

## **METRIC - STUD BOLT TO NUT CHART**

Dimensional Data This metric stud bolt to nut table is meant to help determine the correct size bolt or nut for your purpose. Definitions of terms are located below the chart. Use the dimensions of your bolt to determine the appropriate size nut. Have questions? Contact Maxpro Corp See definitions below.



Nom. Dia.	Pitch mm	Dia. mm	Dia. inch	Nut Size	Nom. Dia.	Pitch mm	Dia. mm	Dia. inch	Nut Size
M10	1.5	10	0.3937	17	M16	1.5	16	0.6299	24
M12	1.75	12	0.4724	19	M18	2	18	0.7087	27
M14	2	14	0.5512	22	M18	1.5	18	0.7087	27
M16	2	16	0.6299	24	M20	2	20	0.7874	30
M18	2.5	18	0.7087	27	M20	1.5	20	0.7874	30
M20	2.5	20	0.7874	30	M22	2	22	0.8661	32
M22	2.5	22	0.8661	32	M22	1.5	22	0.8661	32
M24	3	24	0.9449	36	M24	2	24	0.9499	36
M27	3	27	1.063	41	M24	1.5	24	0.9499	36
M30	3.5	30	1.1811	46	M27	2	27	1.063	41
M33	3.5	33	1.2992	50	M27	1.5	27	1.063	41
M36	4	36	1.4173	55	M30	2	30	1.1811	46
M39	4	39	1.5354	60	M30	1.5	30	1.1811	46
M42	4.5	42	1.6535	65	M33	2	33	1.2992	5
M45	4.5	45	1.7717	70	M33	1.5	33	1.2992	50
M48	5	48	1.8898	75	M36	3	36	1.4173	55
M52	5	52	2.0472	80	M36	1.5	36	1.4173	55
M56	5.5	56	2.2047	85	M39	3	39	1.5354	60
M60	5.5	60	2.3622	90	M42	3	42	1.6535	65
M64	6	64	2.5197	95	M45	3	45	1.7717	70
M68	6	68	2.6772	100	M48	3	48	1.8898	75
M72	6	72	2.8346	105	M52	3	52	2.0472	80
M76	6	76	2.9921	110	M56	4	56	2.2047	85
M80	6	80	3.1496	115	M60	4	60	2.3622	90
M85	6	85	3.3464	120	M64	4	64	2.5197	95
M90	6	90	3.5433	130	M68	4	68	2.6772	100
M100	6	100	3.937	145	M72	4	72	2.8346	105
M110	6	110	4.3307	155	M76	4	76	2.9921	110
M125	6	125	4.9212	180	M80	4	80	3.1496	115
M140	6	140	5.5118	200	M85	4	85	3.3464	120
M160	6	160	6.2992	230	M90	4	90	3.5433	130
					M100	4	100	3.9370	145
					M110	4	110	4.3307	155
					M125	4	125	4.9212	180

## DEFINITIONS

NOMINAL DIAMETER (NOMINAL BOLT DIAMETER) The diameter equal to the external diameter of the threads or the overall diameter of the part. (Nominal diameter is more of a label than a size. For example, a bolt and nut may be described as being ½" diameter. But neither the external threads of the bolt nor the internal threads of the nut are exactly .500 in diameter. In fact, the bolt diameter is a little smaller and the nut diameter a little larger. But it is easier to specify the components by a single size designation since the bolt and nut are mating components.)

PITCH (THREAD PITCH) Pitch is the distance from the crest of one thread to the next or the distance from one thread groove to the next, measured from crest to crest. Pitch is also described as the number of threads per inch.

DIAMETER (BODY DIAMETER) The smallest or largest pitch diameter that fits onto a screw or into a nut, including all of the form deviations such as lead, thread angle, taper, and roundness. Functional diameter is a measure of the ability to assemble the thread.

THREAD (BOLT THREADS) A raised, helical rib or ridge around the interior or exterior of a cylindrically shaped object. Threads are found on screws, nuts, and bolts.

THREADS PER INCH The decimal equivalent of the number of threads in an inch.

COARSE THREADS & FINE THREADS Coarse threads are those with larger pitch (fewer threads per axial distance), and fine threads are those with smaller pitch (more threads per axial distance). Coarse threads have a larger threadform relative to screw diameter, whereas fine threads have a smaller threadform relative to screw diameter.

Call our bolting experts at 888-315-0175 with your torque questions.