






HIGH PERFORMANCE TAPS RECOMMENDATION TABLE

Super HSS : Premium HSS Metallurgy
 P-HSS : Powdered Metallurgy
 HSSE-V3 : 3% Vanadium Alloy HSS-EX
 HSS-V : Vanadium Alloy HSS

⊙ = RECOMMENDED
 ○ = SUITABLE

	SERIES	GS	GS	GS
		T7415	T7426	T7405
DESCRIPTION		USCTI 322A	USCTI 322	USCTI 322A
PAGE		476	477	478
THREADS		M/MF	UNC/UNF	M/MF
TAP MATERIALS		HSS	HSS	HSS
CHAMFER LENGTH		4-5P	4-5P 1.5-2P	4-5P 1.5-2P
SURFACE TREATMENT		Bright	Bright	Bright
SPIRAL FLUTE ANGLE		-	-	-
THREAD DEPTH		3.0D	2.0D	2.0D
HOLE TYPE		Through	Blind Through	Blind Through

COOLANT
 A = Cutting Oil
 T = Oil Emulsion
 X = Cutting Oil/Oil Emulsion

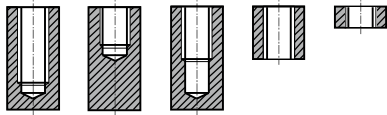
Material Group	Material Sub-Group	ISO	Hardness (HRC)	Hardness (BHN)	Cutting Speed (SFM)		COOLANT			
					Uncoated	Coated				
Steel	Low carbon steels Free machining carbon steels	P	< 15	< 180	25 - 50	50 - 80	T	○	○	○
	Medium to high carbon steels Low alloyed steels	P	< 23	< 240	25 - 50	50 - 80	T	○	○	○
	Steel castings & forgings Heat-treatable alloy steels	P	> 24 ≤ 38	> 250 ≤ 350	6 - 30	10 - 35	X			
	Alloyed tool steels Mold steels	P	> 38 ≤ 44	> 350 ≤ 420	6 - 12	-	A			
Stainless Steel	Free machining stainless steels	M	< 23	< 240	12 - 35	20 - 50	A			
	Heat-and corrosion-resistant stainless steels Valve stainless steels	M	> 24 ≤ 38	> 250 ≤ 350	12 - 15	12 - 15	A			
	Stainless steel castings Precipitation hardening stainless steels	M	> 38 ≤ 44	> 350 ≤ 420	12 - 15	-	A			
Cast Iron	Grey cast iron	K	-	≤ 220	35 - 50	50 - 65	T	○	○	○
	Nodular cast iron / Chilled cast iron Meehanite iron / Ductile iron	K	-	≥ 250	12 - 45	25 - 55	X			
Copper	Pure and alloyed copper	N	-	-	50 - 60	65 - 100	T			
Brass	Free machining brass Alloyed brass	N	-	-	30 - 65	-	T			
Bronze		N	44	< 420	12 - 20	35 - 80	T			
Aluminum	Pure Aluminum Aluminum alloys	N	-	-	50 - 65	-	T	○	○	○
	Aluminum alloy castings	N	-	-	40 - 65	45 - 90	T	○	○	○
Zinc		N	-	-	25 - 65	50 - 80	T			
Magnesium		N	-	-	-	45 - 100	T			
Nickel Alloys	718 & 625 INCO _n / Waspaloy Hastelloyn / Invar Moneln / Incoloy	S	≤ 38	≤ 350	10 - 15	-	A			
	718 Inconel A286	S	> 38 ≤ 44	> 350 ≤ 420	10 - 12	-	A			
Titanium		S	≤ 38	≤ 350	3 - 15	-	A			

YG SCREW THREAD INSERT TAPS

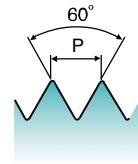
T7426 SERIES

STRAIGHT FLUTE TAPS SCREW THREAD INSERT for General Purpose

Hole type 2.0×D



USCTI



GS
HSS
UNC UNF
USCTI 322
H1~H4
60°
4P~5P Plug
1.5P~2P Bottoming
Bright

SIZE	Thread Per Inch		Limit	No. of Flute	EDP No.	
	UNC	UNF			Plug	Bottoming
#2	56	—	H2	3	T7426087	T7426088
#3	48	—	H2	3	T7426127	T7426128
#4	40	—	H1	3	T7426167H1	T7426168H1
#4	40	—	H2	3	T7426167	T7426168
#4	—	48	H2	3	T7426187	T7426188
#5	40	—	H2	3	T7426207	T7426208
#6	32	—	H2	3	T7426247H2	T7426248H2
#6	32	—	H3	3	T7426247	T7426248
#6	—	40	H2	3	T7426267	T7426268
#8	32	—	H2	3	T7426287H2	T7426288H2
#8	32	—	H3	3	T7426287	T7426288
#8	—	36	H2	3	T7426307	T7426308
#10	24	—	H2	3	T7426327H2	T7426328H2
#10	24	—	H3	3	T7426327	T7426328
#10	—	32	H2	3	T7426347H2	T7426348H2
#10	—	32	H3	3	T7426347	T7426348
1/4	20	—	H2	3	T7426407H2	T7426408H2
1/4	20	—	H3	3	T7426407	T7426408
1/4	—	28	H2	3	T7426427H2	T7426428H2
1/4	—	28	H3	3	T7426427	T7426428
5/16	18	—	H3	4	T7426447	T7426448
5/16	18	—	H4	4	T7426447H4	T7426448H4
5/16	—	24	H2	4	T7426467H2	T7426468H2
5/16	—	24	H3	4	T7426467	T7426468
3/8	16	—	H3	4	T7426487	T7426488
3/8	16	—	H4	4	T7426487H4	T7426488H4
3/8	—	24	H2	4	T7426507H2	T7426508H2
3/8	—	24	H3	4	T7426507	T7426508
7/16	14	—	H3	4	T7426527	T7426528
7/16	14	—	H4	4	T7426527H4	T7426528H4
7/16	—	20	H3	4	T7426547	T7426548
7/16	—	20	H4	4	T7426547H4	T7426548H4
1/2	13	—	H3	4	T7426567	T7426568
1/2	13	—	H4	4	T7426567H4	T7426568H4
1/2	—	20	H3	4	T7426587	T7426588
1/2	—	20	H4	4	T7426587H4	T7426588H4

► For tapping depth on ANSI Length Taps, refer to MCTI 302 on page 498.

◎ : Excellent ○ : Good

P				M				K		
Low carbon steels/ Free machining carbon steels	Medium to high carbon steels/ Low alloyed steels	Steel castings & forgings / Heat-treatable alloy steels	Alloyed tool steels / Mold steels	Free machining stainless steels	Heat-and corrosionresistant stainless steels / Valve stainless steels	Stainless steel castings / Precipitation hardening stainless steels		Grey cast iron		
○	○							○		
K		N				S				
Nodular cast iron / Chilled cast iron / Meehanite iron / Ductile iron	Pure and alloyed copper	Free machining brass / Alloyed brass	Bronze	Pure Aluminum/ Aluminum alloy	Aluminum alloy castings	Zinc	Magnesium	718 & 625 INCO / Waspaloy / Hastelloy / Invar / Monel / Incoloy	718 Inconel / A286	Titanium
				○	○					

THREAD MILLS

COMBO TAPS

SPIRAL FLUTE TAPS

SPIRAL POINT TAPS

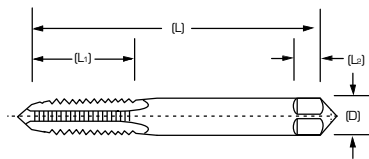
STRAIGHT FLUTE TAPS

FORMING TAPS

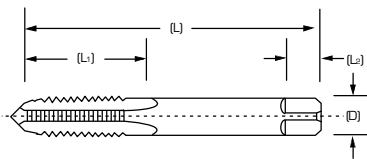
SCREW THREAD INSERT TAPS

PIPE TAPS

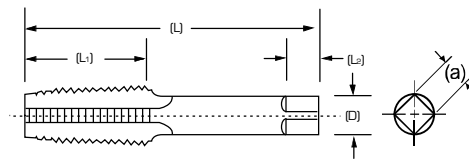
TECHNICAL DATA


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 [L]	Thread Length [L ₂]	Shank Diameter [D]	Square Length [L ₃]	Square Size [a]	Blank Design No.	Table 302 Blank Equivalent
	UNC	UNF							
#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 [L]	Thread Length [L ₂]	Shank Diameter [D]	Square Length [L ₃]	Square Size [a]	Blank Design No.	Table 302 Blank Equivalent
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)			