

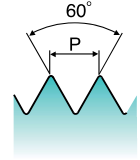
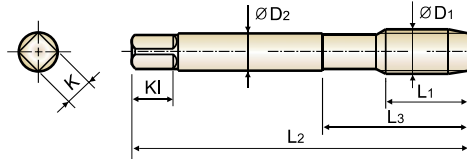
SCREW THREAD INSERT TAP

ST/SI SERIES

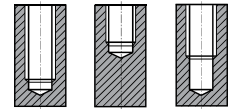
Spiral Flute STI Tap Bottoming Style



ANSI



Thread Depth / Hole Type
2.5xD



Material Groups: **GS** HSS-E UNC UNF USCTI 322 1.5P~2P Hardslick R40 p.B294

Unit : Inch

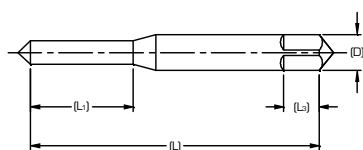
Size	T.P.I	EDP No.	Class of Fit	Overall Length	Thread Length	Neck Length	Shank Diameter	Square Size	Square Length	No. of Flute
D1		Hardslick		L2	L1	L3	D2	K	K1	
#4 - 40UNC		ST162	2B	2.000	.276	.689	.141	.110	.190	3
#4 - 48UNF		SI182	2B	2.000	.276	.689	.141	.110	.190	3
#5 - 40UNC		ST202	2B	2.126	.276	.752	.168	.131	.250	3
#5 - 44UNF		SI222	2B	2.126	.276	.752	.168	.131	.250	3
#6 - 32UNC		ST242	2B	2.374	.354	.906	.194	.152	.250	3
#6 - 40UNF		SI262	2B	2.126	.276	.752	.168	.131	.250	3
#8 - 32UNC		ST282	2B	2.374	.354	.906	.220	.165	.280	3
#8 - 36UNF		SI302	2B	2.374	.354	.906	.220	.165	.280	3
#10 - 24UNC		ST322	2B	2.500	.433	1.000	.255	.191	.310	3
#10 - 32UNF		SI342	2B	2.500	.433	1.000	.255	.191	.310	3
#12 - 24UNC		ST362	2B	2.720	.472	1.126	.318	.238	.380	3
#12 - 28UNF		SI382	2B	2.720	.472	1.126	.318	.238	.380	3
1/4 - 20UNC		ST402	2B	2.720	.472	1.126	.318	.238	.380	3
1/4 - 28UNF		SI422	2B	2.720	.472	1.126	.318	.238	.380	3
5/16 - 18UNC		ST442	2B	2.937	.551	1.252	.381	.286	.440	3
5/16 - 24UNF		SI462	2B	2.937	.551	1.252	.381	.286	.440	3
3/8 - 16UNC		ST482	2B	3.374	.630	2.067	.367	.275	.440	3
3/8 - 24UNF		SI502	2B	3.157	.591	1.850	.323	.242	.410	3
7/16 - 14UNC		ST522	2B	3.594	.709	2.067	.429	.322	.500	3
7/16 - 20UNF		SI542	2B	3.374	.630	2.067	.367	.275	.440	3
1/2 - 13UNC		ST562	2B	3.811	.748	2.205	.480	.360	.560	3
1/2 - 20UNF		SI582	2B	3.594	.709	2.067	.429	.322	.500	3
9/16 - 12UNC		ST602	2B	4.031	.748	2.205	.542	.406	.630	4
9/16 - 18UNF		SI622	2B	3.811	.748	2.205	.480	.360	.560	4
5/8 - 11UNC		ST642	2B	4.252	.827	2.480	.590	.442	.690	4
5/8 - 18UNF		SI662	2B	4.031	.748	2.205	.542	.406	.630	4
3/4 - 10UNC		ST702	2B	4.689	.827	2.815	.697	.523	.750	4
3/4 - 16UNF		SI722	2B	4.469	.827	2.480	.652	.489	.690	4

◎ : Excellent ○ : Good

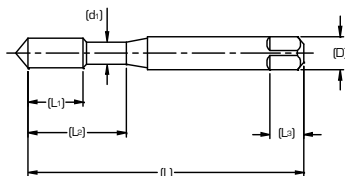
ISO	P										M				K					
Material Description	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel		Stainless steel		Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	19	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	○	○	○	○																	

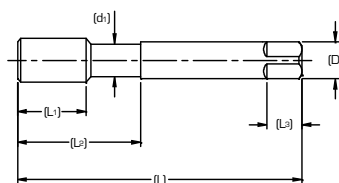
10 STI SPIRAL FLUTE & SPIRAL POINT TAP DIMENSION



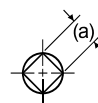
Blank Design (1)



Blank Design (2)



Blank Design (3)



STI Tap blank (Inch)

Nominal Size (STI)	Threads per Inch		Overall Length [L]	Thread Length		Neck Length [L ₂]	Shank Diameter [D]	Square Length [L ₃]	Square Size [a]	Blank Design No.	Table 302 Blank Equivalent
	UNC	UNF		SP	SF						
#2	56	-	1.88	.335	.236	.56	.141	.190	.110	1	No.4
#2		64	1.88	.335	.236	.56	.141	.190	.110	1	No.4
#3	48	-	1.94	.374	.236	.63	.141	.190	.110	1	No.5
#3		56	1.94	.374	.236	.63	.141	.190	.110	1	No.5
#4	40	-	2.00	.413	.276	.68	.141	.190	.110	1	No.6
#4		48	2.00	.413	.276	.68	.141	.190	.110	1	No.6
#5	40	-	2.13	.453	.276	.75	.168	.250	.131	1	No.8
#6	32	-	2.38	.531	.354	.88	.194	.250	.152	1	No.10
#6		40	2.13	.453	.276	.75	.168	.250	.131	1	No.8
#8	32	-	2.38	.571	.354	.94	.220	.280	.165	1	No.12
#8		36	2.38	.571	.354	.94	.220	.280	.165	1	No.12
#10	24	-	2.50	.591	.433	1.0	.255	.310	.191	2	1/4
#10		32	2.50	.591	.433	1.0	.255	.310	.191	2	1/4
#12	24	-	2.72	.669	.472	1.13	.318	.380	.238	2	5/16
1/4	20	-	2.72	.669	.472	1.13	.318	.380	.238	2	5/16
1/4		28	2.72	.669	.472	1.13	.318	.380	.238	2	5/16
5/16	18	-	2.94	.748	.551	1.25	.381	.440	.286	2	3/8
5/16		24	2.94	.748	.551	1.25	.381	.440	.286	2	3/8
3/8	16	-	3.38	.984	.630	1.66	.367	.440	.275	3	1/2
3/8		24	3.16	.866	.591	1.44	.323	.410	.242	3	7/16
7/16	14	-	3.59	.984	.709	1.66	.429	.500	.322	3	9/16
7/16		20	3.38	.984	.630	1.66	.367	.440	.275	3	1/2
1/2	13	-	3.81	1.083	.748	1.81	.480	.560	.360	3	5/8
1/2		20	3.59	.984	.709	1.66	.429	.500	.322	3	9/16

STI Tap blank (Metric)

Nominal Size (STI)	Thread Pitch (mm)	Overall Length [L]	Thread Length		Neck Length [L ₂]	Shank Diameter [D]	Square Length [L ₃]	Square Size [a]	Blank Design No.	Table 302 Blank Equivalent
			SP	SF						
M2	0.4	1.81	.295	.236	.56	.141	.190	.110	1	No.3
M2.5	0.45	1.94	.374	.197	.63	.141	.190	.110	1	No.5
M3	0.5	2.00	.413	.276	.69	.141	.190	.110	1	No.6
M4	0.7	2.38	.531	.354	.93	.194	.250	.152	1	No.10
M5	0.8	2.50	.591	.433	1.0	.255	.310	.191	2	1/4
M6	1	2.72	.669	.433	1.13	.318	.380	.238	2	5/16
M8	1.25	2.94	.748	.512	1.25	.381	.440	.286	2	3/8
M10	1.5	3.38	.984	.591	2.07	.367	.440	.275	3	1/2
M12	1.75	3.59	.984	.709	2.07	.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)			