

NOTE: FOR INFORMATIONAL PURPOSES ONLY – VALUES SHOWN ARE NOT RECOMMENDED TORQUE VALUES.

Available Gasket Stress vs. Bolt Stress - 300# Series A Flat Face Flanges

NOTE: This table is for information purposes only. (see notes below)

Nominal Pipe Size (in.)	Number of Bolts	Size of Bolts (in.)	Bolt Stress								Minimum Recommended Assembly Stress		
			25,000 psi		30,000 psi		60,000 psi		75,000 psi		1/32" thick (psi)	1/16" thick (psi)	1/8" thick (psi)
			Bolt Torque (ft.lbs.)	Gasket Stress (psi)	Bolt Torque (ft.lbs.)	Gasket Stress (psi)	Bolt Torque (ft.lbs.)	Gasket Stress (psi)	Bolt Torque (ft.lbs.)	Gasket Stress (psi)			
0.5	4	0.50	25	1360	30	1632	60	3264	75	4081	3800	4800	6200
0.75	4	0.63	50	1430	60	1716	120	3433	150	4291	3800	4800	6200
1	4	0.63	50	1301	60	1562	120	3123	150	3904	3800	4800	6400
1.25	4	0.63	50	1142	60	1370	120	2740	150	3425	3800	4800	6400
1.5	4	0.75	83	1248	100	1498	200	2996	250	3745	3800	4800	6400
2	8	0.63	50	1605	60	1926	120	3852	150	4815	3800	4800	6400
2.5	8	0.75	83	1837	100	2205	200	4409	250	5512	3800	4800	6400
3	8	0.75	83	1548	100	1857	200	3715	250	4643	3800	4800	6400
3.5	8	0.75	83	1306	100	1567	200	3135	250	3919	3800	4800	6400
4	8	0.75	83	1045	100	1253	200	2507	250	3134	3800	4800	6400
5	8	0.75	83	916	100	1099	200	2199	250	2749	3800	4800	6400
6	12	0.75	83	1118	100	1342	200	2683	250	3354	4000	4800	6400
8	12	0.88	133	1156	160	1387	320	2774	400	3467	4000	5000	6400
10	16	1.00	204	1646	245	1976	490	3952	613	4939	4600	5400	6400
12	16	1.13	296	1595	355	1914	710	3827	888	4784	4600	5400	6400
14	20	1.13	296	1537	355	1845	710	3689	888	4612	4800	5400	6600
16	20	1.25	417	1659	500	1991	1000	3982	1250	4978	4800	5400	6600
18	24	1.25	417	1712	500	2054	1000	4108	1250	5135	4800	5400	6400
20	24	1.25	417	1464	500	1756	1000	3513	1250	4391	4800	5400	6400
24	24	1.50	667	1635	800	1962	1600	3923	2000	4904	5000	5600	6400
26	28	1.62	917	2134	1100	2560	2200	5121	2750	6401	---	6171	7171
28	28	1.62	917	1892	1100	2271	2200	4541	2750	5677	---	6193	7193
30	28	1.75	1250	2075	1500	2490	3000	4979	3750	6224	---	6246	7246
32	28	1.88	1667	2254	2000	2705	4000	5410	5000	6762	---	6299	7299
34	28	1.88	1667	2079	2000	2495	4000	4990	5000	6237	---	6336	7336
36	32	2.00	1833	2550	2200	3060	4400	6119	5500	7649	---	6379	7379
38	32	1.50	667	2436	800	2923	1600	5846	2000	7308	---	7366	8366
40	32	1.62	917	2520	1100	3024	2200	6047	2750	7559	---	7285	8285
42	32	1.62	917	2396	1100	2876	2200	5751	2750	7189	---	7376	8376
44	32	1.75	1250	2562	1500	3075	3000	6150	3750	7687	---	7368	8368
46	28	1.88	1667	2335	2000	2802	4000	5604	5000	7004	---	7325	8325
48	32	1.88	1667	2601	2000	3121	4000	6241	5000	7802	---	7443	8443
50	32	2.00	1833	2741	2200	3289	4400	6578	5500	8223	---	7429	8429
52	32	2.00	1833	2631	2200	3158	4400	6315	5500	7894	---	7507	8507
54	28	2.25	2650	2578	3180	3093	6360	6186	7950	7733	---	7371	8371
56	28	2.25	2650	2483	3180	2980	6360	5959	7950	7449	---	7442	8442
58	32	2.25	2650	2787	3180	3344	6360	6689	7950	8361	---	7551	8551
60	32	2.25	2650	2690	3180	3228	6360	6456	7950	8071	---	7622	8622

The values shown are not recommended values. The intent of this table is to illustrate the relationship between bolt torque, bolt stress, gasket stress, and how these three factors relate to the contact area of ASME B16.5 & B16.47 Series A flat face flanges.

Full face gaskets will typically seal at stresses well below the minimum recommended values shown.

Contact Garlock Applications Engineering at 800-448-6688 for further discussions regarding the use of compressed non-asbestos, GYLON® or GRAPH-LOCK® products in flat face flanges.

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