SELECTION GUIDE

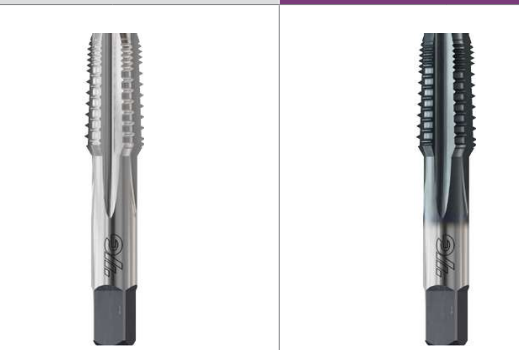
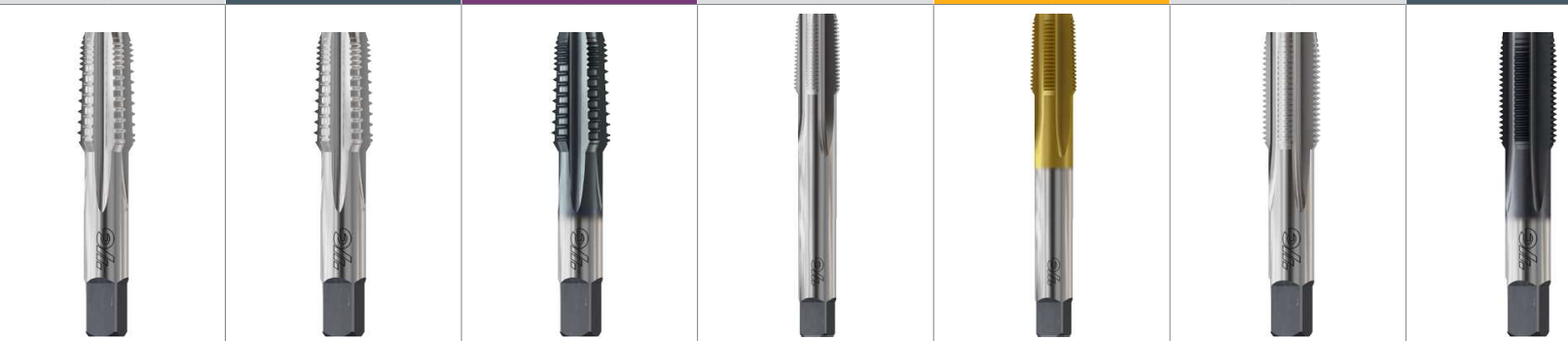
YG THREADING TOOLS

HSS-E & HSS PIPE TAP

- For Tapping National Pipe Threads

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

	S1	S2	T7505	T6505	TH505	T7546	T8546	T7L36/T7536	T6L36/T6536
HOLE TYPE	Max. 2.0xD Blind/Through Hole		Max. 2.0xD Blind/Through Hole						
TOOL MATERIAL	HSS-E		HSS						
CHAMFER LEAD	2P-3P		2P-3P			2P-3P		4P~5P	
FLUTE TYPE	Straight Flute		Straight Flute						
SPIRAL FLUTE ANGLE	-		-			-		-	
SERIES M									
SERIES M/MF									
SERIES UNC									
SERIES UNC/UNF									
SERIES UNC/UNF/UNS									
SERIES UNC/UN8									
SERIES NPT			T7505 (p.B316)	T6505 (p.B316)	TH505 (p.B316)				
SERIES NPTF	S1 (p.B315)	S2 (p.B315)				T7546 (p.B317)	T8546 (p.B317)		
SERIES NPS/NPSF								T7L36/T7536 (p.B318/p.B319)	T6L36/T6536 (p.B318/p.B319)
SURFACE TREATMENT / COATING	Bright	TiCN	Bright	Steam Oxide	TiCN	Bright	TiN	Bright	Steam Oxide
MODEL									

ISO	VDI 3323	Material Description	Composition / Structure	Heat Treatment	HB	HRc	S1	S2	T7505	T6505	TH505	T7546	T8546	T7L36/T7536	T6L36/T6536
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40
P	2	Non-alloy steel	About 0.45% C	Annealed	190	13	◎ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40	○ 15-40
P	3	Non-alloy steel	About 0.45% C	Quenched & Tempered	250	25	◎ 10-25	◎ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25
P	4	Non-alloy steel	About 0.75% C	Annealed	270	28	○ 10-20	○ 10-20							
P	5	Non-alloy steel	About 0.75% C	Quenched & Tempered	300	32	○ 10-20	○ 10-20							
P	6	Low alloy steel		Annealed	180	10	◎ 10-25	◎ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25	○ 10-25
P	7	Low alloy steel		Quenched & Tempered	275	29	○ 10-25	○ 10-25							
P	8	Low alloy steel		Quenched & Tempered	300	32	○ 10-25	○ 10-25							
P	9	Low alloy steel		Quenched & Tempered	350	38									
P	10	High alloyed steel, and tool steel		Annealed	200	15									
P	11	High alloyed steel, and tool steel		Quenched & Tempered	325	35									
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15									
M	13	Stainless steel	Martensitic	Quenched & Tempered	240	23									
M	14	Stainless steel	Austenitic		180	10									
K	15	Grey cast iron	Pearlitic / ferritic		180	10	◎ 15-50	◎ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50
K	16	Grey cast iron	Pearlitic (Martensitic)		260	26	◎ 15-50	◎ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50	○ 15-50
K	17	Nodular cast iron	Ferritic		160	3	◎ 15-50	◎ 15-50							
K	18	Nodular cast iron	Pearlitic		250	25	◎ 15-50	◎ 15-50							
K	19	Malleable cast iron	Ferritic		130										
K	20	Malleable cast iron	Pearlitic		230	21									
N	21	Aluminum-wrought alloy	Not Curable		60				○ 15-40		○ 15-40	○ 15-40	○ 15-40	○ 15-40	
N	22	Aluminum-wrought alloy	Curable	Hardened	100				○ 15-40		○ 15-40	○ 15-40	○ 15-40	○ 15-40	
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75				○ 20-35		○ 20-35	○ 20-35	○ 20-35	○ 20-35	
N	24	Aluminum-cast, alloyed	≤ 12% Si, Curable	Hardened	90										
N	25	Aluminum-cast, alloyed	> 12% Si, Not Curable		130										
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110										
N	27	Copper and Copper Alloys (Bronze / Brass)	CuZn, CuSnZn (Brass)		90										
N	28	Copper and Copper Alloys (Bronze / Brass)	CuSn, lead-free copper and electrolytic copper		100										
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic												
N	30	Non Metallic Materials	Rubber, Wood, etc.												
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15									
S	32	Heat Resistant Super Alloys	Fe Based	Cured	280	30									
S	33	Heat Resistant Super Alloys	Ni or Co Based	Annealed	250	25									
S	34	Heat Resistant Super Alloys	Ni or Co Based	Cured	350	38									
S	35	Heat Resistant Super Alloys	Ni or Co Based	Cast	320	34									
S	36	Titanium Alloys	Pure Titanium		400 Rm										
S	37	Titanium Alloys	Alpha + Beta Alloys	Hardened	1050 Rm										
H	38	Hardened steel		Hardened	550	55									
H	39	Hardened steel		Hardened	630	60									
H	40	Chilled Cast Iron		Cast	400	42									
H	41	Hardened Cast Iron		Hardened	550	55									

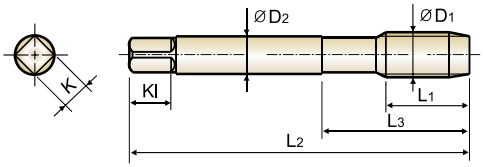
PIPE TAP

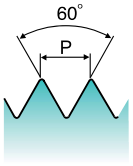
T7546/T8546 SERIES

Taper Pipe Tap : Straight Flute Standard Projection 6" Extension for General Purpose

ANSI

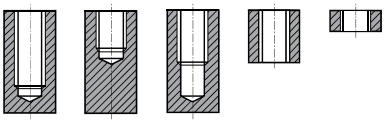






Material groups **GS** | HSS | NPTF | USCTI 311 | 2P~3P | Bright | TiN | p.B311

Thread Depth / Hole Type 2.0×D



Unit : Inch

Size D1	T.P.I	EDP No. Bright	EDP No. TiN	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length Kl	No. of Flute
NPTF1/8 -	27	T7546200	T8546200	6.000	.736	1.339	.437	.328	.380	4
NPTF1/4 -	18	T7546400	T8546400	6.000	1.063	1.732	.562	.421	.440	4
NPTF3/8 -	18	T7546480	T8546480	6.000	1.063	1.732	.700	.531	.500	4
NPTF1/2 -	14	T7546560	T8546560	6.000	1.378	-	.687	.515	.630	4
NPTF3/4 -	14	T7546700	T8546700	6.000	1.378	-	.906	.679	.690	5
NPTF1 -	11-1/2	T7546780	T8546780	6.000	1.752	-	1.125	.843	.810	5

▶These Taps meet both NPT and NPTF Standards.

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed 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	○	○	○																		

TECHNICAL DATA

Pipe Tap (Limit)

Tap Thread Limits						Reference Dimensions	
Nominal Size Inches	Threads per Inch	Projection* Inches	Projection Tolerance + or -	Taper per Foot Limits		Length	Tap Drill Size** NPT, ANPT, NPTF
				Min.	Max.	(L_1)	
1/16	27	.312	.063	.719	.781	.160	C
1/8	27	.312	.063	.719	.781	.1615	Q
1/8	18	.459	.063	.719	.781	.2278	7/16
3/8	18	.454	.063	.719	.781	.240	9/16
1/2	14	.579	.063	.719	.781	.320	45/64
3/4	14	.565	.063	.719	.781	.339	29/32
1	11-1/2	.678	.094	.719	.781	.400	1-9/64
1-1/4	11-1/2	.686	.094	.719	.781	.420	1-31/64
1-1/2	11-1/2	.699	.094	.719	.781	.420	1-23/32
2	11-1/2	.667	.094	.719	.781	.436	2-3/16
2-1/2	8	.925	.094	.734	.781	.682	2-39/64
3	8	.925	.094	.734	.781	.766	3-15/64
3-1/2	8	.938	.125	.734	.781	.821	...
4	8	.950	.125	.734	.781	.844	...

*** Distance small end of tap projects through L1 Taper Thread Ring Gage.**

**** Recommended size given permit direct tapping without reaming the hole, but only give a full thread for approx. the L1 length.**

