SELECTION GUIDE

THREADING TOOLS

HSS-E & HSS SCREW THREAD INSERT TAP

- For Tapping STI Threads

Please visit globalyg1.com/mat for material search

◎ : Excellent ○ : Good

						HOLE TYPE	Max. 2.5xD Blind Hole						Max. 2.5xD Blind Hole		Max. 3.0xD Through Hole				Max. 2.0xD Blind /Through Hole				
						TOOL MATERIAL	HSS-E		HSS				HSS		HSS-E		HSS		HSS				
						CHAMFER LEAD	1.5P-2P						1.5P-2P		4P-5P				4P-5P, 1.5P-2P				
						FLUTE TYPE	Spiral Flute						Spiral Flute		Spiral Point				Straight Flute				
						SPIRAL FLUTE ANGLE	R40		R50				R50		-				-				
						SERIES M											T7415 (p.B303)			T7405 (p.B306)		M	
						SERIES M/MF							T7425 (p.B299)									M/MF	
						SERIES UNC																UNC	
						SERIES UNC/UNF	ST/SI (p.B296)		T7406 (p.B297)					ST/SI (p.B300)		T7436 (p.B301)			T7426 (p.B304)			UNC/UNF	
						SERIES UNC/UNF/UNS																UNC/UNF/UNS	
						SERIES UNC/UN8																UNC/UN8	
						SERIES NPT																NPT	
						SERIES NPTF																NPTF	
						SERIES NPS/NPSF																NPS/NPSF	
						SURFACE TREATMENT / COATING	Hardslick		Bright				Bright	Hardslick		Bright	Bright		Bright	Bright			
						MODEL																	
ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment		HB	HRc																	
P	1	Non-alloy steel	About 0.15% C	Annealed	125		◎	50-80	○	25-50	○	25-50	◎	50-80	○	25-50	○	25-50	○	25-50	○	25-50	1
P	2		About 0.45% C	Annealed	190	13	◎	50-80	○	25-50	○	25-50	◎	50-80	○	25-50	○	25-50	○	25-50	○	25-50	2
P	3		About 0.45% C	Quenched &Tempered	250	25	◎	50-80	○	25-50	○	25-50	◎	50-80	○	25-50	○	25-50	○	25-50	○	25-50	3
P	4		About 0.75% C	Annealed	270	28	○	10-35	○	6-30	○	6-30	○	10-35	○	6-30	○	6-30	○	6-30	○	6-30	4
P	5		About 0.75% C	Quenched &Tempered	300	32																	5
P	6	Low alloy steel		Annealed	180	10	◎	10-35	○	6-30	○	6-30	◎	10-35	○	6-30	○	6-30	○	6-30	○	6-30	6
P	7			Quenched &Tempered	275	29																	7
P	8			Quenched &Tempered	300	32																	8
P	9			Quenched &Tempered	350	38																	9
P	10	High alloyed steel, and tool steel		Annealed	200	15																	10
P	11			Quenched &Tempered	325	35																	11
M	12	Stainless steel	Ferritic / Martensitic	Annealed	200	15																	12
M	13		Martensitic	Quenched &Tempered	240	23																	13
M	14		Austenitic		180	10																	14
K	15	Grey cast iron	Pearlitic / ferritic		180	10	○	50-65	○	35-50	○	35-50	○	50-65	○	35-50	○	35-50	○	35-50	○	35-50	15
K	16		Pearlitic (Martensitic)		260	26	○	50-65	○	35-50	○	35-50	○	50-65	○	35-50	○	35-50	○	35-50	○	35-50	16
K	17	Nodular cast iron	Ferritic		160	3																	17
K	18		Pearlitic		250	25																	18
K	19	Malleable cast iron	Ferritic		130																		19
K	20		Pearlitic		230	21																	20
N	21	Aluminum-wrought alloy	Not Curable		60		○	50-65	○	50-65	○	50-65	○	50-65	○	50-65	○	50-65	○	50-65	○	50-65	21
N	22		Curable	Hardened	100		○	50-65	○	50-65	○	50-65	○	50-65	○	50-65	○	50-65	○	50-65	○	50-65	22
N	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable		75		○	45-90	○	40-65	○	40-65	○	45-90	○	40-65	○	40-65	○	40-65	○	40-65	23
N	24		≤ 12% Si, Curable	Hardened	90		○	45-90	○	40-65	○	40-65	○	45-90	○	40-65	○	40-65	○	40-65	○	40-65	24
N	25		> 12% Si, Not Curable		130																		25
N	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%		110																		26
N	27		CuZn, CuSnZn (Brass)		90																		27
N	28		CuSn, lead-free copper and electrolytic copper		100																		28
N	29	Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic																				29
N	30		Rubber, Wood, etc.																				30
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15																	31
S	32			Cured	280	30																	32
S	33		Ni or Co Based	Annealed	250	25																	33
S	34			Cured	350	38																	34
S	35			Cast	320	34																	35
S	36	Titanium Alloys	Pure Titanium		400 Rm																		36
S	37		Alpha + Beta Alloys	Hardened	1050 Rm																		37
H	38	Hardened steel		Hardened	550	55																	38
H	39			Hardened	630	60																	39
H	40	Chilled Cast Iron		Cast	400	42																	40
H	41	Hardened Cast Iron		Hardened	550	55																	41

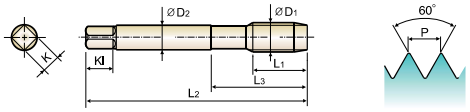
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
PRIME TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP TI NI
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

SCREW THREAD INSERT TAP

T7426 SERIES

Straight Flute STI Tap Plug and Bottoming Style for General Purpose

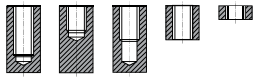
ANSI



Material groups **GS** | HSS | UNC UNF | USCTI 322 | 4P~5P Plug | 1.5P~2P Bottoming | Bright

Thread Depth / Hole Type: 2.0×D

p.B295



Unit : Inch

Size D1	T.P.I	EDP No. Plug	EDP No. Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
#2	- 56UNC	T7426087	T7426088	H2	1.874	.563	.799	.141	.110	.190	3
#3	- 48UNC	T7426127	T7426128	H2	1.937	.626	.882	.141	.110	.190	3
#4	- 40UNC	T7426167H1	T7426168H1	H1	2.000	.689	.965	.141	.110	.190	3
#4	- 40UNC	T7426167	T7426168	H2	2.000	.689	.965	.141	.110	.190	3
#4	- 48UNF	T7426187	T7426188	H2	2.000	.689	.965	.141	.110	.190	3
#5	- 40UNC	T7426207	T7426208	H2	2.126	.752	-	.168	.131	.250	3
#6	- 32UNC	T7426247H2	T7426248H2	H2	2.374	.906	-	.194	.152	.250	3
#6	- 32UNC	T7426247	T7426248	H3	2.374	.906	-	.194	.152	.250	3
#6	- 40UNF	T7426267	T7426268	H2	2.126	.752	1.047	.168	.131	.250	3
#8	- 32UNC	T7426287H2	T7426288H2	H2	2.374	.906	-	.220	.165	.280	3
#8	- 32UNC	T7426287	T7426288	H3	2.374	.906	-	.220	.165	.280	3
#8	- 36UNF	T7426307	T7426308	H2	2.374	.906	-	.220	.165	.280	3
#10	- 24UNC	T7426327H2	T7426328H2	H2	2.500	1.000	-	.255	.191	.310	3
#10	- 24UNC	T7426327	T7426328	H3	2.500	1.000	-	.255	.191	.310	3
#10	- 32UNF	T7426347H2	T7426348H2	H2	2.500	1.000	-	.255	.191	.310	3
#10	- 32UNF	T7426347	T7426348	H3	2.500	1.000	-	.255	.191	.310	3
1/4	- 20UNC	T7426407H2	T7426408H2	H2	2.720	1.126	1.500	.318	.238	.380	3
1/4	- 20UNC	T7426407	T7426408	H3	2.720	1.126	1.500	.318	.238	.380	3
1/4	- 28UNF	T7426427H2	T7426428H2	H2	2.720	1.126	-	.318	.238	.380	3
1/4	- 28UNF	T7426427	T7426428	H3	2.720	1.126	-	.318	.238	.380	3
5/16	- 18UNC	T7426447	T7426448	H3	2.937	1.252	1.646	.381	.286	.440	4
5/16	- 18UNC	T7426447H4	T7426448H4	H4	2.937	1.252	1.646	.381	.286	.440	4
5/16	- 24UNF	T7426467H2	T7426468H2	H2	2.937	1.252	-	.381	.286	.440	4
5/16	- 24UNF	T7426467	T7426468	H3	2.937	1.252	-	.381	.286	.440	4
3/8	- 16UNC	T7426487	T7426488	H3	3.374	1.657	-	.367	.275	.440	4

▶ NEXT PAGE

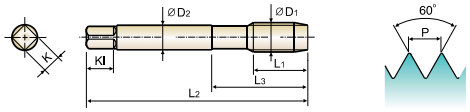
◎ : Excellent ○ : Good

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	○	○	○	○		○									○	○				

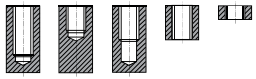
ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel	Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	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	○	○	○	○																	

SCREW THREAD INSERT TAP
T7426 SERIES
Straight Flute STI Tap Plug and Bottoming Style for General Purpose

ANSI



Material groups GS | HSS | UNC UNF | USCTI 322 | 4P~5P Plug | 1.5P~2P Bottoming | Bright
Thread Depth / Hole Type: 2.0×D
p.B295



Unit : Inch

Size D1	T.P.I	EDP No. Plug	EDP No. Bottoming	Limit	Overall Length L2	Thread Length L1	Neck Length L3	Shank Diameter D2	Square Size K	Square Length KL	No. of Flute
3/8	- 16UNC	T7426487H4	T7426488H4	H4	3.374	1.657	-	.367	.275	.440	4
3/8	- 24UNF	T7426507H2	T7426508H2	H2	3.157	1.437	-	.323	.242	.410	4
3/8	- 24UNF	T7426507	T7426508	H3	3.157	1.437	-	.323	.242	.410	4
7/16	- 14UNC	T7426527	T7426528	H3	3.594	1.657	-	.429	.322	.500	4
7/16	- 14UNC	T7426527H4	T7426528H4	H4	3.594	1.657	-	.429	.322	.500	4
7/16	- 20UNF	T7426547	T7426548	H3	3.374	1.657	-	.367	.275	.440	4
7/16	- 20UNF	T7426547H4	T7426548H4	H4	3.374	1.657	-	.367	.275	.440	4
1/2	- 13UNC	T7426567	T7426568	H3	3.811	1.811	-	.480	.360	.560	4
1/2	- 13UNC	T7426567H4	T7426568H4	H4	3.811	1.811	-	.480	.360	.560	4
1/2	- 20UNF	T7426587	T7426588	H3	3.594	1.657	-	.429	.322	.500	4
1/2	- 20UNF	T7426587H4	T7426588H4	H4	3.594	1.657	-	.429	.322	.500	4

◎ : Excellent ○ : Good

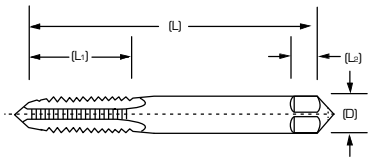
ISO	P																					M				K						
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron			Malleable cast iron		
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38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

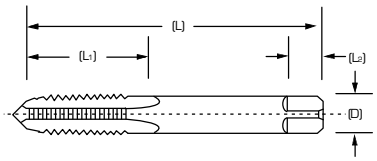
CARBIDE
HSS
THREAD MILL
SYNCHRO TAP
PRIME TAP
COMBO TAP
YG TAP BLUE RING
YG TAP STEEL
YG TAP INOX
YG TAP CAST IRON
YG TAP ALU
YG TAP Ti Ni
YG TAP HARDENED STEEL
YG TAP GENERAL
YG TAP FORMING
STI TAP
PIPE TAP
TECHNICAL DATA

TECHNICAL DATA

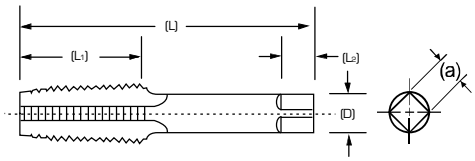
9 STI STRAIGHT TAP DIMENSION



Blank Design (1)



Blank Design (2)



Blank Design (3)

STI Tap blank (Inch)

Nominal Size (STI)	Threads per Inch		Overall Length	Thread Length	Shank Diameter	Square Length	Square Size	Blank Design No.	Table 302 Blank Equivalent
	UNC	UNF	(L)	(L_2)	(D)	(L_3)	(a)		
#2	56	–	1.88	.560	.141	.190	.110	1	No.4
#2		64	1.88	.560	.141	.190	.110	1	No.4
#3	48	–	1.94	.630	.141	.190	.110	1	No.5
#3		56	1.94	.630	.141	.190	.110	1	No.5
#4	40	–	2.00	.690	.141	.190	.110	1	No.6
#4		48	2.00	.690	.141	.190	.110	1	No.6
#5	40	–	2.13	.750	.168	.250	.131	1	No.8
#6	32	–	2.38	.880	.194	.250	.152	1	No.10
#6		40	2.13	.750	.168	.250	.131	1	No.8
#8	32	–	2.38	.940	.220	.280	.165	1	No.12
#8		36	2.38	.940	.220	.280	.165	1	No.12
#10	24	–	2.50	1.000	.255	.310	.191	2	1/4
#10		32	2.50	1.000	.255	.310	.191	2	1/4
#12	24	–	2.72	1.130	.318	.380	.238	2	5/16
1/4	20	–	2.72	1.130	.318	.380	.238	2	5/16
1/4		28	2.72	1.130	.318	.380	.238	2	5/16
5/16	18	–	2.94	1.250	.381	.440	.286	2	3/8
5/16		24	2.94	1.250	.381	.440	.286	2	3/8
3/8	16	–	3.38	1.660	.367	.440	.275	3	1/2
3/8		24	3.16	1.440	.323	.410	.242	3	7/16
7/16	14	–	3.59	1.660	.429	.500	.322	3	9/16
7/16		20	3.38	1.660	.367	.440	.275	3	1/2
1/2	13	–	3.81	1.810	.480	.560	.360	3	5/8
1/2		20	3.59	1.660	.429	.500	.322	3	9/16

STI Tap blank (Metric)

Nominal Size (STI)	Thread Pitch (mm)	Overall Length	Thread Length	Shank Diameter	Square Length	Square Size	Blank Design No.	Table 302 Blank Equivalent
		(L)	(L_2)	(D)	(L_3)	(a)		
M2	0.4	1.81	.50	.141	.190	.110	1	No.3
M2.5	0.45	1.94	.630	.141	.190	.110	1	No.5
M3	0.5	2.00	.690	.141	.190	.110	1	No.6
M4	0.7	2.38	.880	.194	.250	.152	1	No.10
M5	0.8	2.50	1.000	.255	.310	.191	2	1/4
M6	1	2.72	1.130	.318	.380	.238	2	5/16
M8	1.25	2.94	1.250	.381	.440	.286	2	3/8
M10	1.5	3.38	1.660	.367	.440	.275	3	1/2
M12	1.75	3.59	1.660	.429	.500	.322	3	9/16

SCREW THREAD INSERT (STI) TAP DRILL CHART

NOMINAL THREAD SIZE (COARSE SERIES)	SUGGESTED DRILL SIZE (INCH)		NOMINAL THREAD SIZE	SUGGESTED DRILL SIZE (INCH)	
	ALUMINUM	STEEL, MAGNESIUM PLASTIC		ALUMINUM	STEEL, MAGNESIUM PLASTIC
M2.2X0.45	#42 (.0935)	#42 (.0935)	2 (.086)-56	3/32 (.0938)	#41 (.0960)
M2.5X0.45	#37 (.1040)	#37 (.1040)	3 (.099)-48	#36 (.1065)	7/64 (.1094)
M3X0.5	1/8 (.1250)	1/8 (.1250)	4 (.112)-40	#31 (.1200)	#31 (.1200)
M3.5X0.6	#27 (.1440)	#26 (.1470)	5 (.125)-40	3.4mm (.1339)	#29 (.1360)
M4X0.7	#19 (.1660)	#19 (.1660)	6 (.138)-32	#26 (.1470)	#25 (.1495)
M5X0.8	#5 (.2055)	#4 (.2090)	8 (.164)-32	#17 (.1730)	#16 (.1770)
M6X1	D (.2460)	1/4 (.2500)	10 (.190)-24	13/64 (.2031)	#5 (.2055)
M7X1	L (.2900)	L (.2900)	12 (.216)-24	#1 (.2280)	#1 (.2280)
M8X1.25	21/64 (.3281)	Q (.3320)	1/4 (.2500)-20	H (.2660)	H (.2660)
M10X1.5	Z (.4130)	Z (.4130)	5/16 (.3125)-18	Q (.3320)	Q (.3320)
M12X1.75	31/64 (.4844)	1/2 (.5000)	3/8 (.3750)-16	X (.3970)	X (.3970)
M14X2	37/64 (.5781)	37/64 (.5781)	7/16 (.4375)-14	29/64 (.4531)	29/64 (.4531)
M16X2	21/32 (.6562)	21/32 (.6562)	1/2 (.5000)-13	33/64 (.5156)	17/32 (.5312)
M18X2.5	47/64 (.7344)	47/64 (.7344)	9/16 (.5625)-12	37/64 (.5781)	19/32 (.5938)
M20X2.5	13/16 (.8125)	13/16 (.8125)	5/8 (.6250)-11	21/32 (.6562)	21/32 (.6562)
M22X2.5	57/64 (.8906)	57/64 (.8906)	3/4 (.7500)-10	25/32 (.7812)	25/32 (.7812)
M24X3	63/64 (.9844)	63/64 (.9844)	7/8 (.8750)-9	29/32 (.9062)	29/32 (.9062)
M27X3	1-3/32 (1.0938)	1-3/32 (1.0938)	1 (1.0000)-8	1-1/32 (1.0312)	1-1/32 (1.0312)
M30X3.5	1-7/32 (1.1288)	1-7/32 (1.1288)	1-1/8 (1.1250)-7	1-11/64 (1.1719)	1-11/64 (1.1719)
M33X3.5	1-11/32 (1.3438)	1-11/32 (1.3438)	1-1/4 (1.2500)-7	1-19/64 (1.2969)	1-19/64 (1.2969)
M36X4	1-29/64 (1.4531)	1-15/32 (1.4688)	1-3/8 (1.3750)-6	1-27/64 (1.4219)	1-27/64 (1.4219)
M39X4	1-37/64 (1.5781)	1-37/64 (1.5781)	1-1/2 (1.5000)-6	1-35/64 (1.5469)	1-35/64 (1.5469)
(FINE SERIES)					
M8X1	21/64 (.3281)	21/64 (.3281)	3 (.099)-56	#37 (.1040)	#36 (.1065)
M10X1	Y (.4040)	13/32 (.4062)	4 (.112)-48	3mm (.1181)	#31 (.1200)
M10X1.25	Y (.4040)	13/32 (.4062)	6 (.138)-40	#26 (.1470)	#25 (.1495)
M12X1.25	31/64 (.4844)	31/64 (.4844)	8 (.164)-36	#17 (.1730)	#16 (.1770)
M12X1.5	31/64 (.4844)	1/2 (.5000)	10 (.190)-32	#7 (.2010)	13/64 (.2031)
M14X1.5	9/16 (.5625)	37/64 (.5781)	1/4 (.2500)-28	G (.2610)	6.7mm (.2638)
M16X1.5	41/64 (.6406)	21/32 (.6562)	5/16 (.3125)-24	21/64 (.3281)	21/64 (.3281)
M18X1.5	23/32 (.7188)	47/64 (.7344)	3/8 (.3750)-24	25/64 (.3906)	25/64 (.3906)
M20X1.5	51/64 (.7969)	13/16 (.8125)	7/16 (.4375)-20	29/64 (.4531)	29/64 (.4531)
M22X1.5	7/8 (.8750)	57/64 (.8906)	1/2 (.5000)-20	33/64 (.5156)	33/64 (.5156)
M18X2	47/64 (.7344)	47/64 (.7344)	9/16 (.5625)-18	37/64 (.5781)	37/64 (.5781)
M20X2	13/16 (.8125)	13/16 (.8125)	5/8 (.6250)-18	41/64 (.6406)	41/64 (.6406)
M22X2	57/64 (.8906)	57/64 (.8906)	3/4 (.7500)-16	49/64 (.7656)	49/64 (.7656)
M24X2	31/32 (.9688)	31/32 (.9688)	7/8 (.8750)-14	57/64 (.8906)	57/64 (.8906)
M27X2	1-5/64 (1.0781)	1-3/32 (1.0938)	1 (1.0000)-14	1-1/64 (1.0156)	1-1/32 (1.0312)
M30X2	1-13/64 (1.2031)	1-13/64 (1.2031)	1 (1.0000)-12	1-1/64 (1.0156)	1-1/32 (1.0312)
M33X2	1-5/16 (1.3125)	1-21/64 (1.3281)	1-1/8 (1.1250)-12	1-9/64 (1.1406)	1-5/32 (1.1562)
M36X2	1-7/16 (1.4375)	1-7/16 (1.4375)	1-1/4 (1.2500)-12	1-17/64 (1.2656)	1-9/32 (1.2812)
M39X2	1-35/64 (1.5469)	1-9/16 (1.5625)	1-3/8 (1.3750)-12	1-25/64 (1.3906)	1-13/32 (1.4062)
M36X3	1-29/64 (1.4531)	1-29/64 (1.4531)	1-1/2 (1.5000)-12	1-33/64 (1.5156)	1-17/32 (1.5312)
M39X3	1-9/16 (1.5625)	1-9/16 (1.5625)			