

Tap and Drill Bit Size Chart: The Ultimate Machinist Reference

Ever wonder which drill bit to grab before tapping a hole? This chart is your go-to guide, laying out the exact tap drill sizes you need to cut perfect threads, along with clearance drill sizes for when you just want a bolt to pass through. Using the wrong tap drill size can lead to stripped threads or broken taps—a real headache you want to avoid. That's why having this chart handy is a game-changer for any DIYer or pro machinist. You'll find sizes for common machine screws and fractional threads, both UNC (Unified National Coarse) and UNF (Unified National Fine).

TAP SIZE ↕	TPI ↕	TAP DRILL (DECIMAL IN.) ¹	TAP DRILL (SIZE) ¹	CLOSE FIT CLEARANCE (DECIMAL IN.) ¹	CLOSE FIT CLEARANCE (SIZE) ¹	FREE FIT CLEARANCE (DECIMAL IN.) ¹	FREE FIT CLEARANCE (SIZE) ¹
#0-80 UNC	80	0.0465	#56	0.0700	#49	0.0730	#48
#1-64 UNC	64	0.0625	1/16"	0.0820	#45	0.0860	#44
#2-56 UNC	56	0.0700	#49	0.0890	#43	0.0935	#42
#3-48 UNC	48	0.0781	5/64"	0.1040	#37	0.1100	#35
#4-40 UNC	40	0.0890	#43	0.1110	#34	0.1160	#32
#5-40 UNC	40	0.1015	#38	0.1250	1/8"	0.1285	#30
#6-32 UNC	32	0.1065	#36	0.1330	#29	0.1405	#28
#8-32 UNC	32	0.1360	#29	0.1640	#19	0.1730	#17
#10-24 UNC	24	0.1495	#25	0.1820	#14	0.1910	#11
#10-32 UNF	32	0.1590	#21	0.1820	#14	0.1910	#11
#12-24 UNC	24	0.1770	#16	0.2010	#7	0.2055	#5
1/4"-20 UNC	20	0.2010	#7	0.2610	F	0.2720	17/64"
1/4"-28 UNF	28	0.2130	#3	0.2610	F	0.2720	17/64"
5/16"-18 UNC	18	0.2570	F	0.3230	O	0.3320	Q
5/16"-24 UNF	24	0.2770	9/32"	0.3230	O	0.3320	Q
3/8"-16 UNC	16	0.3125	5/16"	0.3860	V	0.3970	X
3/8"-24 UNF	24	0.3437	11/32"	0.3860	V	0.3970	X
7/16"-14 UNC	14	0.3680	U	0.4490	29/64"	0.4680	15/32"
7/16"-20 UNF	20	0.4040	W	0.4490	29/64"	0.4680	15/32"
1/2"-13 UNC	13	0.4218	27/64"	0.5160	33/64"	0.5310	17/32"
1/2"-20 UNF	20	0.4680	15/32"	0.5160	33/64"	0.5310	17/32"

21 rows