

Torque Table for VCS, VCFS (use max value), VCSID, PGE, LineBacker, and Evolution (use max value) - 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	20	40	60	10	25	40	60	130	160	60	130	160	65	130	160	1/2
3/4	15	30	45	30	55	90	40	75	120	20	45	75	65	130	185	65	130	185	70	130	185	3/4
1	15	30	45	30	55	90	40	75	120	25	45	75	105	205	295	105	205	295	110	205	295	1
1 1/4	20	30	45	35	55	90	45	75	120	25	45	75	115	205	340	115	205	340	175	305	465	1 1/4
1 1/2	25	30	45	60	95	160	80	130	210	45	80	130	170	305	505	170	305	505	250	445	710	1 1/2
2	45	55	90	35	55	90	45	75	120	25	45	75	110	205	340	110	195	325	170	305	505	2
2 1/2	50	55	90	55	95	160	75	130	210	45	80	130	165	305	505	170	305	505	260	445	705	2 1/2
3	55	60	90	60	95	160	85	130	210	50	80	130	125	205	340	255	445	745	375	625	1045	3
3 1/2	40	55	90	65	95	160	125	205	340	75	125	205	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	130	205	340	75	125	205	255	445	745	385	625	1045	705	1120	1865	4
5	75	95	160	75	95	160	145	205	340	115	185	305	365	625	1045	665	1120	1865	1125	1825	2895	5
6	80	95	160	65	95	160	130	205	340	105	185	305	275	445	745	530	850	1415	1705	2775	3995	6
8	90	95	160	105	155	255	200	305	505	160	270	445	530	850	1415	935	1445	2405	1775	2775	4205	8
10	115	155	255	140	230	380	265	445	745	220	375	625	555	850	1415	1525	2265	3775	3500	5555	8005	10
12	125	155	255	205	335	560	380	625	1045	230	375	625	570	850	1415	1810	2775	4620	4895	7460	10785	12
14	160	230	380	200	335	560	385	625	1045	315	510	850	775	1120	1865	2630	4005	5850	N/A	N/A	N/A	14
16	155	230	380	280	470	785	525	850	1415	420	675	1120	1025	1445	2405	3665	5555	8140	N/A	N/A	N/A	16
18	225	335	560	285	470	785	535	850	1415	550	870	1445	1565	2265	3775	4990	7460	11870	N/A	N/A	N/A	18
20	215	335	560	300	470	785	705	1120	1865	555	870	1445	1945	2775	4620	6525	9760	14305	N/A	N/A	N/A	20
22	315	470	785	515	840	1400	945	1445	2405	715	1095	1825	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	1185	1825	3040	925	1360	2265	3710	5555	9255	10535	15690	24080	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	1350	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 GasketSeal - 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 Xylon coated studs use Recommended values.
- "M" - Maintenance Factor = 0, "Y" - Minimum Design Seating Stress = 7500 [psi] M&Y values are specific to GPT  
isolating gasket including: VCS, VCFS, VCSID, PGE, LineBacker, and Gasket Seal
- 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.