

Figure 1. Type DVC5020 Digital Valve Controller Mounted on Type 1052 Size 33 Actuator

Use these instructions to mount a FIELDVUE® Type DVC5020 digital valve controller on Fisher Type 1051 and 1052 actuators.

WARNING

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

- **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 valve.**

- **Use bypass valves or completely shut off the process to isolate the valve from process pressure. Relieve process pressure from both sides of the valve. Drain the process media from both sides of the 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.**

Unless otherwise noted, refer to figure 1 or 2 for key number locations.

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

Note

Go to step 12 if the actuator already has the cam (key 94) installed.

2. Mark the positions of the travel indicator and actuator cover. Then, remove the actuator travel indicator machine screws, travel indicator, and actuator cover cap screws.

Installation Instructions

Mounting Type DVC5020 on Fisher Type 1051 and 1052

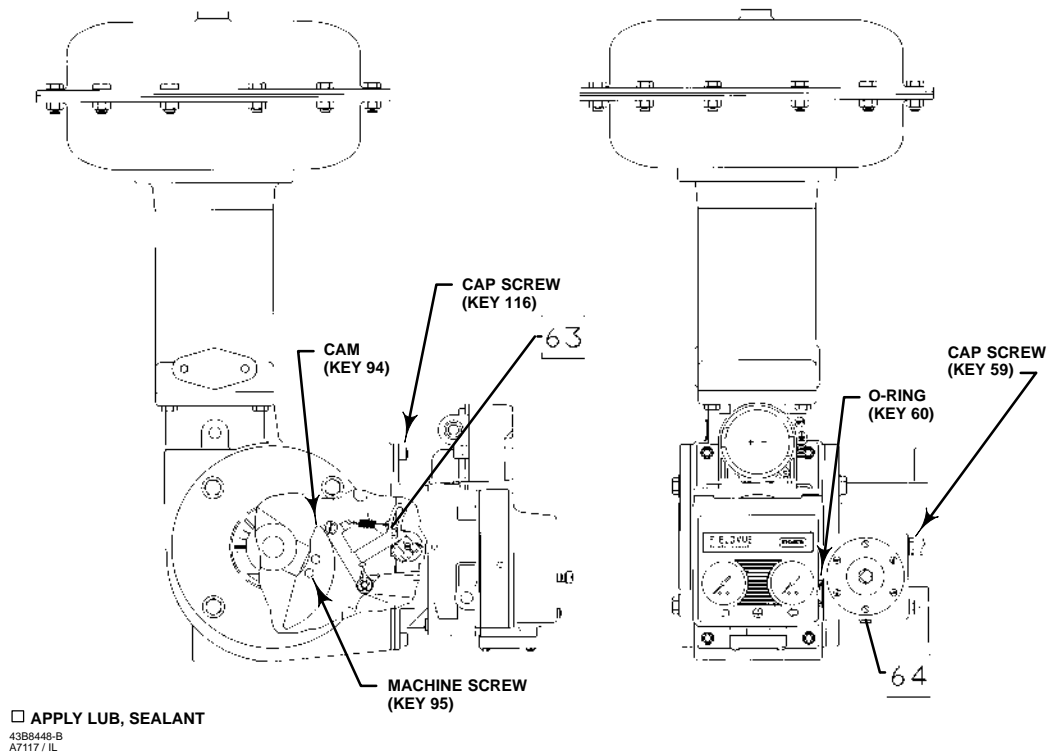


Figure 2. Type DVC5020 Digital Valve Controller with Integrally Mounted Filter Regulator Mounted on Type 1051 Size 40 Actuator

3. Remove the cover plate from the actuator housing.

Note

The cam has the letter D (direct acting) on one side and the letter R (reverse acting) on the other side. Always install the cam with the letter D on the same side as the cam mounting screw heads (key 95).

Note

For information on the various actuator mounting styles and positions, see figure 3. Also refer to the appropriate actuator instruction manual.

4. See figure 3. For actuator mounting styles A and D, proceed to the note before step 8. For actuator mounting styles B and C, continue with step 5.

5. Disconnect the actuator turnbuckle from the lever arm.

8. Install the cam (key 94) on the actuator lever with the cam mounting screws (key 95).

9. For actuator styles A and D, proceed to step 12. For actuator styles B and C, continue with step 10.

10. Slide the lever/cam assembly (cam side first) onto the valve shaft. Orient the lever with the shaft as noted in step 7, and tighten the lever clamping bolt.

Note

Do not change the position of the rod end bearing on the end of the turnbuckle.

6. Loosen the lever clamping bolt in the lever.

7. Mark the lever/valve shaft orientation, and remove the lever.

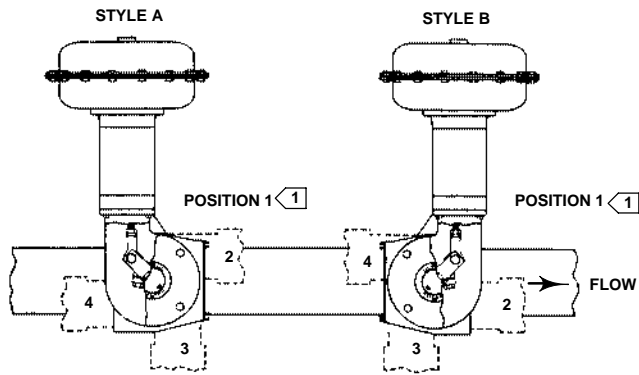
Note

Refer to the appropriate actuator instruction manual to determine the distance required between the housing face and the lever face and to determine the proper tightening torque for the lever clamping bolt.

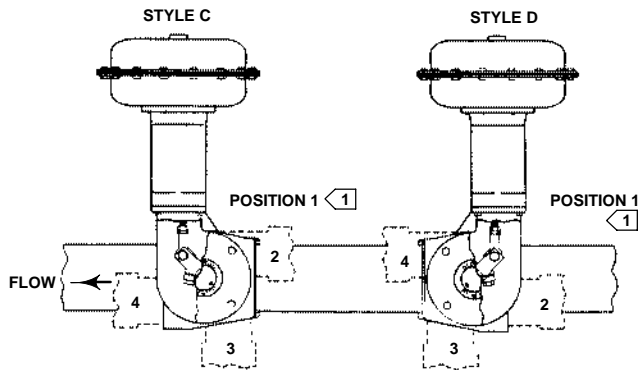
11. Connect the turnbuckle and the lever arm.

Installation Instructions

Mounting Type DVC5020 on Fisher Type 1051 and 1052



RIGHT-HAND MOUNTING



LEFT-HAND MOUNTING

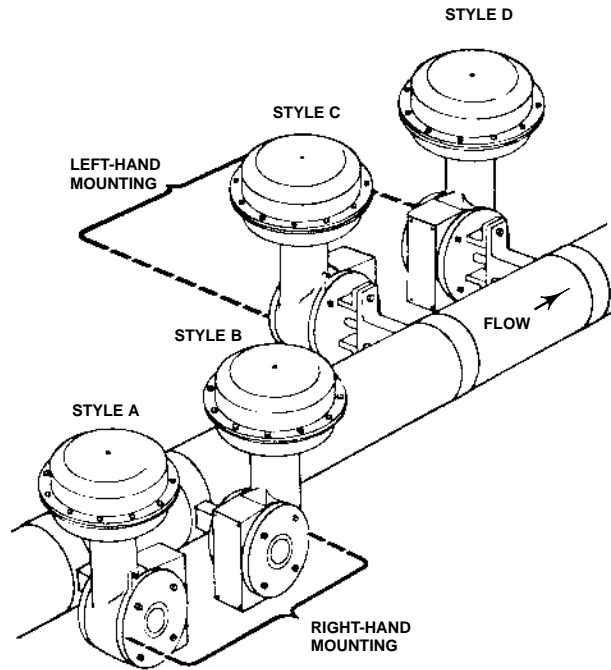
NOTES:

1 POSITION 1 IS STANDARD; POSITIONS 2 THROUGH 4 (SHOWN IN DOTTED LINES) ARE ALTERNATIVES.

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MOUNTING	ACTION ⁽¹⁾	VALVE SERIES OR DESIGN		
		V100, V150, V200, V250, V300	8500 edisc [®] , 7600, 8522, 8532, & 9500	CV500 & V500
Right-hand	PDTC	A	B	A
	PDTO	B	A	B
Left-hand	PDTC	C	C	D
	PDTO	D	D	C

1. PDTC—Push-down-to-close. PDTO—Push-down-to-open



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Figure 3. Mounting Styles and Positions for Type 1051 and 1052 Actuators

12. For Type 1051 size 33 and 1052 size 20 and 33 actuators, attach an adaptor (key 117) to the actuator with four screws (key 116). Then assemble the digital valve controller assembly to the adaptor. The roller on the digital valve controller feedback arm will contact the actuator cam as it is being attached. Install and tighten four screws (key 116).

For other size 1051 and 1052 actuators, assemble the digital valve controller assembly to the front access opening of the actuator. The roller on the digital valve controller feedback arm will contact the actuator cam as it is being attached. Install and tighten four screws (key 116).

13. Replace the actuator cover and the travel indicator in the positions that were marked in step 2.

Note

Actuator cover alignment on the Type 1052 actuator can be aided by moving the actuator slightly away from its up travel stop using a regulated air source. If hole alignment cannot be obtained in this manner, temporarily loosen the cap screws that secure the housing to the mounting yoke, and shift the housing slightly. Do not completely stroke the actuator while the cover is removed.

For additional information concerning the mounting, setup, calibration and maintenance of the Type DVC5020 digital valve controller, refer to the *FIELD-VUE[®] DVC5000 Series Digital Valve Controllers Instruction Manual - Form 5335*.

Installation Instructions

Mounting Type DVC5020 on Fisher Type 1051 and 1052

Parts Kits

Key	Description	Part Number
	Mounting Kit for Type 1051, Sizes 30-60 or Type 1052, Sizes 40-70	43B8448X012
	Mounting Kit for Type 1052, Size 20	43B8450X012
	Mounting Kit for Type 1051 or 1052, Size 33	43B8450X022

Filter Regulator Mounting Parts

Key	Description	Part Number
59	Cap Screw, hex hd, SST (2 req'd)	1C3988X0022
60	O-ring, nitrile	1E591406992
61	Pipe Plug, hex socket, SST	1C3335X0012
64	Zink-Plate No. 770 Anti-Seize Compound, or equivalent (not furnished with the kit)	

Parts List

Key	Description	Part Number
63	Lubriplate Mag-1 Lubricant, or equivalent (not furnished with the kit)	
94	Cam, SST For Type 1051, size 30-60 and 1052, size 40-70	33A1613X022
	For Type 1052, Size 20	36A4653X022
	For Type 1051, 1052, Size 33	30B1529X022
95	Mach Screw, hex hd, SST (2 req'd)	13A1617X022
116	Cap Screw, SST (4 req'd)	1P714638992
117	Mounting Adaptor For Type 1051, Size 33 and Type 1052, Sizes 20 and 33	44B1220X012

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