

U. S. Standard Threads, Bolts and Nuts

The tap drill diameters in the table provide for a slight clearance at the root of the thread, in order to facilitate tapping and reduce tap breakages. If full threads are required, use the diameters at the root of the threads for the tap drill diameters

Diameter	No. of Threads per Inch	Diameter at Root of Thread	Diameter of Tap Drill	Area in Sq. Inches		Tensile Strength at Stress of 6000 Pounds per Sq. Inch	Dimensions of Nuts and Bolt Heads				
				Of Bolt	At Root of Thread						
1/4	20	0.185	13/64	0.049	0.026	160	1/2	0.578	0.707	1/4	1/4
5/16	18	0.240	1/4	0.076	0.045	270	19/32	0.686	0.840	5/16	19/64
3/8	16	0.294	5/16	0.110	0.068	410	11/16	0.794	0.972	3/8	11/32
7/16	14	0.345	23/64	0.150	0.093	560	25/32	0.902	1.105	7/16	25/64
1/2	13	0.400	27/64	0.196	0.126	760	7/8	1.011	1.237	1/2	7/16
9/16	12	0.454	15/32	0.248	0.162	1,000	81/32	1.119	1.370	9/16	31/64
5/8	11	0.507	17/32	0.307	0.202	1,210	1 1/16	1.227	1.502	5/8	17/32
3/4	10	0.620	41/64	0.442	0.302	1,810	1 1/4	1.444	1.768	3/4	5/8
7/8	9	0.731	3/4	0.601	0.419	2,520	1 7/16	1.660	2.033	7/8	23/32
1	8	0.838	55/64	0.785	0.551	3,300	1 5/8	1.877	2.298	1	1 1/16
1 1/8	7	0.939	31/32	0.994	0.694	4,160	1 3/4	2.093	2.563	1 1/8	29/32
1 1/4	7	1.064	1 1/32	1.227	0.893	5,350	2	2.310	2.828	1 1/4	1
1 3/8	6	1.158	1 1/32	1.485	1.057	6,340	2 1/16	2.527	3.093	1 3/8	1 3/32
1 1/2	6	1.283	1 11/32	1.767	1.295	7,770	2 3/8	2.743	3.358	1 1/2	1 3/16
1 5/8	5 1/2	1.389	1 27/64	2.074	1.515	9,090	2 1/2	2.960	3.623	1 5/8	1 9/32
1 3/4	5	1.490	1 17/32	2.405	1.746	10,470	2 3/4	3.176	3.889	1 3/4	1 3/8
1 7/8	5	1.615	1 21/32	2.761	2.051	12,300	2 15/16	3.393	4.154	1 7/8	1 15/32
2	4 1/2	1.711	1 49/64	3.142	2.302	13,800	3 1/8	3.609	4.419	2	1 9/16
2 1/4	4 1/2	1.961	2 1/64	3.976	3.023	18,100	3 1/2	4.043	4.949	2 1/4	1 3/4
2 1/2	4	2.175	2 15/64	4.909	3.719	22,300	3 3/8	4.476	5.479	2 1/2	1 15/16
2 3/4	4	2.425	2 31/64	5.940	4.620	27,700	4 1/4	4.909	6.010	2 3/4	2 1/8
3	3 1/2	2.629	2 11/16	7.069	5.428	32,500	4 5/8	5.342	6.540	3	2 5/16
3 1/4	3 1/2	2.879	2 15/16	8.296	6.510	39,000	5	5.775	7.070	3 1/4	2 1/2
3 1/2	3 1/4	3.100	3 11/64	9.621	7.548	45,300	5 3/8	6.208	7.600	3 1/2	2 11/16
3 3/4	3	3.317	3 3/8	11.045	8.641	51,800	5 1/2	6.641	8.131	3 3/4	2 7/8
4	3	3.567	3 5/8	12.566	9.963	59,700	6 1/8	7.074	8.661	4	3 1/16
4 1/4	2 7/8	3.798	3 27/32	14.186	11.340	68,000	6 1/2	7.508	9.191	4 1/4	3 1/4
4 1/2	2 3/4	4.028	4 3/32	15.904	12.750	76,500	6 3/8	7.941	9.721	4 1/2	3 7/16
4 3/4	2 5/8	4.255	4 5/16	17.721	14.215	85,500	7 1/4	8.374	10.252	4 3/4	3 5/8
5	2 1/2	4.480	4 9/16	19.635	15.760	94,000	7 5/8	8.807	10.782	5	3 13/16
5 1/4	2 1/2	4.730	4 13/16	21.648	17.570	105,500	8	9.240	11.312	5 1/4	4
5 1/2	2 3/8	4.953	5 1/32	23.758	19.260	116,000	8 3/8	9.673	11.842	5 1/2	4 3/16
5 3/4	2 3/8	5.203	5 9/32	25.967	21.250	127,000	8 1/2	10.106	12.373	5 3/4	4 3/8
6	2 1/4	5.423	5 1/2	28.274	23.090	138,000	9 1/8	10.539	12.903	6	4 9/16