

# Mounting a DVC6020/DVC6020f Digital Valve Controller on Fisher® Type 585 and 585R Size 50 Actuators with 2 Inch Travel

Installation Instructions  
June 2007

Use these instructions to mount a FIELDVUE® DVC6020 or DVC6020f digital valve controller on Fisher® Type 585 and 585R size 50 actuators with 2 inch travel.

## WARNING

**Avoid personal injury or property damage from sudden release of process pressure or bursting of parts. Before performing any installation operations:**

- **Always wear protective clothing, gloves, and eyewear.**
- **Disconnect any operating lines providing air pressure, electric power, or a control signal to the actuator. Be sure the actuator cannot suddenly open or close the control valve.**
- **Use bypass valves or completely shut off the process to isolate the control valve from process pressure. Relieve process pressure from both sides of the control valve.**
- **Vent the pneumatic actuator loading pressure and relieve any actuator spring precompression.**
- **Use lock-out procedures to be sure that the above measures stay in effect while you work on the equipment.**
- **Check with your process or safety engineer for any additional measures that must be taken to protect against process media.**

Refer to figure 1 and the parts list for mounting parts identification. Refer to the FIELDVUE® DVC6000 Series Digital Valve Controller Instruction Manual, Form 5647, or the FIELDVUE® DVC6000f Series Digital Valve Controller Instruction Manual, Form 5774 for digital valve controller parts identification. Refer to the appropriate actuator instruction manual for actuator installation, operation, maintenance, and parts identification.

1. Isolate the control valve from the process line pressure and release pressure from both sides of the valve body. Shut off all pressure lines to the actuator, releasing all pressure from the actuator. Use lock-out procedures to be sure that the above measures stay in effect while you work on the equipment.

## WARNING

**To avoid personal injury due to the sudden, uncontrolled movement of parts, do not loosen the stem connector cap screws when the stem connector has spring force applied to it.**

2. Remove the cover plate screws and cover plate from the actuator, if present.
3. During the attachment of the cam (key 1) to the valve stem connector it will be necessary to loosen the stem connector cap screws. Consult the appropriate actuator instruction manual for proper actuator disassembly and reassembly.
4. Attach the cam to the stem block using hex head cap screws (key 2). Ensure that the cam is oriented as shown in figure 1.
5. Attach the mounting adapter (key 7) to the yoke using the four spacers (key 9) and the four cap screws (key 6).
6. Remove the roller from the digital valve controller by removing the screw, lockwasher and nut (key 87, 89, and 90; refer to the appropriate digital valve controller instruction manual for parts identification, if necessary). Retain the screw, lockwasher, and nut.
7. In place of the roller, install the follower arm extension (key 12) on the digital valve controller, using two machine screws (key 3), lockwashers (key 4), and machine screw hex nut (key 5), as shown in figure 2.
8. Install the roller (key 13) on the follower arm extension (key 12) as shown in figure 2, using the retained screw, lockwasher and nut (key 87, 89, and 90)
9. Install the vent adapter (key 10) and vent (key 11) on the digital valve controller pressure outlet.
10. Mount the digital valve controller on the mounting adapter (key 7) using four hex socket cap screws (key 8).
11. Ensure that the roller is centered and resting on the cam surface.
12. Make pneumatic and electrical connections to the digital valve controller as described in the digital valve controller instruction manual.
13. Setup and calibrate the digital valve controller as described in the digital valve controller instruction manual or quick start guide.
14. Re-attach actuator cover plate, if necessary.



# Mounting a DVC6020/DVC6020f Digital Valve Controller on Fisher® Type 585 and 585R Size 50 Actuators with 2 Inch Travel

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For additional information concerning mounting, setup, calibration, and maintenance of the DVC6000 or DVC6000f Series digital valve controller refer to the appropriate instruction manual.

## Note

**Neither Emerson, Emerson Process Management, nor any of their affiliated entities assumes responsibility for the selection, use and maintenance of any product. Responsibility for the selection, use and maintenance of any product remains with the purchaser and end-user.**

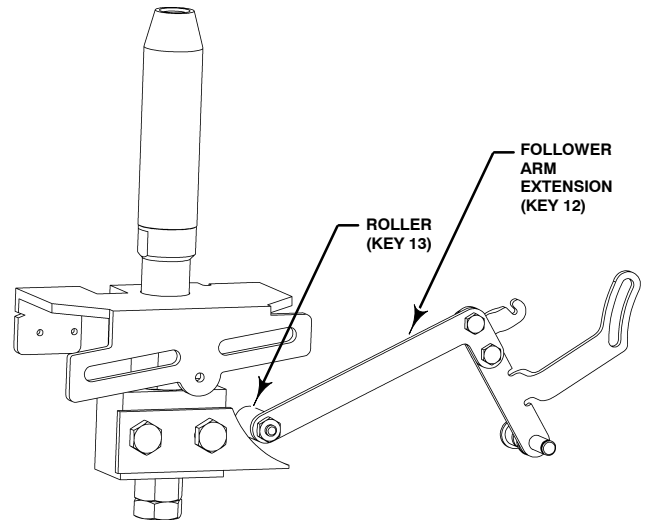
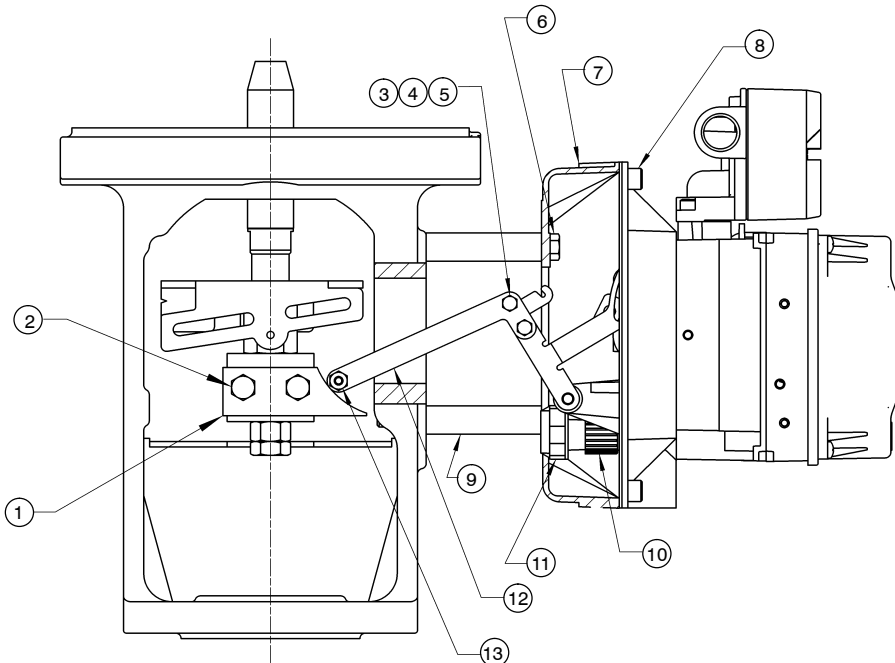


Figure 2. Installing Roller



PARTS LIST		
KEY	QTY	DESCRIPTION
1	1	CAM
2	2	5/16-18 X 1.25 HEX HEAD CAP SCREW
3	2	10-24 X 0.20 HEX HEAD MACHINE SCREW
4	2	No. 10 LOCK SPRING WASHER
5	2	MACHINE SCREW HEX NUT
6	4	HEX HEAD CAP SCREW
7	1	MOUNTING ADAPTER
8	4	5/16-18 X 0.62 HEX SOCKET CAP SCREW
9	4	.344 X .625 X .50 SPACER
10	1	VENT ADAPTER
11	1	3/8-18 NPT VENT
12	1	FOLLOWER ARM EXTENSION
13	1	ROLLER ASSEMBLY (PART OF DVC6020)

**NOTE: A SCREEN AND HEX SOCKET PIPE PLUG ARE INCLUDED IN THIS MOUNTING KIT. THESE ARE ONLY NEEDED WHEN CONVERTING A DVC6020 OR DVC6020f FROM DOUBLE-ACTING TO SINGLE-ACTING.**

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Figure 1. Mounting Parts Identification

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