

Maximum Stem Break Torque At Various Pressures

Use the chart below to locate the curve number for the valve series, valve class and valve size. Locate the curve number on chart to the right. Find the valve design pressure on the horizontal axis and read up until you intersect the selected curve number. Read across horizontally to find the maximum break torque.

Example for a 2" Series 6400 Class 150 valve at 200 psi: Use curve #5 from the table below. The intersection of curve #5 and 200 psi results in 1205 in./lbs. maximum break torque.

Valve Curve Numbers

Series	Size (in.)										
	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12
Class 150											
4400					4	5	6	8	9	10	
4500				3	15	16	12	13			
5400		1	2	3	4	5	6	8	9	10	11
6400	1	2	3	4	5	6	8	9	10	11	
6500			3	15	16	12	13	14			
Class 300											
4400					4	5	6	8	9	10	
4500			2	3	15	16	12	13			
5400		1	2	3	4	5	6	8	9	10	11
6400	1	2	3	4	5	6	8	9	10	11	
6500			3	15	16	12	13	14			
Class 600											
4400		1	2	3	4	5	7	19			
4500				3	15	16	17	18			
6400	1	2	3	4	5	7	19				
6500			3	15	16	17	18				

Maximum Stem Break Torque at Maximum Operating Pressure (in.-lb.) Based on TFM and TFMC Seat Testing

Series	Size (in.)										
	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12
285 M.O.P.											
4410	—	—	—	—	659	1210	1660	2270	5152	12,000	—
4510	—	—	—	284	569	1059	1530	1930	—	—	—
5410	—	170	228	284	659	1210	1660	2270	5152	12,000	29,250
6410	170	228	284	659	1210	1660	2270	5152	12,000	29,250	—
6510	—	—	284	569	1059	1530	1930	4598	—	—	—
740 M.O.P.											
4430	—	—	—	—	732	1226	2395	3194	6991	13,000	—
4530	—	—	—	319	642	1075	2266	2854	—	—	—
5430	—	205	263	319	732	1226	2395	3194	6991	13,000	30,000
6430	205	263	319	732	1226	2395	3194	6991	13,000	30,000	—
6530	—	—	319	642	1075	2266	2854	6437	—	—	—
1480 M.O.P.											
4460	—	262	320	376	849	1252	2395	4093	—	—	—
4560	—	—	—	376	759	1101	2155	3900	—	—	—
6460	262	320	376	849	1252	2395	4093	—	—	—	—
6560	—	—	376	759	1101	2155	3900	—	—	—	—

Notes:

- Torque values are for new valves with TFM/TFMC and clean water service.
 - For Nylon seats, add an additional 25% minimum.
 - For PEEK™ seats, add an additional 120% minimum.
- No additional safety factors have been added.
- Stem torque service condition factors:
 - For powered actuators, it's recommended to add an additional 25% min.
 - For dirty service, add an additional 50% minimum.
 - For dry gas service, add 25% minimum.
- To prevent stem side loading and eliminate potential stem galling, the following tolerances for mounting actuators are recommended:
 - Actuator mounting bracket flanges must be parallel within .015".
 - The maximum allowed run out on the stem coupling bores are .008".
 - 8", 10" and 12", Class 300, have a maximum operating pressure of 550 psig.

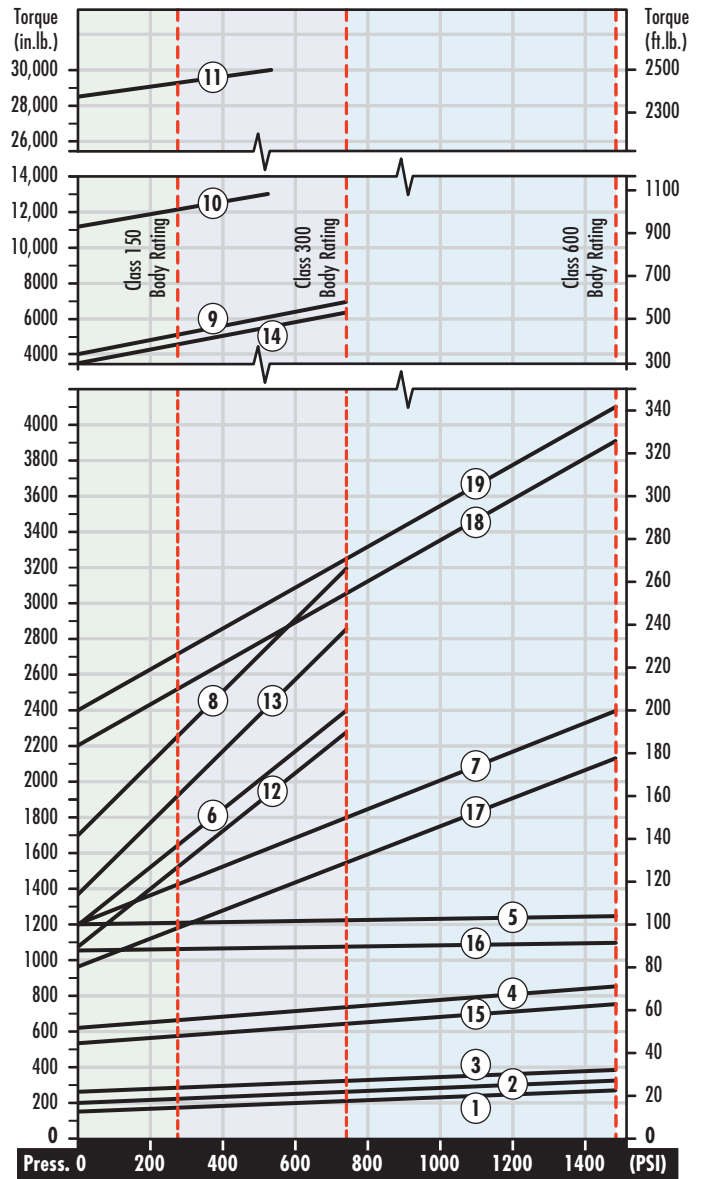


Chart is for TFM or TFMC Seats. For other seat material contact your PBV®-USA sales representative.

Approximate Valve Weights (lbs.)

Series	Size (in.)										
	1/2	3/4	1	1 1/2	2	3	4	6	8	10	12
Class 150											
4410	—	—	—	—	19	35	76	140	210	390	—
4430	—	—	—	—	26	54	106	190	250	420	—
4460	—	11	11	22	33	70	140	269	—	—	—
5410	—	5	6	12	19	35	53	103	164	289	TBD
5430	—	7	12	20	24.4	51	82	179	285	415	TBD
6410	4	5	7	14	22	48	75	180	285	600	—
6430	6	9	12	21	29	65	105	235	313	TBD	—
6460	6	13.5	13.1	27	46	91	177	—	—	—	—