

Description and Application

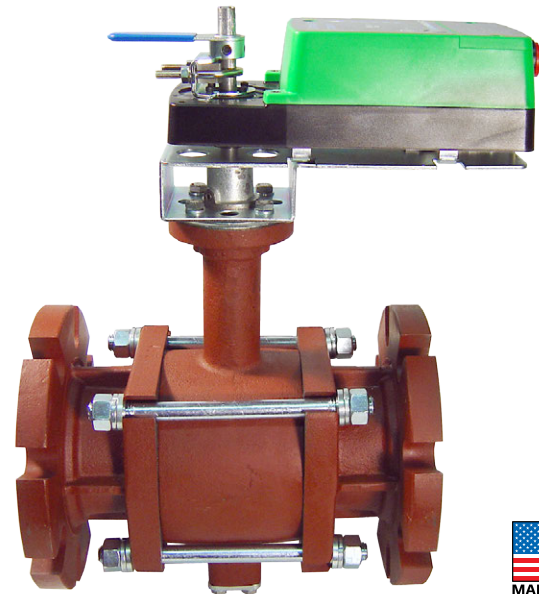
KMC VEB-53 series control ball valves are two-way flanged valves, designed for control of hot or chilled water. These valves range in size from 4 to 6 inches with equal-percentage flow characteristics. Leak-proof, blow-out-proof stems, and stainless steel ball and stem make these valves ideal for many applications.

These valves use KMC ControlSet® actuators with **proportional** or **tri-state** inputs. (See the **MEP-7500/7800 Series** data sheet for more details.) Proportional models accept a 0–10 VDC, 2–10 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 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
- ◆ Stainless-steel stem and ball standard
- ◆ 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-53 XXX S YY

Actuator Model

(On 4 and 5 inch valves)

FF: Tri-state (MEP-7501)

FK: Proportional (MEP-7502)

FH: Fail-safe, tri-state (MEP-7551)

FL: Fail-safe, proportional (MEP-7552)

(On 6 inch valves only)

GF: Tri-state (MEP-7501)

GK: Proportional (MEP-7502)

GH: Fail-safe, tri-state (MEP-7551)

GL: Fail-safe, proportional (MEP-7552)

Pipe Size/Cv

16A: 4"/91

16B: 4"/118

16C: 4"/152

16D: 4"/197

16E: 4"/254

20A: 5"/144

20B: 5"/185

20C: 5"/240

20D: 5"/309

20E: 5"/400

24A: 6"/208

24B: 6"/268

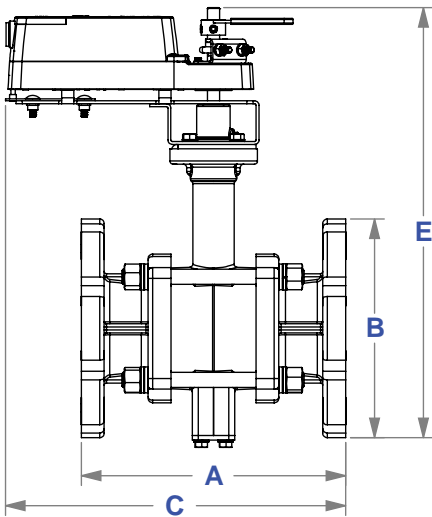
24C: 6"/346

24D: 6"/441

24E: 6"/577

24F: 6"/650

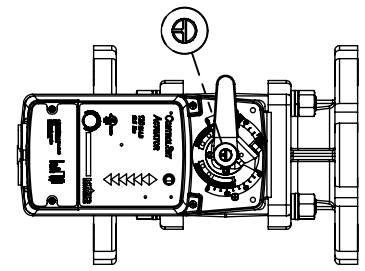
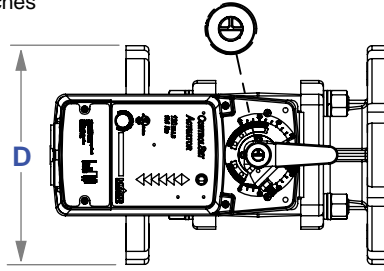
Details



Dimensions in inches

Full CW = Valve Open

Full CCW = Valve Closed



Size	A	B	C	D	E	Weight (lb.)
4"	11	9	13.75	9	17.75	70
5"	12.375	10	14.75	10	18	80
6"	13.875	11	15.625	11	18.875	95

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	70 psi
Cv Rating	See Models chart
Leakage Rating	ANSI Class IV (0.01% of Cv)
Valve Sizes	4 to 6 inches
Body Type	Two-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	See the "Models" section and the MEP-7500/7800 Series data sheet for more details
Supply Voltage	24 VAC (+20%/–15%) or 22–35 VDC (Class 2 only)
Input	Proportional (0–10 VDC, 2–10 VDC, or 4–20 mA) or tri-state (floating, 24 VAC)
Fail-safe	Switch-selectable fail direction (on relevant models)
Torque	180 in-lb.
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)

⚠ 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).

Accessories/Repair Parts

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

NOTE: For more information, see the data sheets for the **MEP-7500/7800 actuators** and the **CME-7001/7002 switches**.

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