

Engineering Table

Chart of TORQUE VALUES for

ASTM A-193 Grade B7 with stud stress Equal to 50% of Maximum Yield Strength (for B16 studs Torque values are 30% less)

Stud or Bolt Size (inches)	Heavy Hex Nut Size (inches)	Min.Yield Strength (PSI)	Bolt Tension (lbs.)	Torque for Specified Lubricant (Ft. Lbs.)							
				f=0.067	f=0.085	f=0.100	f=0.110	f=0.100	f=0.117	API SA2 Oil f=0.15	Machine f=0.400
0.750	1.250	105000	17754	104	137	157	171	157	180	224	559
0.875	1.438	105000	24495	165	218	250	272	250	288	358	893
1.000	1.625	105000	32129	245	325	373	405	373	429	534	1332
1.125	1.813	105000	41873	351	468	538	585	538	621	773	1994
1.250	2.000	105000	52905	483	647	746	811	746	864	1075	2720
1.375	2.188	105000	65226	644	867	1000	1090	1000	1168	1454	3678
1.500	2.375	105000	78835	837	1131	1307	1425	1307	1524	1897	4837
1.625	2.563	105000	93733	1071	1453	1682	1834	1682	1965	2445	6260
1.750	2.750	105000	109920	1338	1820	2109	2301	2109	2476	3081	7888
1.875	2.938	105000	127395	1646	2244	2602	2841	2602	3052	3798	9775
2.000	3.125	105000	146158	1997	2729	3167	3460	3167	3721	4630	11942
2.125	-	105000	166210	2395	3279	3809	4162	3809	4481	5576	14408
2.250	3.500	105000	187551	2843	3898	4531	4953	4531	5336	6640	17191
2.375	-	105000	210180	3343	4590	5339	5838	5339	6294	7833	20310
2.500	3.875	105000	234098	3898	5360	6238	6823	6238	7363	9163	23786
2.750	4.250	105000	258580	4691	6467	7533	8244	7533	8909	11086	28846
3.000	4.625	95000	310020	6087	8410	9803	10732	9803	11612	14450	37670
3.250	5.000	95000	366124	7735	10705	12488	13676	12488	14807	18426	48129
3.500	5.375	95000	426891	9656	13385	15622	17113	15622	18543	23075	60365
3.750	5.750	95000	492321	11871	16477	19241	21084	19241	22864	28452	74516
4.000	6.125	95000	562415	14401	20012	23379	25624	23379	27804	34600	90720
4.250	-	75000	503030	13631	18963	22162	24295	22162	26382	32830	86146
4.500	-	75000	565731	16174	22523	26332	28871	26332	31371	39038	102513
4.750	-	75000	632112	19015	26502	30994	33988	30994	36934	45961	120831
5.000	-	75000	702176	22171	30924	36176	39677	36176	47164	58691	141210
5.250	-	75000	775920	25657	35812	41905	45967	41905	50037	62267	163761
5.500	-	75000	853347	29491	41190	48209	52889	48209	57537	71599	188592
5.750	-	75000	934455	33689	47081	55116	60472	55116	65817	81903	215815
6.000	-	75000	1019244	58267	53508	62652	68748	62652	74854	93148	245538

Note: *f= Coefficient of Friction.