

Torque Table for VCS, VCFS (use max value), VCSID, PGE, LineBacker, and Evolution - ASME B16.5 1/2" - 24" NPS

NPS	150#			300#			400#			600#			900#			1500#			2500#			NPS
	Minimum [ft-lb]	Recommended [ft-lb]	Max [ft-lb]	Minimum [ft-lb]	Recommended [ft-lb]	Max [ft-lb]	Minimum [ft-lb]	Recommended [ft-lb]	Max [ft-lb]	Minimum [ft-lb]	Recommended [ft-lb]	Max [ft-lb]	Minimum [ft-lb]	Recommended [ft-lb]	Max [ft-lb]	Minimum [ft-lb]	Recommended [ft-lb]	Max [ft-lb]	Minimum [ft-lb]	Recommended [ft-lb]	Max [ft-lb]	
1/2	15	30	45	15	30	45	15	30	45	15	30	45	45	95	120	45	95	120	50	95	120	1/2
3/4	15	30	45	30	55	90	30	55	90	30	55	90	50	95	140	50	95	140	50	95	140	3/4
1	15	30	45	30	55	90	30	55	90	30	55	90	80	155	220	80	155	220	80	155	220	1
1 1/4	20	30	45	35	55	90	35	55	90	35	55	90	85	155	255	85	155	255	130	230	350	1 1/4
1 1/2	25	30	45	60	95	160	60	95	160	60	95	160	125	230	380	125	230	380	185	335	530	1 1/2
2	45	55	90	35	55	90	35	55	90	35	55	90	80	155	255	80	150	245	125	230	380	2
2 1/2	50	55	90	55	95	160	55	95	160	55	95	160	120	230	380	125	230	380	190	335	530	2 1/2
3	55	60	90	60	95	160	60	95	160	60	95	160	90	155	255	185	335	560	275	470	785	3
3 1/2	40	55	90	65	95	160	95	155	255	95	155	255	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3 1/2
4	45	55	90	65	95	160	95	155	255	95	155	255	190	335	560	280	470	785	515	840	1400	4
5	75	95	160	75	95	160	105	155	255	145	230	380	265	470	785	485	840	1400	825	1370	2170	5
6	80	95	160	65	95	160	95	155	255	135	230	380	200	335	560	390	640	1065	1245	2080	2995	6
8	90	95	160	105	155	255	145	230	380	205	335	560	390	640	1065	685	1085	1805	1295	2080	3155	8
10	115	155	255	140	230	380	195	335	560	285	470	785	405	640	1065	1115	1700	2830	2545	4165	6005	10
12	125	155	255	205	335	560	280	470	785	290	470	785	420	640	1065	1320	2080	3465	3560	5595	8090	12
14	160	230	380	200	335	560	280	470	785	405	640	1065	570	840	1400	1915	3005	4390	N/A	N/A	N/A	14
16	155	230	380	280	470	785	385	640	1065	540	840	1400	750	1085	1805	2670	4165	6105	N/A	N/A	N/A	16
18	225	335	560	285	470	785	390	640	1065	710	1085	1805	1140	1700	2830	3630	5595	8900	N/A	N/A	N/A	18
20	215	335	560	300	470	785	515	840	1400	710	1085	1805	1420	2080	3465	4745	7320	10730	N/A	N/A	N/A	20
22	315	470	785	515	840	1400	690	1085	1805	920	1370	2280	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22
24	330	470	785	565	840	1400	865	1370	2280	1190	1700	2830	2700	4165	6945	7650	11765	18060	N/A	N/A	N/A	24
26	325	470	785	635	1085	1805	775	1370	2280	1110	1700	2830	3540	5595	9325	N/A	N/A	N/A	N/A	N/A	N/A	26
28	315	470	785	660	1085	1805	955	1700	2830	1350	2080	3465	4540	7320	12200	N/A	N/A	N/A	N/A	N/A	N/A	28
30	330	470	785	825	1370	2280	1170	2080	3465	1425	2080	3465	4765	7320	12200	N/A	N/A	N/A	N/A	N/A	N/A	30
32	525	840	1400	1020	1700	2830	1205	2080	3465	1965	3005	5005	6005	9370	15615	N/A	N/A	N/A	N/A	N/A	N/A	32
34	515	840	1400	1055	1700	2830	1240	2080	3465	2045	3005	5005	7445	11765	19610	N/A	N/A	N/A	N/A	N/A	N/A	34
36	530	840	1400	1230	2080	3465	1230	2080	3465	2720	4165	6945	7720	11765	19610	N/A	N/A	N/A	N/A	N/A	N/A	36
38	535	840	1400	640	840	1400	915	1370	2280	2220	3005	5005	8010	11765	19610	N/A	N/A	N/A	N/A	N/A	N/A	38
40	525	840	1400	800	1085	1805	1115	1700	2830	2190	3005	5005	7780	11765	19610	N/A	N/A	N/A	N/A	N/A	N/A	40
42	545	840	1400	830	1085	1805	1150	1700	2830	3035	4165	6945	8045	11765	19610	N/A	N/A	N/A	N/A	N/A	N/A	42
44	535	840	1400	1015	1370	2280	1385	2080	3465	2985	4165	6945	9745	14540	24235	N/A	N/A	N/A	N/A	N/A	N/A	44
46	540	840	1400	1300	1700	2830	1370	2080	3465	3090	4165	6945	11670	17720	29535	N/A	N/A	N/A	N/A	N/A	N/A	46
48	540	840	1400	1270	1700	2830	2025	3005	5005	3950	5595	9325	12020	17720	29535	N/A	N/A	N/A	N/A	N/A	N/A	48
50	805	1370	2280	1515	2080	3465	1990	3005	5005	5220	7320	12200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	50
52	815	1370	2280	1565	2080	3465	2045	3005	5005	5110	7320	12200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	52
54	820	1370	2280	2210	3005	5005	2810	4165	6945	5255	7320	12200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	54
56	820	1370	2280	2280	3005	5005	2750	4165	6945	6475	9370	15615	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	56
58	825	1370	2280	2220	3005	5005	2820	4165	6945	6645	9370	15615	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	58
60	815	1370	2280	2280	3005	5005	3610	5595	9325	8485	11765	19610	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60

Torque Table for VCS, VCFS (use max value), VCSID, PGE, LineBacker, and Evolution - ASME B16.47A 26" - 60" NPS

Notes:

- The max recommended values is not an absolute max values for the products relevant to this table. The absolute max value for these products could exceed the maximum allowable limits of the other components in bolted flange assemblies therefore GPT has chosen not to display this information. (Please contact the factory for additional information)
- All values have been calculated assuming a 0.11 Coefficient of Friction and new nuts and bolt. If using non-lubricated, dry, bolts increase torque by 15%. If using PTFE or Nylon coated studs use Recommended values.
- "M" - Maintenance Factor = 0, "Y" - Minimum Design Seating Stress = 7500 [psi] isolating gasket including: VCS, VCFS, VCSID, PGE, and LineBacker. Y=0 psi for Evolution
M&Y values are specific to GPT
- The above "Max" torque value is based on the use of bolts with a yield strength of 100,000 [psi]
- The minimum values are based on flange design codes calling for minimum seating stress(Y value). Sometimes minimum seating stress is inadequate to seat the gasket because the bolting and flange rigidity are insufficient to effect a proper seal. Care should be taken to ensure that flange conditions provide a suitable seating surface.