Super Alloys

Titanium Alloys

Hardened steel

Chilled Cast Iron

Hardened Cast Iron

YG TAP

YG TAP Ti Ni

P

M 13

K

N

S

38

39

12

14

16

18

20

YG TAP

NUT TAPS

TECHNICAL

SELECTION GUIDE



HSS-E & HSS-PI COMBO

Hardened

550

55

						Max. 2.5xD Blind Hole							
C	JUIDE			HOLE.	ТҮРЕ								
			-	TOOL MA	ATERIAL			HS	S-E				
	THREADIN	NC.	CHAM	MFER LEAD A	ACC. TO DIN2197	С	С	С	С	С	С		
	THREADIN	NG		FLUTE	TYPE	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	te Spiral Flute R40 TBE05 (P.77)		
	TOOLS		SP	IRAL FLU	JTE ANGLE	R40	R40	R40	R40	R40	VAP VAP O O O O O O O O O O O O O O O O O O		
					DIN371/376	TC804	TD804	TB804	TCE05	TDE05	TBE05		
						(P.76)	(P.76)	(P.76)	(P.77)	(P.77)	(P.77)		
C	CEQU	CC DM		M	DIN352								
D	S-E & H	33-PIVI			DIN357/LONG								
					DIN374	TC844 (P.81)	TD844 (P.81)	TB844 (P.81)	TCE09 (P.83)	TDE09 (P.83)			
		VIBO		MF	DIN2181	(r.o1)	(r.o1)	(r.o1)	(r.os)	(r.os)			
						TC824	TD824	TB824	TCE01	TDE01			
	-			UNC	DIN371/376	(P.91)	(P.91)	(P.91)	(P.92)	(P.92)			
		APS	is		DIN351								
			뿙	OE RIES	DIN371/374	TC864 (P.93)	TD864 (P.93)	TB864 (P.93)	TCE02 (P.94)	TDE02 (P.94)			
	For Multi P	urpose Tapping	S		DIN2181	(1.23)	(1.23)	(1.23)	(1.24)	(1.54)			
		YG-1's Patent			DIN2182/2183								
				BSW									
					DIN351								
				G(BSP)	DIN5156/5157								
				EG-M	DIN371/376								
				EG-UNC	DIN371/376								
				EG-UNF	DIN371/374								
			SL	IRFACE T	REATMENT	Bright	TiN	VAP	Bright	TiN	VAP		
R	© ecommended cutting	Excellent O: Good conditions: P.114	MODEL										
otion	Composition / Struct	ure / Heat Treatment		НВ	HRC		4	6		4	4		
	About 0.15% C	Annealed		125		0	0	0	0	0	0		
	About 0.45% C	Annealed		190	13	0	0	0	0	0			
eel	About 0.45% C	Quenched & Tempered		250	25	0	0	0	0	0			
	About 0.75% C	Annealed		270	28	0	0	0	0	0			
	About 0.75% C	Quenched & Tempered Annealed		300 180	32 10	© ©	0	0	0	0	_		
		Quenched & Tempered		275	29	0	0	0	0	0			
eel		Quenched & Tempered		300	32	0	0	0	0	0			
		Quenched & Tempered		350	38	0	0	0	0	0			
teel,		Annealed		200	15	0	0	0	0	0	_		
el		Quenched & Tempered		325	35								
	Ferritic / Martensitic	Annealed		200	15	0	0	0	0	0	0		
el	Martensitic	Quenched & Tempered		240	23	0	0	0	0	0	0		
	Austenitic			180	10	0	0	0	0	0	0		
n	Pearlitic / ferritic			180	10	0	0	0	0	0			
,,,	Pearlitic (Martensitic)			260	26	0	0	0	0	0	0		
iron	Ferritic			160	3	0	0	0	0	0			
	Pearlitic			250	25	0	0	0	0	0	0		
iron	Ferritic			130	21								
	Pearlitic Not Curable			230 60	21								
- oy	Curable	Hardened		100									
٠,	≤ 12% Si, Not Curable			75		0	0	0	0	0	0		
-	≤ 12% Si, Curable	Hardened		90									
d	> 12% Si, Not Curable			130									
d	Cutting Alloys, PB>1%	6		110		0	0	0	0	0	0		
ys	CuZn, CuSnZn (Brass)			90		0	0	0	0	0	0		
ss)	CuSn, lead-free copper			100		0	0	0	0	0	0		
ic	Duroplastic, Fiber Reir	nforced Plastic											
	Rubber, Wood, etc.												
	Fe Based	Annealed		200	15								
nt		Cured		280	30								
rs	Ni ou Co Door I	Annealed		250	25								
	Ni or Co Based	Cured		350	38								
	Pure Titanium	Cast		320 00 Rm	34								
oys	Alpha + Beta Alloys	Hardened		50 Rm									
	Alpha i beta Alloys	Hardened		550 Kill	55								
eel		Hardened		630	60								
ron		Cast		400	42								

	Max. 2.5xD Blind Hole													
	I	I	I	I	I	HSS-E	I		I	I		I	HSS-PM	
C	C	C	C	C	C	C	C	C	C	C	E	C	C	
Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	Spiral Flute	
TCE06	R40 TDE06	R40 TBE06	TCE07	R40 TDE07	R40 TBE07	TCE08	R40 TDE08	R40 TBE08	R40 TC804-IC	R40	R40 TC807	R45 TB744	R45 TQ744	
(P.78)	(P.78)	(P.78)	(P.79)	(P.79)	(P.79)	(P.80)	(P.80)	(P.80)	(P.85)		(P.86)	(P.88)	(P.88)	
										TCC22				M
										TC633 (P.87)				
												TB754 (P.90)	TQ754 (P.89)	MF
														.,,,
														UNC
														UNF
														BSW
														G(BSP)
														EG-M
														EG-UNC
														EG-UNF
Bright	TiN	VAP	Bright	TiN	VAP	Bright	TiN	VAP	Bright	Bright	Bright	VAP	VAP	
1						1					1			
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0	0	0	0	0	0	© ©	0	© ©	0	0	© ©	0	0	7
0	0	0	0	0	0	0	0	0	0	0	0		0	8
0	0	0	0	0	0	0	0	0	0	0	0			9
0	0	0	0	0	0	0	0	0	0	0	0			10 11
0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0	13 M
0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
0	0	0	0	0	0	0	0	0	0	0	0			15 16
0	© ©	0	0	0	© ©	© ©	© ©	© ©	0	0	© ©			17
0	0	0	0	0	0	0	0	0	0	0	0			17 18 K
														19
														20
														22
0	0	0	0	0	0	0	0	0	0	0	0			23
														19 20 21 22 23 24 25 26 27 28 29 30
0	0	0	0	0	0	0	0	0	0	0	0			25 N
0	0	0	0	0	0	0	0	0	0	0	0			27
0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
														29
														31
														32
														33
														34 S 35
														36
														37
														39 40 H
														38 39 40 41
						,								