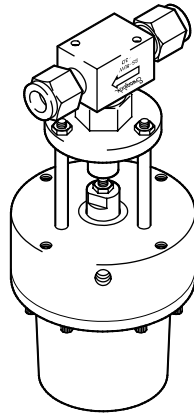
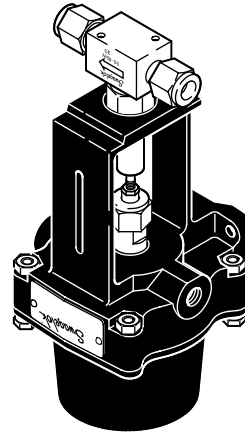


3 Series Assembly

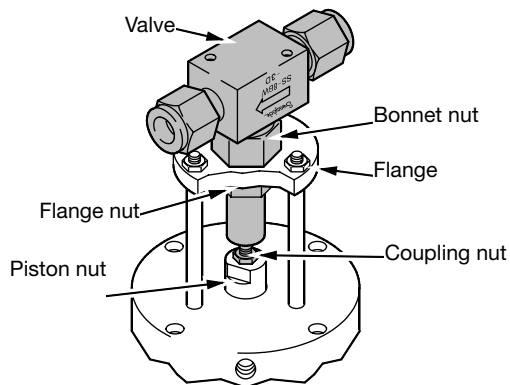


5 Series Assembly



This document describes how to replace a 3 series actuator with a 5 series actuator. These instructions apply to double-acting (D), normally open (O), and normally closed (C) models. The illustrations above show the assemblies before and after replacement.

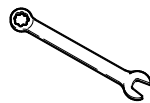
Component Identification



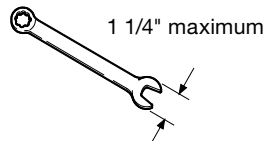
Note: 3 series and 5 series actuators are designed to fit any BK, BG, or BW series bellows valve. The valve shown in this procedure is for reference only. The procedure remains the same regardless of valve used.

Tool and Equipment Requirements

- 7/16 in. wrench



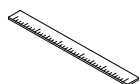
- 7/8 in. wrench (modified)



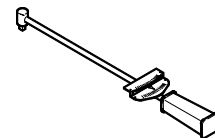
- 7/8 in. open-end extension



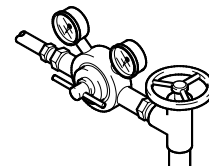
- Scale



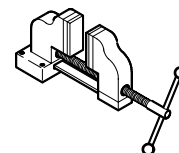
- Torque wrench



- Regulated air supply



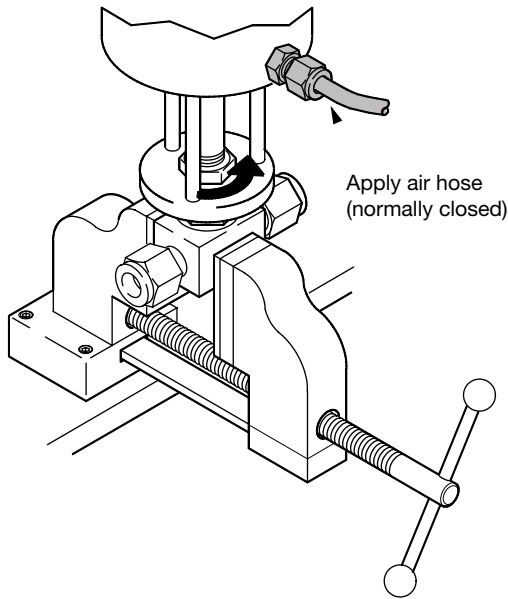
- Vise



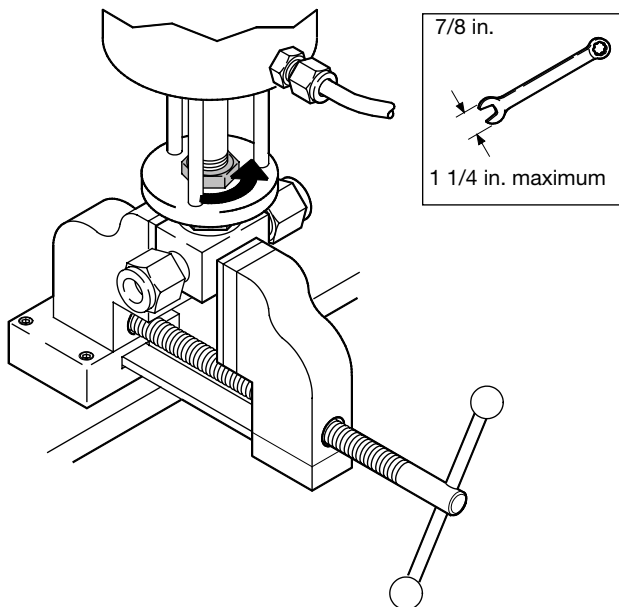
Disassembly Instructions (3 Series)

1. Place the assembly in a vise.
2. **Normally closed:** Connect a regulated air supply to the actuator air connection. Apply and maintain approximately 100 psig (6.8 bar) to relieve the pressure on the flange nut.

Double acting or normally open: Air supply not-required.



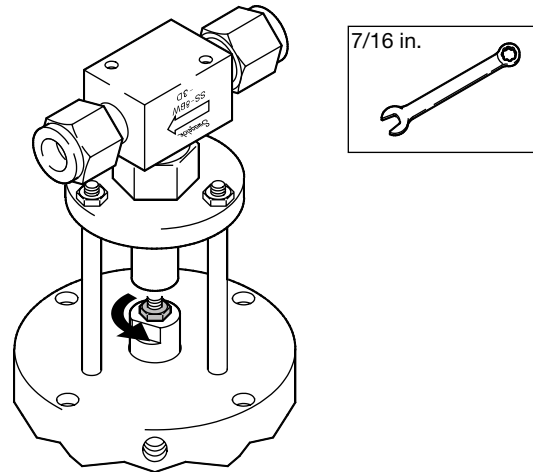
3. Unscrew the flange nut.



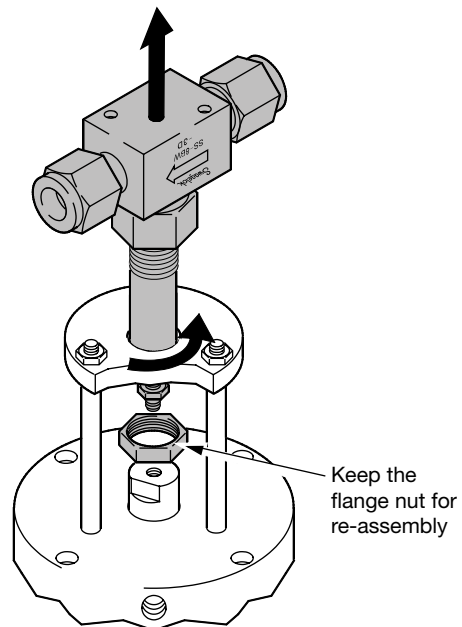
⚠ Caution:

Relieve air pressure before disconnecting any air supply lines from the assembly.

4. **Normally closed:** Disconnect the air supply.
5. Remove the assembly from the vise and place it on a flat surface.
6. Loosen the coupling nut.



7. Unscrew the valve from the piston rod and remove the valve from the actuator.



Assembly Instructions (5 Series)

1. Prepare the actuator to accept the valve by adjusting the height of the piston rod.

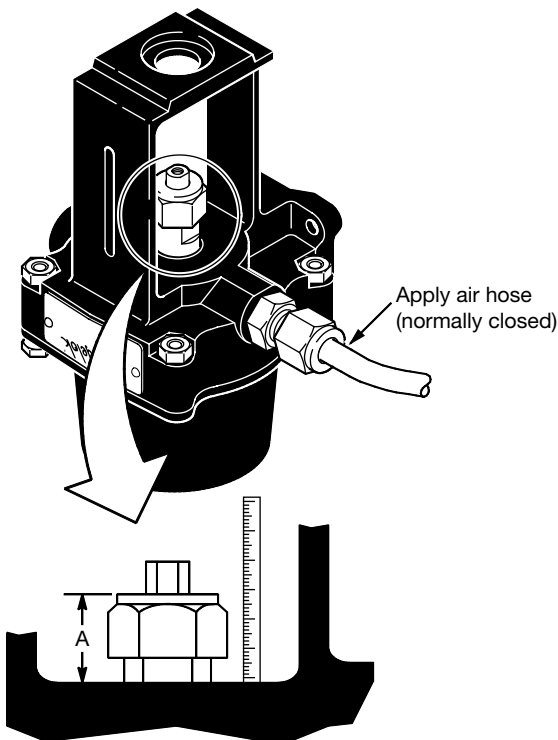
Normally closed or normally open:

- Connect a regulated air supply to the actuator air connection.
- Apply air pressure to move the piston rod to the "A" dimension shown in the table. Once set, maintain the pressure.

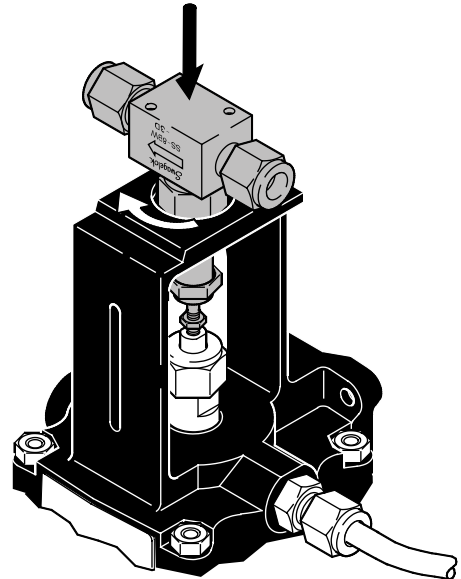
Double acting:

- Push or pull the piston rod to the "A" dimension shown in the table.

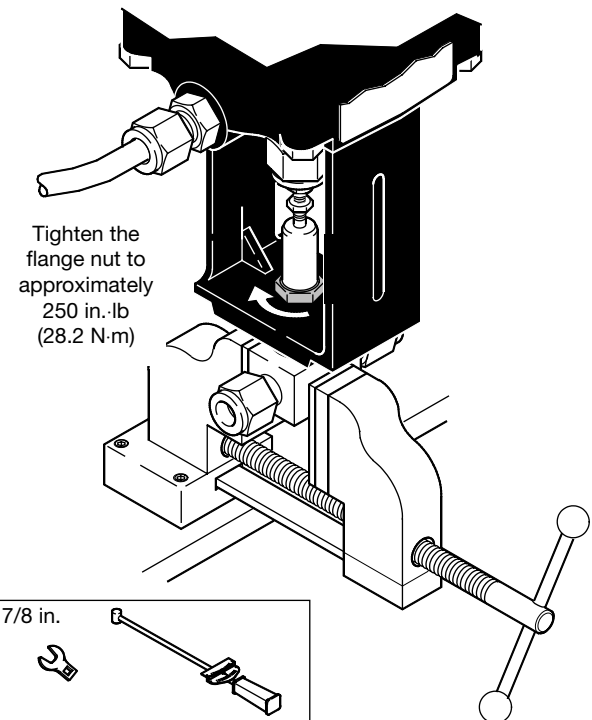
Valve Size/Series	"A" Dimension
4B	1 $\frac{7}{8}$ in. (48 mm)
6B and 8B	1 $\frac{3}{8}$ in. (35 mm)



For steps 2, 3, 4, and 5, see the drawing below.

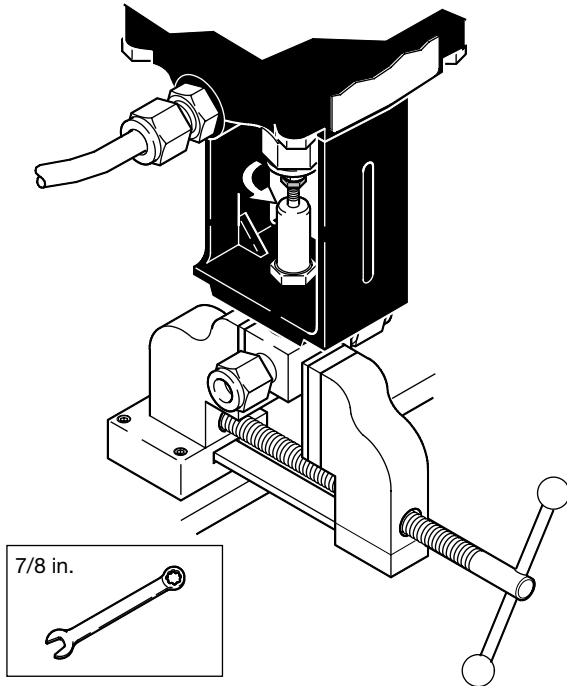


2. Lower the valve through the actuator flange and the flange nut.
3. Thread the flange nut on the valve bonnet.
4. Screw the valve assembly into the piston rod until the bonnet nut contacts the flange.
5. Continue to turn the valve until it is aligned to the actuator as required for the installation.
6. Place the assembly in a vise. Hold the actuator and tighten the flange nut.



Assembly Instructions (continued)

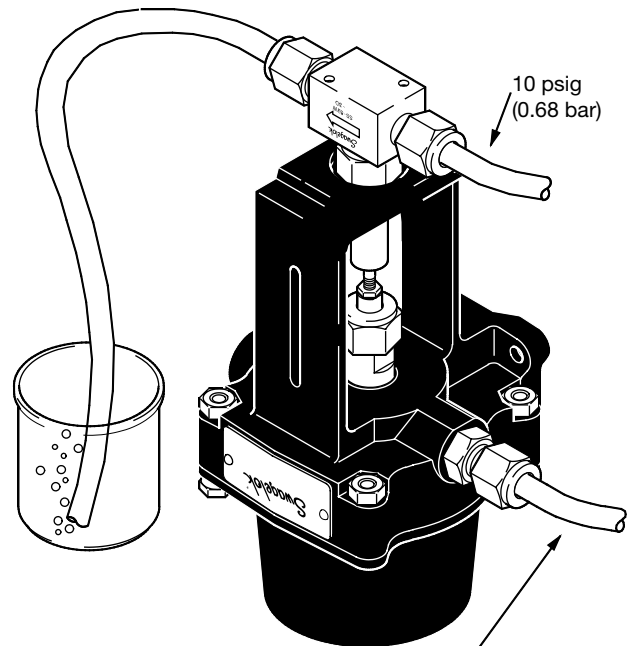
7. **Normally closed or normally open:**
Relieve-pressure to the actuator. Maintain the air-connection.
8. Tighten the coupling nut firmly against the piston-rod.



Testing the Assembly

1. Connect a regulated air supply to the **valve inlet**. Set the pressure at 10 psig (0.68 bar).
2. Connect one end of a piece of flexible tubing to the **valve outlet** and place the other end in a beaker of water.
3. Pressurize the actuator and verify that the valve opens and closes. See the following illustrations for specific instructions:

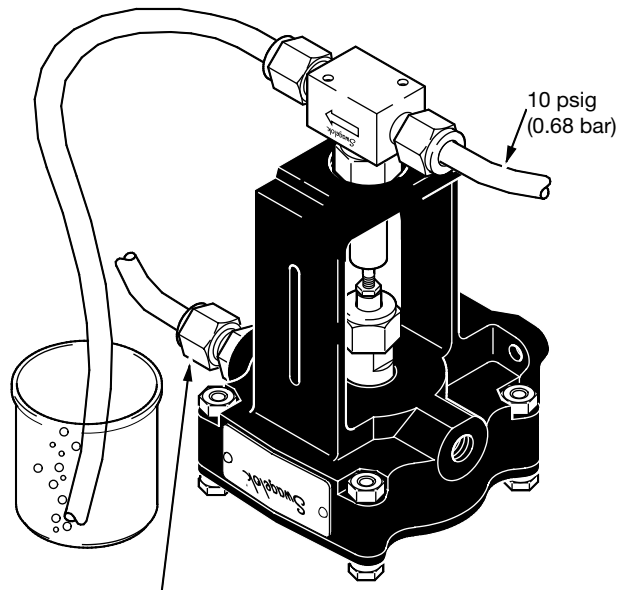
Normally Closed



- a. Apply 50 psig (3.4 bar) to open valve (bubbles visible in beaker)
- b. Relieve pressure to close valve (no bubbles)

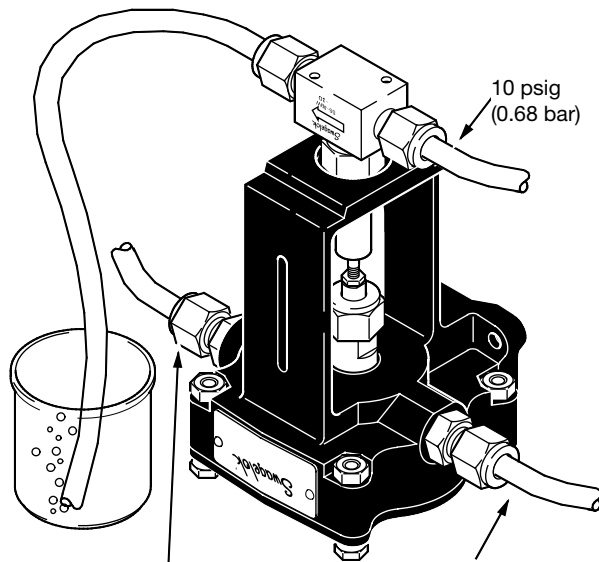
Testing the Assembly (continued)

Normally Open



- a. Apply 20 psig (1.4 bar) to close valve (no bubbles visible in beaker)
- b. Relieve pressure to open valve (bubbles visible)

Double Acting



- a. Apply 20 psig (1.4 bar) to close valve (no bubbles visible in beaker)
- b. Apply 20 psig (1.4 bar) to open valve (bubbles visible)

⚠ Caution:

Relieve air pressure before disconnecting any air supply lines from the assembly.

4. Disconnect all air supply lines when testing is complete.

Safe Product Selection

When selecting products, 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

