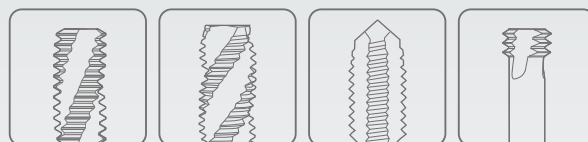




Leading Through Innovation



Global Cutting Tool Leader **YG-1**



THREADING



HSS-E

YG TAP ALU

YG TAP ALU

- For long-chipping Aluminum Wrought Alloys with Large Chip Gullets to Avoid Clogging in the Threading Operations
- Für langspannende Aluminium-Knetlegierungen mit großen Spanabständen zur Vermeidung von Verstopfungen beim Gewindeschneiden.

SELECTION GUIDE



HSS-E
YG TAP
ALU

For long-chipping Aluminum Wrought Alloys
with Large Chip Gullets to Avoid Clogging
in the Threading Operations

Please visit globalyg1.com/mat for material search
◎ : Excellent ○ : Good
Recommended cutting conditions : P.252

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc		
P	1	Non-alloy steel	About 0.15% C	Annealed	125		○	
	2		About 0.45% C	Annealed	190	13	○	
	3		About 0.45% C	Quenched & Tempered	250	25	○	○
	4		About 0.75% C	Annealed	270	28		
	5		About 0.75% C	Quenched & Tempered	300	32		
	6	Low alloy steel		Annealed	180	10		
	7			Quenched & Tempered	275	29		
	8			Quenched & Tempered	300	32		
	9			Quenched & Tempered	350	38		
	10	High alloyed steel, and tool steel		Annealed	200	15		
	11			Quenched & Tempered	325	35		
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15		
	13		Martensitic	Quenched & Tempered	240	23		
	14		Austenitic		180	10		
K	15	Grey cast iron	Pearlitic / ferritic		180	10		
	16		Pearlitic (Martensitic)		260	26		
	17	Nodular cast iron	Ferritic		160	3		
	18		Pearlitic		250	25		
	19	Malleable cast iron	Ferritic		130			
	20		Pearlitic		230	21		
N	21	Aluminum-wrought alloy	Not Curable		60		◎	○
	22		Curable	Hardened	100		◎	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		◎	○
	24		≤ 12% Si, Curable	Hardened	90		◎	○
	25		> 12% Si, Not Curable		130			◎
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110			
	27		CuZn, CuSnZn (Brass)		90		○	
	28		CuSn, lead-free copper and electrolytic copper		100			
	29	Non Metallic	Duroplastic, Fiber Reinforced Plastic					
	30	Materials	Rubber, Wood, etc.					
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15		
	32			Cured	280	30		
	33			Annealed	250	25		
	34		Ni or Co Based	Cured	350	38		
	35			Cast	320	34		
	36	Titanium Alloys	Pure Titanium		400 Rm			
	37		Alpha + Beta Alloys	Hardened	1050 Rm			
H	38	Hardened steel		Hardened	550	55		
	39			Hardened	630	60		
	40	Chilled Cast Iron		Cast	400	42		
	41	Hardened Cast Iron		Hardened	550	55		

 Max. 3.0xD Through Hole		 Max. 2.0xD Blind/Through Hole		
HSS-E				
B	B	C	C	C
Spiral Point	Spiral Point	Straight Flute	Straight Flute	Straight Flute
-	-	-	-	-
TC622 (P.247)	TE943 (P.248)	TC433 (P.249)	TE443 (P.250)	TY433 (P.251)



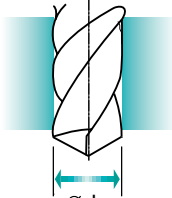
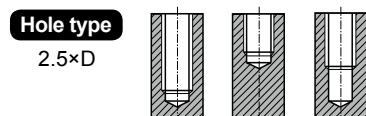
ISO metric coarse threads DIN 13

M **ISO metric coarse threads**

- 🇩🇪 **Metrisches ISO-Gewinde DIN 13**
- 🇫🇷 **ISO MÉTRIQUE DIN13**
- 🇮🇹 **ISO Metrico passo grosso DIN 13**

► Geeignet zum Gewinden von Sacklöchern dank besonderer Nutengeometrie und ausgezeichneter Spanabfuhr.

► Geeignet zum Gewinden von Sacklöchern dank besonderer Nutengeometrie und ausgezeichneter Spanabfuhr.



Unit : mm

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	Ni	L1	L2	L3	ØD2	K	KI	Z	Ød1
M2 × 0.4		TE953136	8	45	13	2.8	2.1	5	2	1.6
M2.2 × 0.45		TE953156	8	45	13	2.8	2.1	5	2	1.75
*M2.3 × 0.4		TE953196	8	45	13	2.8	2.1	5	2	1.9
M2.5 × 0.45		TE953176	9	50	15	2.8	2.1	5	2	2.05
*M2.6 × 0.45		TE953496	9	50	15	2.8	2.1	5	2	2.1
M3 × 0.5		TE953206	6	56	18	3.5	2.7	6	2	2.5
M3.5 × 0.6		TE953226	7	56	20	4	3	6	2	2.9
M4 × 0.7		TE953246	7	63	21	4.5	3.4	6	2	3.3
M4.5 × 0.75		TE953266	8	70	25	6	4.9	8	2	3.7
M5 × 0.8		TE953286	8	70	25	6	4.9	8	2	4.2
M6 × 1		TE953316	10	80	30	6	4.9	8	2	5
M7 × 1		TE953346	10	80	30	7	5.5	8	2	6
M8 × 1.25		TE953366	13	90	35	8	6.2	9	2	6.8
M9 × 1.25		TE953396	13	90	35	9	7	10	3	7.8
M10 × 1.5		TE953426	15	100	39	10	8	11	3	8.5
M11 × 1.5		TE953466	17	100	40	8	6.2	9	3	9.5
M12 × 1.75		TE953506	18	110	44	9	7	10	3	10.2
M14 × 2		TE953546	20	110	44	11	9	12	3	12
M16 × 2		TE953606	20	110	44	12	9	12	3	14
M18 × 2.5		TE953656	25	125	50	14	11	14	4	15.5
M20 × 2.5		TE953706	25	140	54	16	12	15	4	17.5
M22 × 2.5		TE953746	25	140	54	18	14.5	17	4	19.5
M24 × 3		TE953786	30	160	60	18	14.5	17	4	21
M27 × 3		TE953866	30	160	60	20	16	19	4	24
M30 × 3.5		TE953946	35	180	70	22	18	21	4	26.5

►DIN 371(M2~M10) and DIN 376(M11~M30)

- ▶* DIN profile not ISO

◎ : Excellent ○ : Good

[illegible]

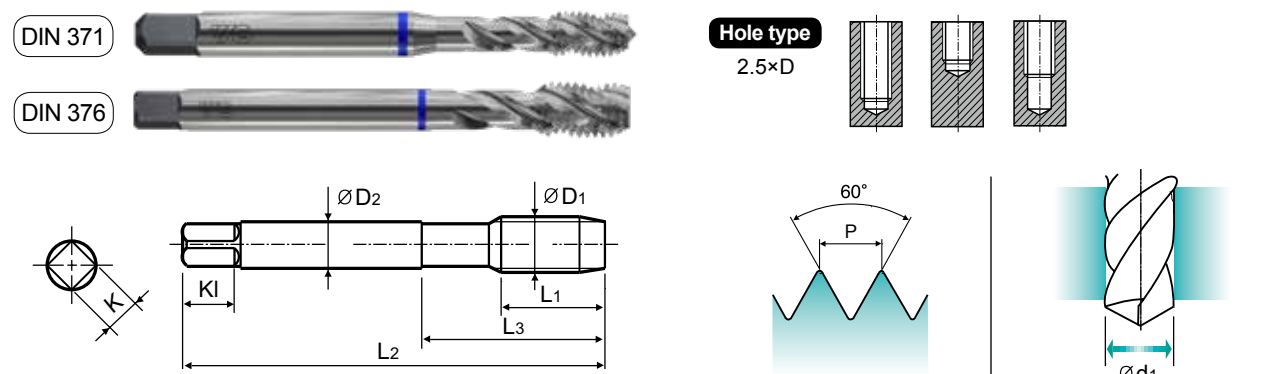

YG TAP ALU

TC169
SERIES

UNC Unified coarse threads

- Unified Grobgewinde
- UNC
- Unificato passo grosso

► Suitable for tapping blind holes due to special flute geometry and excellent chip evacuation.



Recommended Cutting Page : P.252 Unit : mm

SIZE	TPI	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1		Bright	L1	L2	L3	ØD2	K	KI	Z	Ød1
#4 - 40UNC		TC169162	6	56	18	3.5	2.7	6	2	2.3
#5 - 40UNC		TC169202	7	56	18	3.5	2.7	6	2	2.6
#6 - 32UNC		TC169242	7	56	20	4	3	6	2	2.85
#8 - 32UNC		TC169282	8	63	21	4.5	3.4	6	2	3.5
#10 - 24UNC		TC169322	10	70	25	6	4.9	8	2	3.9
#12 - 24UNC		TC169362	10	80	30	6	4.9	8	2	4.5
1/4 - 20UNC		TC169402	13	80	30	7	5.5	8	2	5.2
5/16 - 18UNC		TC169442	14	90	35	8	6.2	9	2	6.6
3/8 - 16UNC		TC169482	16	100	39	9	7	10	2	8
7/16 - 14UNC		TC169522	17	100	40	8	6.2	9	2	9.4
1/2 - 13UNC		TC169562	20	110	44	9	7	10	2	10.75
9/16 - 12UNC		TC169602	20	110	44	11	9	12	3	12.25
5/8 - 11UNC		TC169642	22	110	44	12	9	12	3	13.5
3/4 - 10UNC		TC169702	25	125	50	14	11	14	3	16.5
7/8 - 9UNC		TC169742	27	140	54	18	14.5	17	3	19.5
1 - 8UNC		TC169782	30	160	60	20	16	19	3	22.25
1-1/8 - 7UNC		TC169822	35	180	65	22	18	21	3	25

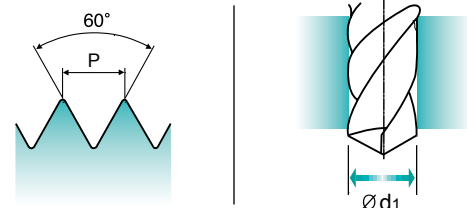
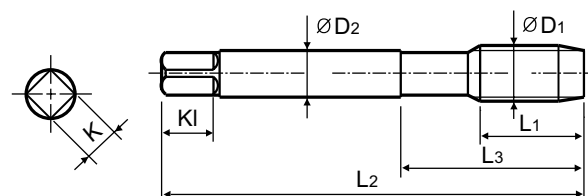
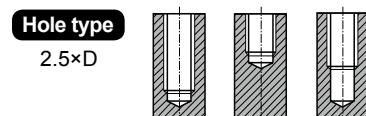
►DIN 371(#4~3/8) and DIN 376(7/16~1-1/8)

[illegible]



- 🇩🇪 Unified Feingewinde
- 🇫🇷 UNF
- 🇮🇹 Unificato passo grosso

► Geeignet zum Gewinden von Sacklöchern dank besonderer Nutengeometrie und ausgezeichneter Spanabfuhr.

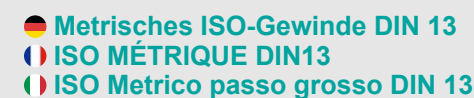


Recommended Cutting Page : P.252

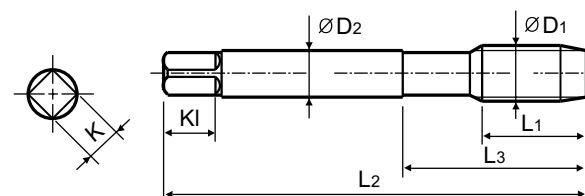
Unit : mm

SIZE	TPI	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1		Bright	L1	L2	L3	ØD2	K	KI	Z	Ød1
#4 - 48UNF		TC170182	6	56	18	3.5	2.7	6	2	2.4
#5 - 44UNF		TC170222	7	56	18	3.5	2.7	6	2	2.7
#6 - 40UNF		TC170262	7	56	20	4	3	6	2	3
#8 - 36UNF		TC170302	8	63	21	4.5	3.4	6	2	3.5
#10 - 32UNF		TC170342	10	70	25	6	4.9	8	2	4.1
#12 - 28UNF		TC170382	10	80	30	6	4.9	8	2	4.7
1/4 - 28UNF		TC170422	10	80	30	7	5.5	8	2	5.5
5/16 - 24UNF		TC170462	10	90	35	8	6.2	9	2	6.9
3/8 - 24UNF		TC170502	10	100	39	9	7	10	2	8.5
7/16 - 20UNF		TC170542	13	100	40	8	6.2	9	2	9.9
1/2 - 20UNF		TC170582	13	100	40	9	7	10	2	11.5
9/16 - 18UNF		TC170622	15	100	40	11	9	12	3	12.9
5/8 - 18UNF		TC170662	15	100	40	12	9	12	3	14.5
3/4 - 16UNF		TC170722	17	110	44	14	11	14	3	17.5
7/8 - 14UNF		TC170762	17	125	50	18	14.5	17	3	20.5
1 - 12UNF		TC170802	20	140	54	18	14.5	17	3	23.25
1-1/8 - 12UNF		TC170842	22	150	60	22	18	21	3	26.5

►DIN 371(#4~3/8) and DIN 374(7/16~1-1/8)

[illegible]

- Gewindebohrer mit ausgesetzten Zähnen um die Kontaktzone mit dem Werkstück und das Drehmoment zu minimieren und dem Span mehr Raum zu geben.



Recommended Cutting Page : P.252

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		TC622136	8	45	13	2.8	2.1	5	3	1.6
M2.2 × 0.45		TC622156	8	45	13	2.8	2.1	5	3	1.75
*M2.3 × 0.4		TC622196	8	45	13	2.8	2.1	5	3	1.9
M2.5 × 0.45		TC622176	9	50	15	2.8	2.1	5	3	2.05
*M2.6 × 0.45		TC622496	9	50	15	2.8	2.1	5	3	2.1
M3 × 0.5		TC622206	11	56	18	3.5	2.7	6	3	2.5
M3.5 × 0.6		TC622226	12	56	20	4	3	6	3	2.9
M4 × 0.7		TC622246	13	63	21	4.5	3.4	6	3	3.3
M4.5 × 0.75		TC622266	14	70	25	6	4.9	8	3	3.7
M5 × 0.8		TC622286	15	70	25	6	4.9	8	3	4.2
M6 × 1		TC622316	17	80	30	6	4.9	8	3	5
M7 × 1		TC622346	17	80	30	7	5.5	8	3	6
M8 × 1.25		TC622366	20	90	35	8	6.2	9	3	6.8
M9 × 1.25		TC622396	20	90	35	9	7	10	3	7.8
M10 × 1.5		TC622426	22	100	39	10	8	11	3	8.5
M11 × 1.5		TC622466	22	100	40	8	6.2	9	3	9.5
M12 × 1.75		TC622506	24	110	44	9	7	10	3	10.2
M14 × 2		TC622546	26	110	44	11	9	12	3	12
M16 × 2		TC622606	27	110	44	12	9	12	3	14
M18 × 2.5		TC622656	30	125	50	14	11	14	3	15.5
M20 × 2.5		TC622706	32	140	54	16	12	15	3	17.5
M22 × 2.5		TC622746	32	140	54	18	14.5	17	3	19.5
M24 × 3		TC622786	34	160	60	18	14.5	17	3	21
M27 × 3		TC622866	36	160	60	20	16	19	3	24
M30 × 3.5		TC622946	40	180	70	22	18	21	3	26.5

►DIN 371(M2~M10) and DIN 376(M11~M30)

- ▶* DIN profile not ISO

◎ : Excellent ○ : Good

[illegible]

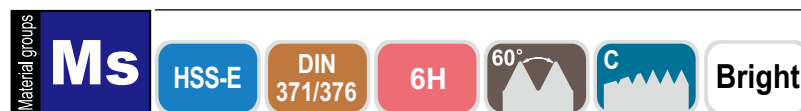
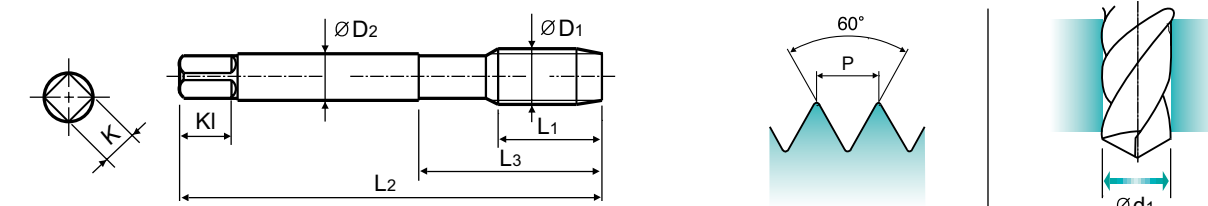


ISO metric coarse threads DIN 13



► Geeignet für Durchgangslöcher in höherer Schnittgeschwindigkeit als bei anderen Gewindebohrern dank größerer Kerndicke.

► Geeignet zum Gewindeschneiden von Messing und anderen kurzspanenden Werkstoffen

Machine taps
MaschinengewindebohrerMachine taps
Maschinengewindebohrer

Recommended Cutting Page : P.252

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	Ni	L1	L2	L3	ØD2	K	KI	Z	Ød1
M2 × 0.4		TE943136	8	45	13	2.8	2.1	5	3	1.6
M2.2 × 0.45		TE943156	8	45	13	2.8	2.1	5	3	1.75
*M2.3 × 0.4		TE943196	8	45	13	2.8	2.1	5	3	1.9
M2.5 × 0.45		TE943176	9	50	15	2.8	2.1	5	3	2.05
*M2.6 × 0.45		TE943496	9	50	15	2.8	2.1	5	3	2.1
M3 × 0.5		TE943206	11	56	18	3.5	2.7	6	3	2.5
M3.5 × 0.6		TE943226	12	56	20	4	3	6	3	2.9
M4 × 0.7		TE943246	13	63	21	4.5	3.4	6	3	3.3
M4.5 × 0.75		TE943266	14	70	25	6	4.9	8	3	3.7
M5 × 0.8		TE943286	15	70	25	6	4.9	8	3	4.2
M6 × 1		TE943316	17	80	30	6	4.9	8	3	5
M7 × 1		TE943346	17	80	30	7	5.5	8	3	6
M8 × 1.25		TE943366	20	90	35	8	6.2	9	3	6.8
M9 × 1.25		TE943396	20	90	35	9	7	10	3	7.8
M10 × 1.5		TE943426	22	100	39	10	8	11	3	8.5
M11 × 1.5		TE943466	22	100	40	8	6.2	9	3	9.5
M12 × 1.75		TE943506	24	110	44	9	7	10	3	10.2
M14 × 2		TE943546	26	110	44	11	9	12	3	12
M16 × 2		TE943606	27	110	44	12	9	12	3	14
M18 × 2.5		TE943656	30	125	50	14	11	14	4	15.5
M20 × 2.5		TE943706	32	140	54	16	12	15	4	17.5
M22 × 2.5		TE943746	32	140	54	18	14.5	17	4	19.5
M24 × 3		TE943786	34	160	60	18	14.5	17	4	21
M27 × 3		TE943866	36	160	60	20	16	19	4	24
M30 × 3.5		TE943946	40	180	70	22	18	21	4	26.5

►DIN 371(M2~M10) and DIN 376(M11~M30)

- ▶* DIN profile not ISO

◎ : Excellent ○ : Good

[illegible]

Recommended Cutting Page : P.252 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		TC433136	8	45	13	2.8	2.1	5	3	1.6
M2.2 × 0.45		TC433156	8	45	13	2.8	2.1	5	3	1.75
*M2.3 × 0.4		TC433196	8	45	13	2.8	2.1	5	3	1.9
M2.5 × 0.45		TC433176	9	50	15	2.8	2.1	5	3	2.05
*M2.6 × 0.45		TC433496	9	50	15	2.8	2.1	5	3	2.1
M3 × 0.5		TC433206	11	56	18	3.5	2.7	6	3	2.5
M3.5 × 0.6		TC433226	12	56	20	4	3	6	3	2.9
M4 × 0.7		TC433246	13	63	21	4.5	3.4	6	3	3.3
M4.5 × 0.75		TC433266	14	70	25	6	4.9	8	3	3.7
M5 × 0.8		TC433286	15	70	25	6	4.9	8	3	4.2
M6 × 1		TC433316	17	80	30	6	4.9	8	3	5
M7 × 1		TC433346	17	80	30	7	5.5	8	3	6
M8 × 1.25		TC433366	20	90	35	8	6.2	9	3	6.8
M9 × 1.25		TC433396	20	90	35	9	7	10	3	7.8
M10 × 1.5		TC433426	22	100	39	10	8	11	3	8.5
M11 × 1.5		TC433466	22	100	40	8	6.2	9	3	9.5
M12 × 1.75		TC433506	24	110	44	9	7	10	3	10.2
M14 × 2		TC433546	26	110	44	11	9	12	3	12
M16 × 2		TC433606	27	110	44	12	9	12	3	14
M18 × 2.5		TC433656	30	125	50	14	11	14	4	15.5
M20 × 2.5		TC433706	32	140	54	16	12	15	4	17.5
M22 × 2.5		TC433746	32	140	54	18	14.5	17	4	19.5
M24 × 3		TC433786	34	160	60	18	14.5	17	4	21
M27 × 3		TC433866	36	160	60	20	16	19	4	24
M30 × 3.5		TC433946	40	180	70	22	18	21	4	26.5

▶DIN 371(M2~M10) and DIN 376(M11~M30)

- ▶ * DIN profile not ISO

◎ : Excellent ○ : Good

[illegible]

