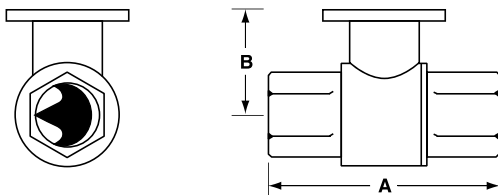




Technical Data	
Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	½", ¾", 1", 1¼", 1½", 2", 2½", 3"
Type of end fitting	NPT female ends
Materials:	
Body	forged brass, nickel plated
Ball	stainless steel
Stem	stainless steel
Seats	PTFE
Characterizing disc	Tefzel®
Packing	2 EPDM O-rings, lubricated
Body pressure rating	
600 psi	½" - 1¼" (B230)
400 psi	1¼" (B231) - 3"
Media temp. range	0°F to 212°F [-18°C to 100°C]
Close off pressure	
200 psi	½" - 2" (B250)
100 psi	2" (B251) - 3"
Maximum differential pressure (ΔP)	30 psi for typical applications
Leakage	0% for A to AB
External leakage	according to EN 12266-1:2003
C <sub>v</sub> rating	A-port: see product chart for values

Tefzel® is a registered trademark of DuPont

### Dimensions



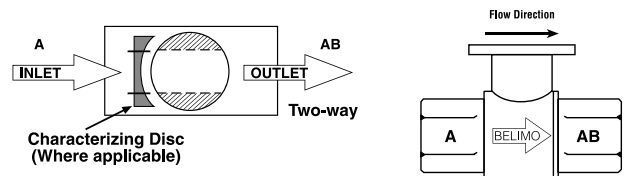
2WayValve-B207-B220

Valve Body	Valve Nominal Size		Dimensions (Inches [mm])	
	Inches	DN [mm]	A	B
B207-B211	½"	15	2.41" [61.1]	1.39" [35.2]
B212-B215	½"	15	2.38" [60.4]	1.78" [45.2]
B217-B220	¾"	20	2.73" [69.3]	1.87" [47.4]
B222-B225	1"	25	3.09" [78.4]	1.87" [47.4]
B229-B230	1¼"	32	3.72" [94.6]	1.87" [47.4]
B231-B232	1¼"	32	3.72" [94.6]	2.04" [51.9]
B238-B240	1½"	40	3.88" [98.5]	2.04" [51.9]
B248-B250	2"	50	4.21" [107.0]	2.27" [57.7]
B251-B254	2"	50	4.93" [125.2]	2.73" [69.5]
B261-B265	2½"	65	5.55" [140.9]	2.73" [69.5]
B277-B280	3"	80	5.82" [147.9]	2.73" [69.5]

C <sub>v</sub>	Valve Nominal Size		Type	Suitable Actuators	
	Inches	DN [mm]	2-Way NPT	Non-Spring	Spring
0.3	½"	15	B207	TR Series	
0.46	½"	15	B208		
0.8	½"	15	B209		
1.2	½"	15	B210		
1.9	½"	15	B211		
3	½"	15	B212		
4.7	½"	15	B213		
7.4	½"	15	B214		
10	½"	15	B215*		
4.7	¾"	20	B217		
7.4	¾"	20	B218		
10	¾"	20	B219		
24	¾"	20	B220*		
7.4	1"	25	B222		
10	1"	25	B223		
19	1"	25	B224		
30	1"	25	B225*		
10	1¼"	32	B229		
19	1¼"	32	B230*		
25	1¼"	32	B231		
37	1¼"	32	B232*		
19	1½"	40	B238		
29	1½"	40	B239		
37	1½"	40	B240*		
29	2"	50	B248		
46	2"	50	B249		
57	2"	50	B250*		
65	2"	50	B251		
85	2"	50	B252		
120	2"	50	B253		
240	2"	50	B254*		
60	2½"	65	B261		
75	2½"	65	B262		
110	2½"	65	B263		
150	2½"	65	B264		
210	2½"	65	B265*		
70	3"	80	B277		
130	3"	80	B278		
170	3"	80	B280*		

\*Models without characterizing disc

### Flow Patterns



M40013 - 06/11 - Subject to change. © Belimo Aircontrols (USA), Inc.



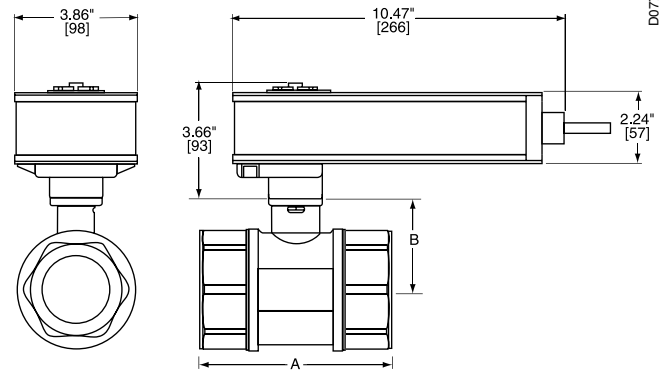
## Models

AF24 US	
AF24-S US	w/built-in Aux. Switches
AF120 US	
AF120-S US	w/built-in Aux. Switches

Technical Data	
Control	on/off
Power consumption	
AF24(-S) US	running 5 W
	holding 1.5 W
AF120(-S) US	running 6 W
	holding 2.3 W
Transformer sizing	
AF24(-S) US	10 VA (class 2 power source)
AF120(-S) US	11 VA (class 2 power source)
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
Manual override	hex crank
Running time	motor 150 seconds independent of load
	spring <20 seconds
Ambient temperature	-22° F to 122° F [-30° C to 50° C]
Housing	NEMA 2 / IP54
Agency listings	cULus according to UL 873 and CAN/CSA C22.2 No. 24-93
Noise level	max. 45 dB(A)

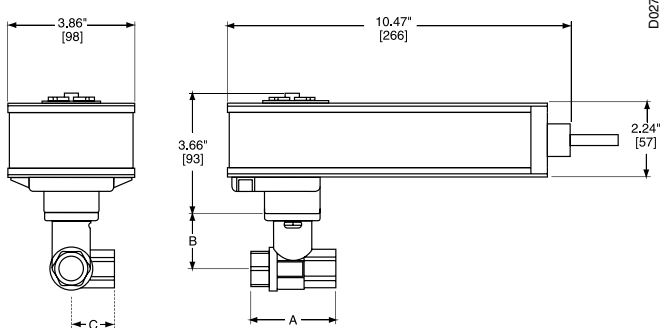
AF...-S US	
Auxiliary switches	2 x SPDT, 7A (2.5A) @ 250 VAC, UL listed, one switch is fixed at +5°, one is adjustable 25° to 85° (double insulated)

## Dimensions with 2-Way Valve



Valve Body	Valve Nominal Size		Dimensions (Inches [mm])	
	Inches	DN [mm]	A	B
B231-B232	1 1/4"	32	3.72" [94.6]	2.04" [51.9]
B238-B240	1 1/2"	40	3.88" [98.5]	2.04" [51.9]
B248-B250	2"	50	4.21" [107.0]	2.27" [57.7]
B251-B254	2"	50	4.93" [125.2]	2.73" [69.5]
B261-B265	2 1/2"	65	5.55" [140.9]	2.73" [69.5]
B277-B280	3"	80	5.82" [147.9]	2.73" [69.5]

## Dimensions with 3-Way Valve



Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
B329-B331	1 1/4"	32	3.96" [100.6]	2.27" [57.7]	2.14" [54.3]
B338-B341	1 1/2"	40	4.39" [111.6]	2.51" [63.7]	2.40" [61.1]
B347-B352	2"	50	4.90" [124.5]	2.73" [69.5]	2.74" [69.7]

### 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 Actuators may also be powered by 24 VDC.

4 For end position indication, interlock control, fan startup, etc., AF24-S US incorporates two built-in auxiliary switches: 2 x SPDT, 7A (2.5A) @ 250 VAC, UL listed, one switch is fixed at +5°, one is adjustable 25° to 85°.

#### 📄 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.

