HSS



TC934522

TC934562

TC934602

TC934642

TC934702

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

26

27

30

30

32

110

110

125

125

140

44

44

50

50

54

11

12

14

14

18

7/16 - 14 UNC

9/16 - 12 UNC

- 13 UNC

- 11 UNC

- 10 UNC

1/2

5/8

3/4



Unit : mm

11.6

133

15

16.5

19.75

#### Unified coarse threads for Screw Thread insert THREAD EG-U Unified Regelgew.f.Gew.Drahteins **() UNC POUR FILETS RAPPORTÉS SYNCHRO** ISO Metrico passo grosso per Helicoil ▶ Wire insert threads are used for increasing fastening strength in • Gewinde mit Drahteinsätzen werden verwendet um größere soft materials. Drehmomente in weichen Werkstoffen zu erreichen. COMBO Hole type DIN 371 3.0×D YG TAP GENERAL DIN 376 YG TAP ØD2 ØD1 60 YG TAP ΚI †L1 Ľз YG TAP L2 INOX Ød YG TAP CAST Machine taps DIN **Bright** HSS-E **2**B Maschinengewindebohrer 371/376 YG TAP Recommended Cutting Page : P.298 Tapping Drill Diameter Thread Length Overall Length Neck Length Square Length Shank Diameter Square Size No. of Flute SIZE EDP No. TPI YG TAP ØD1 ØD2 Κ ΚI Ζ Bright L1 L2 Lз Ød1 40 UNC TC934162 13 63 21 4.5 3.4 6 3 3.1 #4 \_ #5 - 40 UNC TC934202 13 63 21 4.5 3.4 6 3 3.4 YG TAP #6 TC934242 14 70 25 4.9 8 3.8 32 UNC 6 3 -#8 32 UNC TC934282 13 80 25 6 4.9 8 3 4.4 #10 \_ 24 UNC TC934322 17 80 30 7 5.5 8 3 5.2 \_ 17 7 24 UNC TC934362 80 30 5.5 8 3 5.8 NUT TAPS #12 - 20 UNC TC934402 20 90 35 9 3 6.7 1/48 6.2 5/16 - 18 UNC TC934442 100 22 39 10 8 11 3 8.4 3/8 - 16 UNC TC934482 21 110 39 12 9 12 3 10 STI TAPS

TECHNICAL

																		©	Exc	ellent (	⊖:Good
ISO						P								M					K		
Material Description		No	on-alloy s	steel			Low a	alloy ste	el	High ar	n alloyed nd tool st	steel, teel	Sta	ainless	steel	Grey cas	st iron		lar cas on		able cast iron
VDI 3323	1	2	3	4	5	6	7	8	9	1	0	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	1	5	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	20	00 3	325	200	240	180	180	260	160	250	130	230
Recommended	0	0	0																		
ISO					N										S					Н	
Material Description	Alum		Aluminu	ım-cast,	alloyed	Copper a (Bro	nd Coppe nze / Bra	er Alloys ss)	Non Me Materi		H	Heat R	esistan	t Super	Alloys	Titaniu	m Alloys		lened eel		Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33		34 35	36	37	38	39	40	41
HRc											15	30	25	5 3	38 34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	25	0 3	50 320	400 Rm	1050 Rm	550	630	400	550
Recommended	O	O	O	O			0														

9

9

11

11

14 5

12

12

14

14

17

3

3

3

4

Δ



phone:+82-32-526-0909, www.yg1.kr, E-mail:yg1@yg1.kr

#### CARBIDE

HSS

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	

#### RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDKONDITIONEN

					ТС909 ТС944	TC973 TC934 TC954
ISO	VDI 3323	Material Description	HB	HRc	Vc (m	/min)
	1		125		15-20	15-20
	2		190	13	15-20	15-20
		Non-alloy steel	250	25	12-18	12-18
			270	28		
			300	32		
Ρ			180	10		
		Low alloy steel	275	29		
			300	32		
			350	38		
		High alloyed steel,	200	15		
	11	and tool steel	325	35		
	12		200	15		
Μ	13	Stainless steel	240	23		
	14		180	10		
	15	Grey cast iron	180	10		
	16		260	26		
К	17	Nodular cast iron	160	3		
	18		250	25		
	19	Malleable cast iron	130			
	20		230	21		
		Aluminum- wrought alloy	60		10-15	10-15
	22	wiought unoy	100		10-15	10-15
	23 24	Aluminum-	75 90		15-20	15-20
	24	cast, alloyed	90 130		15-20	15-20
Ν	25		110			
	20	Copper and Copper Alloys	90		8-12	8-12
		(Bronze / Brass)	100		0.12	0.12
	20	Nov Mat III	100			
	30	Non Metallic Materials				
	31		200	15		
	32		280	30		
	33	Heat Resistant	250	25		
S	34	Super Alloys	350	38		
	35		320	34		
	36		400 Rm			
	37	Titanium Alloys	1050 Rm			
	38		550	55		
	39	Hardened steel	630	60		
Η	40	Chilled Cast Iron	400	42		
	41	Hardened Cast Iron	550	55		



# SURFACE TREATMENT AND COATING

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

## **STEAM TEMPERED - Vap**

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

## NITRIDING - NI

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

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

## **TIN-COATING**

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

Colour : Golden Coefficient of friction against steel : 0.4

### **TICN-COATING**

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

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

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

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

### 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 TiAINcoating 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

0	А	n	D	in	- I
6	A	K	Б	IU	E.

ARBIDE												
	SE	LEC	TION G	GUIDE		ŀ	HOLET	ГҮРЕ		x. 2.5xD nd Hole		Max. 3.0xD Through Hole
								TERIAL		HSS	S-E	
HSS				THREADIN	IG			ICC. TO DIN2197	С			В
				THREADIN TOOLS			FLUTE		Spiral FI			Spiral Point
				TOOLS		SPIRA	AL FLU	TE ANGLE	R40	)		-
THREAD								DIN371/376				
MILLS							М	DIN352				
					HSS-E			DIN357/LONG				
SYNCHRO TAPS								DIN374				
IAFS				56	REW		MF	DIN2181				
COMBO								DIN371/376				
TAPS				THR	FAD		JNC	DIN351				
						SERIES		DIN371/374				
YG TAP			VCE	RT T	NDC	Ы, I	UNF	DIN2181				
GENERAL			VDE		AFJ	_		DIN2182/2183				
			Top	oing STI Threads	of Soft Matariala	E	3SW					
YGTAP			iap	Sing STI Theads	Soli ivialeriais			DIN351				
STEEL						_		DIN5156/5157	TC90	9		TC973
							G-M	DIN371/376	(P.293			(P.294)
YG TAP ARDENED						EG	i-UNC	DIN371/376	TC94 (P.295			TC934 (P.296)
								DIN371/374				TC954 (P.297)
YG TAP						SURF	ACE TI	REATMENT	Brigh			Bright
INOX									1			
YG TAP		Please		0	Excellent O:Good		MOI	DEL				
CAST		global	yg1.com/mat terial search	ecommended cutting	conditions : P.298							
IRON												
	ISO	VDI M	aterial Description	Composition / Struct	ure / Heat Treatment	HB		HRc	í			
YG TAP ALU		1		About 0.15% C	Annealed	12			0			0
		23	Non-alloy steel	About 0.45% C About 0.45% C	Annealed Quenched & Tempered	190 250		13 25	0			0
YG TAP		4	Non-anoy steel	About 0.45% C	Annealed	270		23	0			0
Ti Ni		5		About 0.75% C	Quenched & Tempered	300	0	32				
	Ρ	6			Annealed	180		10				
YG TAP		7 8	Low alloy steel		Quenched & Tempered Quenched & Tempered	275 300		29 32				
FORMING		9			Quenched & Tempered	350		38				
		10 H	igh alloyed steel,		Annealed	200	0	15				
NUT TAPS		11	and tool steel	E 111 / MA 1 111	Quenched & Tempered	32		35				
	М	12 13	Stainless steel	Ferritic / Martensitic Martensitic	Annealed Quenched & Tempered	200 240		15 23				
		14	Stanness steel	Austenitic	quenencu a tempercu	180		10				
STI TAPS		15	Grey cast iron	Pearlitic / ferritic		180		10				
		16	,	Pearlitic (Martensitic)		260		26 3				
	K	17 18	lodular cast iron	Ferritic Pearlitic		160 250		3 25				
PIPE TAPS		19 M	alleable cast iron	Ferritic		130						
		20		Pearlitic		230		21				
ECHNICAL		21 22	Aluminum- wrought alloy	Not Curable Curable	Hardened	60 100			0			0
DATA		22		≤ 12% Si, Not Curable	. ardened	75			0			0
		24	Aluminum- cast, alloyed	≤ 12% Si, Curable	Hardened	90			0			0
	Ν	25		> 12% Si, Not Curable		130						
		26 27	Copper and Copper Alloys	Cutting Alloys, PB>1% CuZn, CuSnZn (Brass)		11( 90			0			0
			(Bronze / Brass)	CuSn, lead-free copper	and electrolytic copper	100						~
		29	Non Metallic	Duroplastic, Fiber Reir	nforced Plastic							
		30	Materials	Rubber, Wood, etc.	Annealed	204	0	15				
		31 32		Fe Based	Cured	200 280		15 30				
		33	Heat Resistant Super Alloys		Annealed	250		25				
	S	34	Super Alloys	Ni or Co Based	Cured	350		38				
		35		Duro Titonium	Cast	320		34				
		36 37	Titanium Alloys	Pure Titanium Alpha + Beta Alloys	Hardened	400 F						
		38			Hardened	550		55				
	н	39	Hardened steel		Hardened	630	0	60 42				
		40 (	Chilled Cast Iron		Cast	400						

292

