

Elite High Performance Butterfly Valve

CLASS 150 SEATING/UNSEATING TORQUES

SIZE		SOFT SEAT				METAL SEAT				FIRE SAFE SEAT				FIRE SAFE SEAT (NACE)				
inch	mm	100 psi	150 psi	200 psi	285 psi	100 psi	150 psi	200 psi	285 psi	100 psi	150 psi	200 psi	285 psi	100 psi	150 psi	200 psi	285 psi	
2	50	lbf.in	230	242	265	288	644	702	759	863	483	529	575	644	483	529	575	644
		N.M	26	27	30	33	73	79	86	98	55	60	65	73	55	60	65	73
2.5	65	lbf.in	265	288	311	345	690	748	817	920	621	667	702	771	621	667	702	771
		N.M	30	33	35	39	78	85	92	104	70	75	79	87	70	75	79	87
3	80	lbf.in	288	322	345	403	851	932	1,012	1,151	782	828	886	966	782	828	886	966
		N.M	33	36	39	46	96	105	114	130	88	94	100	109	88	94	100	109
4	100	lbf.in	483	541	598	690	1,058	1,162	1,266	1,438	943	1,001	1,070	1,174	943	1,001	1,070	1,174
		N.M	55	61	68	78	120	131	143	163	107	113	121	133	107	113	121	133
5	125	lbf.in	667	725	782	886	1,404	1,542	1,680	1,921	1,496	1,622	1,760	1,979	1,496	1,622	1,760	1,979
		N.M	75	82	88	100	159	174	190	217	169	183	199	224	169	183	199	224
6	150	lbf.in	863	966	1,081	1,266	1,956	2,151	2,347	2,681	2,186	2,336	2,485	2,738	2,186	2,336	2,485	2,738
		N.M	98	109	122	143	221	243	265	303	247	264	281	309	247	264	281	309
8	200	lbf.in	1,898	2,082	2,266	2,589	2,968	3,267	3,567	4,073	3,106	3,774	4,441	5,580	3,567	4,222	4,878	5,983
		N.M	215	235	256	293	335	369	403	460	351	426	502	631	403	477	551	676
10	250	lbf.in	2,876	3,198	3,532	4,084	4,947	5,465	5,983	6,857	4,429	5,039	5,637	6,673	4,832	5,856	6,880	8,629
		N.M	325	361	399	462	559	618	676	775	501	569	637	754	546	662	777	975
12	300	lbf.in	3,452	4,027	4,614	5,591	7,766	8,571	9,365	10,734	6,845	7,605	8,364	9,664	7,018	8,134	9,262	11,160
		N.M	390	455	521	632	878	969	1,058	1,213	774	859	945	1,092	793	919	1,047	1,261
14	350	lbf.in	5,062	5,902	6,742	8,169	11,332	12,494	13,656	15,624	9,146	10,723	12,299	14,968	9,434	10,803	12,172	14,496
		N.M	572	667	762	923	1,281	1,412	1,543	1,765	1,034	1,212	1,390	1,691	1,066	1,221	1,375	1,638
16	400	lbf.in	6,903	7,996	9,077	10,930	14,381	15,842	17,315	19,800	12,080	13,725	15,371	18,178	12,425	13,737	15,037	17,258
		N.M	780	904	1,026	1,235	1,625	1,790	1,957	2,237	1,365	1,551	1,737	2,054	1,404	1,552	1,699	1,950
18	450	lbf.in	9,664	11,217	12,771	15,417	20,709	22,780	24,862	28,383	17,027	18,960	20,882	24,161	17,948	19,259	20,559	22,780
		N.M	1,092	1,268	1,443	1,742	2,340	2,574	2,809	3,207	1,924	2,142	2,360	2,730	2,028	2,176	2,323	2,574
20	500	lbf.in	12,886	15,003	17,119	20,709	28,187	30,856	33,526	38,059	22,435	24,678	26,910	30,718	22,780	24,402	26,013	28,763
		N.M	1,456	1,695	1,934	2,340	3,185	3,487	3,788	4,300	2,535	2,789	3,041	3,471	2,574	2,757	2,939	3,250
24	600	lbf.in	20,249	23,792	27,336	33,365	41,188	45,376	49,552	56,662	33,595	37,575	41,556	48,321	33,940	37,081	40,221	45,560
		N.M	2,288	2,688	3,089	3,770	4,654	5,127	5,599	6,403	3,796	4,246	4,696	5,460	3,835	4,190	4,545	5,148
30	750	lbf.in	36,816	40,083	43,351	48,896												
		N.M	4,160	4,529	4,898	5,525												
36	900	lbf.in	52,348	60,896	69,444	83,987												
		N.M	5,915	6,881	7,847	9,490												

- Torques shown include a safety factor of 30%
- All torque values in the table are for the wetted line media. If media is dry then add additional 10% to torque.
- If service is modulating then add additional 10% to torque.
- Torque may vary with the valve material.

This figure is based on the following seat material - Soft seat: MRTFE and PTFE, Metal Seat: 316 Stainless steel, Fire safe seat: MTFE & 316 Stainless steel.

Example... 12" valve at 285 psi = 5,591 lbf.in

5,591 lbf.in + 10% for dry service = 5,591 lbf.in + 559 = 6,150 lbf.in

6,150 + 10% for modulating service = 6,150 + 615 = 6,765 lbf.in