1/4-20 Tap Drill Chart

Unified National Coarse (UNC) · 20 threads per inch · ASME B1.1

TAP DRILL (75% THREAD)

#7 = 0.2010 in = 5.11 mm

Drills for 1/4-20 (50–85% thread)

DRILL	INCH	MM	% THREAD	
#3	0.2130	5.41	57%	
#4	0.2090	5.31	63%	
#5	0.2055	5.22	69%	
#6	0.2040	5.18	71%	
13/64"	0.2031	5.16	72%	
#7	0.2010	5.11	75%	Recommended
#8	0.1990	5.05	79%	
#9	0.1960	4.98	83%	

Clearance hole (bolt passes through)

FIT	DRILL	INCH	MM
Close	H	0.2660	6.76
Normal	J	0.2770	7.04
Loose	19/64"	0.2969	7.54

Thread dimensions (basic)

DIMENSION	INCH	MM
Major diameter (basic)	0.2500	6.35
Pitch diameter (basic)	0.2175	5.53
Minor diameter, internal (basic)	0.1959	4.98
Pitch (1/20 in)	0.0500	1.27

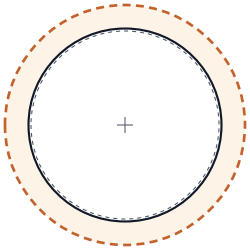
Actual size

Print at 100% scale ("Actual size", not "Fit to page"). Check with the rulers below.



Dashed copper circle: thread major diameter; solid: tap drill hole; dotted: basic minor diameter.

Enlarged 5x:



Tap drill, actual size (5.11 mm):







Scan for the interactive version:

whatsizeis.com/tap-drill/1-4-20/

Values from the ASME B1.1, ISO 261/68-1 and ASME B1.20.1 thread formulas; drill sizes per ASME B94.11M; clearance holes per ISO 273. Method: whatsizeis.com/how-we-calculate/