Thread Size Chart: UNC, UNF, Metric & NPT

Major diameters, threads per inch or pitch, and tap drill sizes for about 75% thread engagement.

UNC and UNF (Unified Inch)

Size	Major dia. (in)	Major dia. (mm)	UNC TPI	UNC tap drill	UNF TPI	UNF tap drill
#0	0.0600	1.52	–	–	80	3/64
#1	0.0730	1.85	64	#53	72	#53
#2	0.0860	2.18	56	#50	64	#50
#3	0.0990	2.51	48	#47	56	#45
#4	0.1120	2.84	40	#43	48	#42
#5	0.1250	3.18	40	#38	44	#37
#6	0.1380	3.51	32	#36	40	#33
#8	0.1640	4.17	32	#29	36	#29
#10	0.1900	4.83	24	#25	32	#21
#12	0.2160	5.49	24	#16	28	#14
1/4	0.2500	6.35	20	#7	28	#3
5/16	0.3125	7.94	18	F	24	I
3/8	0.3750	9.53	16	5/16	24	Q
7/16	0.4375	11.11	14	U	20	25/64
1/2	0.5000	12.70	13	27/64	20	29/64
9/16	0.5625	14.29	12	31/64	18	33/64
5/8	0.6250	15.88	11	17/32	18	37/64
3/4	0.7500	19.05	10	21/32	16	11/16
7/8	0.8750	22.23	9	49/64	14	13/16
1	1.0000	25.40	8	7/8	12	59/64

Thread Classes

Class	Fit	Typical use
1A / 1B	Loose	Quick assembly, dirty or damaged threads
2A / 2B	Standard	The large majority of commercial fasteners
3A / 3B	Tight	Aerospace, precision instruments, high-strength bolts
6g / 6H (metric)	Medium, general purpose	Default for metric fasteners

Metric Thread Chart (ISO, Coarse and Fine)

Size	Coarse pitch (mm)	Coarse tap drill (mm)	Common fine pitch (mm)	Fine tap drill (mm)
M1.6	0.35	1.25	0.2	1.4
M2	0.4	1.6	0.25	1.75
M2.5	0.45	2.05	0.35	2.15
M3	0.5	2.5	0.35	2.65
M4	0.7	3.3	0.5	3.5
M5	0.8	4.2	0.5	4.5
M6	1.0	5.0	0.75	5.25
M8	1.25	6.8	1.0	7.0
M10	1.5	8.5	1.25	8.75
M12	1.75	10.2	1.25	10.75
M14	2.0	12.0	1.5	12.5
M16	2.0	14.0	1.5	14.5
M20	2.5	17.5	1.5	18.5
M24	3.0	21.0	2.0	22.0
M30	3.5	26.5	2.0	28.0

Pipe Thread Size Chart (NPT)

Nominal pipe size	TPI	Pipe outside diameter (in)	Pipe outside diameter (mm)
1/16	27	0.3125	7.94
1/8	27	0.405	10.29
1/4	18	0.540	13.72
3/8	18	0.675	17.15
1/2	14	0.840	21.34
3/4	14	1.050	26.67
1	11.5	1.315	33.40
1-1/4	11.5	1.660	42.16
1-1/2	11.5	1.900	48.26
2	11.5	2.375	60.33

Inch vs Metric Close Equivalents (not interchangeable)

Inch size	Diameter	Closest metric	Diameter
#4-40	2.84 mm	M3 x 0.5	3.0 mm
#8-32	4.17 mm	M4 x 0.7	4.0 mm
#10-24 / #10-32	4.83 mm	M5 x 0.8	5.0 mm
1/4-20	6.35 mm	M6 x 1.0	6.0 mm
5/16-18	7.94 mm	M8 x 1.25	8.0 mm
3/8-16	9.53 mm	M10 x 1.5	10.0 mm
1/2-13	12.70 mm	M12 x 1.75	12.0 mm