



2-year warranty

Type overview

Type	DN
B220VS	20

Technical data

Functional data	Valve size [mm]	0.75" [20]
	Fluid	chilled or hot water, up to 60% glycol, steam
	Fluid Temp Range (water)	-22...280°F [-30...138°C]
	Body Pressure Rating	600 psig WOG psi
	Close-off pressure Δps	600 psi
	Flow characteristic	modified equal percentage
	Max Differential Pressure (Steam)	35 psi
	Flow Pattern	2-way
	Leakage rate	ANSI Class VI
	Controllable flow range	90° rotation
	Cv	51
	Maximum Inlet Pressure (Steam)	35 psi [241 kPa]
	Maximum Velocity	15 FPS
Materials	Valve body	Bronze B584-C84400
	Housing seal	PTFE
	Spindle	316 stainless steel
	Spindle seal	RPTFE
	Seat	RPTFE
	Lock nut	stainless steel
	Pipe connection	NPT female ends
	Retainer	B16 Brass
Suitable actuators	Non-Spring	NMB(X) GRCB(X) GRB(X)
		NF
	Spring	NF

Safety notes

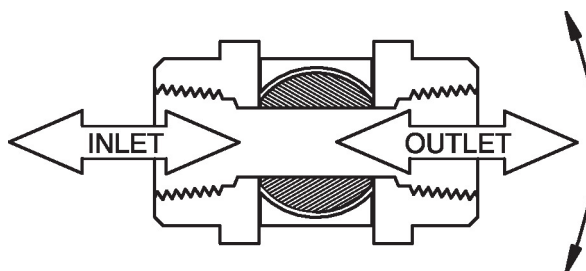


- WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov

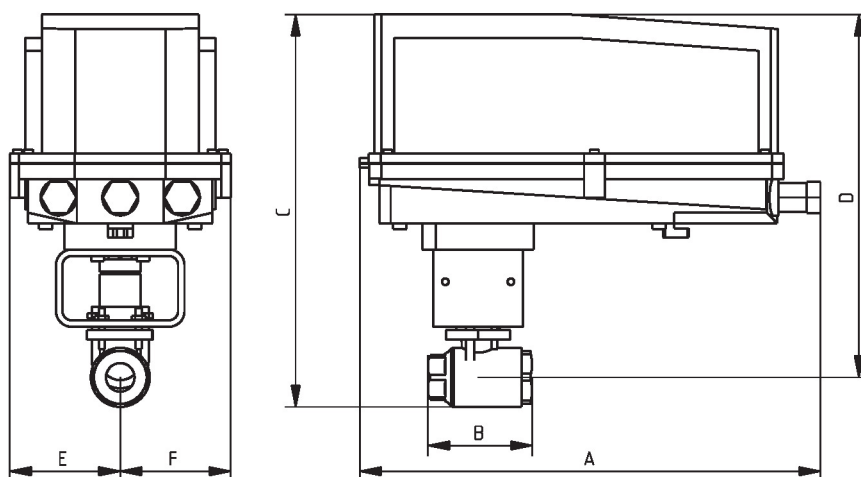
Product features

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 functionally which facilitates the use of various control input.

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

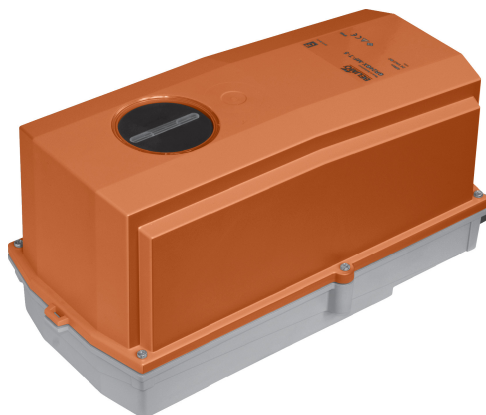
Flow/Mounting details

Dimensions

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B220VS+GRC..N4

A	B	C	D	E	F
14.1" [358]	3.2" [82]	12.0" [305]	11.1" [282]	3.4" [86]	3.4" [86]



5-year warranty



Technical data

Electrical data	Nominal voltage	AC 100...240 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	6 W
	Power consumption in rest position	2 W
	Electrical Connection	1/2" conduit connector, screw terminals
	Overload Protection	electronic throughout 0...90° rotation
Functional data	Input Impedance	500 Ω
	Position feedback U	2...10 V
	Position feedback U note	Max. 0.5 mA
	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	60 dB(A)
	Position indication	Mechanically, 5...20 mm stroke
Safety data	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Enclosure	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 temperature	-22...122°F [-30...50°C]
	Ambient temperature note	-40...50°C for actuator with integrated heating
	Storage temperature	-40...176°F [-40...80°C]
	Ambient humidity	Max. 100% RH
	Servicing	maintenance-free
Materials	Housing material	Die cast aluminium and plastic casing

Footnotes †Rated Impulse Voltage 4kV, Type of action 1, Control Pollution Degree 3.

Accessories

Factory add-on option only	Description	Type
	Heater, with adjustable thermostat	N4 Heater Add-on 24V (-H)
	Heater, with adjustable thermostat	N4 Heater Add-on 230V (-Y)

Electrical installation

INSTALLATION NOTES

- 1 Provide overload protection and disconnect as required.
- 2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- 5 Only connect common to negative (-) leg of control circuits.
- 7 A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
- 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.

 **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

2...10 V / 4...20 mA Control AC 100...240 V

