

Taps: STI Drill Size

Nominal Thread Size	Minor Diameter (After Tapping)		Suggested Drill Size	
	Min.	Max.	Aluminum	Steel Magnesium Plastic
				Unified Coarse
2 (0.086) - 56	0.0899	0.0961	3/32 (0.0938)	#41 (0.0960)
3 (0.099) - 48	0.1036	0.1104	#36 (0.1065)	7/64 (0.1094)
4 (0.112) - 40	0.1175	0.1252	#31 (0.1200)	#31 (0.1200)
5 (0.125) - 40	0.1305	0.1373	3.4mm (0.1339)	#29 (0.1360)
6 (0.138) - 32	0.1448	0.1527	#26 (0.1470)	#25 (0.1495)
8 (0.164) - 32	0.1708	0.1781	#17 (0.1730)	#16 (0.1770)
10 (0.190) - 24	0.1990	0.2000	13/64 (0.2031)	#5 (0.2055)
12 (0.216) - 24	0.2250	0.2340	#1 (0.2280)	#1 (0.2280)
1/4 (0.250) - 20	0.2608	0.2704	H (0.2660)	H (0.2660)
5/16 (0.3125) - 18	0.3245	0.3342	Q (0.3320)	Q (0.3320)
3/8 (0.3750) - 16	0.3885	0.3987	X (0.3970)	X (0.3970)
7/16 (0.4375) - 14	0.4530	0.4639	29/64 (0.4531)	29/64 (0.4531)
1/2 (0.5000) - 13	0.5166	0.5273	33/64 (0.5156)	17/32 (0.5312)
				Unified Fine
3 (0.099) - 56	0.1029	0.1086	#37 (0.1040)	#36 (0.1065)
4 (0.112) - 48	0.1166	0.1229	3mm (0.1181)	#31 (0.1200)
6 (0.138) - 40	0.1435	0.1503	#26 (0.1470)	#25 (0.1495)
8 (0.164) - 36	0.1701	0.1771	#17 (0.1730)	#16 (0.1770)
10 (0.190) - 32	0.1968	0.2041	#7 (0.2010)	13/64 (0.2031)
1/4 (0.2500) - 28	0.2577	0.2646	G (0.2610)	6.7mm (0.2638)
5/16 (0.3125) - 24	0.3215	0.3288	21/64 (0.3281)	21/64 (0.3281)
3/8 (0.3750) - 24	0.3840	0.3910	25/64 (0.3906)	25/64 (0.3906)
7/16 (0.4375) - 20	0.4483	0.4561	29/64 (0.4531)	29/64 (0.4531)
1/2 (0.5000) - 20	0.5108	0.5186	33/64 (0.5156)	33/64 (0.5156)

The suggested drill sizes for aluminum listed in the table are within the minor diameter limits for STI tapped holes specified in MS 33537. Alternate drill sizes are suggested in many instances for magnesium, steel and plastics to provide for maximum tap wear life. In the case of magnesium, the larger size is recommended to allow for material close-in. There are suggested drill sizes and any special requirements or specifications will supersede these recommendations.