

H-13 Flange Bolting

Part ID	Bolt Size	OD	ID	THK	Dish	HGT	Torque (FT-LB)	Flat Load (LB)
H13-1-30	1/2"	1.010	0.529	0.116	0.015	0.131	30	4,488
H13-1-45	1/2"	1.010	0.529	0.145	0.013	0.158	45	7,596
H13-1-60	1/2"	1.010	0.529	0.142	0.014	0.156	60	7,983
H13-2-30	5/8"	1.146	0.642	0.145	0.013	0.158	60	6,208
H13-2-45	5/8"	1.146	0.642	0.175	0.012	0.187	90	10,073
H13-2-60	5/8"	1.146	0.642	0.185	0.013	0.198	120	12,892
H13-3-30	3/4"	1.368	0.760	0.175	0.016	0.191	100	9,360
H13-3-45	3/4"	1.368	0.760	0.215	0.014	0.229	150	15,188
H13-3-60	3/4"	1.368	0.760	0.222	0.014	0.236	200	16,721
H13-4-30	7/8"	1.587	0.893	0.202	0.021	0.223	160	14,190
H13-4-45	7/8"	1.587	0.893	0.245	0.018	0.263	240	21,701
H13-4-60	7/8"	1.587	0.893	0.282	0.015	0.297	320	27,578
H13-5-30	1"	1.807	1.023	0.231	0.024	0.255	245	18,805
H13-5-45	1"	1.807	1.023	0.280	0.020	0.302	368	27,917
H13-5-60	1"	1.807	1.023	0.315	0.018	0.333	490	35,763
H13-6-30	1-1/8"	2.022	1.148	0.265	0.023	0.288	355	21,784
H13-6-45	1-1/8"	2.022	1.148	0.320	0.022	0.342	533	36,690
H13-6-60	1-1/8"	2.022	1.148	0.368	0.018	0.386	710	45,655
H13-7-30	1-1/4"	2.307	1.274	0.300	0.030	0.330	500	30,940
H13-7-45	1-1/4"	2.307	1.274	0.366	0.024	0.390	750	44,945
H13-7-60	1-1/4"	2.307	1.274	0.406	0.023	0.429	1,000	58,794
H13-8-30	1-3/8"	2.467	1.400	0.330	0.030	0.360	680	36,845
H13-8-45	1-3/8"	2.467	1.400	0.400	0.026	0.426	1,020	56,869
H13-8-60	1-3/8"	2.467	1.400	0.446	0.024	0.470	1,360	72,767
H13-9-30	1-1/2"	2.680	1.525	0.363	0.032	0.395	800	44,432
H13-9-45	1-1/2"	2.680	1.525	0.440	0.028	0.468	1,200	69,238
H13-9-60	1-1/2"	2.680	1.525	0.505	0.024	0.529	1,600	89,725
H13-10-30	1-5/8"	2.950	1.650	0.396	0.035	0.431	1,100	51,307
H13-10-45	1-5/8"	2.950	1.650	0.484	0.031	0.515	1,650	82,969
H13-10-60	1-5/8"	2.950	1.650	0.543	0.029	0.572	2,200	109,601
H13-11-30	1-3/4"	3.170	1.775	0.431	0.039	0.470	1,500	63,891
H13-11-45	1-3/4"	3.170	1.775	0.521	0.033	0.554	2,250	95,493
H13-11-60	1-3/4"	3.170	1.775	0.591	0.029	0.620	3,000	122,491
H13-12-30	1-7/8"	3.390	1.902	0.465	0.041	0.506	2,000	73,882
H13-12-45	1-7/8"	3.390	1.902	0.563	0.034	0.597	3,000	108,743
H13-12-60	1-7/8"	3.390	1.902	0.616	0.031	0.647	4,000	129,868
H13-13-30	2"	3.598	2.025	0.542	0.035	0.577	2,200	88,898
H13-13-45	2"	3.598	2.025	0.608	0.032	0.640	3,300	114,732
H13-13-60	2"	3.598	2.025	0.635	0.031	0.666	4,400	126,621
H13-14-30	2-1/4"	4.038	2.281	0.559	0.047	0.606	3,180	104,308
H13-14-45	2-1/4"	4.038	2.281	0.687	0.041	0.728	4,770	168,903
H13-14-60	2-1/4"	4.038	2.281	0.715	0.035	0.750	6,360	162,544
H13-15-30	2-1/2"	4.480	2.530	0.635	0.050	0.685	4,400	132,115
H13-15-45	2-1/2"	4.480	2.530	0.762	0.044	0.806	6,600	200,899
H13-15-60	2-1/2"	4.480	2.530	0.782	0.043	0.825	8,800	212,202



H-13 Flange Bolting

Part ID	Bolt Size	OD	ID	THK	Dish	HGT	Torque (FT-LB)	Flat Load (LB)
H13-16-30	2-3/4"	4.918	2.778	0.693	0.055	0.750	5,920	162,481
H13-16-45	2-3/4"	4.918	2.778	0.843	0.047	0.890	8,880	241,161
H13-16-60	2-3/4"	4.918	2.778	0.869	0.044	0.913	11,840	247,308
H13-17-30	3"	5.358	3.028	0.760	0.062	0.822	7,720	196,477
H13-17-45	3"	5.358	3.028	0.928	0.052	0.980	11,580	300,004
H13-17-60	3"	5.358	3.028	0.974	0.045	1.019	15,440	300,171

-30 denotes 30,000 lb. bolt stress.

-45 denotes 45,000 lb. bolt stress.

-60 denotes 60,000 lb. bolt stress.

*Torque values for sizes 1-1/8" and larger are based on the 8-pitch thread series for flanged piping.