



BLAZE



Butterfly Valve - Grooved Type

Model : BT 5402

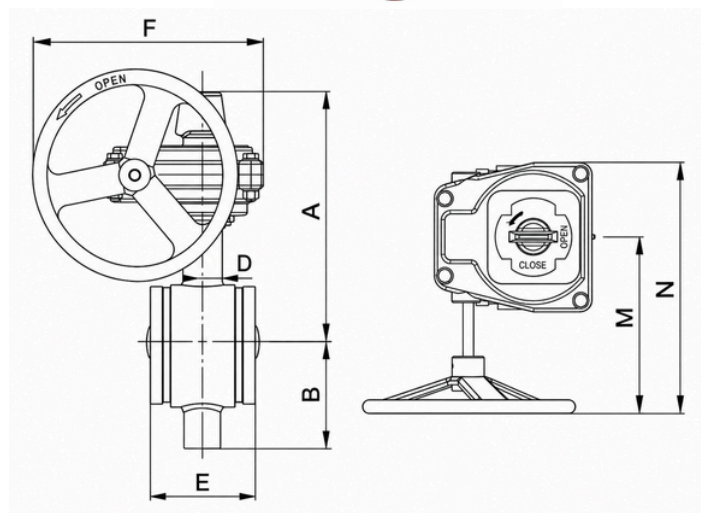
Description:

The Grooved Type Butterfly Valve is a gear-operated isolation valve featuring an integrated indicator flag for clear "Open/Closed" status identification. Ideal for use as isolation or zone control valves within fire protection systems and fire pump rooms. When fully engaged in the open position, the valve provides an unobstructed flow path, minimizing pressure drop and turbulence. The integrated gearbox enables effortless manual operation and ensures a controlled closing speed to mitigate the risk of water hammer.

Specifications:

- Vulcanized Disc Design for Bubble-Tight Shutoff.
- Outdoor and Indoor rated.
- Flag Type Position Indicator.
- Built-in Supervisory Switch.
- Grooved Ends Dimensions meet AWWA C606 Standard

Size	DN50 - DN300 (2" - 12")
Maximum Working Pressure	20.7 bar (300 psi)
Approvals	UL 1091 Listed
Design Standard	EN 593 and MSS SP-67
Temperature Range	0° C to 80°C (32°F to 176°F)
Coating	Fusion Bonded Epoxy Coated Interior and Exterior to AWWA C550 Standard. Average Coating Thickness 250 Microns
Wedge	Ductile-Iron Wedge, EPDM Encapsulated.



Dimensions:

Order Code	DN	INCH	OD	L	A	B	C	D	E	F	G	H	M	N	P
BT-5402-050-300-G	50	2"	60.3	84	100	228	53	90	65	190	115	296	140	220	11
BT-5402-065-300-G	65	2½"	73.0/76.1	97	110	248	53	90	65	190	115	317	140	220	11
BT-5402-080-300-G	80	3"	88.9	97	115	258	53	90	65	190	115	325	140	220	14
BT-5402-100-300-G	100	4"	114.3	116	145	309	54	90	65	190	115	373	140	220	19
BT-5402-125-300-G	125	5"	139.7/141.3	148	145	318	53	90	65	215	165	379	140	220	19
BT-5402-150-300-G	150	6"	165.1/168.3	148	185	383	53	90	65	215	165	450	140	220	19
BT-5402-200-300-G	200	8"	219.1	133	200	454	74	125	85	280	205	540	205	310	28
BT-5402-250-300-G	250	10"	273	159	250	555	75	125	85	330	295	640	215	320	32
BT-5402-300-300-G	300	12"	323.9	165	275	608	73	125	85	330	295	695	215	320	32

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Installation Guidelines:

Grooved type valves are versatile and suitable for both indoor and outdoor applications in any flow direction or orientation.

- These valves feature a self-sealing seat design; no additional gaskets are required for flange connections.
- It is best practice to provide independent support to the valve to mitigate vibration and isolate it from mechanical stresses in the piping system.

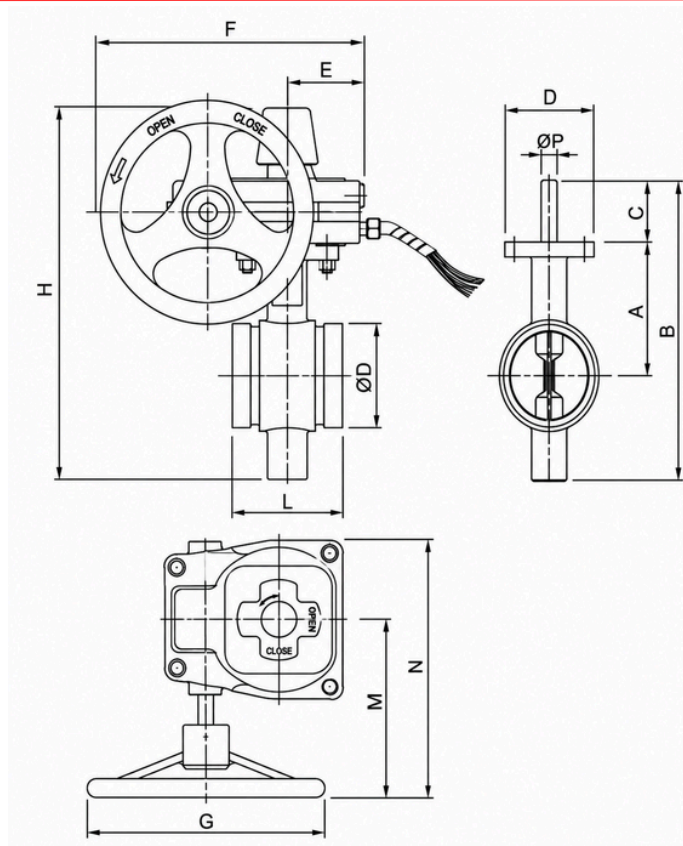
Installation Steps:

- Confirm the valve is in the fully closed position.
- Visually check for transit damage. Ensure the seating area is clean and free of defects.
- Position the valve between matching flanges. Since Grooved valves have threaded inserts, ensure bolts are properly threaded and hand-tightened.
- Do not use gaskets between the valve and the flange. Do not apply lubricants to the valve seats, as this can degrade the sealing material.
- Ensure the valve is perfectly centered between mating flanges to prevent disc interference.
- Cycle the valve to ensure the disc clears the pipe ID and to remove any construction debris.
- Once smooth operation is confirmed, tighten all bolts using the crossover (star) method.
- Perform a final full cycle (Open/Closed) to confirm total operational integrity.

Care & Maintenance

While these valves are designed for long-term reliability without intensive maintenance, regular inspections should be performed by authorized personnel in accordance with NFPA and AHJ guidelines.

- Periodically verify that the gearbox and handwheel operate smoothly, joints remain leak-free, and supervisory switch (I/M switch) connections are secure.
- Obstruction Clearing: If the valve fails to close fully, inspect the seat for foreign particles. Clean the area before attempting to re-close.
- While suitable for outdoor use, direct sunlight may cause minor surface discoloration over time; this is cosmetic and does not impact operational performance.
- Never use a wrench or "cheater bar" on the handwheel to force a seal. Excessive force can cause permanent damage to internal components and will void the product warranty.
- Do not use the valve body to force alignment of the pipeline, as this may lead to structural damage or seal failure.



Material Specifications :

No	Part	Material	Specification
Valve	Body	Ductile Iron	A536 Grade 65-45-12
	Disc	EPDM Fully Encapsulated Ductile Iron	
	Shaft	Stainless Steel	A276 Type 431
	Bushing	Brass	B124 C37700
Gearbox	Housing	Gray Cast Iron	A126 Class B
	Cover	Gray Cast Iron	A126 Class B
	Wormgear	Ductile Iron	A536 Grade 65-45-12
	Worm	Stainless Steel	A276 Type 420
	Handwheel	Ductile Iron	A536 Grade 65-45-12
	Shaft	Stainless Steel	A276 Type 420
	Micro Switch	Assembly, 2 Pieces	

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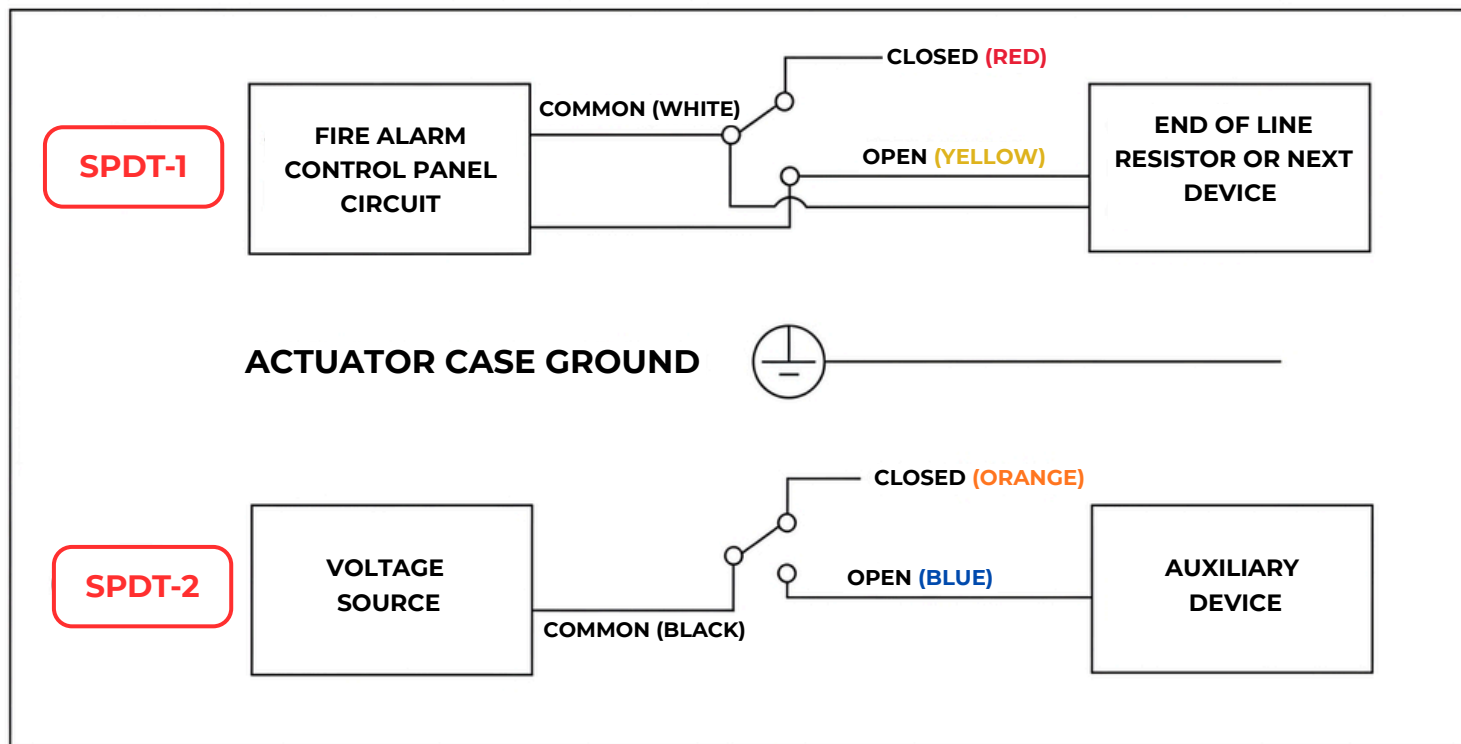


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Switch Installation

The factory has installed two SPDT switches to monitor the valve's open and closed positions. Within two turns of the handwheel from the fully open position, the switch will activate to indicate that the valve is no longer fully open.



When the valve is fully open:

- Switch 1 (SPDT-1): Connected to the supervisory circuit of the alarm control panel.
- Switch 2 (SPDT-2): Auxiliary switch intended for connection to a local device.

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