

Product Range Overview



From design to delivery, many hands with one intention: Your complete satisfaction.



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Engineering



Sandra Leal
Payroll Manager



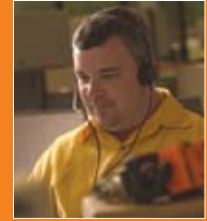
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Amber Maskaly
Customer Service



Matilde Reyes
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A passion for precision

Each product Belimo builds reflects our passion for precision. We've earned the place of market leader by valuing ingenuity and craftsmanship – by never resting on our accomplishments. Very simply, we strive to build damper actuators and control valves that solve your comfort challenges, perform flawlessly and earn your trust through a long and productive life.

Built to last

We bring that same ethic to our relationships with customers, employees, shareholders and business partners. We listen and respect your insight and perspective. Our interactions are guided by our values of honesty, openness and fairness. We want to build mutually beneficial relationships that, like our products, stand the test of time. That is our vision: Belimo. Together to the Top.

Leading through innovation

In 1975, the founders of Belimo broke with tradition and created the first direct coupled air damper actuator. This product set a new standard in actuator design. Belimo innovation continues today, in both damper actuator and control valve technology.

Sharp focus

By focusing solely on damper actuators and control valves for heating, ventilation, and air-conditioning, Belimo maintains technology and service leadership in this specialized area. Our complete product range and customer support has made Belimo a valued resource to consulting engineers, facilities managers, contractors, distributors, and original equipment manufacturers.



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Sonoma, California



Shell Point
Fort Meyers, Florida



FIESP Building
São Paulo, Brazil



Pier 1 Imports
Fort Worth, Texas



The Empire State Building
New York, New York



Canary Wharf
London, England



The Louvre
Paris, France



PeopleSoft
Pleasanton, California



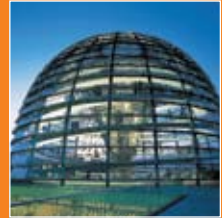
BOSE Corporation
Framingham, Massachusetts



Citibank
New York, New York



Mandalay Bay
Las Vegas, Nevada



Reichstag
Berlin, Germany

The "hands" of the control system

Damper actuators and control valves represent two-thirds of the points of control in most HVAC control systems. Quality actuators and valves help system designers to reach their goals in energy consumption, comfort, installation, life cycle costs, and safety.

Specify for performance

Because of the important role they play, actuators and valves should be specified, not included as an aside to the control system specification. By choosing Belimo, you ensure that your system has the most innovative and reliable actuator and valve technology available.

Quality you can count on




The quality process at Belimo involves a high level of communication between employees, customers, and suppliers. Our quality procedure encompasses customer satisfaction, product design, assembly and testing, sales and service. Each Belimo product is tested for electronic and mechanical integrity before shipment to customers. Belimo is an ISO-9001 certified company.



We never rest

Belimo is constantly innovating and expanding our range of damper actuators and control valves to include new products and technologies covering the entire HVAC control spectrum – from actuators for VAV units to large chilled water supply valves. The following examples reflect our commitment to bringing intelligence to the design and function of damper actuators and control valves.

Fire and Smoke Actuator Product Range

	Running Time		Power Supply			Power Consumption	Control Input	Auxiliary Switches	
	Motor Drive	Spring Return	24 VAC +/- 20%	120 VAC +/- 10%	230 VAC +/- 10%	VA Rating	On/Off	2 SPST, 7A (2.5A Inductive) @120/250V	2 SPDT, 7A (2.5A Inductive) @ 120/250V
FSAF Series 133 in-lb [15 Nm] Approx. 20 sq. ft. @ 250°F 	FSAF24 US	<75	<20	Ⓐ		10	●		
	FSAF24-S US	<75	<20	Ⓐ		10	●	●	
	FSAF120 US	<75	<20		●	11	●		
	FSAF120-S US	<75	<20		●	11	●	●	
	FSAF230 US	<75	<20			12	●		
	FSAF230-S US	<75	<20			12	●	●	
	FSAF24-SR US	<75	<20	●		11	2-10 VDC		
FSNF Series 70 in-lb [8 Nm] Approx. 12 sq. ft. @ 350°F 	FSNF24 US	<15	<15	●		27	●		
	FSNF24-S US	<15	<15	●		27	●		●
	FSNF120 US	<15	<15		●	27	●		
	FSNF120-S US	<15	<15		●	27	●		●
	FSNF230 US	<15	<15			27	●		
	FSNF230-S US	<15	<15			27	●		●
FSLF Series 30 in-lb [3.5 Nm] Approx. 4 sq. ft. @ 350°F 	FSLF24 US	<15	<15	Ⓒ		5	●		
	FSLF24-S US	<15	<15	Ⓒ		5	●	Ⓑ	
	FSLF120 US	<15	<15		●	18	●		
	FSLF120-S US	<15	<15		●	18	●	Ⓑ	
	FSLF230 US	<15	<15			18	●		
	FSLF230-S US	<15	<15			18	●	Ⓑ	

Ⓐ FSAF has 24 VAC ± 20%, VDC -10% +20% power supply.

Ⓑ 3A (.5A inductive) @ 125/250V

Ⓒ 24 VAC ± 10%

Non-Spring Return Actuator Product Range

	Jackshaft Linkage Compatible	Running Time	Power Supply	Power Consumption		Control Input		Control Input MFT				Position Feedback		Auxiliary Switches				
				Motor Drive (Default)	24 VAC +/- 20%, VDC +/- 10%	VA Rating	Wattage Running (Holding)	On/Off	Floating Point	2-10 VDC 4-20 mA* (w/500Ω Resistor)	On/Off	Floating Point	Start and Span adj., Start 0.5 to 30 VDC, Span 2.5 to 32 VDC	PWM adj., 0.02 to 50.0 Seconds	2-10 VDC	5kΩ Resistive Feedback	10kΩ Resistive Feedback	1 SPDT, 3A (0.5A Inductive) @250V
GM Series 360 in-lb [40 Nm] Approx. 90 sq. ft.	GMB24-3†	●	150	●	6	4.0 (2.0)	●	●										●
	GMB24-SR†	●	150	●	6.5	4.5 (2.0)			●				●					●
	GMB24-MFT ①	●	150	●	7	4.0 (1.5)			●	●	●	●	●					●
AM Series 180 in-lb [20 Nm] Approx. 45 sq. ft.	AMB24-3	●	95	●	5.5	2.5 (0.5)	●	●										●
	AMB24-3-S	●	95	●	5.5	2.5 (0.5)	●	●										●
	AMB24-SR	●	95	●	5	2.5 (0.4)			●				●					●
	AMB24-MFT ①	●	150	●	6	3.5 (1.3)			●	●	●	●	●					●
NM Series 90 in-lb [10 Nm] Approx. 22 sq. ft.	NMB24-3		95	●	4	2.0 (0.2)	●	●										●
	NMCB24-3		45	●	4	2.5 (0.2)	●	●										●
	NMB24-SR		95	●	5	2.5 (0.4)			●				●					●
	NMCB24-SR		45	●	5	2.5 (0.4)			●				●					●
LM Series 45 in-lb [5 Nm] Approx. 11 sq. ft.	NMB24-MFT ①		150	●	6	3.5 (1.3)			●	●	●	●	●	●				●
	LMB24-3		95	●	2	1.5 (0.2)	●	●										●
	LMCB24-3		35	●	2.5	1.5 (0.2)	●	●										●
	LMB24-3.1		95	●	2	1.5 (0.2)	●	●										●
	LMB24-3-S		95	●	2	1.5 (0.2)	●	●										●
	LMB24-3-T		95	●	2	1.5 (0.2)	●	●										●
	LMCB24-3-T		35	●	2.5	1.5 (0.2)	●	●										●
	LMB24-3-T.1		95	●	2	1.5 (0.2)	●	●										●
	LMB24-3-P5-T		95	●	2	1.5 (0.2)	●	●										●
	LMB24-3-P5-T.1		95	●	2	1.5 (0.2)	●	●										●
	LMB24-3-P10-T		95	●	2	1.5 (0.2)	●	●										●
	LMB24-SR		95	●	3	1.5 (0.4)			●					●				●
	LMCB24-SR		35	●	3	1.5 (0.4)			●					●				●
	LMB24-SR.1		95	●	3	1.5 (0.4)			●					●				●
	LMB24-SR-T		95	●	3	1.5 (0.4)			●									●
	LMCB24-SR-T		35	●	3	1.5 (0.4)			●									●
	LMB24-SR-T.1		95	●	3	1.5 (0.4)			●									●
	LMB24-MFT ①		150	●	5	2.5 (1.2)			●	●	●	●	●	●				●
CM Series 18 in-lb [2 Nm] Approx. 4.5 sq. ft.	CMB24-3		35	●	1.5	1.0 (0.2)	●	●										●
	CMB24-3.1		35	●	1.5	1.0 (0.2)	●	●										●
	CMB120-3		35		3.5	1.5 (1.0)	●	●										●
	CMB24-3-T		35	●	1.5	1.0 (0.2)	●	●										●
	CMB24-3-T.1		35	●	1.5	1.0 (0.2)	●	●										●
AH Series 101 lbf [450 N Force] 4 or 8 stroke	AHB24-3-100		150	●	4.5	2.0 (0.5)	●	●										●
	AHB24-3-200		150	●	4.5	2.0 (0.5)	●	●										●
	AHB24-SR-100		150	●	4.5	2.5 (0.5)			●					●				●
LH Series 34 lbf [150 N Force] 4 or 8 stroke	AHB24-SR-200		150	●	4.5	2.5 (0.5)			●					●				●
	LHB24-3-100		150*	●	3	1.5 (0.5)	●	●										●
	LHB24-3-T-100		150*	●	3	1.5 (0.5)	●	●										●
	LHB24-3-200		150*	●	3	1.5 (0.5)	●	●										●
	LHB24-SR-100		150*	●	3	1.5 (0.5)			●					●				●
LU Series 27 in-lb [3 Nm]	LHB24-SR-200		150*	●	3	1.5 (0.5)			●					●				●
	LUB24-3		150**	●	2.5	1.0 (0.5)	●	●										●
	LUB24-SR		150**	●	3	3.0 (0.5)			●					●				●

*Running time is 150 seconds per 4" [100 mm].

**Running time is 150 seconds per 360°.

†Dual mounting on a single shaft (-3 and -SR wired in parallel), (-MFT wired Master-Slave). Please call Belimo customer service for details.

① Shipped default. 150 seconds running time, 2-10 VDC control input and feedback. Other setups are possible with MFT tools field programming.

Control Valve Product Range

Pressure Independent Characterized Control Valve Product Range P2.., 2-way

Valve Nominal Size			Type	Suitable Actuators	
GPM	Inches	DN [mm]	2-way NPT	Non-Spring Return	Spring Return
0.5	1/2	15	PICCV-15-0.50 (-PT)*	LRB24-3	LFX24-MFT
1	1/2	15	PICCV-15-001 (-PT)*		
1.5	1/2	15	PICCV-15-1.50 (-PT)*		
2	1/2	15	PICCV-15-002 (-PT)*		
3	1/2	15	PICCV-15-003 (-PT)*		
4	1/2	15	PICCV-15-004 (-PT)*		
5	1/2	15	PICCV-15-005 (-PT)*		
6	3/4	20	PICCV-20-006 (-PT)*		
7	3/4	20	PICCV-20-007 (-PT)*		
8	3/4	20	PICCV-20-008 (-PT)*		
9	3/4	20	PICCV-20-009 (-PT)*		
10	3/4	20	PICCV-20-010 (-PT)*		
12	1	25	PICCV-25-012 (-PT)*		
14	1	25	PICCV-25-014 (-PT)*		
16	1	25	PICCV-25-016 (-PT)*		
18	1	25	PICCV-25-018 (-PT)*		
18	1-1/4	32	PICCV-32-018-PT		
20	1-1/4	32	PICCV-32-020-PT		
22	1-1/4	32	PICCV-32-022-PT		
24	1-1/4	32	PICCV-32-024-PT		
26	1-1/4	32	PICCV-32-026-PT		
26	1-1/2	40	PICCV-40-026-PT		
28	1-1/2	40	PICCV-40-028-PT		
30	1-1/2	40	PICCV-40-030-PT		
33	1-1/2	40	PICCV-40-033-PT		
33	2	50	PICCV-50-033-PT		
36	2	50	PICCV-50-036-PT		
40	2	50	PICCV-50-040-PT		
44	2	50	PICCV-50-044-PT		
48	2	50	PICCV-50-048-PT		
52	2	50	PICCV-50-052-PT		
56	2	50	PICCV-50-056-PT		
60	2	50	PICCV-50-060-PT		
65	2	50	PICCV-50-065-PT		
70	2	50	PICCV-50-070-PT		
75	2	50	PICCV-50-075-PT		
80	2	50	PICCV-50-080-PT		
90	2	50	PICCV-50-090-PT***		
100	2	50	PICCV-50-100-PT***		



Equal percentage characteristic

Applications

- Water-side control of heating and cooling systems, for AHUs, re-heat coils, fan coil units, unit ventilators and heat pumps.

Mode of Operation

The Pressure Independent Characterized Control Valve is a two-way valve which combines the functionality of a control valve and a pressure regulating valve, creating one precise product which is unaffected by pressure variations in a system.

Product Features

Constant flow regardless of pressure variations in the system at every degree of ball opening. Maximizes chiller ΔT , preventing energizing additional chillers due to low ΔT . Simplified valve sizing and selection, no C_v calculations required.

Actuator Specifications

Control type	Floating Pt, Non-Spring Multi-Function Technology Non-Spring and Spring Return
Manual override	(LRB, LRX, LRC, AF, ARC, ARX)
Electrical connection	3 ft [1m] cable with 1/2" conduit fitting

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	equal percentage
Action	controllable flow range 75°
Sizes	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
Type of end fitting	female, NPT
Materials	
Body	forged brass, nickel plated
Ball	chrome plated brass
Stem	chrome plated brass
Characterizing disc	TEFZEL®
Packing	2 EPDM O-rings, lubricated
Diaphragm	polyester reinforced silicone
Regulator components	stainless steel/brass/ Delrin 500AF
Spring	stainless steel
Pete's plug (Qty 2)	1/4" brass/Nortel optional (1/2", 3/4", 1" valve bodies)
Pressure rating	
600 psi	1/2", 3/4", 1"
400 psi	1-1/4", 1-1/2", 2"
Media temp range	0°F to 212°F [-18°C to 100°C]
Close off pressure	200 psi
Maximum differential pressure across valve range	5 to 50 psid
Leakage	ANSI Class IV (0.01% of rated valve capacity at 50 psi differential)

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*P/T ports optional
 **ARCX24-3 available Q4 2007
 ***90 and 100 GPM available Q4 2007

Control Valve Product Range

Characterized Control Valve Product Range B2., B3., B6., 2-way, 3-way

Valve Nominal Size			Type			Suitable Actuators	
C _v	Inches	DN [mm]	2-way NPT	3-way NPT	2-way Flange	Non-Spring Return	Spring Return
0.3	1/2	15	B207(B)	B307(B)	-	TR Series	TF Series
0.46	1/2	15	B208(B)	B308(B)	-		
0.8	1/2	15	B209(B)	B309(B)	-		
1.2	1/2	15	B210(B)	B310(B)	-		
1.9	1/2	15	B211(B)	B311(B)	-		
3	1/2	15	B212(B)	B312(B)	-		
4.7	1/2	15	B213(B)	B313(B)	-		
7.4	1/2	15	B214(B)		-		
10	1/2	15	B215(B)*	B315(B)*	-		
4.7	3/4	20	B217(B)	B317(B)	-		
7.4	3/4	20	B218(B)	B318(B)	-		
10	3/4	20	B219(B)		-		
24	3/4	20	B220(B)*	B320(B)*	-		
7.4	1	25	B222	B322	-		
10	1	25	B223	B323	-		
19	1	25	B224		-		
30	1	25	B225*	B325*	-		
10	1-1/4	32	B229	B329	-		
19	1-1/4	32	B230*	B330	-		
25	1-1/4	32	B231	B331	-		
37	1-1/4	32	B232*		-		
19	1-1/2	40	B238	B338	-		
29	1-1/2	40	B239	B339	-		
37	1-1/2	40	B240*	B340	-		
46	1-1/2	40		B341	-		
29	2	50	B248	B347	-		
37	2	50		B348	-		
46	2	50	B249	B349	-		
57	2	50	B250*	B350	-		
65	2	50	B251		-		
68	2	50		B351	-		
83	2	50		B352	-		
85	2	50	B252		-		
120	2	50	B253		-		
240	2	50	B254*		-		
60	2-1/2	65	B261		B661		
75	2-1/2	65	B262		B662		
110	2-1/2	65	B263		B663		
150	2-1/2	65	B264		B664		
210	2-1/2	65	B265*		B665		
70	3	80	B277		B677		
130	3	80	B278		B678		
170	3	80	B280*		B680		



Equal percentage characteristic

Applications

- Water-side control of heating and cooling systems, for AHUs, re-heat coils, fan coil units, unit ventilators and heat pumps.

Mode of Operation

The characterized control valve is a ball valve with integrated flow characterizing disc, which creates an equal percentage flow curve. A 90° rotation from the actuator will control the flow from 0-100%

Product Features

Equal percentage characteristic of the flow rate ensured by the integral characterizing disc. This characteristic provides linear heating or cooling output from the coil improving energy efficiency and comfort.

Actuator Specifications

Control type	On/Off, Floating, 2-10 VDC Multi-Function Technology
Manual override	TR, LR, AR, and AF Series
Electrical connection	3 ft [1m] cable with 1/2" conduit fitting or covered screw terminal strip

Valve Specifications

Service	chilled or hot water, 60% glycol	
Flow characteristic	A-port equal percentage B-port modified for constant common port flow	
Action	max 90° rotation	
Sizes	1/2" - 3"	
Type of end fitting	1/2" - 3" female, NPT 2-1/2" - 3" pattern to mate up with ANSI 125 flanges	
Materials	Body: forged brass, nickel plated Ball: stainless steel [BXXXB - chrome plated brass] Stem: stainless steel [BXXXB - chrome plated brass] Seats: PTFE Characterizing disc: TEFZEL® Packing: 2 EPDM O-rings, lubricated	
Pressure rating	2-way 600 psi 400 psi	3-way 1/2" - 1-1/4" (B230) 1-1/4" (B231) - 3" 1-1/4" - 2"
Media temp range	0°F to 212°F [-18°C to 100°C]	
Close off pressure	2-way 200 psi 100 psi	3-way 1/2" - 2" (B250) 1/2" - 2" 2" (B251) - 3"
Maximum differential pressure (ΔP)	for characterized A-port 20 psi for typical applications	
Leakage	0% for A to AB < 2% for B to AB	
C _v rating	A-port: see above product chart for values B-port: 70% of A to AB C _v	

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* Models without characterizing disc
(B) Models available with chrome plated brass ball and brass stem

Control Valve Product Range

High Temperature Characterized Control Valve Product Range B2..HT.., 2-way

Valve Nominal Size			Type	Suitable Actuators	
C _v	Inches	DN [mm]	2-way NPT	Non-Spring Return	Spring Return
0.29	1/2	15	B215HT029	TR Series	TF Series
0.46	1/2	15	B215HT046		
0.73	1/2	15	B215HT073		
1.16	1/2	15	B215HT116		
1.86	1/2	15	B215HT186		
2.9	1/2	15	B215HT290		
4.55	1/2	15	B215HT455*		
1.86	3/4	20	B220HT186	LR Series	LF Series
2.9	3/4	20	B220HT290		
4.46	3/4	20	B220HT464		
7.31	3/4	20	B220HT731		
9.28	3/4	20	B220HT928		
13.2	3/4	20	B220HT1320*		
4.64	1	25	B225HT464		
7.31	1	25	B225HT731		
11.6	1	25	B225HT1160		
18.56	1	25	B225HT1856		
28	1	25	B225HT2800*		

* on/off application



Equal-percentage characteristic

Applications

- Water/low pressure steam control of air handling apparatus in ventilation and air-conditioning systems
- District heating
- Humidifier
- Extremely low lead content makes this valve suitable for use as a potable water valve

Mode of Operation

The control valve is operated by an electronic actuator that responds to a standard voltage for on/off control, by a proportional VDC/4...20 mA, or 3-point control system. The actuator will then move the ball to the valve to the position dictated by the control signal thus changing the flow.

Product Features

Equal-percentage characteristic of the flow; models in bold have modified equal percentage characteristic.

Actuator Specifications

Control type	On/Off, Floating, 2-10 VDC Multi-Function Technology
Manual override	TR, LR Series
Electrical connection	3 ft [1m] cable with 1/2" conduit fitting

Valve Specifications

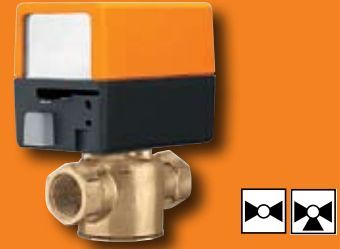
Service	potable or hot water, 60% glycol, steam
Flow characteristic	A-port equal percentage
Action	controllable flow range 75°
Sizes	1/2" - 1"
Type of end fitting	female, NPT
Materials	
Body	brass (DZR) P-CuZn35Pb2
Ball	stainless steel
Stem	stainless steel
Seats	PTFE Teflon
Characterizing disc	PTFE Teflon
Packing	EPDM O-rings
Pressure rating	600 psi
Media temp range	
Steam	250°F
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 rating	see above product chart for values

Control Valve Product Range

Zone Valve Product Range 2-way and 3-way

2-way								
Valve Nominal Size			Type		Suitable Actuators			
C _v	Inches	DN [mm]	NPT	Sweat	Normally Closed		Normally Open	
1	1/2	15	Zone 215N-10	Zone 215S-10	Zone	Zone (with Switch)	Zone	Zone (with Switch)
2.5	1/2	15	Zone 215N-25	Zone 215S-25				
3.5	1/2	15	Zone 215N-35	Zone 215S-35				
3.5	3/4	20	Zone 220N-35	Zone 220S-35				
5	3/4	20	Zone 220N-50	Zone 220S-50				
8	1	25	Zone 225N-80	Zone 225S-80				

3-way								
Valve Nominal Size			Type		Suitable Actuators			
C _v	Inches	DN [mm]	NPT	Sweat	Normally Closed		Normally Open	
1	1/2	15	Zone 315N-10	Zone 315S-10	Zone	Zone (with Switch)	Zone	Zone (with Switch)
2.5	1/2	15	Zone 315N-25	Zone 315S-25				
3.5	1/2	15	Zone 315N-35	Zone 315S-35				
3.5	3/4	20	Zone 320N-35	Zone 320S-35				
5	3/4	20	Zone 320N-50	Zone 320S-50				
8	1	25	Zone 325N-80	Zone 325S-80				



Applications

- Fan coil units and baseboards where fail safe operation or 2-wire control is required
- Hydronic systems with variable or constant flow

Mode of Operation

Zone valves provide a convenient way to create individual zones or equipment isolation in a hydronic system. Utilizing one pump along with multiple zone valves, flow can be started, stopped, or diverted through the system to provide individual room or area comfort control and energy savings.

Product Features

Zone valve is designed to fit in compact areas where on/off or control is required using 24 VAC or 120 VAC.

Actuator Specifications

Control type	On/Off, Diverting
Manual override	(only NC versions)
Electrical connection	6" [15cm] wire lead 120 V; 18" [45 cm] wire lead 24 V

Valve Specifications

Service	chilled or hot water, 50% glycol
Flow characteristic	
Two-way	on/off
Three-way	on/off, diverting
Sizes	1/2", 3/4" and 1"
Type of end fitting	female NPT or sweat
Materials	
Body	forged brass
Stem	stainless steel
Seals	EPDM
Pressure rating	300 psi
Media temp range	32°F to 212°F [0°C to 100°C]
Close off pressure	20-75 psi
Leakage	ANSI Class III 0.1%
C _v rating	see above product chart for values



Control Valve Product Range

Globe Valve Product Range

G2..., G3..., 2-way and 3-way, NPT

Valve Nominal Size			Type		Suitable Actuators					
C _v	Inches	DN [mm]	2-way NPT	3-way NPT	Non-Spring Return		Spring Return			
0.4	1/2	15	G212	-	LM Series	NV Series	LF Series	AF Series		
1.3	1/2	15	G213	-						
2.2	1/2	15	G214	-						
4.4	1/2	15	G215	-						
5.5	3/4	20	G219	-						
7.5	3/4	20	G220	-						
10	1	25	G224	-						
10	1	25	G224	-						
14	1	25	G225	-						
14	1	25	G225	-						
20	1-1/4	32	G232	-	NM Series	NV Series	AF Series			
20	1-1/4	32	G232	-						
28	1-1/2	40	G240	-						
28	1-1/2	40	G240	-						
28	1-1/2	40	G240	-						
40	2	50	G250	-						
40	2	50	G250	-						
40	2	50	G250	-						
0.4	1/2	15	G212S	-				LM Series	NV Series	AF Series
1.3	1/2	15	G213S	-						
2.2	1/2	15	G214S	G314						
4.4	1/2	15	G215S	G315						
5.5	3/4	20	G219S	-						
7.5	3/4	20	G220S	G320						
10	1	25	G224S	-						
10	1	25	G224S	-						
14	1	25	G225S	-						
14	1	25	G225S	G325						
20	1-1/4	32	G232S	G332	NM Series	NV Series	AF Series			
20	1-1/4	32	G232S	-						
28	1-1/2	40	G240S	G340						
28	1-1/2	40	G240S	-						
28	1-1/2	40	G240S	-						
40	2	50	G250S	-						
40	2	50	G250S	-						
40	2	50	G250S	-						
41	2	50	-	G350				AM Series	NV Series	AF Series
4.4	1/2	15	-	G315D						
7.5	3/4	20	-	G320D						
14	1	25	-	G325D						
20	1-1/4	32	-	G332D						
28	1-1/2	40	-	G340D						
41	2	50	-	G350D						



Applications

- Water-side control of air handling apparatus in ventilation and air-conditioning systems
- Water/Steam control in heating systems

Mode of Operation

The control valve is operated by an electronic actuator that responds to a standard voltage for on/off control, by a proportional VDC/4...20 mA, 3-point control system. The actuator will then move the plug of the valve to the position dictated by the control signal thus changing the flow.

Product Features

Equal-percentage characteristic of flow for G2, linear characteristic for G3.

Actuator Specifications

Control type	On/Off, Floating, 2-10 VDC Multi-Function Technology
Manual override	all models
Electrical connection	3 ft [1m] cable with 1/2" conduit fitting

Valve Specifications

Service	chilled or hot water, 60% glycol, steam
Flow characteristic	A-port equal percentage G2, linear G3
Action	Stem up open A to AB (G2) Stem up open B to AB (G3)
Sizes	1/2" - 2"
Type of end fitting	1/2" - 2" female, NPT
Materials	Body forged brass, 1/2"-2" Stem stainless steel Seats bronze: G2, G3 stainless steel: G2..S
Packing	spring loaded TFE: G2, G3 bronze trimmed
Pressure rating	G2, G3..., 1/2"-2" 250 psi
Media temp range	G2 20°F to 250°F [-7°C to 120°C], water, 15 psi steam, G2..S 50 psi steam G3 20°F to 250°F [-7°C to 120°C], water 35 psi, no steam
Maximum differential pressure (ΔP)	35 psi (water) 15 psi (steam)

Control Valve Product Range

Globe Valve Product Range G6..., 2-way, Flanged Connection

Valve Nominal Size		Type	Suitable Actuators			
C _v	Inches	2-Way Flange	Non-Spring Return		Spring Return	
65	2-1/2	G665	NVG Series	GM Series	AF Series	
90	3	G680				
65	2-1/2	G665S				
90	3	G680S				
65	2-1/2	G665-250				
90	3	G680-250				
65	2-1/2	G665S-250		NV Series		NF Series
90	3	G680S-250				
65	2-1/2	G665C				
90	3	G680C		GM Series		AF Series
65	3	G665CS				
90	3	G680CS				
170	4	G6100C				
170	4	G6100CS				
263	5	G6125C				
263	5	G6125CS				
344	6	G6150C				
344	6	G6150CS				

The G...C(S) Series valve is a pressure compensated valve that allows high close-off ratings while utilizing standard actuation.



Applications

- Water-side control of air handling apparatus in ventilation and air-conditioning systems
- Water/Steam control in heating systems

Mode of Operation

The control valve is operated by an electronic actuator that responds to a standard voltage for on/off control, a proportional VDC/4...20 mA, or 3-point control system. The actuator will then move the plug of the valve to the position dictated by the control signal thus change the flow.

Product Features

Equal-percentage characteristic for G6.

Actuator Specifications

Control type	On/Off, Floating, 2-10 VDC Multi-Function Technology
Manual override	all models
Electrical connection	3 ft [1m] cable with 1/2" conduit fitting

Valve Specifications

Service	chilled or hot water, 60% glycol, steam
Flow characteristic	A-port equal percentage
Sizes	2-1/2" - 6"
Type of end fitting	flanged
Materials	
Body	cast iron
Stem	stainless steel
Seats	bronze: G6 stainless steel: G6..S
Packing	bronze trimmed: NLP stainless trimmed, TFE V-ring
Pressure rating	
G6, 125# ANSI flange	125 psi
G6, 250# ANSI flange	250 psi
Media temp range	
G6	32°F to 350°F [0°C to 50°C], water
G6 (S)	338°F [170°C], steam
G6 (bronze)	280°F [138°C], steam
Maximum differential pressure (ΔP)	
25 psi (water) G6... 250	
15 psi (steam) G6... 250	
50 psi (water) G6...S 125	
50 psi (steam) G6...S 125	

Control Valve Product Range

Globe Valve Product Range G7..., 3-way, Flanged Connection

Valve Nominal Size		Type	Suitable Actuators			
C _v	Inches	3-Way Flange	Non-Spring Return	Spring Return		
68	2-1/2	G765	GM Series	AF Series		
85	3	G780				
68	2-1/2	G765S				
85	3	G780S				
68	2-1/2	G765-250				
85	3	G780-250				
68	2-1/2	G765S-250				
85	3	G780S-250				
190	4	G7100				
280	5	G7125				
340	6	G7150				
190	4	G7100S				
280	5	G7125S				
340	6	G7150S				
190	4	G7100-250				
280	5	G7125-250				
340	6	G7150-250				
190	4	G7100S-250				
280	5	G7125S-250				
340	6	G7150S-250				
68	2-1/2	G765D	NVG Series	AF Series		
85	3	G780D				
190	4	G7100D				
280	5	G7125D				
340	6	G7150D				
68	2-1/2	G765DS	NVG Series		AF Series	
85	3	G780DS				
190	4	G7100DS				
280	5	G7125DS				
340	6	G7150DS				
68	2-1/2	G765DS-250	NVG Series			AF Series
85	3	G780DS-250				
190	4	G7100DS-250				
280	5	G7125DS-250				
340	6	G7150DS-250				



Applications

- Water-side control of air handling apparatus in ventilation and air-conditioning systems
- Water/Steam control in heating systems

Mode of Operation

The control valve is operated by an electronic actuator that responds to a standard voltage for on/off control, a proportional VDC/4...20 mA, or 3-point control system. The actuator will then move the plug of the valve to the position dictated by the control signal thus changing the flow.

Product Features

Linear characteristic

Actuator Specifications

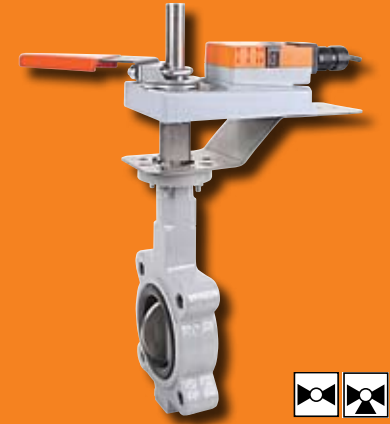
Control type	On/Off, Floating, 2-10 VDC Multi-Function Technology
Manual override	all models except NF
Electrical connection	3 ft [1m] cable with 1/2" conduit fitting

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	linear
Action	Stem up open A to AB
Sizes	2-1/2" - 6"
Type of end fitting	flanged
Materials	
Body	cast iron
Stem	stainless steel
Seats	bronze stainless steel
Packing	bronze trimmed: NLP stainless trimmed, TFE V-ring
Pressure rating	
G7, 125# ANSI flange	125 psi
G7, 250# ANSI flange	250 psi
Media temp range	
G7	32°F to 300°F [0°C to 148°C], water.
Maximum differential pressure (ΔP)	25 psi (water)

Control Valve Product Range

Electronic Butterfly Valve Product Range Standard Performance – Resilient Seat, 2-way and 3-way Valves



2-way					Suitable Actuators									
Valve Nominal Size				Type	Spring Return		Non-Spring Return							
C _v 90°	C _v 60°	Size	DN [mm]	2-way	HSU	HS	HSU	HS	HSU	HS	HSU	HS	HSU	HS
115	44	2	50	F650HS(U)	AF Series	HS	HSU	HS	HSU	HS	HSU	HS	HSU	HS
196	75	2.5	65	F665HS(U)										
302	116	3	80	F680HS(U)										
600	230	4	100	F6100HS(U)										
1022	392	5	125	F6125HS(U)										
1579	605	6	150	F6150HS(U)										
3136	1202	8	200	F6200HS(U)										
5340	2047	10	250	F6250HS(U)										
8250	3062	12	300	F6300HS(U)										
11917	4568	14	350	F6350HS										
16388	6282	16	400	F6400HS										
21705	8320	18	450	F6450HS										
27908	10698	20	500	F6500HS										
43116	16528	24	600	F6600HS										
73426	28146	30	750	F6750HS										

3-way					Suitable Actuators									
Valve Nominal Size				Type	Spring Return		Non-Spring Return							
C _v 90°	C _v 60°	Size	DN [mm]	3-way	HSU	HS	HSU	HS	HSU	HS	HSU	HS	HSU	HS
115	44	2	50	F750HS(U)	AF Series	HS	HSU	HS	HSU	HS	HSU	HS	HSU	HS
196	75	2.5	65	F765HS(U)										
302	116	3	80	F780HS(U)										
600	230	4	100	F7100HS(U)										
1022	392	5	125	F7125HS(U)										
1579	605	6	150	F7150HS(U)										
3136	1202	8	200	F7200HS(U)										
5340	2047	10	250	F7250HS(U)										
8250	3062	12	300	F7300HS(U)										
11917	4568	14	350	F7350HS										
16388	6282	16	400	F7400HS										
21705	8320	18	450	F7450HS										
27908	10698	20	500	F7500HS										
43116	16528	24	600	F7600HS										

Applications

These valves are designed to meet the needs of commercial and industrial HVAC applications requiring positive shutoff for liquids. Applications include chiller isolation, cooling tower isolation, change-over systems, large air handler coil control and bypass including related process control.

Mode of Operation

Butterfly valves allow higher flows with relatively low pressure loss from the valves, and are typically used for isolation or flow control for valve openings between 30 to 70 degrees of full open. At valve openings greater than 70 degrees, the pressure loss of a butterfly valve is too low to produce any significant effect on flow or the energy loss of a flow system. Butterfly valves can be controlled with a maintenance-free electronic actuator or manually with an ergonomic, wear-free plastic handle or gear operator.

Product Features

The unique disc and seat design ensures positive valve seating while maintaining low seating torque.

Actuator Specifications

Control type	On/Off, Floating, Proportional 2-10 VDC Multi-Function Technology
Manual override	all models
Electrical connection	3 ft [1m] cable with 1/2" conduit fitting

Valve Specifications

Service	chilled or hot water, 50% glycol
Flow characteristic	modified equal percentage
Action	90° rotation
Sizes	2" - 30"
Type of end fitting	125/150 lb. flanged
Materials	
Body	cast iron
Disc	304 stainless steel
Seat	EPDM standard
Body pressure	ASME/ANSI Class 125
Shaft	416 stainless steel
Media temp range	-22°F to +250°F
Maximum differential pressure (ΔP)	HSU: 50 psi HS: 200 psi
Leakage	bubble tight shut-off

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Control Valve Product Range

Electronic Butterfly Valve Product Range High Performance - RTFE Seat, 2-way and 3-way Valves

Valve Nominal Size			Type		Suitable Actuators					
C _v 90°	C _v 60°	Size	ANSI 150 2-way	ANSI 300 2-way	Spring Return		Non-Spring Return			
					150	300	150	300	150	300
102	56	2	F650-150SHP	F650-300SHP	AF Series	AF Series	GM Series	GM Series	SY Series	SY Series
146	80	2.5	F665-150SHP	F665-300SHP						
228	125	3	F680-150SHP	F680-300SHP						
451	248	4	F6100-150SHP	F6100-300SHP						
714	392	5	F6125-150SHP	F6125-300SHP						
1103	607	6	F6150-150SHP	F6150-300SHP						
2064	1135	8	F6200-150SHP	F6200-300SHP						
3517	1934	10	F6250-150SHP	F6250-300SHP						
4837	2660	12	F6300-150SHP	F6300-300SHP						
6857	3592	14	F6350-150SHP	F6350-300SHP						
9287	4865	16	F6400-150SHP	F6400-300SHP						
11500	3270	18	F6450-150SHP	F6450-300SHP						
14420	7590	20	F6500-150SHP	F6500-300SHP						
22050	11550	24	F6600-150SHP	F6600-300SHP						
34388	18012	30	F6750-150SHP	n/a						

Valve Nominal Size			Type		Suitable Actuators					
C _v 90°	C _v 60°	Size	ANSI 150 3-way	ANSI 300 3-way	Spring Return		Non-Spring Return			
					150	300	150	300	150	300
102	56	2	F750-150SHP	F750-300SHP	AF Series		GM Series		SY Series	
146	80	2.5	F765-150SHP	F765-300SHP						
228	125	3	F780-150SHP	F780-300SHP						
451	248	4	F7100-150SHP	F7100-300SHP						
714	392	5	F7125-150SHP	F7125-300SHP						
1103	607	6	F7150-150SHP	F7150-300SHP						
2064	1135	8	F7200-150SHP	F7200-300SHP						
3517	1934	10	F7250-150SHP	F6250-300SHP						
4837	2660	12	F7300-150SHP	F7300-300SHP						
6857	3592	14	F7350-150SHP	F7350-300SHP						
9287	4865	16	F7400-150SHP	F7400-300SHP						
11500	3270	18	F7450-150SHP	F7450-300SHP						
14420	7590	20	F7500-150SHP	F7500-300SHP						
22050	11550	24	F7600-150SHP	F7600-300SHP						



Applications

These valves are designed to meet the needs of commercial and industrial HVAC applications requiring positive shutoff for liquids at higher pressure and temperatures. Applications include chiller isolation, cooling tower isolation, change-over systems, large air handler coil control and bypass including related process control.

Mode of Operation

Butterfly valves allow higher flows with relatively low pressure loss from the valves, and are typically used for isolation or flow control for valve openings between 30 to 70 degrees of full open. At valve openings greater than 70 degrees, the pressure loss of a butterfly valve is too low to produce any significant effect on flow or the energy loss of a flow system. Butterfly valves can be controlled with a maintenance-free electronic actuator or manually with an ergonomic, wear-free plastic handle or gear operator.

Product Features

Unique body seat and disc design ensuring positive valve sealing to help assure leak free performance in water applications while maintaining low seating torque.

Actuator Specifications

Control type	On/Off, Floating, Proportional 2-10 VDC Multi-Function Technology
Manual override	all models
Electrical connection	3 ft [1m] cable with 1/2" conduit fitting

Valve Specifications

Service	chilled or hot water, glycol, steam to 50 psi
Flow characteristic	modified equal percentage, unidirectional
Action	quarter turn, mechanically limited
Sizes	2" - 30"
Type of end fitting	ANSI Class 250/300 flanged
Materials	Body: cast steel full lug Disc: 316 stainless steel Seat: RTFE Body Pressure: ASME/ANSI Class 150/300 Shaft: 17-4 pH stainless
Media temp range	-20°F - 400°F [-30°F - 204°F]
Maximum differential pressure (ΔP)	ANSI Class 150 - 285 psi @ 100°F ANSI Class 300 - 725 psi @ 100°F
Leakage	bubble tight shut-off



Control Valve Product Range

VS/VSS Ball Valve Product Range B2...VS/VSS, B3...VS, B6...VS

Valve Nominal Size			Type			Suitable Actuators			
C _v	Inches	DN [mm]	2-way NPT	3-way NPT	2-Way Flange	Non-Spring Return	Spring Return		
1	1/2	15	B212VS			LM Series	LF Series		
2	1/2	15	B213VS					NF Series	
4	1/2	15	B214VS						AF Series
15	1/2	15	B215VS						
30	3/4	20	B219VS						
51	3/4	20	B220VS						
43	1	25	B224VS				GM Series	AF Series	
68	1	25	B225VS						
48	1-1/4	32	B232VS						
84	1-1/2	40	B239VS						
177	1-1/2	40	B240VS						
108	2	50	B249VS						
389	2	50	B250VS						
503	2-1/2	65	B265VS						
370	3	200	B280VS						
15	1/2	15	B215VSS			NM Series			LF Series
30	3/4	15	B219VSS						
43	1	15	B224VSS						
48	1-1/4	15	B232VSS						
84	1-1/2	20	B239VSS						
108	2	20	B249VSS						
503	2-1/2	25	B265VSS						
2	1/2	15		B314VS		LM Series	AF Series		
4.8	1/2	15		B315VS					
11	3/4	20		B320VS					
21	1	25		B325VS					
33	1-1/4	32		B332VS					
49	1-1/2	40		B340VS		GM Series	AF Series		
91	2	50		B350VS					
330	2	50			B650VS			SY Series	
420	2-1/2	65			B665VS				
600	3	80			B680VS				
1200	4	100			B6100VS				
3300	6	150			B6150VS				
9000	8	203			B6200VS				
12400	10	254			B6250VS				



Applications

- Water-side control of air handling apparatus in ventilation and air-conditioning systems
- Water/Steam control in heating systems

Mode of Operation

The control valve is operated by an electronic actuator that responds to a standard voltage for on/off control, by a proportional VDC/4...20 mA, or 3-point control system. The actuator will then move the ball to the valve to the position dictated by the control signal thus changing the flow.

Product Features

Modified equal percentage of flow for B2, B3 and B6.

Actuator Specifications

Control type	On/Off, Floating, Proportional 2-10 VDC Multi-Function Technology
Manual override	all models except NF, LF
Electrical connection	3 ft [1m] cable with 1/2" conduit fitting

Valve Specifications

Service	chilled or hot water, 60% glycol or steam
Flow characteristic	modified equal percentage (2-way), modified linear (3-way)
Type of end fitting	NPT (B2 & B3 VS/VSS) flanged (B6VS)
Materials	
Body	bronze (B2 & B3VS), stainless steel (B2VSS), cast iron (B6VS)
Stem	stainless steel
Seats	PTFE
Packing	PTFE
Media temp range	-22°F - 280°F [30°C-138°C]



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Configurable control and feedback signal type	Reduced number of actuators required in stock
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Scalable operating range	Optimized control resolution for every operating range
Min, Mid, Max override function	Additional system control beyond modulation
Stored alarm information	Ease troubleshooting
Data logging capability	Gather system data for optimization or diagnostics

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