FASTENAL®

Torque Values for A2-70 or A4-70 Metric Stainless Steel Fasteners

Caution: Stainless steel fasteners tend to gall, especially with long run downs, prevailing torque fasteners, impact drivers, and lack of lubrication. It is highly encouraged to use a lubricant such as graphite-based anti-seize or molybdenum disulfide based anti-seize or other commercially available anti-galling compounds and assemble with a slow and continuously applied torque to avoid galling.

Nominal Dia. (mm)	Pitch	Min Tensile Strength		Min Yield		Lubricated Clamp Load	Lubricated Clamp Load	Tightening Torque				Dry Clamp Load	Dry Clamp Load
								Lubricated K=0.16		Dry K = 0.35			
		(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(Nm)	US Units	(Nm)	US Units	(N)	(lbs)
3	0.5	3522	792	2264	509	1698	382	0.81	7.2 in-lb	0.95	8.4 in-lbs	906	204
4	0.7	6145	1381	3950	888	2963	666	1.90	16.8	2.21	19.6	1580	355
5	0.8	9928	2232	6382	1435	4787	1076	3.83	33.9	4.47	39.5	2553	574
6	1	14086	3167	9056	2036	6792	1527	6.52	57.7	7.61	67.3	3622	814
8	1.25	25626	5761	16474	3703	12355	2777	15.8	140.0	18.5	163.3	6590	1481
10	1.5	40593	9125	26095	5866	19571	4400	31.3	23.1 ft-lbs	36.5	27.0 ft-lbs	10438	2346
12	1.75	58987	13260	37920	8524	28440	6393	54.6	40.3	63.7	47.0	15168	3410
14	2	80808	18166	51948	11678	38961	8758	87.3	64.4	102	75.1	20779	4671
16	2	109668	24653	70501	15849	52876	11886	135	99.9	158	116.5	28200	6339
18	2.5	134731	30288	86613	19471	64960	14603	187	138	218	161	34645	7788
20	2.5	171356	38521	110158	24763	82618	18573	264	195	308	228	44063	9905
22	2.5	212380	47743	136530	30692	102397	23019	360	266	421	310	54612	12277
24	3	246753	55470	158627	35659	118970	26744	457	337	533	393	63451	14264
27	3	321585	72292	206733	46474	155050	34855	670	494	781	577	82693	18589
30	3.5	392411	88214	252264	56709	189198	42532	908	670	1060	782	100906	22684
33	3.5	485488	109138	312099	70160	234075	52620	1236	912	1442	1064	124840	28064
36	4	571706	128520	367525	82620	275644	61965	1588	1172	1852	1367	147010	33048

The torque values can only be achieved if nut (or tapped hole) has a proof load greater than or equal to the bolt's minimum ultimate tensile strength.

Torque values calculated from formula T=KDF, where

Lubricated Clamp Load F based on 75% of Yield

Dry Clamp Load F based on 40% of Yield to avoid Galling.

K = 0.16 for "lubricated" conditions

K = 0.35 "dry"

Tightening Torque listed in Nm as well as US Customary Units inch-pounds up through M10 and foot-pounds M12 and larger.