

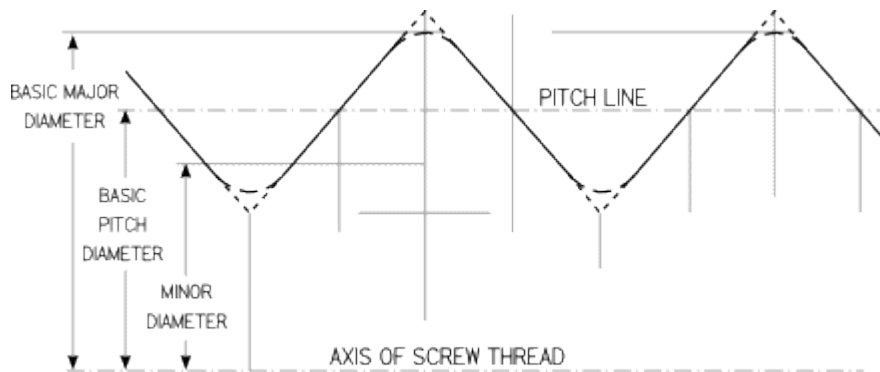
Thread Pitch Chart

Thread series cover designations of diameter/pitch combinations that are measured by the number of threads per inch (TPI) applied to a single diameter.

Coarse Thread Series (UNC/UNRC) is the most common designation for general application bolts and nuts. Coarse thread is beneficial, because they are less likely to cross thread, more tolerant in adverse conditions and facilitate quick assembly.

Fine Thread Series (UNF/UNRF) is commonly used in precision applications. Because of the larger tensile stress areas, they have high tension strength. However, a longer engagement is required for fine thread applications than for coarse series threads to prevent stripping.

8-Thread Series (8UN) is the specified thread forming method for several ASTM standards including A193 B7, A193 B8/B8M, and A320. This series is used for diameters one inch and above.



Coarse Thread Series - UNC			
Nominal Size and Threads Per In.	Basic Pitch Dia.	Section at Minor Dia.	Tensile Stress Area
	In.	Sq in.	Sq in.
3/8 - 16	0.3344	0.0678	0.0775
7/16 - 14	0.3911	0.0933	0.1063
1/2 - 13	0.4500	0.1257	0.1419
9/16 - 12	0.5084	0.162	0.182
5/8 - 11	0.5660	0.202	0.226
3/4 - 10	0.6850	0.302	0.334
7/8 - 9	0.8028	0.419	0.462
1 - 8	0.9188	0.551	0.606
1.1/8 - 7	1.0322	0.693	0.763
1 1/4 - 7	1.1572	0.890	0.969
1.3/8 - 6	1.2667	1.054	1.155

1½ - 6	1.3917	1.294	1.405
1¾ - 5	1.6201	1.74	1.90
2 - 4½	1.8557	2.30	2.50
2¼ - 4½	2.1057	3.02	3.25
2½ - 4	2.3376	3.72	4.00
2¾ - 4	2.5876	4.62	4.93
3 - 4	2.8376	5.62	5.97
3¼ - 4	3.0876	6.72	7.10
3½ - 4	3.3376	7.92	8.33
3¾ - 4	3.5876	9.21	9.66
4 - 4	3.8376	10.61	11.08

Fine Thread Series - UNF

Nominal Size and Threads Per In.	Basic Pitch Dia.	Section at Minor Dia.	Tensile Stress Area
	In.	Sq in.	Sq in.
3/8 - 24	0.3479	0.0809	0.0878
7/16 - 20	0.4050	0.1090	0.1187
1/2 - 20	0.4675	0.1486	0.1599
9/16 - 18	0.5264	0.189	0.203
5/8 - 18	0.5889	0.240	0.256
3/4 - 16	0.7094	0.351	0.373
7/8 - 14	0.8286	0.480	0.509
1 - 12	0.9459	0.625	0.663
1.1/8 - 12	1.0709	0.812	0.856
1¼ - 12	1.1959	1.024	1.073
1.3/8 - 12	1.3209	1.260	1.315
1½ - 12	1.4459	1.521	1.581

8-Thread Series - 8UN

Nominal Size and Threads Per In.	Basic Pitch Dia.	Section at Minor Dia.	Tensile Stress Area
	In.	Sq in.	Sq in.
1 - 8	0.9188	0.551	0.606
1.1/8 - 8	1.0438	0.728	0.790
1¼ - 8	1.1688	0.929	1.000
1.3/8 - 8	1.2938	1.155	1.233
1½ - 8	1.4188	1.405	1.492

1.5/8 - 8	1.5438	1.68	1.78
1¾ - 8	1.6688	1.98	2.08
1.7/8 - 8	1.7938	2.30	2.41
2 - 8	1.9188	2.65	2.77
2¼ - 8	2.1688	3.42	3.56
2½ - 8	2.4188	4.29	4.44
2¾ - 8	2.6688	5.26	5.43
3 - 8	2.9188	6.32	6.51
3¼ - 8	3.1688	7.49	7.69
3½ - 8	3.4188	8.75	8.96
3¾ - 8	3.6688	10.11	10.34
4 - 8	3.9188	11.57	11.81

Source: Portland Bolt & Mfg. Co.