

B2...VS Series, 2-Way, Ball Valve Bronze Body, Stainless Steel Ball and Stem



- Live-load packing set
- Stainless steel ball & stem
- Blow-out proof stem design

Application

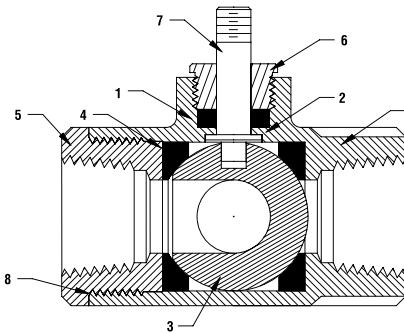
This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV Box re-heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.

This valve is designed with MFT functionality which facilitates the use of various control input.

- Up to 35 psi steam
- 1/2" - 600 PSIG WOG, Cold Non-Shock.
- Federal Specification: WW-V-35C, Type II
Composition: BZ
Style: 3

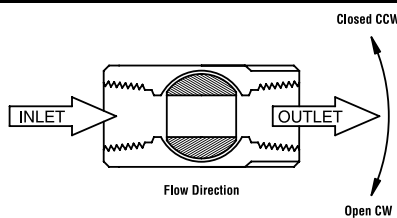
Technical Data	
Media	chilled or hot water, glycol, 35# steam
Flow characteristic	modified equal percentage
Action	90° rotation valve open CW, valve closed CCW
Sizes	1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3"
Type of end fitting	SAE NPT (female connections)
Materials:	
1 Stem Packing	Reinforced PTFE
2 Stem Bearing	Reinforced PTFE
3 Ball	316 Stainless Steel
4 Seat (x2)	Reinforced PTFE w/ Durafill
5 Retainer	B16 (3/4" - 1") Brass B584 (1 1/4" - 3") Brass
6 Gland	B16 Brass
7 Stem	316 Stainless Steel
8 Jam Nut	Stainless Steel
9 Body Seal	PTFE (1-1/4" to 3")
10 Body	B584-C84400 Bronze

Cv	Valve Nominal Size		Type	Suitable Return Actuators	
	Inches	DN [mm]	2-way NPT	Spring	Non-Spring
1	1/2	15	B2050VS-01	LF Series	LM Series
2	1/2	15	B2050VS-02		
4	1/2	15	B2050VS-04		
15	1/2	15	B2050VS-15	NF	NM
30	3/4	20	B2075VS-30		
51	3/4	20	B2075VS-51		
43	1	25	B2100VS-43	AF Series	AM Series
68	1	25	B2100VS-68		
48	1 1/4	32	B2125VS-48		
84	1 1/2	40	B2150VS-84		
177	1 1/2	40	B2150VS-177	GM Series	SY Series
108	2	50	B2200VS-108		
389	2	50	B2200VS-389		
503	2 1/2	65	B2250VS-503		
370	3	80	B2300VS-370		

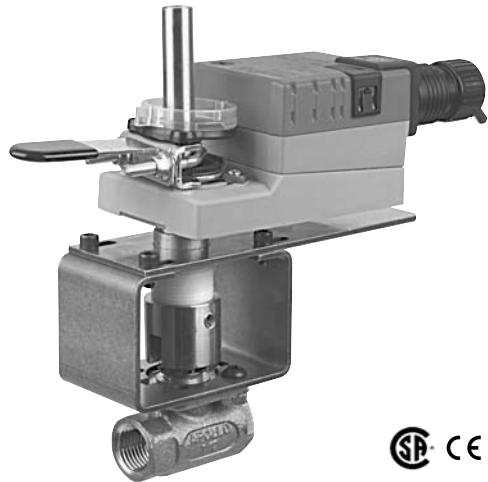


Pressure rating	600 psig WOG
Media temp. range	-22°F to 280°F (-30°C to 138°C)
Close-off pressure	600 psig @ 100°F
Maximum differential pressure (ΔP)	<600 psig

Flow Patterns



IM40006 - 05/10 - Subject to change. © Belimo Aircontrols (USA), Inc.

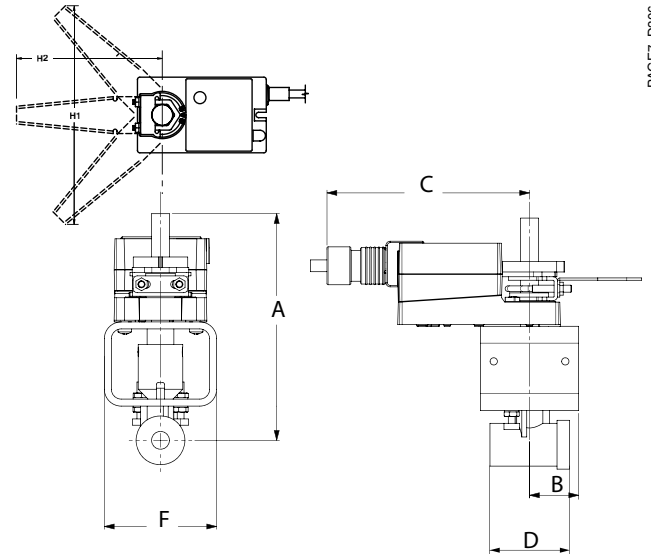


Models

LMB24-3-X1
LMX24-3-X1

Technical Data		
Control		on/off, floating point
Power supply		24 VAC ± 20% 50/60 Hz 24 VDC ± 10%
Power consumption	running	1.5 W
	holding	0.2 W
Transformer sizing		3 VA (class 2 power source)
Electrical connection		½" conduit connector 3 ft, 18 GA plenum rated cables
Overload protection		electronic throughout 0° to 95° rotation
Input impedance		600 Ω
Angle of rotation		95°
Torque		45 in-lb [5 Nm]
Direction of rotation		reversible with switch
Position indication		reflective visual indicator (snap-on)
Manual override		external push button
Running time		95 seconds, constant independent of load
Humidity		5 to 95% RH non-condensing (EN 60730-1)
Ambient temperature		-22° F to 122° F [-30° C to 50° C]
Storage temperature		-40° F to 176° F [-40° C to 80° C]
Housing		NEMA type 2/IP54
Housing material		UL94-5VA
Agency listings		cULus according to UL 60730-1/-2-14, CAN/CSA C22.2 No. 24 certified, CE according to 73/23/EEC
Noise level		<35 db(A)
Servicing		maintenance free
Quality standard		ISO 9001

Dimensions with 2-Way Valve



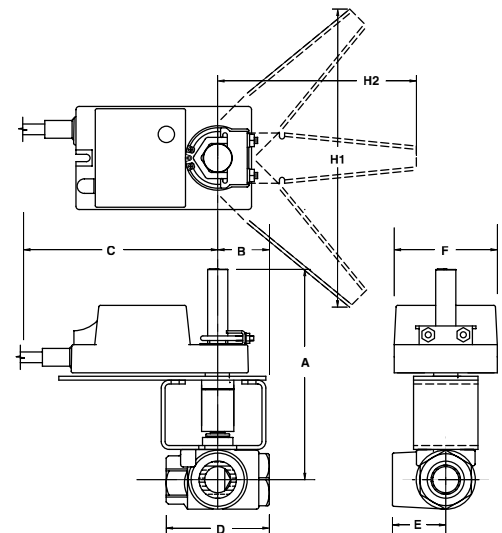
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Valve Nominal Size

Dimensions (Inches)

Valve Body	COP	Inches	DN [mm]	A	B	C	D	F	H1	H2
B2050VS-01	100	½	15	6.75	1.50	5.68	2.20	3.15	9.75	8.50
B2050VS-02	100	½	15	6.75	1.50	5.68	2.20	3.15	9.75	8.50
B2050VS-04	100	½	15	6.75	1.50	5.68	2.20	3.15	9.75	8.50
B2050VS-15	100	½	15	6.75	1.50	5.68	2.20	3.15	9.75	8.50
B2050VSS-15	1000	½	15	6.75	1.50	5.68	2.30	3.15	9.75	8.50

Dimensions with 3-Way Valve



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Valve Nominal Size

Dimensions (Inches)

Valve Body	COP	Inches	DN [mm]	A	B	C	D	E	F	H1	H2
B315VS	75	½	15	6.50	1.50	4.70	2.30	1.25	3.19	9.75	8.50

Wiring Diagrams

✂️ INSTALLATION NOTES

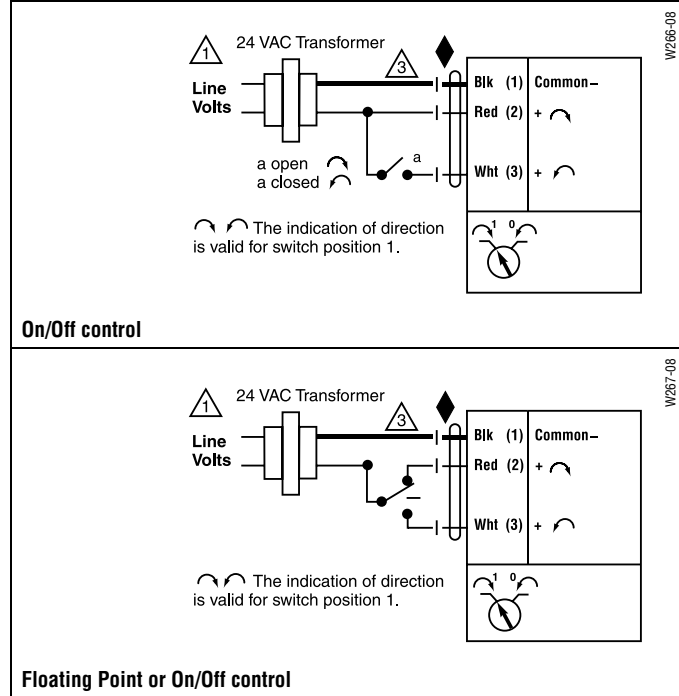
- 1 Provide overload protection and disconnect as required.
- 3 Actuators may also be powered by 24 VDC.

📄 APPLICATION NOTES

- ◆ Meets cULus or UL and CSA requirements without the need of an electrical ground connection.

⚠️ WARNING Live Electrical Components!

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



Piping

The valve should be mounted in a weather-protected area in a location that is within the ambient limits of the actuator. Allow sufficient room for valve with actuator and for service. Allow 6" for cover removal and 12" for complete actuator removal. The assembly can be mounted with the actuator vertical or horizontal in relation to the pipe. The actuators should never be mounted underneath the valve, as condensation can build up and result in a failure of the actuators. Do not reverse flow direction.