Metric Tap Drill Chart

Recommended tap drill (75% thread for UNC/UNF/UNEF, D – P for metric, no-ream size for NPT) with clearance holes. Thread % = (D – drill) / (1.299 × pitch).

Metric coarse (ISO 261)

THREAD	TAP DRILL	INCH	MM	THREAD %	CLOSE FIT	NORMAL FIT
M1 x 0.25	0.75 mm	**0.0295**	**0.75**	**77%**	1.1 mm	1.2 mm
M1.2 x 0.25	0.95 mm	**0.0374**	**0.95**	**77%**	1.3 mm	1.4 mm
M1.4 x 0.3	1.1 mm	**0.0433**	**1.10**	**77%**	1.5 mm	1.6 mm
M1.6 x 0.35	1.25 mm	**0.0492**	**1.25**	**77%**	1.7 mm	1.8 mm
M2 x 0.4	1.6 mm	**0.0630**	**1.60**	**77%**	2.2 mm	2.4 mm
M2.5 x 0.45	2.05 mm	**0.0807**	**2.05**	**77%**	2.7 mm	2.9 mm
M3 x 0.5	2.5 mm	**0.0984**	**2.50**	**77%**	3.2 mm	3.4 mm
M3.5 x 0.6	2.9 mm	**0.1142**	**2.90**	**77%**	3.7 mm	3.9 mm
M4 x 0.7	3.3 mm	**0.1299**	**3.30**	**77%**	4.3 mm	4.5 mm
M5 x 0.8	4.2 mm	**0.1654**	**4.20**	**77%**	5.3 mm	5.5 mm
M6 x 1	5 mm	**0.1969**	**5.00**	**77%**	6.4 mm	6.6 mm
M8 x 1.25	6.8 mm	**0.2677**	**6.80**	**74%**	8.4 mm	9 mm
M10 x 1.5	8.5 mm	**0.3346**	**8.50**	**77%**	10.5 mm	11 mm
M12 x 1.75	10.2 mm	**0.4016**	**10.20**	**79%**	13 mm	13.5 mm
M14 x 2	12 mm	**0.4724**	**12.00**	**77%**	15 mm	15.5 mm
M16 x 2	14 mm	**0.5512**	**14.00**	**77%**	17 mm	17.5 mm
M18 x 2.5	15.5 mm	**0.6102**	**15.50**	**77%**	19 mm	20 mm
M20 x 2.5	17.5 mm	**0.6890**	**17.50**	**77%**	21 mm	22 mm
M22 x 2.5	19.5 mm	**0.7677**	**19.50**	**77%**	23 mm	24 mm
M24 x 3	21 mm	**0.8268**	**21.00**	**77%**	25 mm	26 mm
M27 x 3	24 mm	**0.9449**	**24.00**	**77%**	28 mm	30 mm
M30 x 3.5	26.5 mm	**1.0433**	**26.50**	**77%**	31 mm	33 mm
M33 x 3.5	29.5 mm	**1.1614**	**29.50**	**77%**	34 mm	36 mm
M36 x 4	32 mm	**1.2598**	**32.00**	**77%**	37 mm	39 mm
M39 x 4	35 mm	**1.3780**	**35.00**	**77%**	40 mm	42 mm
M42 x 4.5	37.5 mm	**1.4764**	**37.50**	**77%**	43 mm	45 mm
M45 x 4.5	40.5 mm	**1.5945**	**40.50**	**77%**	46 mm	48 mm
M48 x 5	43 mm	**1.6929**	**43.00**	**77%**	50 mm	52 mm

Scan for the interactive version:

whatsizeis.com/tap-drill/metric/

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/

Metric Tap Drill Chart (continued)

Metric fine (ISO 261)

THREAD	TAP DRILL	INCH	MM	THREAD %	CLOSE FIT	NORMAL FIT
M4 x 0.5	3.5 mm	**0.1378**	**3.50**	**77%**	4.3 mm	4.5 mm
M5 x 0.5	4.5 mm	**0.1772**	**4.50**	**77%**	5.3 mm	5.5 mm
M8 x 1	7 mm	**0.2756**	**7.00**	**77%**	8.4 mm	9 mm
M10 x 1	9 mm	**0.3543**	**9.00**	**77%**	10.5 mm	11 mm
M10 x 1.25	8.8 mm	**0.3465**	**8.80**	**74%**	10.5 mm	11 mm
M12 x 1.25	10.8 mm	**0.4252**	**10.80**	**74%**	13 mm	13.5 mm
M12 x 1.5	10.5 mm	**0.4134**	**10.50**	**77%**	13 mm	13.5 mm
M14 x 1.5	12.5 mm	**0.4921**	**12.50**	**77%**	15 mm	15.5 mm
M16 x 1.5	14.5 mm	**0.5709**	**14.50**	**77%**	17 mm	17.5 mm
M18 x 1.5	16.5 mm	**0.6496**	**16.50**	**77%**	19 mm	20 mm
M20 x 1.5	18.5 mm	**0.7283**	**18.50**	**77%**	21 mm	22 mm
M22 x 1.5	20.5 mm	**0.8071**	**20.50**	**77%**	23 mm	24 mm
M24 x 1.5	22.5 mm	**0.8858**	**22.50**	**77%**	25 mm	26 mm
M24 x 2	22 mm	**0.8661**	**22.00**	**77%**	25 mm	26 mm
M27 x 2	25 mm	**0.9843**	**25.00**	**77%**	28 mm	30 mm
M30 x 2	28 mm	**1.1024**	**28.00**	**77%**	31 mm	33 mm
M12 x 1	11 mm	**0.4331**	**11.00**	**77%**	13 mm	13.5 mm
M14 x 1	13 mm	**0.5118**	**13.00**	**77%**	15 mm	15.5 mm
M16 x 1	15 mm	**0.5906**	**15.00**	**77%**	17 mm	17.5 mm
M18 x 1	17 mm	**0.6693**	**17.00**	**77%**	19 mm	20 mm
M18 x 2	16 mm	**0.6299**	**16.00**	**77%**	19 mm	20 mm
M20 x 1	19 mm	**0.7480**	**19.00**	**77%**	21 mm	22 mm
M20 x 2	18 mm	**0.7087**	**18.00**	**77%**	21 mm	22 mm
M22 x 1	21 mm	**0.8268**	**21.00**	**77%**	23 mm	24 mm
M22 x 2	20 mm	**0.7874**	**20.00**	**77%**	23 mm	24 mm
M24 x 1	23 mm	**0.9055**	**23.00**	**77%**	25 mm	26 mm
M27 x 1.5	25.5 mm	**1.0039**	**25.50**	**77%**	28 mm	30 mm
M30 x 1.5	28.5 mm	**1.1220**	**28.50**	**77%**	31 mm	33 mm
M30 x 1	29 mm	**1.1417**	**29.00**	**77%**	31 mm	33 mm
M33 x 2	31 mm	**1.2205**	**31.00**	**77%**	34 mm	36 mm
M36 x 1.5	34.5 mm	**1.3583**	**34.50**	**77%**	37 mm	39 mm

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