

### Description and Application

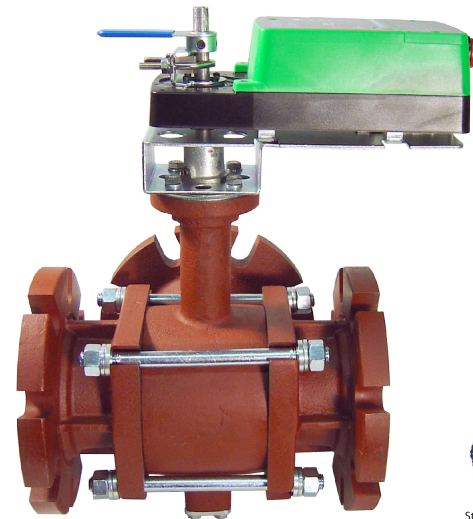
The KMC VEB-56 series control ball valves are three-way mixing or diverting flanged valves, designed for control of hot or chilled water. These valves range in size from 4 to 6 inches with equal-percentage flow characteristics. Leak-proof, blow-out-proof stems, and stainless steel ball and stem make these valves ideal for many applications.

These valves use KMC ControlSet® actuators with **proportional** or **tri-state** inputs. (See the [MEP-7200/7500/7800 Series Data Sheet](#) for more details.) Proportional models accept a 0–10 VDC or 4–20 mA control signal input from a thermostat, controller, or building automation system. A user-initiated, auto-mapping feature provides better equipment control by reassigning the 0–10 VDC input signal range over the desired reduced rotation range (from 45 to 95°). Plus, they feature a feedback voltage output that is proportional to the actuator position. Tri-state models are designed for use with floating thermostats, controllers, or building automation systems.

An optional, long-life, capacitor-driven “fail-safe” feature allows simple **switch-selectable fail direction** in either direction upon power loss. Optional **auxiliary switches** are available for remote position indication or controller and equipment interface. A **gear disengagement** button allows positioning of the valve stem/plug without energizing the actuator.

### Features

- ◆ Equal percentage flow characteristics
- ◆ Mixing or diverting control
- ◆ Stainless-steel stem and ball
- ◆ Proportional or tri-state actuator input options
- ◆ Gear disengagement button
- ◆ Fail-safe (switch-selectable fail direction) option
- ◆ Auxiliary switch options
- ◆ High close-off and high rangeability
- ◆ Large selection of Cvs for each size
- ◆ Lower torque required to operate compared to globe valves
- ◆ Standard ANSI class 125 flange connections



### Models

Use the chart below to select your model.

VEB-56 XXX S YY

#### Actuator Model

(On 4 and 5 inch valves)

FF: Tri-state (MEP-7201, 120 in-lb.)

FK: 0–10 VDC (MEP-7202, 120 in-lb.)

FH: Fail-safe, tri-state (MEP-7251, 120 in-lb.)

FL: Fail-safe, 0–10 VDC (MEP-7252, 120 in-lb.)

(On 6 inch valves only)

GF: Tri-state (MEP-7501, 180 in-lb.)

GK: 0–10 VDC (MEP-7502, 180 in-lb.)

GH: Fail-safe, tri-state (MEP-7551, 180 in-lb.)

GL: Fail-safe, 0–10 VDC (MEP-7552, 180 in-lb.)

#### Pipe Size/Cv

16A: 4"/91

16B: 4"/118

16C: 4"/152

16D: 4"/197

16E: 4"/254

16F: 4"/327

20A: 5"/144

20B: 5"/185

20C: 5"/240

20D: 5"/309

20E: 5"/400

24A: 6"/208

24B: 6"/268

24C: 6"/346

24D: 6"/441

24E: 6"/577

24F: 6"/650

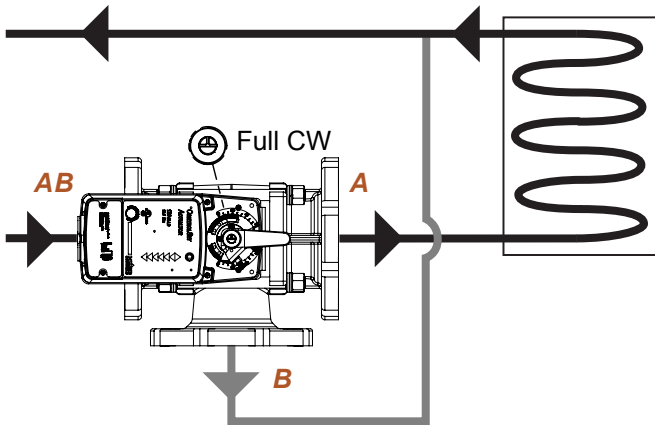
### Accessories/Repair Parts

CME-7001	Rotary aux. cam switch, single
CME-7002	Rotary aux. cam switch, double
HMO-4536	Adjustable stop kit
MEP-7xxx	Actuator (see Models section)

## Details

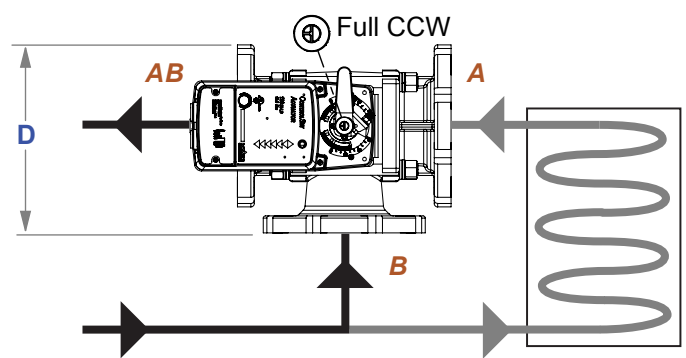
### Diverting Flow Action:

Port 'AB' to Port 'A'—full CW; Port 'AB' to 'B'—full CCW



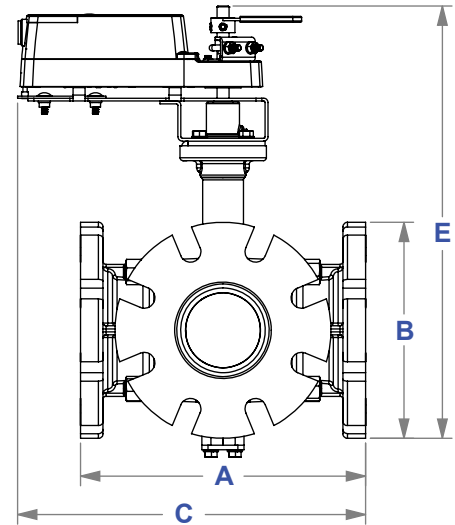
### Mixing Flow Action:

Port 'A' to Port 'AB'—full CW; Port 'B' to 'AB'—full CCW



### Dimensions (Inches):

Size	A	B	C	D	E	Weight (lb.)
4"	11.875	9	14.5	10.375	18	80
5"	13.875	10	15.5	12	18.875	95
6"	15.875	11	16.5	13.375	20	110



## ⚠ CAUTION

Using mineral oil lubricants or other incompatible substances in system fluids may damage EPDM rubber seals 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).

## Specifications

<b>Service</b>	Hot or chilled water, up to 50% glycol
<b>Action</b>	0 to 90°
<b>Flow Characteristics</b>	Equal percentage
<b>Rangeability</b>	500 to 1
<b>Body Pressure Rating</b>	240 psi at 250° F
<b>Close-Off Rating</b>	70 psi
<b>Cv Rating</b>	See Models chart
<b>Leakage Rating</b>	ANSI Class IV (0.01% of Cv)
<b>Valve Sizes</b>	4 to 6 inches
<b>Body Type</b>	Three-way, flanged connections, ANSI Class 125
<b>Valve Material</b>	
Body	Cast iron, ASTM A395, 60-40-18
Ball and stem	316 stainless-steel
Stem seals	EPDM O-rings
Ball seals	Teflon seals

<b>Actuators</b>	See the "Models" section and the <a href="#">MEP-7200/7500/7800 Series Data Sheet</a> for details
<b>Supply Voltage</b>	24 VAC (+20%/–15%) or 22–35 VDC
<b>Input</b>	Proportional 0–10 VDC or tri-state (floating, 24 VAC)
<b>Fail-Safe</b>	Switch-selectable fail direction (on relevant models)
<b>Torque</b>	120 in-lb. or 180 in-lb.
<b>Material</b>	Flame-retardant polymer
<b>Temperature Limits</b>	
Medium	–22 to 250° F (–30 to 121° C)
Ambient	–22 to 131° F (–30 to 55° C)
Shipping	–40 to 140° F (–40 to 60° C)

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