

Ball Valve (VSS), 1", 2-way, Cv 43

- NSF/ANSI 61 – Water Quality – C. Hot
- NSF/ANSI 372 - Lead Free



2-year warranty

Type overview

Type	DN
B224VSS	25

Technical data

Functional data	Valve size [mm]	1" [25]
Fluid	chilled or hot water, up to 60% glycol, steam	
Fluid Temp Range (water)	-30...148°C [-22...298°F]	
Body Pressure Rating	1500 psig WOG	
Close-off pressure Δps	1000 psi	
Flow characteristic	modified equal percentage	
Leakage rate	ANSI Class VI	
Pipe connection	Internal thread NPT (female)	
Max Differential Pressure (Steam)	50 psi	
Flow Pattern	2-way	
Controllable flow range	90° rotation	
Cv	43	
Maximum Inlet Pressure (Steam)	50 psi	
Maximum Velocity	15 FPS	
Materials	Valve body	Stainless steel A351-CF8M 316
	Housing seal	PTFE
	Stem	316 stainless steel
	Stem seal	RPTFE
	Seat	RPTFE
	Lock nut	stainless steel
	Ball	316 stainless steel
Suitable actuators	Non Fail-Safe	AMB(X) GRCB(X) GRB(X)
	Spring	AF

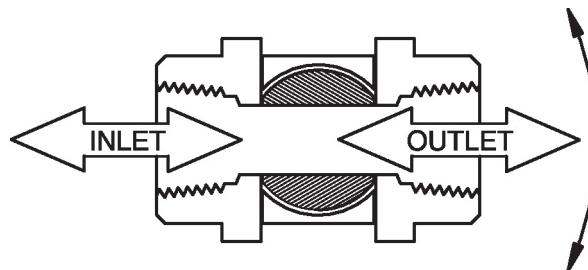
Note: NSF/ANSI/CAN 61 Section 8, Annex G, NSF/ANSI 372 - Drinking Water System Components - Lead Content. Suitable for Cold, Domestic Hot, and Commercial Hot applications.

Product features

Application These threaded valves are designed to provide modulating or two position control of hot or chilled water and saturated steam systems under 50 psi. Typical applications include reheat coils, VAV terminal control, unit ventilators, and air handlers, especially in areas which have minimum profile requirements.

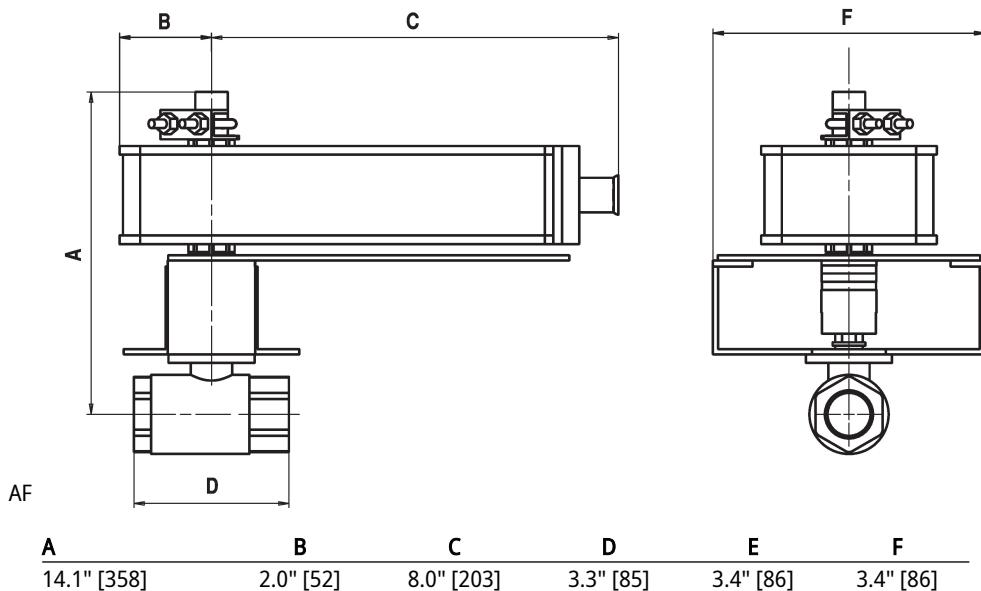
Up to 50 psi steam
1/2" - 2000 PSIG WOG, Cold Non-Shock
Federal Specification: WW-V-35C, Type II
Composition: SS
Style: 3

Flow/Mounting details

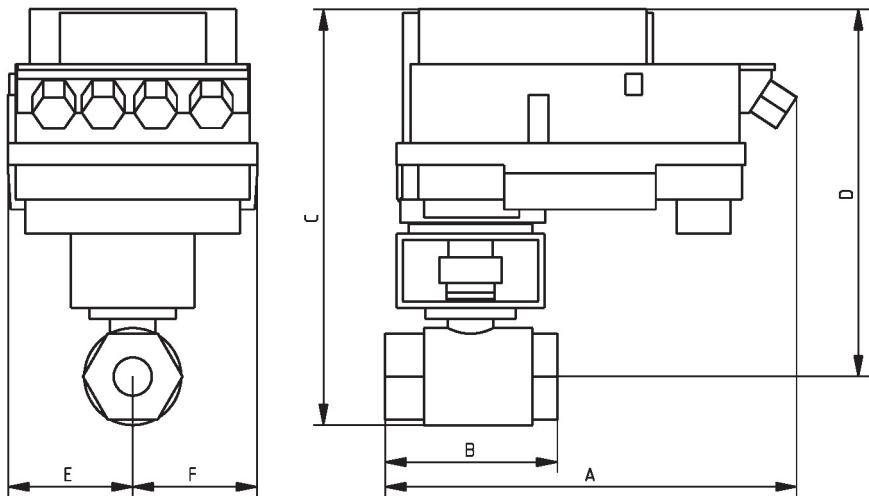


Dimensions

Type	DN	Weight
B224VSS	25	1.8 lb [0.80 kg]



Dimensions



B249VSS+PKR..

A	B	C	D	E	F
14.1" [358]	3.4" [86]	12.1" [307]	11.1" [283]	3.4" [86]	3.4" [86]

On/Off, Floating point, Non fail-safe, 24 V



5-year warranty



Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...28.8 V / DC 21.6...28.8 V
	Power consumption in operation	8 W
	Power consumption in rest position	2.5 W
	Transformer sizing	11 VA
	Electrical Connection	Terminal blocks
	Overload Protection	electronic throughout 0...90° rotation
Functional data	Direction of motion motor	selectable with switch 0/1
	Manual override	under cover
	Angle of rotation	90°
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	35 s / 90°
	Running time motor note	constant, independent of load
	Noise level, motor	45 dB(A)
	Position indication	Mechanical, 5...20 mm stroke
Safety data	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Housing	UL Enclosure Type 4X
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU
	Quality Standard	ISO 9001
	Ambient humidity	Max. 100% RH
	Ambient temperature	-22...122°F [-30...50°C]
	Ambient temperature note	-40...50°C [104...122°F] for actuator with integrated heating
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
Weight	Weight	6.9 lb [3.1 kg]

Materials	Housing material	Die cast aluminium and plastic casing
-----------	------------------	---------------------------------------

Footnotes [†]Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3

Accessories

Electrical accessories	Description	Type
Battery backup system, for non-spring return models		NSV24 US
Battery, 12 V, 1.2 Ah (two required)		NSV-BAT
Auxiliary switch 1x SPDT add-on		S1A
Auxiliary switch 2x SPDT add-on		S2A
Feedback potentiometer 140 Ω add-on, grey		P140A GR
Feedback potentiometer 1 k Ω add-on, grey		P1000A GR
Feedback potentiometer 10 k Ω add-on, grey		P10000A GR
Feedback potentiometer 2.8 k Ω add-on, grey		P2800A GR
Feedback potentiometer 500 Ω add-on, grey		P500A GR
Feedback potentiometer 5 k Ω add-on, grey		P5000A GR
Factory add-on option only	Description	Type
Heater, with adjustable thermostat		ACT_PACK_H

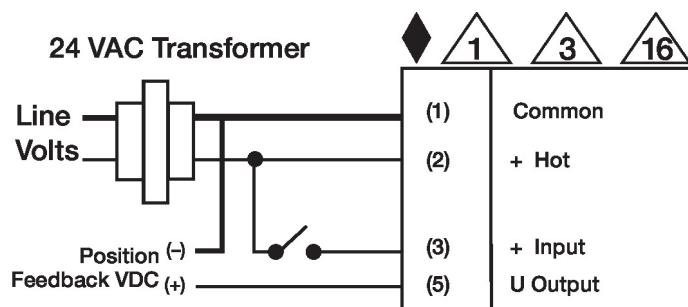
Electrical installation

INSTALLATION NOTES

-  1 Provide overload protection and disconnect as required.
-  3 Actuators may also be powered by DC 24 V.
-  10 For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.
-  12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
-  16 Actuators are provided with a numbered screw terminal strip instead of a cable.
-  Meets cULus requirements without the need of an electrical ground connection.
-  1 **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.

Wiring diagrams

On/Off



Electrical installation

Wiring diagrams

Floating Point

