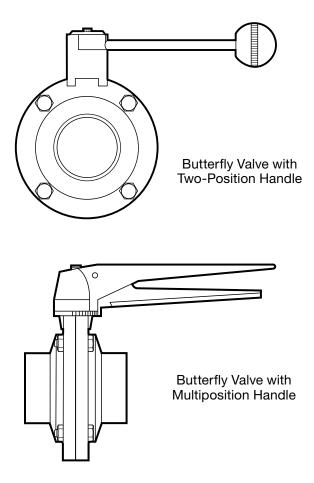
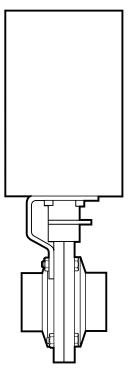
# **Butterfly Valve**

## **Disassembly and Reassembly Instructions**





Pneumatically Actuated Butterfly Valve

#### Contents

- Seat Replacement
- Installing a Pneumatic Actuator with an External Proximity Switch 4

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### Seat Replacement

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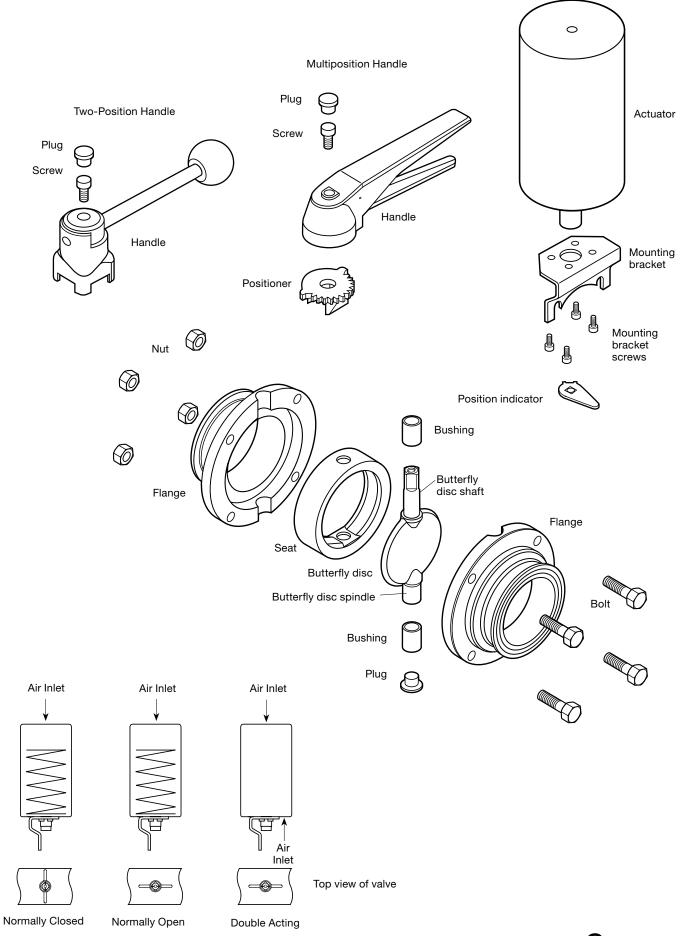
Before servicing any installed valve, you must:

- depressurize the system cycle the valve
- purge the valve.

Disassembly	
Manual Valves	Pneumatically Actuated Valves
<ul> <li>Remove plug at top of the handle.</li> <li>Loosen the screw and remove the handle.</li> <li>Multiposition handle - remove the positioner from the flanges by using a screwdriver as a lever.</li> <li>Remove the top bushing.</li> </ul>	<ul> <li>Ensure compressed air is disconnected from the actuator.</li> <li>Loosen the two bolts and nuts that join the mounting bracket to the flanges.</li> <li>Remove the actuator and mounting bracket.</li> <li>Remove the position indicator.</li> </ul>
<ul> <li>Remove the nuts and bolts that join the flanges.</li> <li>Separate the flanges and remove the butterfly disc and seat assembly.</li> <li>Remove the plug and bushing from the bottom of the butterfly spindle.</li> <li>Turn the butterfly disc to the open position. Detach the seat from the butterfly disc by squeezing the seat until it can be pulled off the end of the butterfly spindle, then slide off the butterfly disc shaft end.</li> </ul>	
Reassembly	
<ul> <li>Lubricate the butterfly disc spindle and seat with a sanitary grade lubricant.</li> <li>Insert the butterfly disc shaft into one of the seat holes with the butterfly disc in the open position.</li> <li>Stretch the seat as shown to insert the butterfly disc spindle in the free seat hole.</li> <li>Fit the butterfly disc and seat assembly between the two flanges in the open position.</li> <li>Reinstall both bushings and the bottom plug.</li> </ul>	
Manual Valves	Pneumatically Actuated Valves
<ul> <li>Install the bolts and nuts. Torque to 15.8 ft.·lb (21.4 N·m) in a cross pattern.</li> <li>Multiposition handle - install the positioner.</li> <li>Place handle on the butterfly disc shaft in the open position and tighten the screw slightly with a 5/16 in. wrench.</li> <li>Reinstall the top plug.</li> <li>Prior to putting the valve in service, open and close several times to verify the butterfly is smoothly housed against the seat.</li> </ul>	<ul> <li>Prior to mounting the actuator, open and close several times to verify the butterfly is smoothly housed against the seat.</li> <li>To add an external proximity switch, see Pneumatic Actuator with External Proximity Switch.</li> <li>Fit the position indicator on the butterfly disc shaft.</li> <li>Fit the mounting bracket against the valve and insert the bolts, using M8 × 35 mm hex head stainless steel bolts for the top two positions. The bottom two positions can use the 5/16-20 UN bolts shipped with the valve.</li> <li>Adjust bolts and nuts without tightening them.</li> <li>Mount the actuator on the mounting bracket screws slightly with a wrench.</li> <li>Place the valve and position indicator in the desired position: Normally Closed: position the butterfly and the position indicator in the open position. Double Acting: postion the butterfly and the position indicator in the open position.</li> <li>Double Acting: postion the butterfly and the position indicator in the open position.</li> </ul>
	position: Normally Closed: position the butterfly and the position indicator in the closed position. Normally Open: position the butterfly and the position indicator in the open position. Double Acting: postion the butterfly and the position and the position the butterfly and the position and the position and the position. Air at top of actuation will close valve. Air at bottom of actuator will op

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Pneumatically Actuated





### Installing a Pneumatic Actuator with an External Proximity Switch

- 1. Insert 2 mounting bracket screws through the proximity switch plate and the mounting bracket. Insert 2 mounting bracket screws through only the mounting bracket. Tighten all four screws into the actuator using a 4 mm allen wrench.
- 2. Install the **signal arm** on the **actuator shaft** using the **signal arm screw** so the signal arm paddle lines up under the **proximity switch plate** hole. Tighten the signal arm screw to the actuator shaft.
- Install a panel nut onto the proximity switch, then place the proximity switch through the proximity switch plate hole. Adjust the proximity switch so there is approximately 1/16 in. clearance between the proximity switch and the signal arm. Install and tighten the second panel nut.

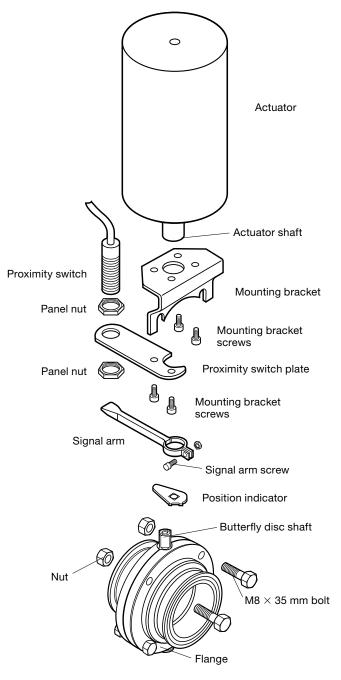
Note: The proximity switch must not touch the signal arm or function will be affected.

- 4. Remove and discard the two top bolts.
- Place the valve in the desired actuation position Normally Closed: position the butterfly disc in the closed position. Normally Open: position the butterfly in the open

position.

Double Acting: postion the butterfly disc in the open position. Air at top of actuator will close valve. Air at bottom of actuator will open valve.

- 6. Install the **position indicator** on the **butterfly disc shaft**. (optional)
- 7. Slide the actuator shaft over the butterfly disc shaft.
- 8. Install  $M8 \times 35$  mm stainless steel bolts and nuts in the top two positions of the flanges and through the mounting bracket.
- 9. Torque all four **nuts** to 15.8 ft.·lb (21.4 N·m) using a cross pattern.



#### Safe Product Selection

When selecting a product the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Caution: Do not mix or interchange parts with those of other manufacturers

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