SELECTION GUIDE

YG THREADING TOOLS

HSS-E & HSS
PIPE TAP

- For Tapping National Pipe Threads

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									

Please visit
globalyg1.com/mat
for material search

◎ : Excellent ○ : Good

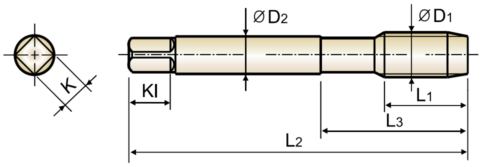
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc	S1		S2		T7505		T6505		TH505		T7546		T8546		T7L36/T7536		T6L36/T6536	
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	15-40	○	15-40	○	15-40	○	15-40	○	15-40	○	15-40	○	15-40	○	15-40	○	15-40
	2		About 0.45% C	Annealed	190	13	◎	15-40	○	15-40	○	15-40	○	15-40	○	15-40	○	15-40	○	15-40	○	15-40	○	15-40
	3		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
	4		About 0.75% C	Annealed	270	28	○	10-20	○	10-20														
	5		About 0.75% C	Quenched & Tempered	300	32	○	10-20	○	10-20														
	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
	7			Quenched & Tempered	275	29	○	10-25	○	10-25														
	8			Quenched & Tempered	300	32	○	10-25	○	10-25														
	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	◎	15-50	◎	15-50	○	15-50	○	15-50	○	15-50	○	15-50	○	15-50	○	15-50	○	15-50
	16		Pearlitic (Martensitic)		260	26	◎	15-50	◎	15-50	○	15-50	○	15-50	○	15-50	○	15-50	○	15-50	○	15-50	○	15-50
	17	Nodular cast iron	Ferritic		160	3	◎	15-50	◎	15-50														
	18		Pearlitic		250	25	◎	15-50	◎	15-50														
	19	Malleable cast iron	Ferritic		130																			
	20		Pearlitic		230	21																		
N	21	Aluminum-wrought alloy	Not Curable		60						○	15-40			○	15-40	○	15-40	○	15-40	○	15-40		
	22		Curable	Hardened	100						○	15-40			○	15-40	○	15-40	○	15-40	○	15-40		
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75						○	20-35			○	20-35	○	20-35	○	20-35	○	20-35		
	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 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		Ni or Co Based	Annealed	250	25																		
	34			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																		

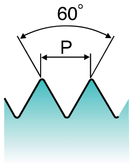
YG PIPE TAP

T7536/T6536 SERIES

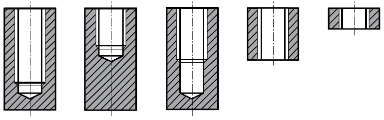
Straight Pipe Tap for General Purpose

ANSI





Thread Depth / Hole Type 2.0×D



Material groups **GS** | HSS | NPSF | USCTI 311 | 4P~5P | Bright | Steam Oxide | p.B311

Unit : Inch

Size	T.P.I	EDP No.		Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Bright	Steam Oxide	L2	L1	L3	D2	K	Kl	
NPSF1/8	- 27	T7536200	T6536200	2.130	.736	.906	.437	.328	.380	4
NPSF1/8	- 27	T7536210	T6536210	2.130	.748	-	.312	.234	.380	4
NPSF1/4	- 18	T7536400	T6536400	2.440	1.063	1.220	.562	.421	.440	4
NPSF3/8	- 18	T7536480	T6536480	2.560	1.063	1.220	.700	.531	.500	4
NPSF1/2	- 14	T7536560	T6536560	3.130	1.378	-	.687	.515	.630	4
NPSF3/4	- 14	T7536700	T6536700	3.250	1.378	-	.906	.679	.690	5
NPSF1	- 11-1/2	T7536780	T6536780	3.750	1.752	-	1.125	.843	.810	5

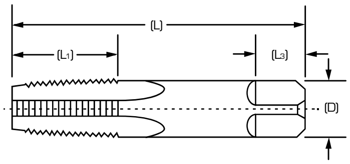
▶ Steam Oxide is not recommended for Aluminum and Aluminum alloys.

◎ : Excellent ○ : Good

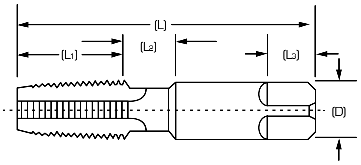
ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	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	400Rm	1050Rm	550	630	400	550
Recommended	○	○	○																		

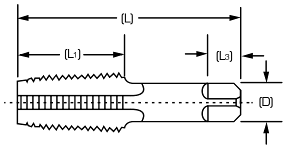
STANDARD PIPE TAP DIMENSION (STRAIGHT AND TAPER, GROUND THREAD)



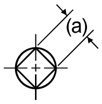
Blank Design (1)



Blank Design (2)



Blank Design (3)



Nominal Size	Overall Length	Thread Length	Shank Diameter	Square Length	Square Size	Optional Neck Length
	[L]	[L1]	[D]	[L3]	[a]	[L2]
1/16	2.13	.69	.3125	.38	.234	.375
1/8	2.13	.75	.3125	.38	.234	...
1/8	2.13	.75	.4375	.38	.328	.375
1/4	2.44	1.06	.5625	.44	.421	.375
3/8	2.56	1.06	.7000	.50	.531	.375
1/2	3.13	1.38	.6875	.63	.515	...
3/4	3.25	1.38	.9063	.69	.679	...
1	3.75	1.75	1.1250	.81	.843	...
1-1/4	4.00	1.75	1.3125	.94	.984	...
1-1/2	4.25	1.75	1.5000	1.00	1.125	...
2	4.25	1.75	1.8750	1.13	1.406	...
2-1/2	5.50	2.56	2.2500	1.25	1.687	...
3	6.00	2.63	2.6250	1.38	1.968	...
3-1/2	6.50	2.69	2.8125	1.50	2.108	...
4	6.75	2.75	3.0000	1.56	2.250	...

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.	(L1)	
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.**