

UNF

X-COATED HSS-PM SPIRAL POINT TAPS for MULTI-PURPOSE Unified Fine Threads

SERIES

TRJ18

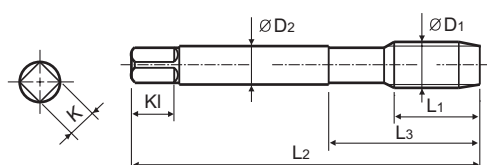
DIN 371



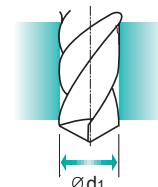
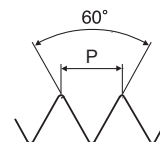
DIN 374



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



Hole type 3×D



HSS PM

DIN 371/374

2BX



X Coating



p.7

Machine Taps

Unit : mm

SIZE	TPI	EDP No.	Thread Length	Overall Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute	Tapping Drill Diameter
ØD ₁		X-Coating	L ₁	L ₂	L ₃	ØD ₂	K	KI	Z	Ød ₁
#4 - 48 UNF		TRJ18182GS	11	56	18	3.5	2.7	6	2	2.4
#5 - 44 UNF		TRJ18222GS	11	56	18	3.5	2.7	6	3	2.7
#6 - 40 UNF		TRJ18262GS	12	56	20	4	3	6	3	2.9
#8 - 36 UNF		TRJ18302GS	13	63	21	4.5	3.4	6	3	3.5
#10 - 32 UNF		TRJ18342GS	15	70	25	6	4.9	8	3	4.1
#12 - 28 UNF		TRJ18382GS	16	80	30	6	4.9	8	3	4.6
1/4 - 28 UNF		TRJ18422GS	17	80	30	7	5.5	8	3	5.5
5/16 - 24 UNF		TRJ18462GS	17	90	35	8	6.2	9	3	6.9
3/8 - 24 UNF		TRJ18502GS	18	100	39	9	7	10	3	8.5
7/16 - 20 UNF		TRJ18542GS	22	100	40	8	6.2	9	3	9.9
1/2 - 20 UNF		TRJ18582GS	22	100	40	9	7	10	3	11.5
9/16 - 18 UNF		TRJ18622GS	22	100	40	11	9	12	3	12.9
5/8 - 18 UNF		TRJ18662GS	22	100	40	12	9	12	3	14.5
3/4 - 16 UNF		TRJ18722GS	25	110	44	14	11	14	3	17.5
7/8 - 14 UNF		TRJ18762GS	26	125	50	18	14.5	17	3	20.5
1" - 12 UNF		TRJ18802GS	28	140	54	20	16	19	3	23.2

► DIN 371(#4~3/8) and DIN374(7/16~1")

◎ : Excellent ○ : Good

ISO	P										M			K								
Material Description	Non-alloy steel					Low alloy steel				High alloy steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron			
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230		
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	◎	◎	◎	◎	◎	◎	◎				
ISO	N										S						H					
Material Description	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	
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	38	34			55	60	42	55	
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550	
Recommended	○	○	◎	◎	○	◎	◎	◎														

HSS-PM PRIME TAP



Please visit
globalyg1.com/mat
for material search

◎ : Excellent ○ : Good

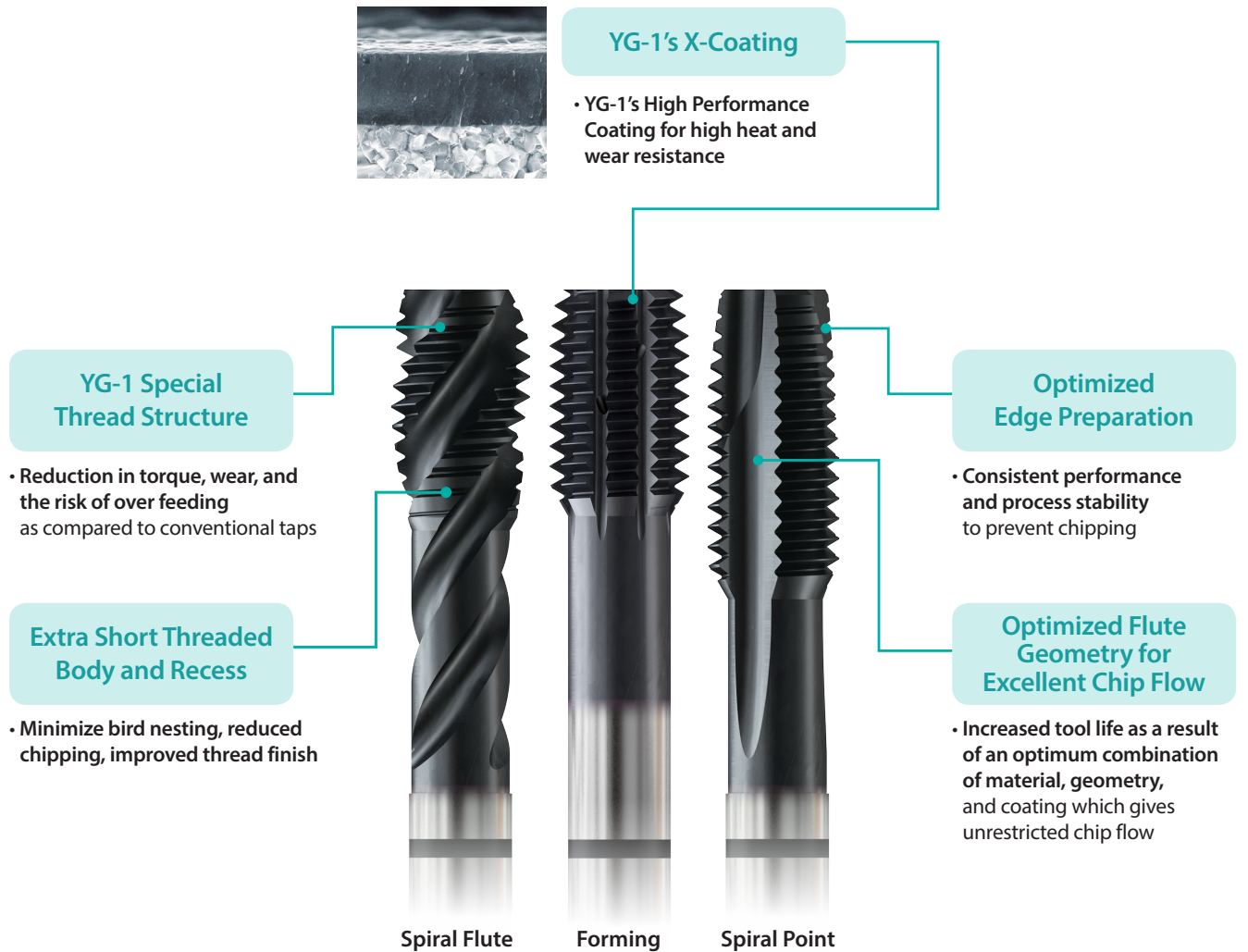
HOLE TYPE		Max. 2.5xD Blind Hole					
TOOL MATERIAL		HSS-PM					
CHAMFER LEAD ACC. TO DIN2197		C	C	E	C	C	E
FLUTE TYPE		Spiral Flute					
SPIRAL FLUTE ANGLE		R45					
CLASS OF THREAD		6HX	6GX	6HX	2BX	-	-
SERIES	M	DIN371/376	TRE30 (p.9)	TRE35 (p.10)	TRE34 (p.11)		
	MF	DIN374	TRE31 (p.12)	TRE36 (p.14)			
	UNC	DIN371/376				TRE32 (p.15)	
	UNF	DIN371/374				TRE33 (p.16)	
	G(BSP)	DIN5156					TRE37 (p.17) TRE38 (p.18)
SURFACE TREATMENT / COATING		X-Coating					
MODEL							

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		○ (5-20)	○ (5-20)	○ (5-20)	○ (5-20)	○ (5-20)	○ (5-20)
	2		About 0.45% C	Annealed	190	13	◎ (10-50)	◎ (10-50)	◎ (10-50)	◎ (10-50)	◎ (10-50)	◎ (10-50)
	3		About 0.45% C	Quenched & tempered	250	25	◎ (10-50)	◎ (10-50)	◎ (10-50)	◎ (10-50)	◎ (10-50)	◎ (10-50)
	4		About 0.75% C	Annealed	270	28	◎ (15-40)	◎ (15-40)	◎ (15-40)	◎ (15-40)	◎ (15-40)	◎ (15-40)
	5		About 0.75% C	Quenched & tempered	300	32	◎ (15-40)	◎ (15-40)	◎ (15-40)	◎ (15-40)	◎ (15-40)	◎ (15-40)
	6	Low alloy steel		Annealed	180	10	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)
	7			Quenched & tempered	275	29	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)
	8			Quenched & tempered	300	32	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)
	9			Quenched & tempered	350	38	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)
	10	High alloyed steel, and tool steel		Annealed	200	15	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)
	11			Quenched & Tempered	325	35	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)
	13		Martensitic	Quenched & Tempered	240	23	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)
	14		Austenitic		180	10	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	16		Pearlitic (Martensitic)		260	26	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	17	Nodular cast iron	Ferritic		160	3	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)
	18		Pearlitic		250	25	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)
	19	Malleable cast iron	Ferritic		130							
	20		Pearlitic		230	21						
N	21	Aluminum- wrought alloy	Not Curable		60		○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	22		Curable	Hardened	100		○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	23	Aluminum- cast, alloyed	≤ 12% Si, Not Curable		75		◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)
	24		≤ 12% Si, Curable	Hardened	90		◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)
	25		> 12% Si, Not Curable		130		○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110		◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)
	27		CuZn, CuSnZn (Brass)		90		◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)
	28		CuSn, lead-free copper and electrolytic copper		100		◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)
	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic									
	30		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. 3.0xD Blind / Through Hole						Max. 2.5xD Blind Hole	
HSS-PM											
B	B	B	B	C	C	C	E	C	C	C	
Spiral Point				Forming						Spiral Flute	
-	-	-	-	-	-	-	-	-	-	R45	
6HX	6GX	2BX	-	6HX	6GX	7GX	6HX	2BX	-	6HX	
TRJ15 (p.19)	TRJ10 (p.20)			TRQ10 (p.26)	TRQ14 (p.27)	TRQ16 (p.28)	TRQ12 (p.29)			TRE39 (p.36)	
TRJ16 (p.21)	TRJ11 (p.22)			TRQ11 (p.30)	TRQ15 (p.31)		TRQ13 (p.32)			TRE40 (p.38)	
		TRJ17 (p.23)						TRQ18 (p.33)			
		TRJ18 (p.24)						TRQ19 (p.34)			
			TRJ12 (p.25)						TRQ17 (p.35)		
X-Coating											
											
	NEW		NEW	NEW	NEW	NEW	NEW	NEW	NEW	NEW	
Recommended cutting conditions Vc (m/min.)											
◎ (15-45)	◎ (15-45)	◎ (15-45)	◎ (15-45)	◎ (15-40)	◎ (15-40)	◎ (15-40)	◎ (15-40)	◎ (15-40)	◎ (15-40)	○ (5-25)	1
◎ (10-55)	◎ (10-55)	◎ (10-55)	◎ (10-55)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (10-55)	2
◎ (10-55)	◎ (10-55)	◎ (10-55)	◎ (10-55)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (10-55)	3
◎ (15-50)	◎ (15-50)	◎ (15-50)	◎ (15-50)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-45)	4
◎ (15-50)	◎ (15-50)	◎ (15-50)	◎ (15-50)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-45)	5
◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (8-35)	6
◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (15-30)	◎ (8-35)	7
◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (5-20)	◎ (5-20)	◎ (5-20)	◎ (5-20)	◎ (5-20)	◎ (5-20)	◎ (8-35)	8
◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (8-30)	◎ (5-20)	◎ (5-20)	◎ (5-20)	◎ (5-20)	◎ (5-20)	◎ (5-20)	○ (8-35)	9
○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	○ (8-35)	10
○ (8-30)	○ (8-30)	○ (8-30)	○ (8-30)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	○ (8-35)	11
◎ (8-20)	◎ (8-20)	◎ (8-20)	◎ (8-20)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-17)	12
◎ (8-20)	◎ (8-20)	◎ (8-20)	◎ (8-20)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-15)	◎ (5-17)	13
◎ (8-20)	◎ (8-20)	◎ (8-20)	◎ (8-20)	◎ (3-9)	◎ (3-9)	◎ (3-9)	◎ (3-9)	◎ (3-9)	◎ (3-9)	◎ (5-17)	14
◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)							○ (15-40)	15
◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)							○ (15-40)	16
◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)							◎ (15-40)	17
◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)							◎ (15-40)	18
											19
											20
○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	◎ (20-50)	◎ (20-50)	◎ (20-50)	◎ (20-50)	◎ (20-50)	◎ (20-50)	○ (15-40)	21
○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	◎ (20-50)	◎ (20-50)	◎ (20-50)	◎ (20-50)	◎ (20-50)	◎ (20-50)	○ (15-40)	22
◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (15-40)	23
◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (15-40)	24
○ (15-35)	○ (15-35)	○ (15-35)	○ (15-35)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (20-40)	◎ (20-40)	○ (15-40)	25
◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (15-40)	26
◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (15-40)	27
◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (15-35)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (10-30)	◎ (15-40)	28
											29
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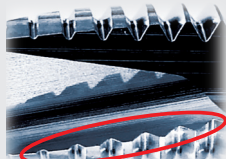
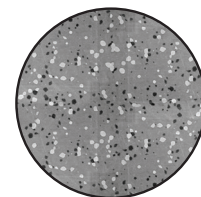
FEATURES & BENEFITS

High and Reliable Performance on Various Ductile Materials



HSS-PM(Powder Metallurgy) Premium Taps

Powdered Metal Technology for a tough-chipping resistant cutting edge for long tool life and reliable thread finish



Premium Cutting Edge Strength

- More controlled structure with high wear resistance
- Consistent performance and process stability with chipping resistance