



## Target Torque Value per Bolt Size for Standard Flanges

Bolt Grade: A193 - B7 / B16

Bolt Size (inch)	Yield Stress	Bolt Stress		Coefficient of friction, $\mu$	TORQUE	
	(PSI)	(PSI)	%		(lbf.ft)	(Nm)
3/4	105,000	63,000	60%	0.11	207	281
7/8	105,000	63,000	60%	0.11	330	447
1	105,000	63,000	60%	0.11	490	664
1 1/8	105,000	63,000	60%	0.11	708	960
1 1/4	105,000	63,000	60%	0.11	983	1332
1 3/8	105,000	63,000	60%	0.11	1320	1788
1 1/2	105,000	63,000	60%	0.11	1725	2338
1 5/8	105,000	63,000	60%	0.11	2207	2990
1 3/4	105,000	63,000	60%	0.11	2770	3753
1 7/8	105,000	63,000	60%	0.11	3421	4635
2	105,000	63,000	60%	0.11	4167	5646
2 1/4	105,000	63,000	60%	0.11	5967	8086
2 1/2	105,000	63,000	60%	0.11	8223	11142
2 3/4	95,000	57,000	60%	0.11	10027	13586
3	95,000	57,000	60%	0.11	12941	17535
3 1/4	95,000	57,000	60%	0.11	16494	22349
3 1/2	95,000	57,000	60%	0.11	20790	28170
3 3/4	95,000	57,000	60%	0.11	25436	34466
4	95,000	57,000	60%	0.11	30917	41893

**Notes:**

- 1 - The calculated torque values are based on the used of Molykote 1000 with coefficient of friction 0.11
- 2 - Target bolt load is calculated at 60% bolt yield stress
- 3 - When using HTW/PTW equipment, refer to the OEM's Torque/Pressure conversion table to determine the required pump/air pressure to achieve the target torque