

Torque table

**ASTM A193 B7 and ASTM A194 2H
With Zn-Ni Nanostructured**

Important Note: The suggested torque values in this table do not indicate fasteners tension; these are only an indirect estimate of the desired tension. The final user is responsible for making the necessary adjustments for each application

Bolt Diameter (in) - TPI	Bolt Tension = 50% SMYS		Bolt Tension = 60% SMYS		Bolt Tension = 70% SMYS	
	Torque ⁽¹⁾ (ft-lb) k=0.24 ⁽²⁾	Torque ⁽¹⁾ (ft-lb) k=0.17 ⁽³⁾	Torque ⁽¹⁾ (ft-lb) k=0.24 ⁽²⁾	Torque ⁽¹⁾ (ft-lb) k=0.17 ⁽³⁾	Torque ⁽¹⁾ (ft-lb) k=0.24 ⁽²⁾	Torque ⁽¹⁾ (ft-lb) k=0.17 ⁽³⁾
3/8" - 16	30	22	37	26	43	30
1/2" - 13	74	53	89	63	104	74
5/8" - 11	148	105	178	126	208	147
3/4" - 10	263	186	316	224	369	261
7/8" - 9	424	300	509	360	594	420
1" - 8	636	450	763	540	890	630
1-1/8" - 8	933	661	1,120	793	1,307	925
1-1/4" - 8	1,311	929	1,574	1,115	1,836	1,301
1-3/8" - 8	1,780	1,261	2,136	1,513	2,492	1,765
1-1/2" - 8	2,348	1,663	2,818	1,996	3,288	2,329
1-5/8" - 8	3,027	2,144	3,632	2,573	4,237	3,001
1-3/4" - 8	3,824	2,709	4,589	3,250	5,354	3,792
1-7/8" - 8	4,750	3,365	5,700	4,038	6,651	4,711
2" - 8	5,815	4,119	6,978	4,943	8,142	5,767
2-1/8" - 8	7,029	4,979	8,434	5,974	9,840	6,970
2-1/4" - 8	8,400	5,950	10,080	7,140	11,760	8,330
2-3/8" - 8	9,939	7,040	11,926	8,448	13,914	9,856
2-1/2" - 8	10,545	7,469	12,654	8,963	14,763	10,457
2-3/4" - 8	14,166	10,034	16,999	12,041	19,832	14,048
3" - 8	18,534	13,128	22,240	15,754	25,947	18,379

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Note 1: Bolt Torque calculated using the nut factor calculation $T = \frac{KDF}{12}$, where

T = Target torque (ft-lb)

D = Nominal bolt diameter (in.)

*Bolt tension based on percentage of specified minimum yield strength (SMYS) for A193 B7 grade and calculated using tensile stress area of stud per ASME PCC-1 Appendix H

Note 2: K-factor for Dry/No Lubricant can range as high as 0.29. Lubrication is highly recommended for low variance in K-factor. If lubrication is not available alternate tensioning methods are recommended

Note 3: The K factor reported in this column was obtained using two different lubricants.