

Description and Application

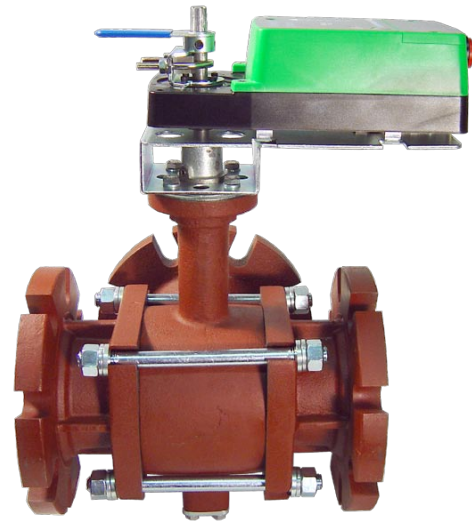
The KMC VEB-56 series control ball valves are three-way mixing or diverting flanged valves, designed for control of hot water or chilled water. These valves range in size from 4 to 6 inches with equal-percentage flow characteristics. Leak-proof, blow-out-proof stems, and stainless steel ball and stem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

These valves use KMC ControlSet® actuators with **proportional or tri-state inputs**. 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 standard
- ◆ Proportional or tri-state actuator input options
- ◆ Gear disengagement button
- ◆ High close-off; high rangeability
- ◆ Large selection of Cvs for each size
- ◆ Lower torque required to operate compared to globe valves
- ◆ Standard ANSI class 125 flange connections
- ◆ Fail-safe (switch-selectable fail direction) option
- ◆ Auxiliary switch options



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-lbs.)

FK: 0–10 VDC (MEP-7202, 120 in-lbs.)

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

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

(On 6 inch valves only)

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

GK: 0–10 VDC (MEP-7502, 180 in-lbs.)

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

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

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

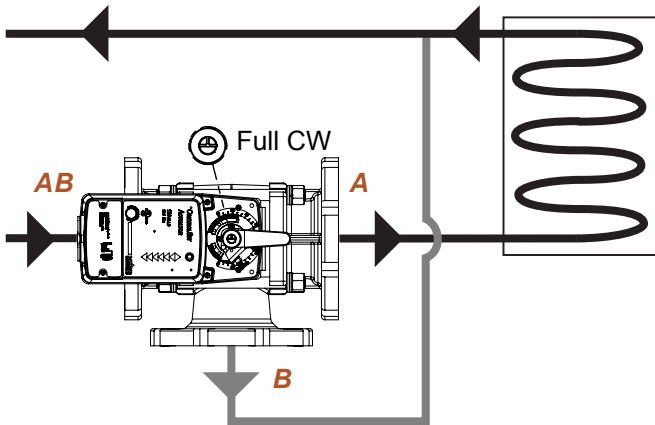
Accessories/Repair Parts

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

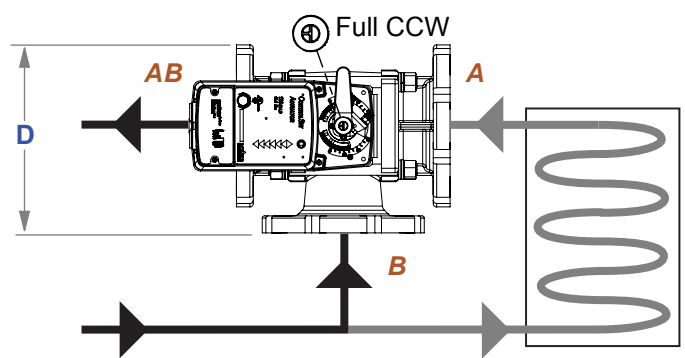
Diverting Flow Action:

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



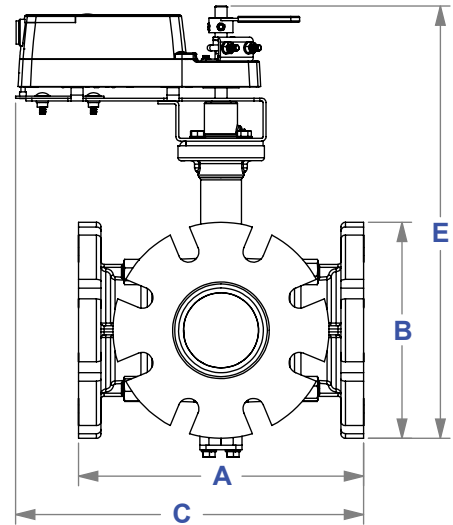
Mixing Flow Action:

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



Dimensions (Inches):

Size	A	B	C	D	E	Weight (lbs.)
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

Service	Hot or chilled water, up to 50% glycol
Action	0 to 90°
Flow Characteristics	Equal percentage
Rangeability	500 to 1
Body Pressure Rating	240 psi at 250° F
Close-Off Rating	90 psi on 4 and 5"; 70 psi on 6"
Cv Rating	See Models chart
Leakage Rating	ANSI Class IV (0.01% of Cv)
Valve Sizes	4 to 6 inches
Body Type	Three-way, flanged connections, ANSI Class 125
Valve Material	
Body	Cast iron, ASTM A395, 60-40-18
Ball and stem	316 stainless-steel
Stem seals	EPDM O-rings
Ball seals	Teflon seals

Actuators	Refer to the "Models" section and the MEP-7200/7500/7800 series data sheet (035-035-01) for details
Supply Voltage	24 VAC (+20%/–15%) or 22–35 VDC
Input	Proportional 0–10 VDC or tri-state (floating, 24 VAC)
Fail-safe	Switch-selectable fail direction (on relevant models)
Torque	120 in-lbs. or 180 in-lbs.
Material	Flame-retardant polymer
Temperature Limits	
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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