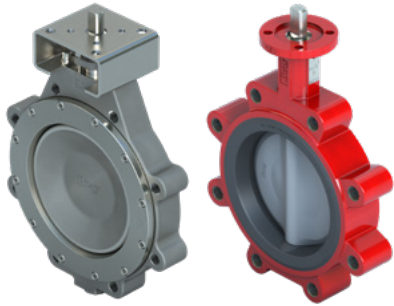


Butterfly Valves Qualified Beyond 1 Million Cycles Using Liquid Media Testing



CHALLENGE

A leading water & wastewater OEM was seeking reliable butterfly valve solutions for a 30-year design life. This required passing their 1 million consecutive cycle test to qualify as a valve supplier. The valves must be supplied for testing conducted by the customer using their municipal water supply.

SOLUTION

Bray supplied three standard butterfly valves with key design features to provide reliable high cycle solutions.

McCANNALOK SERIES

High Performance Butterfly Valves (x2)

- > Resilient seat design with pressure assisted sealing.
- > Fully encapsulated resilient energizer ring.
- > Upper and lower stem bearings.

SERIES 3W/3L

Resilient Seated Butterfly Valve

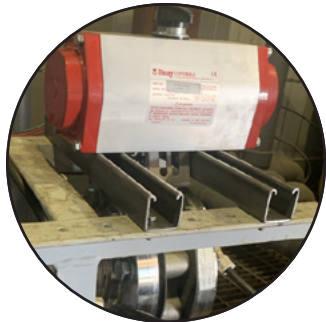
- > Optimized molded in seat with tightly controlled/repeatable dimensions.
- > Optimized disc geometry.
- > Upper and lower stem bearings.

TEST CONDITIONS

Industry	Water & wastewater.
Test Pressure (Open)	0 to 18 psig 0 to 1.24 bar g
Test Pressure (Closed)	70 to 80 psig 4.83 to 5.52 bar g
Test Medium	Municipal water supply.
Medium Temperature	61°F 16°C
Valve Open Time	5 seconds
Valve Close Time	5 seconds
Total Cycle Time	10 seconds
Acceptance Criteria	Equal to or greater than 1,000,000 consecutive cycles without failure.

BRAY PRODUCT DETAILS

Valve Type	High Performance Butterfly Valve	High Performance Butterfly Valve	Resilient Seated Butterfly Valve
Valve Model	Series 40/41	Series 42/43	Series 3W/3L
Size	NPS 4 DN 100	NPS 4 DN 100	NPS 4 DN 100
Pressure Class	ASME 150 PN 10, 16	ASME 300 PN 25, 40	ASME 150 PN 10, 16
Options	Standard trim	Standard trim	Standard trim; Standard 175 psi disc
Seat	RPTFE (Energized)	RPTFE (Energized)	EPDM
Disc	CF8M	CF8M	CF8M
Stem	17-4PH	17-4PH	416 Stainless Steel
Body	CF8M	CF8M	A536
TEST RESULTS	1,400,000+ cycles	1,000,000+ cycles	1,000,000+ cycles



Bray butterfly valve undergoing 1 million cycle testing at customer location.

RESULTS

After months of continuous testing and monitoring by the customer, all three of the Bray valves passed with zero leakage across the valves or through the stem packing. Post-test examination indicated that the valves could have been cycled longer while still maintaining performance.

With these outstanding results, Bray has been added to the customer's approved vendor list.