

### Description

VEB-43 (formerly VEP-45) series, two-way, NPT, ball valves are designed for the control of hot or chilled water in HVAC applications. Valves range in size from 1/2 to 3 inches and feature an optimizing insert (except for indicated models), which reduces the Cv and characterizes the ball opening for equal percentage flow characteristics. They include a field-repairable blowout-proof stem and leak-proof shut-off. The reduced torque seals and O-rings eliminate the need for high torque actuators. KMC's low-torque MEP-4000/5000 series actuators work on all valve sizes.

Valve assemblies with MEP-4002V/4003V actuators have new brackets with a patent-pending, **quick-mounting** mechanism that creates a universal connection to VSI, Griswold, and other valve bodies. See the MEP-4000/4800 data sheet for more information.

### Features

- ◆ Tri-state (floating) or proportional inputs
- ◆ Fail-safe (with switch-selectable direction) or non-fail-safe
- ◆ Equal percentage flow characteristics with optimizer insert (except indicated models)
- ◆ Cv ratings similar to globe valves
- ◆ Leak-proof shutoff
- ◆ Field-repairable valve stem design

### Accessories/Repair Parts

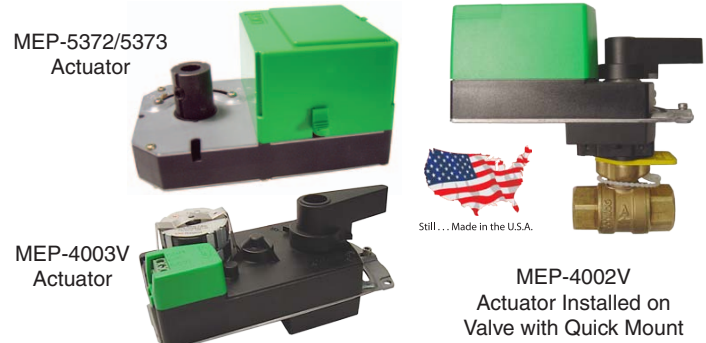
#### Valves With MEP-400xV Actuators (Only)

HPO-5074 Ball valve to actuator quick mount kit

#### Valves with Standard MEP-4000/5000 Series Actuator

HPO-5072 Ball valve to actuator repair kit

(See also the MEP-5372/5373/5374 data sheet for actuator auxiliary switches and connector accessories.)



### Models\*

#### VEB-43 YYY B ZZ

##### Actuators

- CK: 0-10 VDC (MEP-4002V)
- CF: Tri-state (MEP-4003V)
- DL: Fail-safe, 2-10 VDC (MEP-5372)
- DH: Fail-safe, tri-state (MEP-5373)

##### Size / Cv

02B: 1/2" / 0.38 Cv <sup>FD</sup>	05L: 1-1/4" / 41.1 Cv*
02D: 1/2" / 0.68 Cv <sup>FD</sup>	05K: 1-1/4" / 36.5 Cv
02F: 1/2" / 1.3 Cv <sup>FD</sup>	06D: 1-1/2" / 22.8 Cv
02H: 1/2" / 2.6 Cv <sup>FD</sup>	06J: 1-1/2" / 73.9 Cv*
02K: 1/2" / 4.7 Cv	06G: 1-1/2" / 41.3 Cv
02M: 1/2" / 11.7 Cv <sup>FD*</sup>	08D: 2" / 41.7 Cv
03G: 3/4" / 2.4 Cv <sup>FD</sup>	08M: 2" / 108.0 Cv <sup>FD*</sup>
03K: 3/4" / 4.3 Cv <sup>FD</sup>	08G: 2" / 71.1 Cv
03L: 3/4" / 10.1 Cv <sup>FD</sup>	10C: 2-1/2" / 55.0 Cv
03N: 3/4" / 14.7 Cv*	10D: 2-1/2" / 72.0 Cv
04J: 1" / 9.0 Cv <sup>FD</sup>	10G: 2-1/2" / 101.0 Cv
04Q: 1" / 28.4 Cv <sup>FD*</sup>	12C: 3" / 82.0 Cv
04M: 1" / 15.3 Cv	12D: 3" / 124.0 Cv
05F: 1-1/4" / 14.9 Cv <sup>FD</sup>	

<sup>FD</sup>"Fast Delivery" stocked items have a delivery time of approximately five business days. For all others, call for delivery time.

\*Full-port, no optimizer insert

\*NOTE: To select a **valve body and linkage only:**

- And attach your own **quick-mount MEP-4002V or MEP-4003V** actuator, specify VFB-43 YYY BC (e.g., VFB-4305LBC) with YYY the appropriate size and Cv from chart above.

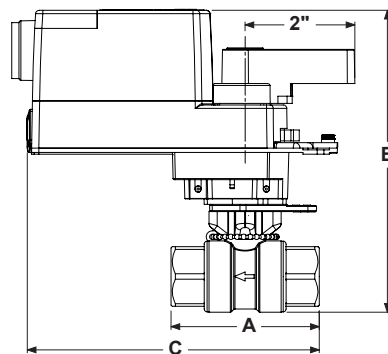
- Or attach your own **standard MEP-4000/5000 series** actuator, specify VFB-43 YYY BX (e.g., VFB-4305L BX) with YYY the appropriate size and Cv (includes non-rotation brackets for both types of actuators).

## Details

Dimensions in inches  
and weight in pounds

**ACTION:**  
Full CW = Valve Closed  
Full CCW = Valve Open

←  
Flow



(Actuators and mounting vary)

### 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).

Size NPT	Model	A	B (Overall Height)			C (Overall Length)		Width (Not Shown)		Weight	
			MEP-4002V	MEP-4003V	MEP-4000/5000	MEP-4000(V)	MEP-5000	MEP-4000(V)	MEP-5000	MEP-4000(V)	MEP-5000
1/2"	VEB-4302	2.37	5.10	4.41	6.88	4.97	6.50	2.60	4.00	2.02	3.5
3/4"	VEB-4303G/K/N	2.41	5.10	4.41	6.88	4.99	6.61			2.22	3.7
	VEB-4303L	2.76	5.28	4.59	7.06	5.16	6.79			2.22	3.7
1"	VEB-4304J/Q	2.76	5.28	4.59	7.06	5.16	6.68	3.00	4.00	2.22	3.7
	VEB-4304M	3.04	5.60	4.91	7.38	5.30	6.82			2.52	4
1-1/4"	VEB-4305F/L	3.01	5.55	4.86	7.33	5.29	6.78	3.50	4.00	2.52	4
	VEB-4305K	3.62	6.20	5.51	7.98	5.59	7.11			3.62	5.1
1-1/2"	VEB-4306D/J	3.43	6.20	5.51	7.98	5.50	7.00	4.00	4.00	3.62	5.1
	VEB-4306G	4.06	6.70	6.01	8.48	5.81	7.33			4.22	5.7
2"	VEB-4308D/M	3.98	6.70	6.01	8.48	5.77	7.30	4.00	4.00	4.22	5.7
	VEB-4308G	4.90	7.50	6.81	9.28	6.23	7.75			6.02	7.5
2-1/2"	VEB-4310	5.35	7.50	6.81	9.28	6.46	7.95	4.00	4.00	6.52	8
3"	VEB-4312	5.73	7.65	6.96	9.43	6.65	8.16	4.00	4.00	7.42	8.9

## Specifications

<b>Service</b>	Hot or chilled water, up to 50% glycol
<b>Connections</b>	Female NPT
<b>Body Rating</b>	360 psi
<b>Max. Close Off</b>	1/2" and 3/4", 130 psi (896 kPa); 1" to 3", 100 psi (689 kPa)
<b>Max. Differential Pressure</b>	Same values as Max. Close-Off (see above)
<b>Flow Characteristics</b>	Equal percentage (with optimizer insert)
<b>Rangeability</b>	500 to 1
<b>Leakage Rating</b>	ANSI Class IV (0.01% of Cv)
<b>Actuators</b>	<b>Refer to specific MEP actuator data sheets for more details</b>

### Temperature Limits

Medium	-22 to 250° F (-30 to 121° C)
Operating	0 to 120° F (-18 to 49° C)
Shipping	-40 to 140° F (-40 to 60° C)

### Material

Body	Forged brass ASTM B283-06
Stem	Brass
Ball	Nickel-plated brass
Flow inserts	Glass filled polymer
Stem Seals	EPDM O-rings
Ball Seals	Teflon seals w/ EPDM O-rings

MEP-4002V	40 in-lbs., 0-10 VDC
MEP-4003V	40 in-lbs., tri-state
MEP-5372	50 in-lbs., 2-10 VDC, fail-safe
MEP-5373	50 in-lbs., tri-state, fail-safe

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