





		HOLE TYPE		HSS-PM							
		TOOL MATERIAL		HSS-PM							
		CHAMFER LEAD KC-TO DIN2197		C	C	E	C	C	C	E	
		FLUTE TYPE		Spiral Flute							
		SPIRAL FLUTE ANGLE		R45							
		CLASS OF THREAD		6HX	6GX	6HX	2BX	-	-	-	
SERIES	M	DIN371/376	TRE30 (p.15)	TRE35 (p.16)	TRE34 (p.11)						
	MF	DIN374	TRE31 (p.12)	TRE36 (p.14)							
	UNC	DIN371/376				TRE32 (p.15)					
	UNF	DIN371/374				TRE33 (p.16)					
	6SPF	DIN516					TRE37 (p.17)	TRE38 (p.18)			
		SURFACE TREATMENT / COATING		X-Coating							
		MODEL									
				NEW			NEW		NEW		
				○ : Excellent □ : Good							
ISO	Material Description	Composition / Structure / Heat Treatment	HB	HRC	Recommended cutting conditions Vc (m/min)						
P	1	Non-alloy steel	About 0.15% C	Annealed	125	○ (5-20)	○ (5-20)	○ (5-20)	○ (5-20)	○ (5-20)	○ (5-20)
	2		About 0.45% C	Annealed	190	○ (10-50)	○ (10-50)	○ (10-50)	○ (10-50)	○ (10-50)	○ (10-50)
	3		About 0.45% C	Quenched & tempered	250	○ (10-50)	○ (10-50)	○ (10-50)	○ (10-50)	○ (10-50)	○ (10-50)
	4		About 0.75% C	Annealed	270	○ (15-40)	○ (15-40)	○ (15-40)	○ (15-40)	○ (15-40)	○ (15-40)
	5		About 0.75% C	Quenched & tempered	300	○ (15-40)	○ (15-40)	○ (15-40)	○ (15-40)	○ (15-40)	○ (15-40)
	6	Low alloy steel	Annealed	180	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)
	7		Quenched & tempered	275	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)
	8		Quenched & tempered	300	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)
	9		Quenched & tempered	350	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)
	10	High alloyed steel and tool steel	Annealed	200	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)
M	11		Quenched & Tempered	325	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)
	12	Feritic / Martenitic	Annealed	200	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)
	13	Stainless steel	Martensitic	240	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)
	14		Austenitic	180	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)	○ (5-15)
	15	Gray cast iron	Pearlitic / Ferritic	180	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	16		Pearlitic (Martempered)	260	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	17	Modular cast iron	Ferritic	160	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	18		Pearlitic	250	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
K	19	Malleable cast iron	Ferritic	130	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	20		Pearlitic	230	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	21	Aluminum-wrought alloy	Not Curable	60	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	22		Curable	100	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	23	Aluminum-cast alloy	≤ 12% Si, Not Curable	75	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	24		> 12% Si, Not Curable	90	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	25	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB-1% Cu3Ni, Cu5Zn (Brass)	110	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	26		Cu3Ni, lead-free copper and electrolytic copper	90	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	27	Non Metallic Materials	Duploplastic Fiber Reinforced Plastic	100	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	28		Rubber, Wood, etc.		○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
S	29										
	30										
	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15					
	32		Cast	280	30						
	33		Annealed	250	25						
	34		Cast	350	38						
	35		Cur	320	34						
	36	Titanium Alloys	Pure Titanium	400 Rm							
H	37		Alpha + Beta Alloys	Hardened	1050 Rm						
	38	Hardened steel	Hardened	550	55						
	39	Chilled Cast Iron	Hardened	630	60						
	40		Cast	400	42						
41	Hardened Cast Iron	Hardened	550	55							

[illegible]

HSS-PM PRIME TAP

HOLE TYPE		 Max. 2.5xD Blind Hole		 Max. 3xD Through Hole		 Max. 3xD Blind / Through Hole		
TOOL MATERIAL		HSS-PM						
CHAMFER LEAD ACC. TO DIN2197		E	C	B	C	C	E	
FLUTE TYPE		Spiral Flute		Spiral Point		Forming		
SPIRAL FLUTE ANGLE		R45						
CLASS OF THREAD		6HX	-	6HX	6HX	6GX	6HX	
SERIES	M	DIN371/376	TR41 (p.37)		TR24 (p.40)	TR20 (p.42)	TR24 (p.43)	TR22 (p.44)
	MF	DIN374			TR25 (p.41)	TR21 (p.45)	TR25 (p.46)	TR23 (p.47)
	UNC	DIN371/376						
	UNF	DIN371/374						
	GB91	DIN3196		TR42 (p.39)				
SURFACE TREATMENT / COATING		X-Coating						
MODEL								
								

Please visit
yg1.com/mat
for material search

◎ : Excellent ○ : Good

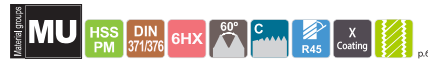
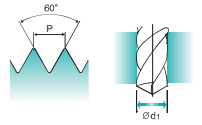
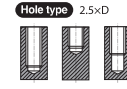
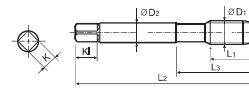
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRC	Recommended cutting conditions Vc (m/min.)									
P	1	Non-alloy steel	About 0.15% C	Annealed	125	13	○ (5-25)	○ (5-25)	○ (15-50)	○ (15-45)	○ (15-45)	○ (15-45)	○ (15-45)	○ (15-45)	○ (15-45)
	2		About 0.45% C	Annealed	190	13	○ (10-55)	○ (10-55)	○ (10-55)	○ (10-60)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	3		About 0.45% C	Quenched & tempered	250	25	○ (10-55)	○ (10-55)	○ (10-60)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	4		About 0.75% C	Annealed	270	28	○ (15-45)	○ (15-45)	○ (15-55)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	5		About 0.75% C	Quenched & tempered	300	32	○ (15-45)	○ (15-45)	○ (15-55)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	6	Low alloy steel		Annealed	180	10	○ (8-35)	○ (8-35)	○ (8-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	7			Quenched & tempered	275	29	○ (8-35)	○ (8-35)	○ (8-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	8			Quenched & tempered	300	32	○ (8-35)	○ (8-35)	○ (8-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	9			Quenched & tempered	350	38	○ (8-35)	○ (8-35)	○ (8-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	10			Quenched & tempered	350	38	○ (8-35)	○ (8-35)	○ (8-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
M	11	High alloyed steel, and tool steel		Annealed	200	15	○ (8-35)	○ (8-35)	○ (8-35)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)
	12			Quenched & tempered	325	35	○ (8-35)	○ (8-35)	○ (8-35)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)
	13			Quenched & tempered	325	35	○ (8-35)	○ (8-35)	○ (8-35)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)
	14			Quenched & tempered	325	35	○ (8-35)	○ (8-35)	○ (8-35)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)
	15			Quenched & tempered	325	35	○ (8-35)	○ (8-35)	○ (8-35)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)	○ (5-22)
	16	Stainless steel	Ferritic / Martensitic	Annealed	200	15	○ (5-17)	○ (5-17)	○ (8-25)	○ (5-17)	○ (5-17)	○ (5-17)	○ (5-17)	○ (5-17)	○ (5-17)
	17		Martensitic	Quenched & tempered	240	23	○ (5-17)	○ (5-17)	○ (8-25)	○ (5-17)	○ (5-17)	○ (5-17)	○ (5-17)	○ (5-17)	○ (5-17)
	18		Austenitic	Annealed	180	10	○ (5-17)	○ (5-17)	○ (8-25)	○ (3-10)	○ (3-10)	○ (3-10)	○ (3-10)	○ (3-10)	○ (3-10)
	19				180	10	○ (15-40)	○ (15-40)	○ (15-40)						
	20				260	26	○ (15-40)	○ (15-40)	○ (15-40)						
K	21	Grey cast iron	Ferritic / Pearlitic	Annealed	160	3	○ (15-40)	○ (15-40)	○ (15-40)						
	22				160	3	○ (15-40)	○ (15-40)	○ (15-40)						
	23				250	25	○ (15-40)	○ (15-40)	○ (15-40)						
	24				130	21	○ (15-40)	○ (15-40)	○ (15-40)						
	25				230	21	○ (15-40)	○ (15-40)	○ (15-40)						
	26	Malleable cast iron	Pearlitic	Annealed	60		○ (15-40)	○ (15-40)	○ (15-40)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)
	27				75		○ (15-40)	○ (15-40)	○ (15-40)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)
	28				100		○ (15-40)	○ (15-40)	○ (15-40)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)
	29				130		○ (15-40)	○ (15-40)	○ (15-40)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)
	30				180		○ (15-40)	○ (15-40)	○ (15-40)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)	○ (20-55)
N	31	Aluminum-cast, alloyed	Aluminum-cast, alloyed	Hardened	90		○ (15-40)	○ (15-40)	○ (15-40)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)
	32				110		○ (15-40)	○ (15-40)	○ (15-40)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)
	33				130		○ (15-40)	○ (15-40)	○ (15-40)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)
	34				180		○ (15-40)	○ (15-40)	○ (15-40)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)
	35				200		○ (15-40)	○ (15-40)	○ (15-40)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)	○ (20-45)
	36	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)	Hardened	100		○ (15-40)	○ (15-40)	○ (15-40)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)
	37				130		○ (15-40)	○ (15-40)	○ (15-40)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)
	38				180		○ (15-40)	○ (15-40)	○ (15-40)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)
	39				200		○ (15-40)	○ (15-40)	○ (15-40)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)
	40				250		○ (15-40)	○ (15-40)	○ (15-40)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)	○ (10-35)
S	41	Heat Resistant Super Alloys	Fe Based	Annealed	200	15									
	42				280	30									
	43				250	25									
	44				350	38									
	45				320	34									
	46	Titanium Alloys	Pure Titanium	Hardened	400 Rm										
	47				1050 Rm										
	48				550	55									
	49				630	60									
	50				400	42									
H	51	Hardened steel	Hardened	Hardened	550	55									
	52				630	60									
	53				400	42									
	54				550	55									
	55				550	55									
	56	Chilled Cast Iron	Cast	Cast	400	42									
	57				550	55									
	58				550	55									
	59				550	55									
	60				550	55									

M X-COATED HSS-PM SPIRAL FLUTE TAPS for MULTI-PURPOSE ISO Metric Coarse Threads DIN 13

SERIES

TRE30

- High performance on various ductile materials
- Specially designed to prevent oversized threads and reduce gauging problems



Machine Taps

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD1	P	X-Coating	L1	L2	L3	ØD2	K	KL	Z	Ød1
M2 x 0.4		TRE30136GS	3.2	45	13	2.8	2.1	5	2	1.6
M2.5 x 0.45		TRE30176GS	3.6	50	15	2.8	2.1	5	2	2.1
M3 x 0.5		TRE30206GS	4	56	18	3.5	2.7	6	3	2.5
M3.5 x 0.6		TRE30226GS	4.8	56	20	4	3	6	3	2.9
M4 x 0.7		TRE30246GS	5.6	63	21	4.5	3.4	6	3	3.3
M5 x 0.8		TRE30286GS	6.4	70	25	6	4.9	8	3	4.2
M6 x 1.0		TRE30316GS	8	80	30	6	4.9	8	3	5
M7 x 1.0		TRE30346GS	10	80	30	7	5.5	8	3	6
M8 x 1.25		TRE30366GS	13	90	35	8	6.2	9	3	6.8
M9 x 1.25		TRE30396GS	13	90	35	9	7	10	3	7.8
M10 x 1.5		TRE30426GS	15	100	39	10	8	11	3	8.5
M12 x 1.75		TRE30506GS	18	110	44	9	7	10	3	10.3
M14 x 2.0		TRE30546GS	20	110	44	11	9	10	3	12
M16 x 2.0		TRE30606GS	20	110	44	12	9	12	3	14
M18 x 2.5		TRE30656GS	25	125	50	14	11	14	4	15.5
M20 x 2.5		TRE30706GS	25	140	54	16	12	15	4	17.5
M22 x 2.5		TRE30746GS	25	140	54	18	14.5	17	4	19.5
M24 x 3.0		TRE30786GS	30	160	60	18	14.5	17	4	21