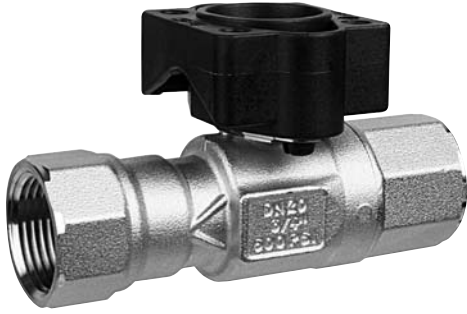


B2...HT... Two-way High Temperature Characterized Control Valve

Stainless Steel Ball and Stem



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.

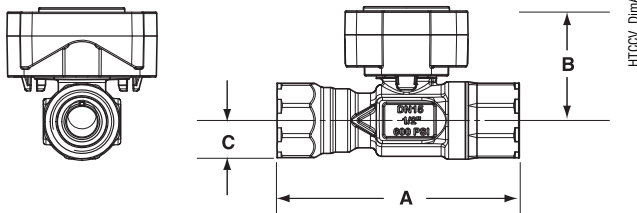
This valve is designed to fit in compact areas where on/off or floating point control is required using 24 VAC.

Technical Data	
Service	water/low pressure steam, 60% glycol
Flow characteristic	A-port equal percentage
Sizes	½", ¾", 1"
Type of end fitting	female, NPT
Materials:	
Body	brass (DZR) P-CuZn35Pb2
Ball	stainless steel
Stem	stainless steel
Seats	PTFE Teflon
Characterizing disc	PTFE Teflon
Packing	2 EPDM O-rings
Pressure rating	600 psi
Media temperature range	
Steam	250°F (15 psig)
Hot water	37°F - 266°F
Close off pressure	200 psi
Maximum differential pressure (ΔP)	116 psi full open ball 60 psi partially open ball
Leakage	bubble tight 0%

C _v	Valve Nominal Size		Type	Suitable Actuators	
	Inches	DN [mm]	2-way NPT	Spring	Non-Spring
0.29	½	15	B215HT029	TF Series	TR Series
0.46	½	15	B215HT046		
0.73	½	15	B215HT073		
1.16	½	15	B215HT116		
1.86	½	15	B215HT186		
2.90	½	15	B215HT290		
4.55	½	15	B215HT455*	LF Series	LR Series
1.86	¾	20	B220HT186		
2.90	¾	20	B220HT290		
4.64	¾	20	B220HT464		
7.31	¾	20	B220HT731		
9.28	¾	20	B220HT928		
13.20	¾	20	B220HT1320		
4.64	1	25	B225HT464		
7.31	1	25	B225HT731		
11.6	1	25	B225HT1160		
18.56	1	25	B225HT1856		
28.00	1	25	B225HT2800		

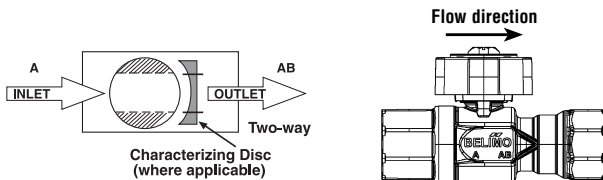
* modified equal percentage

Dimensions



Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
B215HT	½"	15	3.33" [84.6]	2.09" [53.2]	0.53" [13.5]
B220HT	¾"	20	3.96" [100.6]	2.37" [60.1]	0.67" [17.0]
B225HT	1"	25	5.14" [130.6]	3.14" [79.8]	0.92" [23.25]

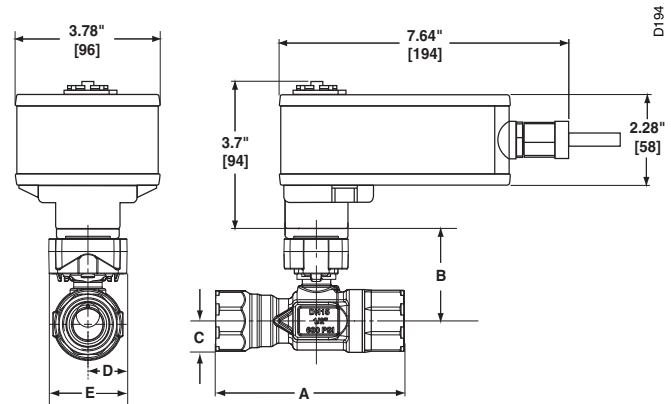
Flow Patterns



L30059 - 08/09 - Subject to change. © Belimo Aircontrols (USA), Inc.



Dimensions with 2-Way Valve



Models

- LF24 US
- LF24-S US w/built-in Aux. Switch
- LF120 US
- LF120-S US w/built-in Aux. Switch

Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
B220HT	3/4"	20	3.96" [100.6]	2.37" [60.1]	0.67" [17.0]
B225HT	1"	25	5.14" [130.6]	3.14" [79.8]	0.92" [23.25]

Technical Data	
Control	On/Off, Floating
Power supply	
LF24(-S) US	24 VAC ± 20% 50/60 Hz 24 VDC ± 10%
LF120(-S) US	120 VAC ± 10% 50/60 Hz
Power consumption	
LF24(-S) US	running 5 W holding 2.5 W
LF120(-S) US	running 5.5 W holding 3.5 W
Transformer sizing	
LF24(-S) US	7 VA, class 2 power source
LF120(-S) US	7.5 VA, class 2 power source
Electrical connection	3 ft, 18 GA appliance cable (-S models have 2 cables) 1/2" conduit connector
Electrical protection	120V actuators double insulated
Overload protection	electronic throughout rotation
Angle of rotation	95°
Spring return direction	reversible with CW/CCW mounting
Position indication	visual indicator 0° to 90°
Running time	<40 to 75 sec. (on-off)
spring	<25 sec. @-4°F to 122°F [-20°C to 50°C] <60 sec. @-22°F [-30°C]
Ambient temperature	-22° F to 122° F [-30° C to 50° C]
Housing	NEMA 2
Agency listings†	UL 873, CSA C22.2 No. 24 certified, CE
Quality standard	ISO 9001
Noise level	max. 62 dB(A)

LF...-S US	
Auxiliary switch	1 x SPDT, 6A (1.5A) @ 250 VAC, UL Listed, adjustable 0° to 95° (double insulated)

† Rated impulse voltage 800V (4kV for 120V model), Control pollution degree 3, Type of action 1.AA (1.AA.B for -S models)

Wiring Diagrams

✂️ INSTALLATION NOTES



CAUTION Equipment damage!
Actuators may be connected in parallel.
Power consumption must be observed.



Actuator may also be powered by 24 VDC.



For end position indication, interlock control, fan startup, etc., LF24-S US and LF120-S US incorporates a built-in auxiliary switch: 1 x SPDT, 6A (1.5A) @ 250 VAC, UL listed, adjustable 0° to 95°.



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.

