

## Rebuild/Repack Kits for Flowrite™ High Pressure Close-off 2-way 2-1/2 to 6-inch Valves

### Product Description

This kit contains the parts necessary to rebuild and repack a Flowrite 599 Series High Pressure Close-off Valve.

### Contents



Contents	Qty
Stem and plug assembly	1
ANSI Class 125 gasket	1
ANSI Class 250 gasket	1
Packing bearing	1
Packing spring	1
Packing cartridge kit	
Cartridge	1
Copper gasket	1
Instructions	1

### Product Numbers

Action	Valve Size In (mm)	Part Number
Normally Open	2-1/2 (65)	599-09250
	3 (75)	599-09251
	4 (100)	599-09252
	5 (125)	599-09253
	6 (150)	599-09254
Normally Closed	2-1/2 (65)	599-09255
	3 (75)	599-09256
	4 (100)	599-09257
	5 (125)	599-09258
	6 (150)	599-09259

See Table 2 for cross reference of valve number to kit number.

### Warning/Caution Notations

<b>WARNING</b>		Personal injury/loss of life may occur if you do not perform a procedure as specified.
<b>CAUTION</b>		Equipment damage, or loss of data may occur if you does not follow procedure as specified.

### Required Tools

- Tools for removing the actuator. These tools are listed on the installation instruction included in the packing cartridge assembly kit.
- Open end wrenches or adjustable wrench. See Table 1.

Table 1. Open End Wrench Sizes.

Use on	Wrench Size	Torque
<b>Valve Body Cap Screws</b>		
ANSI 125 2-1/2 to 4-inch (65 to 100 mm)	15/16 inch (≈ 24 mm)	55 to 60 lb-ft (75 to 80 Nm)
ANSI 125 5 and 6-inch (125 to 150 mm)	1-1/8 inch (≈ 29 mm)	90 to 100 lb-ft (122-130 Nm)
ANSI 250 2-1/2 to 6-inch (65 to 150 mm)	1-1/8 inch (≈ 29 mm)	90 to 100 lb-ft (122-130 Nm)
<b>Packing Cartridge</b>		
All Bonnets	1-1/2 inch (≈ 39 mm)	60 to 65 lb-ft (80 to 85 Nm)

### Expected Installation Time

45 minutes for NO valves  
60 minutes for NC valves

### Prerequisites

Open the packing cartridge assembly kit and remove the installation instructions. These instructions explain how to remove and reassemble each type of actuator and list the tools needed.

## Prerequisites, Continued

### WARNING:



Isolate the valve so that the medium will not leak out of the valve when the valve body is disassembled.

### WARNING:



Remove and cap the air line or disconnect the power to the actuator before removing the actuator from the valve.

## Installation

### Normally Open Valves

#### Removing the Packing and the Stem and Plug Assembly. (See Figure 1)

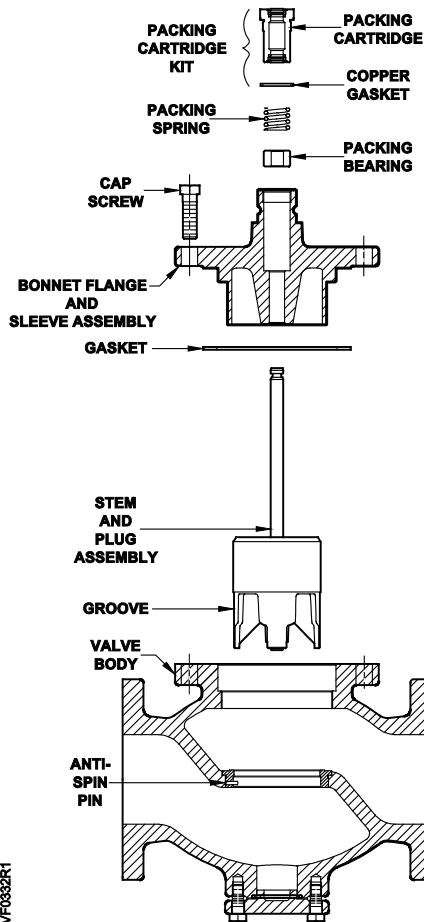


Figure 1.

1. Remove the actuator by following the instructions included in the packing cartridge kit.
2. Using a 1-1/2 inch wrench, remove the packing cartridge assembly.
3. Remove and discard the copper gasket. The gasket cannot be reused.
4. Remove the cap screws in the bonnet flange. See Table 1 for the proper wrench size. Save the cap screws.
5. Lift the bonnet flange and sleeve assembly from the valve body. Remove and discard the gasket.

**NOTE:** The stem and plug assembly may remain attached to the bonnet flange and sleeve assembly.

6. Remove and discard the stem and plug assembly.
7. Remove and discard the packing spring and packing bearing.
8. Clean the bonnet threads to remove any buildup.

#### Replacing the Stem and Plug Assembly and Packing

1. Locate the groove on the plug and align it with the anti-spin pin in the seat. See Figure 2.

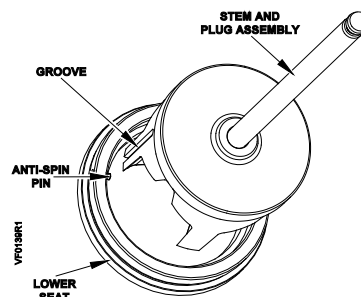


Figure 2.

2. Insert the new stem and plug assembly into the valve body making sure that the anti-spin pin is in the plug groove.



### CAUTION:

Be careful not to nick the seat.

3. Select the gasket that is marked for the appropriate ANSI Class valve. Place the gasket on the cleaned valve body gasket surface.

## Installation, Continued

4. Carefully install the bonnet flange and sleeve assembly over the stem and plug assembly. Some evenly applied pressure may be required to install the bonnet flange and stem assembly due to the sleeve seal.



### WARNING:

Be careful not to pinch fingers between valve body and bonnet flange during this operation.

5. Attach the bonnet flange to the valve body using an open end wrench to tighten the cap screws. See Table 1 for the proper wrench size and torque.
6. Insert the new packing bearing and the packing spring into the bonnet.
7. Place the new copper gasket on the valve bonnet.
8. Insert the new packing assembly cartridge into the valve bonnet. Use a 1-1/2 inch wrench to tighten the cartridge applying 60 to 65 lb-ft (80 to 85 Nm) torque.
9. Return to the instructions that came in the packing cartridge kit to assemble the actuator to the valve.

## Normally Closed Valves

### Removing the Packing and the Stem and Plug Assembly. (See Figure 3)

1. Remove the actuator by following the instructions included in the packing cartridge kit.
2. Using a 1-1/2 inch wrench, remove the packing cartridge assembly.
3. Remove and discard the copper gasket. The gasket cannot be reused.
4. Remove the cap screws on the bottom of the valve. See Table 1 for the proper wrench size. Save the cap screws.
5. Pull the flange and sleeve assembly from the valve body. Remove and discard gasket.

**NOTE:** The stem and plug assembly may remain attached to the flange and sleeve assembly.

6. Remove and discard the stem and plug assembly.
7. Remove the packing spring and packing bearing from the bonnet and discard them.
8. Clean the bonnet threads to remove any build-up.

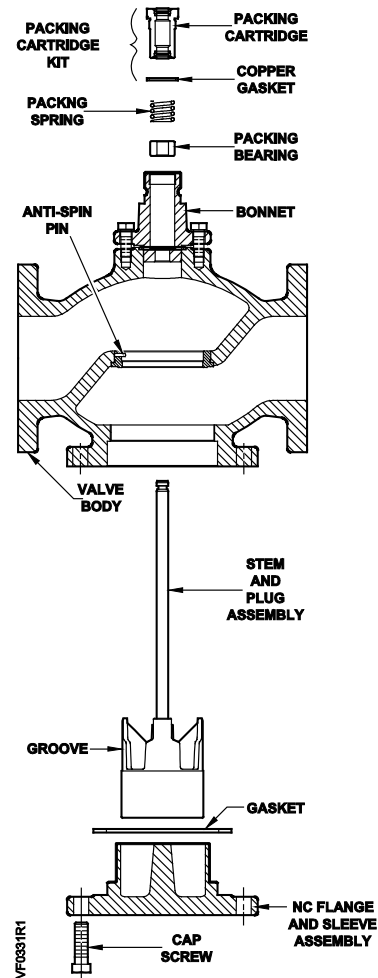


Figure 3.

### Replacing the Stem and Plug Assembly and Packing

1. Insert the new stem and plug assembly into the flange and sleeve assembly. Some evenly applied pressure may be required to install the stem and plug assembly due to the sleeve seal.
2. Select the gasket that is marked for the appropriate ANSI Class valve. Place the gasket on the flange gasket surface.
3. Install the stem/plug/flange/sleeve assembly into the valve body.
4. Locate the groove on the plug and align it with the anti-spin pin in the seat (similar to Figure 2). Make sure the anti-spin pin is in the plug groove.



### CAUTION:

Be careful not to nick the seat.

5. Attach the cap to the valve body using an open end wrench to tighten the cap screws. See Table 1 for the proper wrench size and torque.
6. Insert the new packing bearing and the packing spring into the bonnet.
7. Place the new copper gasket on the valve bonnet.
8. Insert the new packing assembly cartridge into the valve bonnet. Use a 1-1/2 inch wrench to tighten the cartridge applying 60 to 65 lb-ft (80 to 85 Nm) torque.
9. Return to the instructions that came in the packing cartridge kit to assemble the actuator to the valve.

**Table 2. Rebuild Kit Numbers.**

ANSI	Action	Valve Body	Valve Size Inch (mm)	Cv	Stroke	Kit No.
ANSI 125	Normally Open	599-06610	2-1/2 (65)	63	3/4 (20)	599-09250
		599-06611	3 (80)	100	3/4 (20)	599-09251
		599-06612	4 (100)	160	1-1/2 (40)	599-09252
		599-06613	5 (125)	250	1-1/2 (40)	599-09253
		599-06614	6 (150)	400	1-1/2 (40)	599-09254
	Normally Closed	599-06615	2-1/2 (65)	63	3/4 (20)	599-09255
		599-06616	3 (80)	100	3/4 (20)	599-09256
		599-06617	4 (100)	160	1-1/2 (40)	599-09257
		599-06618	5 (125)	250	1-1/2 (40)	599-09258
		599-06619	6 (150)	400	1-1/2 (40)	599-09259
ANSI 250	Normally Open	599-06620	2-1/2 (65)	63	3/4 (20)	599-09250
		599-06621	3 (80)	100	3/4 (20)	599-09251
		599-06622	4 (100)	160	1-1/2 (40)	599-09252
		599-06623	5 (125)	250	1-1/2 (40)	599-09253
		599-06624	6 (150)	400	1-1/2 (40)	599-09254
	Normally Closed	599-06625	2-1/2 (65)	63	3/4 (20)	599-09255
		599-06626	3 (80)	100	3/4 (20)	599-09256
		599-06627	4 (100)	160	1-1/2 (40)	599-09257
		599-06628	5 (125)	250	1-1/2 (40)	599-09258
		599-06629	6 (150)	400	1-1/2 (40)	599-09259

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