

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, B16, A193 B8/B8M, and A320. This series is used for diameters one inch and above.

Thread Pitch

| Coarse Thread Series - UNC | | | | Fine Thread Series - UNF | | | | 8-Thread Series - 8UN | | | |
|----------------------------------|------------------|-----------------------|---------------------|----------------------------------|------------------|-----------------------|---------------------|----------------------------------|------------------|-----------------------|---------------------|
| Nominal Size and Threads Per In. | Basic Pitch Dia. | Section at Minor Dia. | Tensile Stress Area | Nominal Size and Threads Per In. | Basic Pitch Dia. | Section at Minor Dia. | Tensile Stress Area | Nominal Size and Threads Per In. | Basic Pitch Dia. | Section at Minor Dia. | Tensile Stress Area |
| | In. | Sq in. | Sq in. | | In. | Sq in. | Sq in. | | In. | Sq in. | Sq in. |
| 3/8 - 16 | 0.3344 | 0.0678 | 0.0775 | 3/8 - 24 | 0.3479 | 0.0809 | 0.0878 | -- -- | -- | -- | -- |
| 7/16 - 14 | 0.3911 | 0.0933 | 0.1063 | 7/16 - 20 | 0.4050 | 0.1090 | 0.1187 | -- -- | -- | -- | -- |
| 1/2 - 13 | 0.4500 | 0.1257 | 0.1419 | 1/2 - 20 | 0.4675 | 0.1486 | 0.1599 | -- -- | -- | -- | -- |
| 9/16 - 12 | 0.5084 | 0.162 | 0.182 | 9/16 - 18 | 0.5264 | 0.189 | 0.203 | -- -- | -- | -- | -- |
| 5/8 - 11 | 0.5660 | 0.202 | 0.226 | 5/8 - 18 | 0.5889 | 0.240 | 0.256 | -- -- | -- | -- | -- |
| 3/4 - 10 | 0.6850 | 0.302 | 0.334 | 3/4 - 16 | 0.7094 | 0.351 | 0.373 | -- -- | -- | -- | -- |
| 7/8 - 9 | 0.8028 | 0.419 | 0.462 | 7/8 - 14 | 0.8286 | 0.480 | 0.509 | -- -- | -- | -- | -- |
| 1 - 8 | 0.9188 | 0.551 | 0.606 | 1 - 12 | 0.9459 | 0.625 | 0.663 | 1 - 8 | 0.9188 | 0.551 | 0.606 |
| 1 1/8 - 7 | 1.0322 | 0.693 | 0.763 | 1 1/8 - 12 | 1.0709 | 0.812 | 0.856 | 1 1/8 - 8 | 1.0438 | 0.728 | 0.790 |
| 1 1/4 - 7 | 1.1572 | 0.890 | 0.969 | 1 1/4 - 12 | 1.1959 | 1.024 | 1.073 | 1 1/4 - 8 | 1.1688 | 0.929 | 1.000 |
| 1 3/8 - 6 | 1.2667 | 1.054 | 1.155 | 1 3/8 - 12 | 1.3209 | 1.260 | 1.315 | 1 3/8 - 8 | 1.2938 | 1.155 | 1.233 |
| 1 1/2 - 6 | 1.3917 | 1.294 | 1.405 | 1 1/2 - 12 | 1.4459 | 1.521 | 1.581 | 1 1/2 - 8 | 1.4188 | 1.405 | 1.492 |
| -- -- | -- | -- | -- | -- -- | -- | -- | -- | 1 5/8 - 8 | 1.5438 | 1.68 | 1.78 |
| 1 3/4 - 5 | 1.6201 | 1.74 | 1.90 | -- -- | -- | -- | -- | 1 3/4 - 8 | 1.6688 | 1.98 | 2.08 |
| -- -- | -- | -- | -- | -- -- | -- | -- | -- | 1 7/8 - 8 | 1.7938 | 2.30 | 2.41 |
| 2 - 4 1/2 | 1.8557 | 2.30 | 2.50 | -- -- | -- | -- | -- | 2 - 8 | 1.9188 | 2.65 | 2.77 |
| 2 1/4 - 4 1/2 | 2.1057 | 3.02 | 3.25 | -- -- | -- | -- | -- | 2 1/4 - 8 | 2.1688 | 3.42 | 3.56 |
| 2 1/2 - 4 | 2.3376 | 3.72 | 4.00 | -- -- | -- | -- | -- | 2 1/2 - 8 | 2.4188 | 4.29 | 4.44 |
| 2 3/4 - 4 | 2.5876 | 4.62 | 4.93 | -- -- | -- | -- | -- | 2 3/4 - 8 | 2.6688 | 5.26 | 5.43 |
| 3 - 4 | 2.8376 | 5.62 | 5.97 | -- -- | -- | -- | -- | 3 - 8 | 2.9188 | 6.32 | 6.51 |
| 3 1/4 - 4 | 3.0876 | 6.72 | 7.10 | -- -- | -- | -- | -- | 3 1/4 - 8 | 3.1688 | 7.49 | 7.69 |
| 3 1/2 - 4 | 3.3376 | 7.92 | 8.33 | -- -- | -- | -- | -- | 3 1/2 - 8 | 3.4188 | 8.75 | 8.96 |
| 3 3/4 - 4 | 3.5876 | 9.21 | 9.66 | -- -- | -- | -- | -- | 3 3/4 - 8 | 3.6688 | 10.11 | 10.34 |
| 4 - 4 | 3.8376 | 10.61 | 11.08 | -- -- | -- | -- | -- | 4 - 8 | 3.9188 | 11.57 | 11.81 |