



TORQUE TABLE AWWA C207				
NPS	TABLE B,D,E			NPS
	Minimum (ft-lb)	Recommended (ft-lb)	Max (ft-lb)	
1/2	15	30	45	1/2
3/4	15	30	45	3/4
1	15	30	45	1
1 1/4	20	30	45	1 1/4
1 1/2	25	30	45	1 1/2
2	45	55	90	2
2 1/2	50	55	90	2 1/2
3	55	60	90	3
3 1/2	40	55	90	3 1/2
4	45	55	90	4
5	75	95	160	5
6	80	95	160	6
8	90	95	160	8
10	115	155	255	10
12	125	155	255	12
14	160	230	360	14
16	155	230	360	16
18	225	335	560	18
20	215	335	560	20
22	315	470	785	22
24	330	470	785	24
26	325	470	785	26
28	315	470	785	28
30	330	470	785	30
32	525	840	1400	32
34	515	840	1400	34
36	530	840	1400	36
38	535	840	1400	38
40	525	840	1400	40
42	545	840	1400	42
44	535	840	1400	44
46	540	840	1400	46
48	540	840	1400	48
50	805	1370	2280	50
52	815	1370	2280	52
54	820	1370	2280	54
56	820	1370	2280	56
58	825	1370	2280	58
60	815	1370	2280	60
66	865	1370	2280	66
72	855	1370	2280	72
78	1210	2080	3455	78
84	1255	2080	3455	84
90	1730	3005	5005	90
96	1785	3005	5005	96
102	2370	4165	6945	102
108	2435	4165	6945	108
114	3145	5595	9325	114
120	3220	5595	9325	120
126	4070	7320	12200	126
132	4155	7320	12200	132
144	5250	9370	16615	144

**Notes:**

- 1) The above recommended values to not an absolute max values for the products relevant to this table. The absolute max values for these products could exceed the maximum allowable limits of the other components in ball joint assemblies therefore GPT has chosen not to display this information (Please contact the factory for additional information)
- 2) All values have been calculated assuming a 0.10 Coefficient of friction and new nuts and bolt. If using non lubricated, dry, bolts increase torque by 10%. If using 1" II L or Xlon coated studs use 1/2 recommended values.
- 3) "M" Maintenance factor 0. "Y" Minimum Design Seating Stress /500 (psi) M&Y values are specific to C11  
 making gasket including VCR, VCRS, VCRD, PIG, 1 inch/kerf, and Gasket Steel
- 4) The above "Max" torque value is based on the use of bolts with a yield strength of 100,000 (psi)
- 5) 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 quality are insufficient to effect a proper seal. Care should be taken to ensure that flange conditions provide a suitable seating surface.
- 6) All values for sizes greater than 24" are based on B16.47 series A flanges. Contact C11 engineering for series B flange values.