Drill Tap Size Chart: A Machinist's Guide to Perfect Threads

Creating a strong, precise thread in metal or plastic demands drilling the right size hole first. If your pilot hole is too small, you risk breaking your tap or stripping the material. Too big, and your threads won't hold properly—a recipe for fasteners shaking loose and parts failing. This chart gives you the exact tap drill sizes for common Unified National Coarse (UNC), Unified National Fine (UNF), and Metric threads, helping you get it right every time. Print this out and keep it near your workbench; it's a real time-saver.

TAP SIZE	THREAD PITCH	RECOMMENDED TAP DRILL	DECIMAL EQUIVALENT (IN.)	THREAD TYPE
#4-40 UNC	40 TPI	#43	0.089	UNC
#6-32 UNC	32 TPI	#36	0.1065	UNC
#8-32 UNC	32 TPI	#29	0.136	UNC
#10-24 UNC	24 TPI	#25	0.1495	UNC
#10-32 UNF	32 TPI	#21	0.159	UNF
1/4"-20 UNC	20 TPI	#7	0.201	UNC
1/4"-28 UNF	28 TPI	#3	0.213	UNF
5/16"-18 UNC	18 TPI	F	0.257	UNC
5/16"-24 UNF	24 TPI	I	0.272	UNF
3/8"-16 UNC	16 TPI	5/16"	0.3125	UNC
3/8"-24 UNF	24 TPI	Q	0.332	UNF
7/16"-14 UNC	14 TPI	U	0.368	UNC
7/16"-20 UNF	20 TPI	X	0.397	UNF
1/2"-13 UNC	13 TPI	27/64"	0.4219	UNC
1/2"-20 UNF	20 TPI	29/64"	0.4531	UNF
M3 x 0.5	0.5 mm	2.5 mm	0.0984	Metric
M4 x 0.7	0.7 mm	3.3 mm	0.1299	Metric
M5 x 0.8	0.8 mm	4.2 mm	0.1654	Metric
M6 x 1.0	1.0 mm	5.0 mm	0.1969	Metric
M8 x 1.25	1.25 mm	6.8 mm	0.2677	Metric
M10 x 1.5	1.5 mm	8.5 mm	0.3346	Metric
M12 x 1.75	1.75 mm	10.2 mm	0.4016	Metric

22 rows