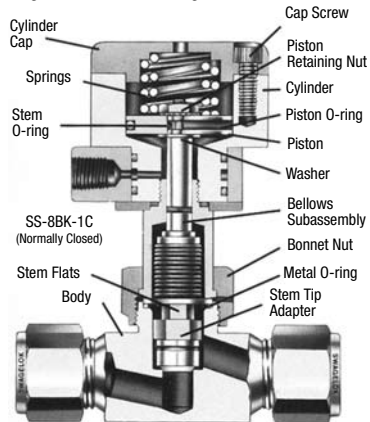


Bellows Subassembly Replacement Instructions

BK Series Pneumatically Actuated Bellows Valves

Bellows Kit includes: Bellows Subassembly, Stem O-ring, Washer, Piston O-ring and Nut.



VALVE DISASSEMBLY

(It is good practice to use a new O-ring or Gasket each time the valve is disassembled. Replacement O-rings and Gaskets are available in many materials for a variety of system requirements.)

WARNING: Before servicing any installed valve, you must

- depressurize system
- cycle valve

WARNING: Residual material may be left in the valve and system.

NOTE: It is important to refer to the cutaway drawing while following the maintenance instructions.

1. Remove three (3) **Cap screws** from **Cylinder Cap** (9/64 in. hex wrench) and remove **Cap**. Remove **Spring(s)** - "1C" model only.
2. Unscrew **Bonnet Nut** (1 in. open-end wrench).
3. Remove **Actuator Subassembly** from valve **Body**. (Actuator Subassembly consists of all parts less **Body** and **Metal O-ring**).
4. While holding a 9/32 in. open-end wrench on **Stem Flats**:
 - a. **Unscrew Stem Tip Adapter** from **Stem** and set **Adapter** aside (5/16 in. wrench for 4BK; 1/2 in. wrench for 6/8 BK).
 - b. **Unscrew Piston Retaining Nut** (11/32 in. socket wrench).
5. Remove **Piston**, upper **Stem O-ring** and **Washer** from Subassembly. Discard upper **Stem O-ring** and **Washer**. Remove **Spring** - "10" model only.

6. Remove **Bellows Subassembly** from the **Actuator Subassembly** and discard.

VALVE REASSEMBLY

1. Lubricate **Cylinder** bore with silicone base lubricant.
2. Insert **NEW Bellows Subassembly** into **Actuator Subassembly**.
3. Place **Washer** on upper stem of **Bellows Subassembly**.
4. Lubricate upper **Stem O-ring** with thin film of silicone base lubricant and install into groove on upper stem above **Washer**. Install **Spring** - "10" model only.
5. Replace **Piston O-ring** if it is worn, nicked or damaged from disassembly. If replacement is necessary, lubricate new **O-ring** with thin film of silicone base lubricant.
6. Install **Piston** on upper stem, carefully sliding it over the upper **Stem O-ring**.

Note: Groove side of piston faces up, chamfer side of piston faces down. Some valves may not have groove and/or chamfer. In this case, either side faces down.

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7. While holding a 9/32 in. open-end wrench on **Stem Flats**:
 - a. Install **Piston Retaining Nut** on upper stem. Tighten to 25 in.-lb. (2.8 N-m).

- b. Screw **Stem Tip Adapter** to stem and tighten as follows: stainless steel and brass valves: 45 in.-lb. (5.1 N-m), alloy 400 valves: 35 in.-lb. (4 N-m).

NOTE: Care should be taken not to compress the bellows during this process.

8. On "1C" model only, install **Spring(s)** into **Cylinder**.
9. Assemble **Cylinder Cap** to **Cylinder** with three (3) **Cap screws**.
10. Place **Metal O-ring** on body.
11. Normally closed, "1C" model, only: Pressurize the actuator into the open position prior to placing actuator subassembly on the body.
12. Place **Actuator Subassembly** on **Body** and fasten with **Bonnet Nut**, holding actuator subassembly and body stationary while rotating the bonnet nut. Tighten **Bonnet Nut** as follows: stainless steel and alloy 400 valves: 300 in.-lb. (33.9 N-m), brass valves: 200 in.-lb. (22.6 N-m).

NOTE: These torque values are for the standard TFE Coated O-rings. For torque values on other O-ring materials or gaskets, see the installation instructions for Gasket and Metal O-ring for Bellows Valves (MS-CRD-0008).

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