



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

Application

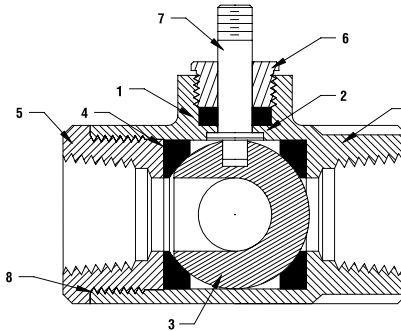
These threaded valves are designed to provide modulating or two position control of hot or chilled water and saturated steam systems under 50 psi.

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

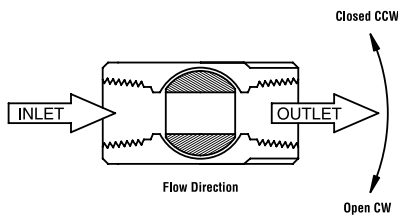
Technical Data	
Media	chilled or hot water, glycol, 50# steam
Flow characteristic	modified equal percentage
Action	90° rotation valve open CW, valve closed CCW
Sizes	1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2"
Type of end fitting	SAE NPT (female connections)
Materials:	
1 Stem Packing	Reinforced PTFE
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	A276-316
7 Stem	316 Stainless Steel
8 Jam Nut	Stainless Steel
9 Body Seal	PTFE (1/4" to 3")
10 Body	A351-CF8M 316 Stainless Steel

C _v	Valve Nominal Size		Type	Suitable Return Actuators		
	Inches	DN [mm]	2-way NPT	Spring	Non-Spring	
15	1/2	15	B2050VSS-15	LF Series	NM Series	SY Series
30	3/4	20	B2075VSS-30			
43	1	25	B2100VSS-43	AF Series	AM Series	
48	1 1/4	32	B2125VSS-48			
84	1 1/2	40	B2150VSS-84	GM Series		
108	2	50	B2200VSS-108			
503	2 1/2	65	B2250VSS-503			
370	3	80	B2300VSS-370			

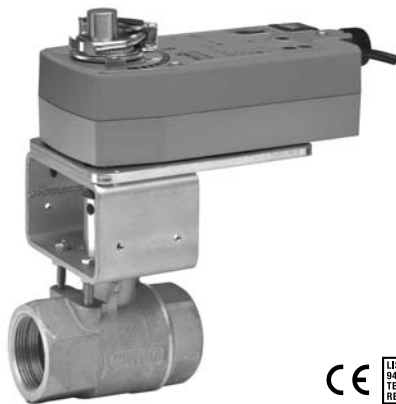


Pressure rating	2000 psig WOG (1/2" - 1")
Media temp. range	-22°F to 298°F (-30°C to 148°C)
Close-off pressure	600 psig @ 100°F
Maximum differential pressure (ΔP)	<600 psig

Flow Patterns



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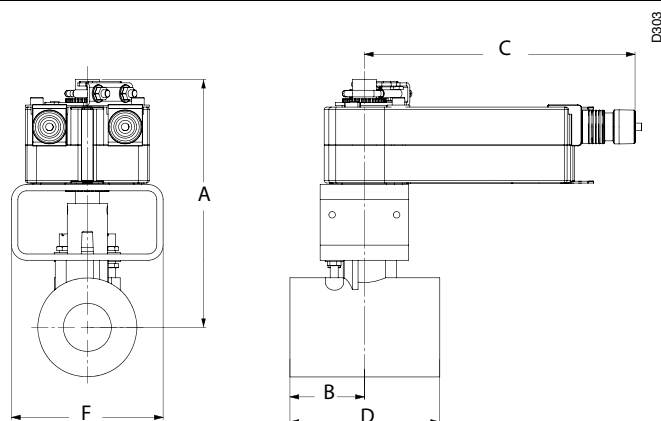


Models

NFB24-X1
 NFBUP-S-X1 w/built-in Aux. Switch
 NFBUP-X1

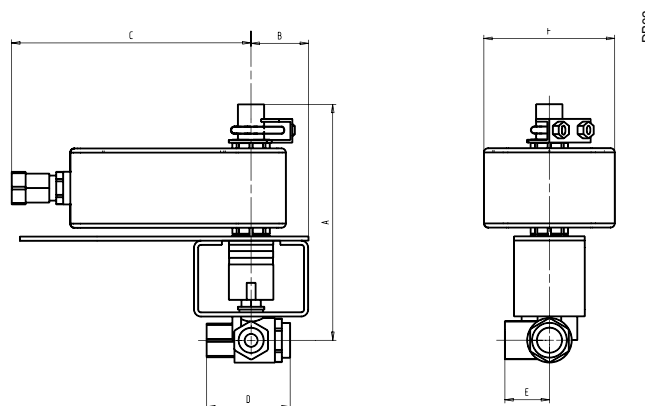
Technical Data	
Control	on/off
Power consumption	
NFB24-X1	running 6 W
	holding 2.5 W
NFBUP(-S)-X1	running 6 W
	holding 2.5 W
Transformer sizing	
NFB24-X1	8.5 VA
NFBUP(-S)-X1	9.5 VA
Electrical connection	1/2" conduit connector
(-S model has 2 cables)	3 ft [1m], 18 GA appliance cables
Electrical protection	120 V actuators double insulated
Overload protection	electronic throughout 0° to 95° rotation
Angle of rotation	95°
Position indication	visual indicator
Running time	control <75 seconds
	spring <20 seconds
Ambient temperature	-22° F to 122° F [-30° C to 50° C]
Housing	NEMA 2 / IP54
Agency listings	UL 873, CSA C22.2 No. 24 certified, CE
Noise level	max. 45 dB(A)
NFBUP-S-X1	
Auxiliary switch	2 x SPDT, 3A (0.5A inductive) @ 250V

Dimensions with 2-Way Valve



Valve Body	COP	Valve Nominal Size		Dimensions (Inches)				
		Inches	DN [mm]	A	B	C	D	F
B2075VS-30	400	3/4	20	7.50	2.00	9.76	3.00	4.60
B2075VS-51	400	3/4	20	7.50	2.00	9.76	3.20	4.60
B2100VS-43	400	1	25	7.81	2.00	9.76	3.40	4.60
B2075VSS-30	1000	3/4	20	7.50	2.00	9.76	3.00	4.60
B2100VSS-43	1000	1	25	7.81	2.00	9.76	3.40	4.60

Dimensions with 3-Way Valve



Valve Body	COP	Valve Nominal Size		Dimensions (Inches)					
		Inches	DN [mm]	A	B	C	D	E	F
B315VS	200	1/2	15	7.00	2.00	8.00	3.56	1.88	6.25
B320VS	75	3/4	20	7.00	2.00	8.00	3.56	1.88	6.25

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Wiring Diagrams

✂️ INSTALLATION NOTES

1 Provide overload protection and disconnect as required.

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

3 24V actuators can be powered by 24 VAC/DC.

4 For end position indication, interlock control, fan startup, etc.,
(-S) Models: 2 SPDT, 3A (0.5 inductive) @250V, one switch fixed at 10°, one adjustable 10° to 90°.

📄 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.

