

# Torque comparisons:

## Z-DISC CONTROL VANE TORQUE DATA

SIZE	TO OPEN	TO CLOSE	TO CLOSE AT 100 PSI	TO CLOSE AT 180 PSI
2	5	10	36	57
3	17	34	92	138
4	40	82	200	295
6	136	172	488	568
8	320	450	1000	1450

All torque in inch-pounds (unlubricated).

## Standard Butterfly Valve Torque Requirements:

FIGURE 990/920 SEATING AND UNSEATING TORQUES (in Lbs.)

Application ΔP	Valve size (NPS)															
	1	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	
<b>I</b>																
0	35	60	110	135	160	240	325	450	750	1150	1550	2150	2750	3450	4250	
50	55	90	120	145	180	270	375	550	950	1450	2050	2950	3950	5250	6750	
100	60	100	130	155	200	300	425	650	1150	1750	2550	3750	5150	7050	9250	
150	70	105	140	165	220	330	475	750	1350	2050	3050	4550	6350	8850	11750	
50 (U/C)	-	-	-	-	-	165	220	306	500	750	1000	1450	1850	2350	2850	
<b>II</b>																
0	55	80	220	270	320	480	650	900	1500	2300	3100	4300	5500	6900	8500	
50	70	105	230	280	340	510	700	1000	1700	2600	3600	5100	6700	8700	11000	
100	80	115	240	290	360	540	750	1100	1900	2900	4100	5900	7900	10500	13500	
150	90	125	250	300	380	570	800	1200	2100	3200	4600	6700	9100	12300	16000	
50 (U/C)	-	-	-	-	-	360	490	710	1200	1800	2500	3700	4900	6500	8200	
<b>III</b>																
0	70	100	330	405	480	720	975	1350	2250	3450	4650	6450	8250	10350	12750	
50	90	125	340	410	500	750	1025	1450	2450	3750	5150	7250	9450	12150	15250	
100	100	140	350	420	520	780	1075	1550	2650	4050	5650	8050	10650	13950	17750	
150	105	150	360	430	540	910	1125	1650	2850	4350	6150	8850	11850	15750	20250	
50 (U/C)	-	-	-	-	-	525	710	1015	1700	2550	3500	5150	6750	8850	11050	

## Actuator Comparison: Standard 3" Butterfly VS 3" Z-Disc:



### Actuator Weight and Dimensions:

- **F89-014 (left):** W: 16LBS, D: 6" X 12"
- **F89-004 (right):** W: 6LB, D: 4" X 9"

## Actuator Comparison: Keystone Actuator on 3" butterfly VS Lilly Actuator on 4" Z-Disc:



### Actuator Weight and Dimensions:

- **F89-014 (left):** W: 16LBS, D: 6" X 12"
- **Lilly EVA 514 (right):** W: 6LBS D: 5" X 8"