

(Valve Body) Installation Guide

Mounting

1. Clean the lines upstream from the valve. Remove any debris (welding slag, pipe scale, or other contaminants) larger than 1/16 inch (1.6 mm).

NOTE: If the system experiences large amounts of debris, steps should be taken to keep the system clean, such as 20 mesh strainer installed upstream of the valve.

2. Align the valve assembly according to the system flow requirements. VEF-56 three-way valves can be used in either mixing or diverting applications (see the VEF-56 3-Way Details section).

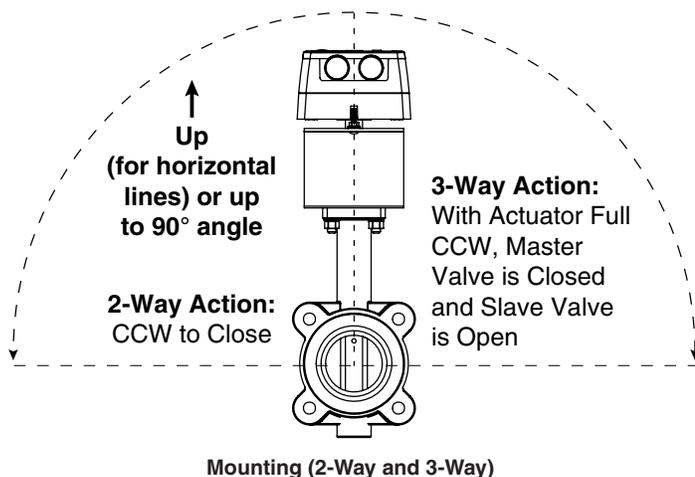
NOTE: No flange gaskets are needed because of the design of the seat face.

3. The valve may be mounted on either vertical or horizontal pipe lines. On horizontal lines, mount the valve so the actuator is positioned upright and over the valve. (Leave sufficient room on all sides to service the actuator and valve.)

⚠ CAUTION

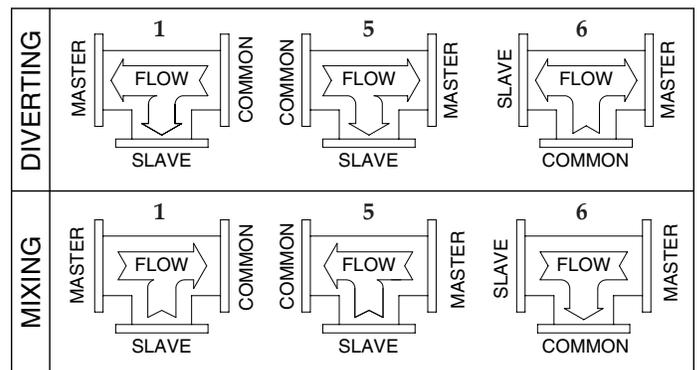
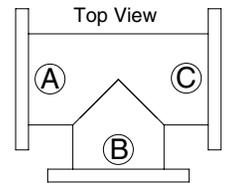
To prevent condensation from dripping onto the actuator housing on horizontal lines, mount the valve with the actuator in the upright position or, at most, at a 90° angle. See the Mounting (2-Way and 3-Way) illustration below.

4. Bolt the valve to the pipes.
5. Eliminate air from the system to keep the valves full of fluid during operation.



VEF-56 3-Way Details

VEF-56 Arrangement	Master Valve (Actuator)	Slave Valve	Common Port
1	A	B	C
2	A	C	B
3	B	C	A
4	B	A	C
5	C	B	A
6	C	A	B



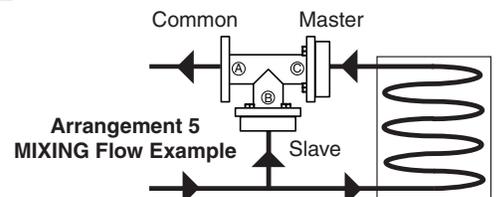
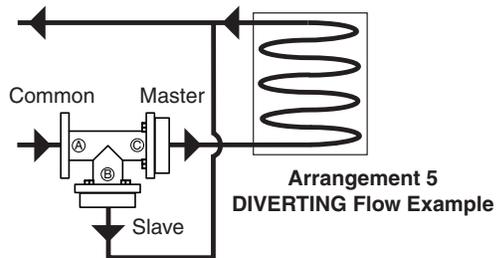
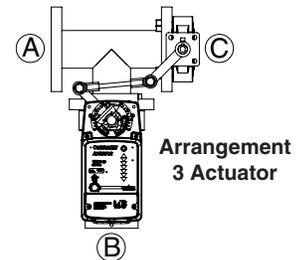
(Arrangements 2 and 4 not illustrated – see actuator illustration below for Arrangement 3)

Actuator full CCW:

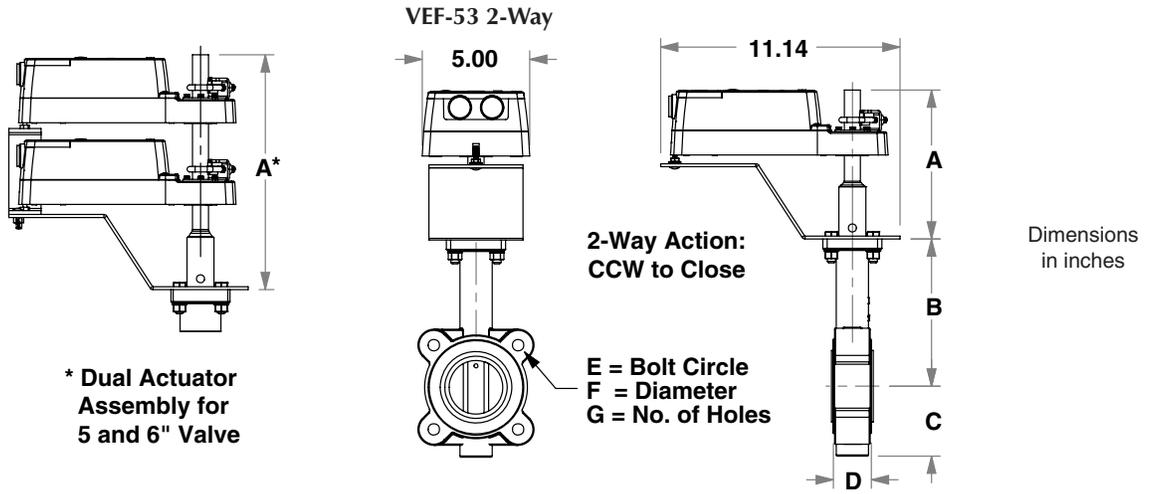
- Master valve closed
- Slave valve open

Actuator full CW:

- Master valve open
- Slave valve closed

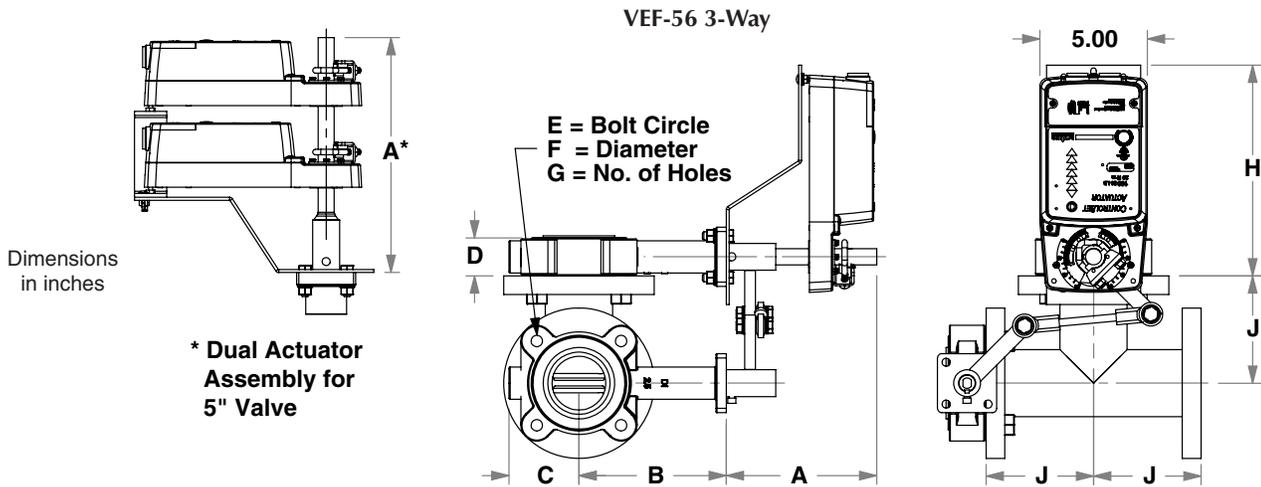


Dimensions and Cv Values



Size	A	B	C	D	E	F	G
2"	7	6.34	3.35	1.69	4.75	5/8-11	4
2.5"	7	6.89	3.66	1.81	5.5	5/8-11	4
3"	7	7.13	3.9	1.81	6	5/8-11	4
4"	7	7.87	4.57	2.05	7.5	5/8-11	8
5"	11*	8.39	5.12	2.2	8.5	3/4-10	8
6"	11*	8.9	5.67	2.2	9.5	3/4-10	8

Size	A	B	C	D	E	F	G	H	J
2"	7	6.34	3.35	1.69	4.75	5/8-11	4	9.77	4.5
2.5"	7	6.89	3.66	1.81	5.5	5/8-11	4	9.83	5
3"	7	7.13	3.9	1.81	6	5/8-11	4	9.83	5.5
4"	7	7.87	4.57	2.05	7.5	5/8-11	8	9.95	6.5
5"	11*	8.39	5.12	2.2	8.5	3/4-10	8	10	7.5



NOTE: "D" is the face to face dimension of the valve body. This does not account for the valve seat. Approximately 1/8" additional spacing is required for proper seating with the pipe flanges. The installation does not require gaskets since the valve seat creates the seal against the mounting flange. These valves are designed to be installed between ANSI B16.1 Class 125 (Iron) and Class 150 (Steel) pipe flanges.

Size	Position of Disk								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
2	0.06	3	7	14	26	42	67	101	111
2.5	0.10	6	12	24	43	72	114	171	188
3	0.19	9	17	38	67	112	176	263	290
4	0.29	16	35	75	134	195	350	525	577
5	0.48	28	59	128	228	377	596	894	983
6	0.77	43	91	197	352	582	921	1382	1518

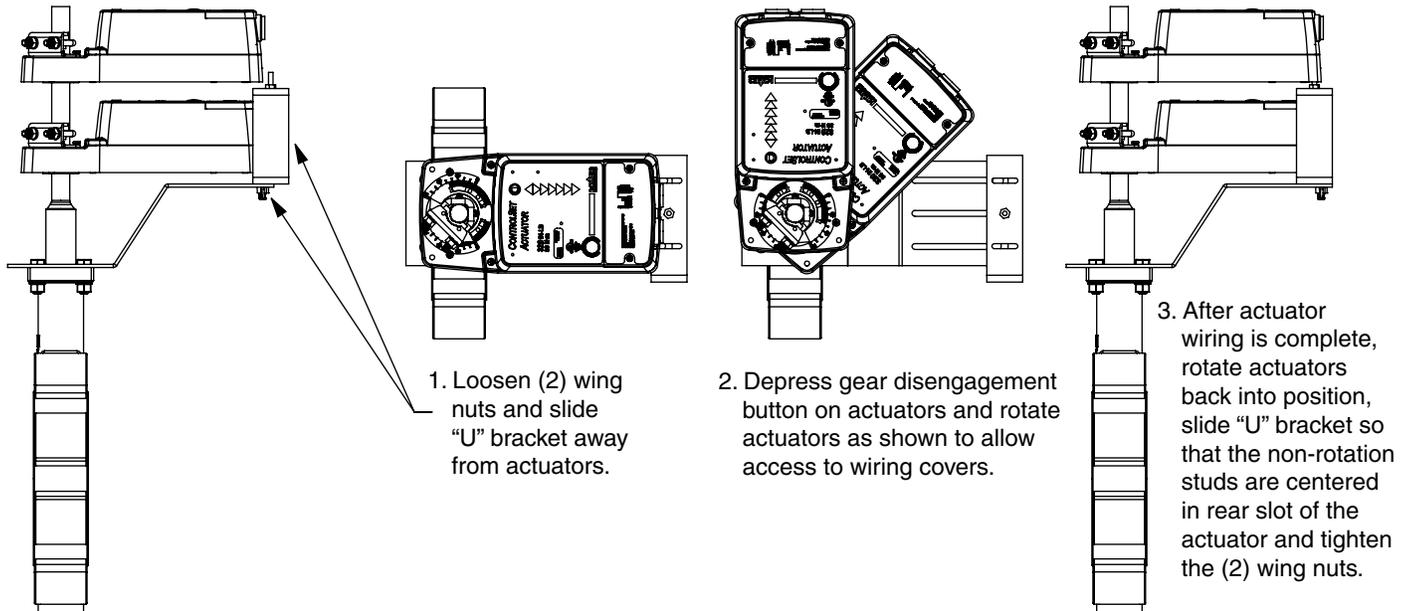
Actuator Wiring

Wiring is dependent on the type of actuator, mounting, and the desired options that are available.

Consult the actuator model label and then the relevant sections in the MEP-7200/7500/7800 series actuators installation guide (031-019-01)

for detailed instructions on the applicable wiring, feedback selector, and actuator/signal range reset (auto-mapping) of the valve's actuator. For dual, stacked actuators, follow the process below to access terminals in both actuators.

Dual, Stacked Actuators Wiring Access



Operation

After the mechanical and electrical installations have been completed, cycle the actuator to verify the direction of rotation for normal operation and fail-safe if so equipped.

NOTE: If a fail-safe actuator is used, the fail direction can be selected with the CW/OFF/CCW switch.

For more information, see the data sheets for the:

- VEF-53 series 2-way valves (732-035-38)
- VEF-56 series 3-way valves (732-035-39)
- MEP-7200/7500/7800 series actuators (035-035-01)
- CME-7001/7002 rotary auxiliary cam switches (826-035-02)

⚠ CAUTION

Using mineral oil lubricants or other incompatible substances in system fluids may damage EPDM rubber seats in valves. Before using any lubricant or additive in a water or ethylene glycol base, consult the substance manufacturer for compatibility with EPDM (Ethylene Propylene Diene Monomer).

⚠ CAUTION

Freeze protection required for fluid temperatures below 32° F (0° C).

Maintenance

No routine maintenance is required. The motors are permanently lubricated. Careful installation will also ensure long term reliability and performance.

Accessories/Repair Parts

CME-7001	Rotary aux. cam switch, single
CME-7002	Rotary aux. cam switch, double
HMO-4536	Adjustable stop kit
MEP-7xxx	Replacement actuator (see label on actuator or data sheet)

Important Notices

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