3/8 Bolt Torque

3/8 inch bolt torque, 3/8-16 coarse

Torque = K × diameter × clamp load, with clamp load at 75% of proof load (a reusable joint). K is 0.20 for dry threads and 0.15 for lubricated threads. Proof load is tensile stress area times proof strength: grade 2 at 55 ksi, grade 5 at 85 ksi, grade 8 at 120 ksi, and ISO classes 8.8, 10.9 and 12.9 at 580, 830 and 970 MPa. Stress area is π/4 × (D − 0.9743/TPI)² for inch threads and π/4 × (D − 0.9382 × pitch)² for metric.

Bolt (diameter-TPI)	Stress area (in²)	Grade 2 clamp load (lb)	Grade 2 dry (ft-lb)	Grade 2 lubricated (ft-lb)	Grade 2 dry (N·m)	Grade 2 lubricated (N·m)	Grade 5 clamp load (lb)	Grade 5 dry (ft-lb)	Grade 5 lubricated (ft-lb)	Grade 5 dry (N·m)	Grade 5 lubricated (N·m)	Grade 8 clamp load (lb)	Grade 8 dry (ft-lb)	Grade 8 lubricated (ft-lb)	Grade 8 dry (N·m)	Grade 8 lubricated (N·m)
3/8-16	0.0775	3,196	20	15	27	20	4,940	31	23	42	31	6,974	44	33	59	44

3/8 inch bolt torque, 3/8-24 fine

Bolt (diameter-TPI)	Stress area (in²)	Grade 2 clamp load (lb)	Grade 2 dry (ft-lb)	Grade 2 lubricated (ft-lb)	Grade 2 dry (N·m)	Grade 2 lubricated (N·m)	Grade 5 clamp load (lb)	Grade 5 dry (ft-lb)	Grade 5 lubricated (ft-lb)	Grade 5 dry (N·m)	Grade 5 lubricated (N·m)	Grade 8 clamp load (lb)	Grade 8 dry (ft-lb)	Grade 8 lubricated (ft-lb)	Grade 8 dry (N·m)	Grade 8 lubricated (N·m)
3/8-24	0.0878	3,623	23	17	31	23	5,599	35	26	47	36	7,905	49	37	67	50

Disclaimer. Starting values for general use. Follow the manufacturer's specification for critical joints, wheels and engines. Charts & Specs is an independent reference site. It is not affiliated with any manufacturer, standards body or code organization, and it uses brand and standard names only to identify what a value applies to.