6 CHARACTERIZED CONTROL VALVES (CCV™)

- Equal percentage flow characteristic yields a linear heat output.
- Cv values equal to globe valves of the same size requiring no additional system design.
- Valve bodies available with stainless steel trim or chrome plated brass trim depending upon application and cost involved.
- Higher close-off rating ensures shut off.
- 3-way assemblies can be piped for mixing or diverting applications.

Applications

The Characterized Control Valve (CCV) marks a true advancement in control valves. It combines the high close-off capabilities of a ball valve with a specialized disc that ensures a true equal percentage flow characteristic. Since its release in 1999, over 2 million CCVs have been sold in hydronic systems. The CCV offers a comprehensive Cv range for various applications such as air handlers, heating and cooling coils, fan coil units, unit ventilators and VAV re-heat coils.

Characterized Control Valve™ Nomenclature

B2	09		LRX	24	-MFT	

Valve
B2 = 2-way
B3 = 3-way
B6 = 2-way Flanged

Valve Size
07-80 = ½" to 3"

Trim Material
B = Chrome Plated Brass Ball, Nickel Plated Stem
Blank = Stainless Steel Ball and Stem

Actuator Type
Non-Spring Return
TR…
LRB…
LRX…
ARB…
ARX…
Spring Return
TF…
LF…
AF…

Power Supply
24 = 24 VAC/DC
120 = 120 VAC*
230 = 230 VAC

Control
Blank = On/Off, Floating
-3 = Floating Point
-SR = 2-10 VDC
-MFT = Multi-Function Technology
-MFT95 = 0-135 Ω

-S = Built-in Auxiliary Switch
-T = Terminal Strip
N4 = NEMA 4X
N4H = NEMA 4X with Heater

Ordering Example

1 Choose the valve actuator combination.

B209+LRX24-MFT

2 Specify preference or configuration.

Set-Up

Non-Spring Models
NO = Normally Open
NC = Normally Closed

Spring Return Models
NO/FO = Normally Open/Fail Open
NO/FC = Normally Open/Fail Closed

NC/FO = Normally Closed/Fail Open
NC/FC = Normally Closed/Fail Closed

See settings
Refers to valve ports A to AB.

3 For MFT orders only - select programming code

+NO

+Tagging (if needed)

P-10001 (A01)

P-100xx (Axx)	Control voltage applications
P-200xx (Wxx)	Pulse width modulation applications
P-300xx (Fxx)	Floating Point applications
P-400xx (Jxx)	On/Off applications
X-XXXXX	Create custom MFT configuration code
X-XXXXX	Create custom MFT configuration in the field with MFT-actuator PC software

4 Does order require tagging?

Tagging:
Valves may be tagged per customer specification. ($10.00 charge per tag)

Example:
AHU-1
FCU-2

Part number for tagging: 99981-00101

5 Complete Ordering Example: B209+LRX24-MFT+NO+A01

*LR and AR include 120-240 VAC

Control Valve Product Range

Characterized Control Valves Product Range

B2.., B3.., B6.., 2-way, 3-way, Stainless Steel and Brass Ball and Stem

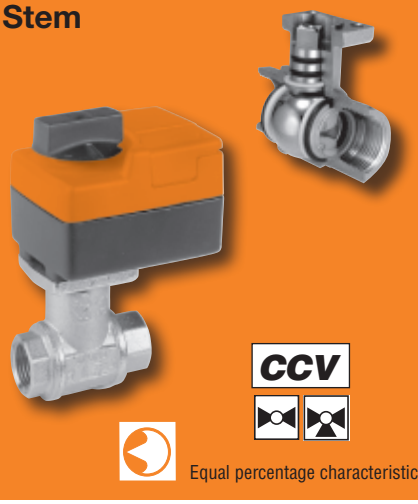
	Valve Nominal Size		Type			Suitable Actuators				
						Non-Spring Return		Spring Return		NEMA 4X
C_V	Inches	DN [mm]	2-way NPT	3-way NPT	2-way Flange	TR Series	LR Series	TF Series	LF Series	NR Series
0.3	½	15	B207(B)	B307(B)	–					
0.46	½	15	B208(B)	B308(B)	–					
0.8	½	15	B209(B)	B309(B)	–					
1.2	½	15	B210(B)	B310(B)	–					
1.9	½	15	B211(B)	B311(B)	–					
3	½	15	B212(B)	B312(B)	–					
4.7	½	15	B213(B)	B313(B)	–					
7.4	½	15	B214(B)		–					
10	½	15	B215(B)*	B315(B)*	–					
4.7	¾	20	B217(B)	B317(B)	–					
7.4	¾	20	B218(B)	B318(B)	–					
10	¾	20	B219(B)		–					
24	¾	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	1¼	32	B229	B329	–					
19	1¼	32	B230*	B330	–					
25	1¼	32	B231	B331	–					
37	1¼	32	B232*		–					
19	1½	40	B238	B338	–					
29	1½	40	B239	B339	–					
37	1½	40	B240*	B340	–					
46	1½	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	2½	65	B261		B661					
70	2½	65			B6250S-070					
75	2½	65	B262		B662					
110	2½	65	B263		B663, B6250S-110					
150	2½	65	B264		B664					
210	2½	65	B265*		B665*					
70	3	80	B277		B677					
110	3	80			B6300S-110					
130	3	80	B278		B678					
170	3	80	B280*		B680*					

AR Series

AF Series

AR Series

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



CCV

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 operated by a rotary actuator. The actuators are controlled by a standard voltage for on/off control or a proportional signal or 3-point control system which move the ball of the valve to the position dictated by the control system.

Product Features

The equal-percentage characteristic of the flow is 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 Point, 2-10 VDC, Multi-Function Technology (MFT)
Manual override	TR, LR, AR, and AF series
Electrical connection	3 ft [1m] cable with ½" 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	½" - 3"	
Type of end fitting		
½" - 3"	NPT female ends	
2½" - 3"	ANSI 125 flange pattern	
Materials		
Body	forged brass, nickel plated	
Ball	stainless steel [BXXXB - chrome plated brass]	
Stem	stainless steel [BXXXB - nickel plated brass]	
Seats	PTFE	
Characterizing disc	TEFZEL® stainless steel (B6250/300)	
Packing	2 EPDM O-rings, lubricated	
Pressure rating	2-way	3-way
600 psi	½" - 1¼" (B230)	½" - 1"
400 psi	1¼" (B231) - 3"	1¼" - 3"
Media temp range	0°F to 212°F [-18°C to 100°C]	
Close-off pressure	2-way	3-way
200 psi	½" - 2" (B250)	½" - 2"
100 psi	2" (B251) - 3", B6	
Maximum differential pressure (ΔP)	30 psi, 58 psi (B6250/300)	
Leakage	0% for A to AB < 2.0% for B to AB	
C_V rating	A port: see product chart above for values B port: 70% of A to AB C_V	

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BELIMO

SET-UP

		2-WAY VALVE SPECIFY UPON ORDERING		3-WAY VALVE SPECIFY UPON ORDERING	
NON-SPRING RETURN Stays in Last Position	**TR24-3-T US** **TR24-3 US**	Power to pin 2 will drive valve CCW. Power to pin 3 will drive valve CW.		Power to pin 2 will drive valve CCW. Power to pin 3 will drive valve CW.	
	TR24-SR-T US **TR24-SR US**	**NC:** Closed A to AB, will open as voltage increases.	**NO:** Open A to AB, will close as voltage increases. (Can be chosen with switch inside terminal block of actuator.)	**NC:** Closed A to AB, will open as voltage increases.	**NO:** Open A to AB, will close as voltage increases. (Can be chosen with switch inside terminal block of actuator.)
	LRB24-3, LRB24-MFT **LRB24-SR,** **LRX24-MFT,** **ARB24-3, ARB24-SR** **ARB24-MFT** **ARX24-MFT**	Power to pin 2 will drive valve CW. Power to pin 3 will drive valve CCW. The above will function when the directional switch is in the "1" position, to reverse select the "0" position.	**NO:** Open A to AB, will close as voltage increases or power applied. (Can be chosen with CW/CCW switch.)	Power to pin 2 will drive valve CW. Power to pin 3 will drive valve CCW. The above will function when the directional switch is in the "1" position, to reverse select the "0" position.	**NO:** Open A to AB, will close as voltage increases or power applied. (Can be chosen with CW/CCW switch.)
SPRING RETURN Note Fail Position	**TFX24 US** **LF24 US** **AF24 US**	**NO/FO** Valve: Open A to AB will drive closed. Spring Action: Will spring open A to AB upon power loss.	**NC/FC** Valve: Closed A to AB will drive open. Spring Action: Will spring closed A to AB upon power loss.	**NO/FO** Valve: Open A to AB will drive closed. Spring Action: Will spring open A to AB upon power loss.	**NC/FC** Valve: Closed A to AB will drive open. Spring Action: Will spring closed A to AB upon power loss.
	TF (-3), MFT, SR **LF (-3), MFT, SR** **AF (-3), MFT, SR** Floating Point or Proportional type actuators	**NC/FO** Valve: Closed A to AB will drive open. Spring Action: Will spring open A to AB upon power loss.	**NC/FC** or **NO/FC** Valve: Closed A to AB or Open A to AB. (Can be chosen with CW/CCW switch.) Spring Action: Will spring closed A to AB upon power loss. **NO/FO** Valve: Open A to AB Spring Action: Will spring open A to AB upon power loss. (**NO** action can be chosen with CW/CCW switch.)	**NC/FO** Valve: Closed A to AB will drive open Spring Action: Will spring open A to AB upon power loss.	**NC/FC** or **NO/FC** Valve: Closed A to AB or Open A to AB. (Can be chosen with CW/CCW switch.) Spring Action: Will spring closed A to AB upon power loss. **NO/FO** Valve: Open A to AB Spring Action: Will spring open A to AB upon power loss. (**NO** action can be chosen with CW/CCW switch.)

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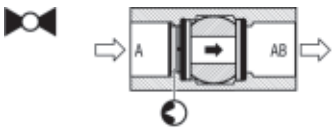
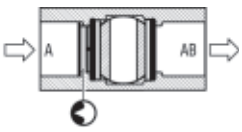
FLOW PATTERNS

2-way Characterized Control Valves™ **(Belimo B2 Series)**
(Belimo B6 Series)

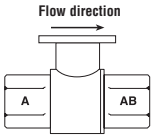


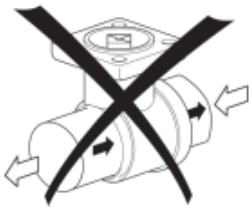
A→AB 100%



A→AB 0%

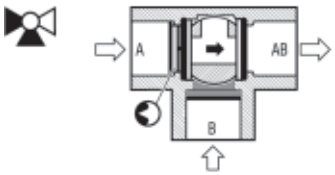
Two-way valves should be installed with the disc upstream.



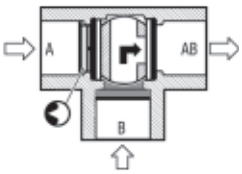


3-way Characterized Control Valves™ **(Belimo B3 Series)**

MIXING



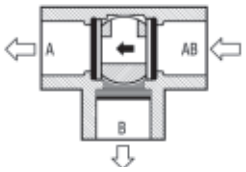
A→AB 100%
B→AB 0%



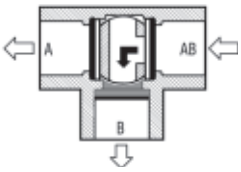
A→AB 0%
B→AB 70%

The A-port must be piped to the coil to maintain proper control.

DIVERTING



A→AB 100%
B→AB 0%

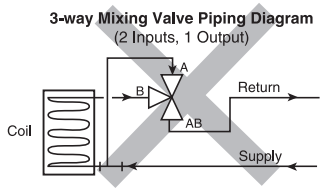


A→AB 0%
B→AB 70%

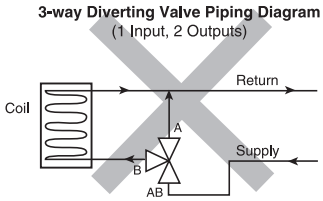
INCORRECT PIPING

The A-port must be piped to the coil to maintain proper control.

3-way Mixing Valve Piping Diagram
(2 Inputs, 1 Output)



3-way Diverting Valve Piping Diagram
(1 Input, 2 Outputs)



WARNING! Do Not Pipe in this manner!
Note Valve Porting!
The A-port must be piped to the coil! Not the B-port!

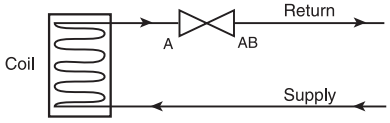
Flow is not possible from A to B. If AB-port is not piped as the common port, the valve must be re-piped. It is good practice to install a balancing valve in the bypass line. These valves are intended for closed loop systems. Do not install in an open loop system or in an application that is open to atmospheric pressure.

OPERATION/INSTALLATION – CORRECT PIPING

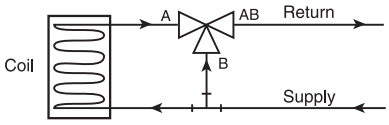
2-way valves should be installed with the disc upstream. If installed with disc downstream, flow curve will be deeper. If installed "backwards" it is NOT necessary to remove and change. No damage or control problems will occur.

3-WAY VALVES MUST BE PIPED CORRECTLY. They can be mixing or diverting. Mixing is the preferred piping arrangement.

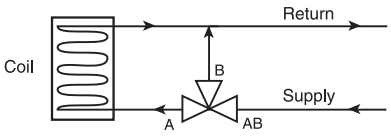
2-way Valve Piping Diagram
(1 Input, 1 Output)



3-way Mixing Valve Piping Diagram
(2 Inputs, 1 Output)



3-way Diverting Valve Piping Diagram
(1 Input, 2 Outputs)



The BELIMO Characterized Control Valve is a CONTROL valve, not a manual valve adapted for actuation. The control port is the A-port. It is similar to the globe valve in that the middle port is the B or bypass port. The common port AB is on the main opposite the A-port. These diagrams are for typical applications only. Consult engineering specification and drawings for particular circumstances.

REDUCED B-PORT FLOW

Note: The B-port flow of the 3-way CCV is lower than that of the A-port. In most applications this is beneficial since the reduced flow compensates for the inexistent pressure drop across the coil in the bypass mode. Therefore, proper sizing is important to avoid flow noise in particular when the system is designed with constant speed pumps. Please refer to our valve sizing and selection guidelines.

The flow velocity in the pipe upstream and downstream of the valve should be considered as well. The typical HVAC design maximum flow is 4 to 8 ft/s to avoid noise issues.

Also, the pipe reduction factor must be considered. Pipe reducers decrease the C_V value of a valve and consequently increase the pressure drop across the valve creating a situation that could lead to noise or a lower than designed flow.

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PIPING REDUCTION CHART

Piping Reduction Factor (Fp) - Correction Factor for Valves

Values in chart are corrected C_V ratings for indicated pipe size.

VALVE SIZE				LINE SIZE										
Model #	Inches	DN (mm)	C_V Rating	½"	¾"	1"	1¼	1½	2"	2½	3	4"	5"	6"
B215*	½"	15	10	10	7.4	6.3								
B220*	¾"	20	24		24	19	16.1	14.6						
B225*	1"	25	30			30	27.3	24.9	21.9					
B230*	1¼"	32	19				19	18.8	18.2	17.9				
B232*	1¼"	32	37				37	35.5	31.8	30				
B240*	1½"	40	37					37	35	34	33			
B250*	2"	50	57						57	56	54	52		
B251	2"	50	65						65	65	64	64		
B252	2"	50	85						85	81	78	74		
B253	2"	50	120						120	107	102	92		
B254	2"	50	240						240	197	182	148		
B261	2½"	65	60							60	58	55	54	
B262	2½"	65	75							75	73	72	70	
B263	2½"	65	110							110	104	100	95	
B264	2½"	65	150							150	139	132	122	
B265	2½"	65	210							210	190	175	164	
B277	3"	80	70								70	69	68	68
B278	3"	80	130								130	119	115	113
B280	3"	80	170								170	148	142	139
B661	2½"	65	60							60	58	55	54	
B662	2½"	65	75							75	73	72	70	
B663	2½"	65	110							110	104	100	95	
B664	2½"	65	150							150	139	132	122	
B665	2½"	65	210							210	190	175	164	
B677	3"	80	70								70	69	68	68
B678	3"	80	130								130	119	115	113
B680	3"	80	170								170	148	142	139

*Models without disc.

NOTE: Please use the corrected C_V values for the valves listed in the chart, when installing them in pipes larger than the line size of the valve. All CCVs not listed do not require piping reduction factors.

NOTE: Values also apply to A-AB flow of 3-way versions.

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B2/B3 Series Characterized Control Valve, Non-Spring Return Actuator

2-way and 3-way Valves with Chrome Plated Brass Ball and Brass Stem, NPT Female Ends

BELIMO

Valve Specifications	
Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage B-port modified linear for constant flow
Action	90° rotation
Sizes	½", ¾"
Type of end fitting	NPT female ends
Materials:	
Body	forged brass, nickel plated
Ball	chrome plated brass
Stem	chrome plated brass
Seats	PTFE
Characterizing disc	TEFZEL®
Packing	2 EPDM O-rings, lubricated
Pressure rating	600 psi
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB <2.0% for B to AB
C_V rating	A-port: as stated in chart B-port: 70% of A to AB C_V

5 YEAR WARRANTY

Non-Spring Return Actuators

ACTUATOR PART #					TR24-3-T US	TR24-3 US	TR24-SR-T US	TR24-SR US	LRB24-3-T	LRB24-3	LRB24-SR-T	LRB24-SR
Control type					On/Off, Floating Point	On/Off, Floating Point	Proportional	Proportional	On/Off, Floating Point	On/Off, Floating Point	Proportional	Proportional
Manual override					•	•	•	•	•	•	•	•
Running time					90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	90 seconds
Noise level					<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)
ELECTRICAL CONNECTION:												
3 ft [1m] cable, ½" conduit fitting						•		•		•		•
Covered terminal strip					•		•		•		•	
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**								
B2…B 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS												
B207B	0.3	½	15	200	$174.00	$186.00	$262.00	$274.00	$216.00	$230.00	$330.00	$342.00
B208B	0.46	½	15	200	$174.00	$186.00	$262.00	$274.00	$216.00	$230.00	$330.00	$342.00
B209B	0.8	½	15	200	$174.00	$186.00	$262.00	$274.00	$216.00	$230.00	$330.00	$342.00
B210B	1.2	½	15	200	$176.00	$188.00	$264.00	$276.00	$218.00	$232.00	$332.00	$344.00
B211B	1.9	½	15	200	$176.00	$188.00	$264.00	$276.00	$218.00	$232.00	$332.00	$344.00
B212B	3	½	15	200	$180.00	$192.00	$270.00	$282.00	$224.00	$236.00	$340.00	$352.00
B213B	4.7	½	15	200	$182.00	$194.00	$274.00	$286.00	$226.00	$238.00	$344.00	$356.00
B214B	7.4	½	15	200	$186.00	$198.00	$278.00	$292.00	$230.00	$242.00	$348.00	$362.00
B215B*	10	½	15	200	$188.00	$200.00	$280.00	$294.00	$232.00	$244.00	$350.00	$364.00
B217B	4.7	¾	20	200	$226.00	$238.00	$296.00	$310.00	$264.00	$276.00	$366.00	$378.00
B218B	7.4	¾	20	200	$228.00	$240.00	$300.00	$314.00	$266.00	$278.00	$370.00	$382.00
B219B	10	¾	20	200	$230.00	$242.00	$302.00	$318.00	$268.00	$280.00	$372.00	$384.00
B220B*	24	¾	20	200	$232.00	$244.00	$304.00	$320.00	$270.00	$282.00	$374.00	$386.00
B3…B 3-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS												
B307B	0.3	½	15	200	$214.00	$228.00	$326.00	$338.00	$254.00	$266.00	$368.00	$380.00
B308B	0.46	½	15	200	$214.00	$228.00	$326.00	$338.00	$254.00	$266.00	$368.00	$380.00
B309B	0.8	½	15	200	$214.00	$228.00	$326.00	$338.00	$254.00	$266.00	$368.00	$380.00
B310B	1.2	½	15	200	$216.00	$230.00	$328.00	$340.00	$256.00	$268.00	$370.00	$382.00
B311B	1.9	½	15	200	$216.00	$230.00	$328.00	$340.00	$256.00	$268.00	$370.00	$382.00
B312B	3	½	15	200	$224.00	$236.00	$334.00	$346.00	$260.00	$272.00	$376.00	$388.00
B313B	4.7	½	15	200	$226.00	$238.00	$338.00	$350.00	$264.00	$276.00	$380.00	$392.00
B315B*	10	½	15	200	$228.00	$240.00	$340.00	$352.00	$270.00	$282.00	$382.00	$394.00
B317B	4.7	¾	20	200	$278.00	$292.00	$356.00	$370.00	$286.00	$300.00	$400.00	$414.00
B318B	7.4	¾	20	200	$280.00	$294.00	$358.00	$372.00	$292.00	$304.00	$402.00	$416.00
B320B*	24	¾	20	200	$282.00	$296.00	$362.00	$374.00	$296.00	$310.00	$404.00	$418.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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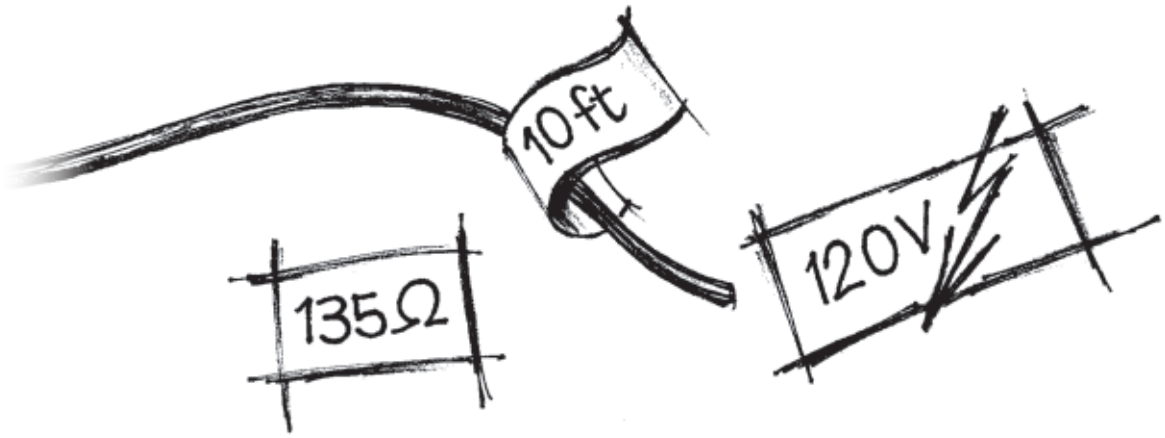
OPTIONS



Non-Spring Return Actuator Options

OPTIONS		TR24-3/300 US	TR24-SR/300 US	LRB24-3-S US	LRB120-3	LRB120-SR
Control type		On/Off, Floating Point	Proportional	On/Off, Floating Point	On/Off, Floating Point	Proportional
120 VAC power supply					•	•
Built-in auxiliary switch				•		
3 ft [1m] cable				•	•	•
10 ft [3m] cable		•	•			
CCV Model #	**C_V Rating**					
B2…B 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS						
B207B	0.3	$202.00	$292.00	$280.00	$260.00	$374.00
B208B	0.46	$202.00	$292.00	$280.00	$260.00	$374.00
B209B	0.8	$202.00	$292.00	$280.00	$260.00	$374.00
B210B	1.2	$204.00	$294.00	$282.00	$262.00	$376.00
B211B	1.9	$204.00	$294.00	$282.00	$262.00	$376.00
B212B	3	$210.00	$300.00	$286.00	$266.00	$384.00
B213B	4.7	$214.00	$304.00	$290.00	$268.00	$388.00
B214B	7.4	$218.00	$310.00	$294.00	$272.00	$392.00
B215B*	10	$222.00	$312.00	$296.00	$274.00	$394.00
B217B	4.7	$254.00	$328.00	$332.00	$310.00	$408.00
B218B	7.4	$256.00	$332.00	$334.00	$312.00	$414.00
B219B	10	$258.00	$334.00	$336.00	$314.00	$416.00
B220B*	24	$260.00	$336.00	$338.00	$318.00	$418.00
B3…B 3-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS						
B307B	0.3	$244.00	$354.00	$322.00	$298.00	$412.00
B308B	0.46	$244.00	$354.00	$322.00	$298.00	$412.00
B309B	0.8	$244.00	$354.00	$322.00	$298.00	$412.00
B310B	1.2	$246.00	$356.00	$324.00	$300.00	$414.00
B311B	1.9	$246.00	$356.00	$324.00	$300.00	$414.00
B312B	3	$252.00	$364.00	$328.00	$304.00	$422.00
B313B	4.7	$254.00	$368.00	$332.00	$310.00	$426.00
B315B*	10	$256.00	$370.00	$338.00	$318.00	$428.00
B317B	4.7	$310.00	$386.00	$354.00	$334.00	$448.00
B318B	7.4	$312.00	$388.00	$358.00	$338.00	$450.00
B320B*	24	$314.00	$390.00	$364.00	$342.00	$452.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

K20945 - 04/09 - Subject to change. © Belimo Aircontrols (USA), Inc.

B2/B3 Series Characterized Control Valve, Spring Return Actuator

2-way and 3-way Valves with Chrome Plated Brass Ball and Brass Stem, NPT Female Ends

BELIMO

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage B-port modified linear for constant flow
Action	90° rotation
Sizes	½", ¾"
Type of end fitting	NPT female ends
Materials:	
Body	forged brass, nickel plated
Ball	chrome plated brass
Stem	chrome plated brass
Seats	PTFE
Characterizing disc	TEFZEL®
Packing	2 EPDM O-rings, lubricated
Pressure rating	600 psi
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB <2.0% for B to AB
C_V rating	A-port: as stated in chart B-port: 70% of A to AB C_V

5 YEAR WARRANTY

Spring Return Actuators

ACTUATOR PART #		TFX24 US	TF24-3 US	TF24-SR US	LF24 US	LF24-3 US	LF24-SR US
Control type		On/Off	Floating Point	Proportional	On/Off	Floating Point	Proportional
Manual override							
Running time	Motor	<75 seconds	95 seconds	95 seconds	<40-75 seconds	150 seconds	150 seconds
	Spring	<75 seconds	<25 seconds	<25 seconds	<25 seconds	<25 seconds	<25 seconds
Noise level	Running	<40 dB(A)	<35 dB(A)	<35 dB(A)	<50 dB(A)	<30 dB(A)	<30 dB(A)
	Spring	<40 dB(A)	<62 dB(A)	<62 dB(A)	<62 dB(A)	<62 dB(A)	<62 dB(A)
ELECTRICAL CONNECTION:							
3 ft, cable, ½" conduit fitting		•	•	•	•	•	•

CCV Model #	C_V Rating	Valve Nominal Size Inches	DN (mm)	Close-Off psi					
B2…B 2-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS									
B207B	0.3	½	15	200	$320.00	$366.00	$392.00	$368.00	$468.00	$482.00
B208B	0.46	½	15	200	$320.00	$366.00	$392.00	$368.00	$468.00	$482.00
B209B	0.8	½	15	200	$320.00	$366.00	$392.00	$368.00	$468.00	$482.00
B210B	1.2	½	15	200	$322.00	$368.00	$394.00	$368.00	$468.00	$482.00
B211B	1.9	½	15	200	$322.00	$368.00	$394.00	$368.00	$468.00	$482.00
B212B	3	½	15	200	$326.00	$370.00	$396.00	$368.00	$468.00	$482.00
B213B	4.7	½	15	200	$328.00	$374.00	$402.00	$368.00	$468.00	$482.00
B214B	7.4	½	15	200	$330.00	$376.00	$404.00	$368.00	$468.00	$482.00
B215B*	10	½	15	200	$332.00	$378.00	$406.00	$370.00	$470.00	$480.00
B217B	4.7	¾	20	200	$368.00	$414.00	$444.00	$380.00	$480.00	$494.00
B218B	7.4	¾	20	200	$370.00	$416.00	$446.00	$380.00	$480.00	$494.00
B219B	10	¾	20	200	$372.00	$418.00	$448.00	$380.00	$480.00	$494.00
B220B*	24	¾	20	200	$374.00	$424.00	$450.00	$380.00	$482.00	$496.00
B3…B 3-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS									
B307B	0.3	½	15	200	$378.00	$442.00	$462.00	$436.00	$538.00	$556.00
B308B	0.46	½	15	200	$378.00	$442.00	$462.00	$436.00	$538.00	$556.00
B309B	0.8	½	15	200	$378.00	$442.00	$462.00	$436.00	$538.00	$556.00
B310B	1.2	½	15	200	$380.00	$444.00	$466.00	$436.00	$538.00	$556.00
B311B	1.9	½	15	200	$382.00	$446.00	$466.00	$436.00	$538.00	$556.00
B312B	3	½	15	200	$386.00	$448.00	$468.00	$436.00	$538.00	$556.00
B313B	4.7	½	15	200	$390.00	$452.00	$472.00	$436.00	$538.00	$556.00
B315B*	10	½	15	200	$392.00	$454.00	$474.00	$436.00	$538.00	$556.00
B317B	4.7	¾	20	200	$424.00	$486.00	$506.00	$448.00	$550.00	$568.00
B318B	7.4	¾	20	200	$426.00	$488.00	$508.00	$448.00	$550.00	$568.00
B320B*	24	¾	20	200	$428.00	$490.00	$510.00	$450.00	$552.00	$570.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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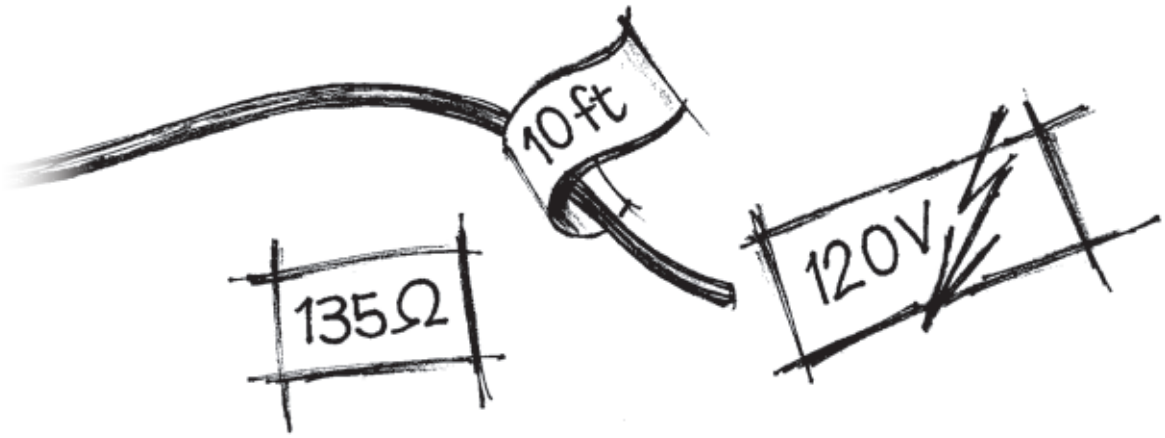
OPTIONS



Spring Return Actuator Options

OPTIONS		TFX24/300 US	TFX24-S US	TF24-3 /300 US	TF24-3-S US	TF24-SR-S US	TFX120 US	TFX120 /300 US	TFX120-S US	LF24-S US	LF24-3-S US	LF24-SR-S US	LF120 US	LF120-S US
Control type		On/Off	On/Off	Floating Point	Floating Point	Proportional	On/Off	On/Off	On/Off	On/Off	Floating Point	Proportional	On/Off	On/Off
120 VAC power supply							•	•	•				•	•
Built-in auxiliary switch			•		•	•			•	•	•	•		•
3 ft [1m] cable			•		•	•	•		•	•	•	•	•	•
10 ft [3m] cable		•		•				•						
CCV Model #	**Cv Rating**													
B2…B 2-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS														
B207B	0.3	$348.00	$372.00	$394.00	$418.00	$448.00	$362.00	$390.00	$414.00	$422.00	$522.00	$538.00	$398.00	$454.00
B208B	0.46	$348.00	$372.00	$394.00	$418.00	$448.00	$362.00	$390.00	$414.00	$422.00	$522.00	$538.00	$398.00	$454.00
B209B	0.8	$348.00	$372.00	$394.00	$418.00	$448.00	$362.00	$390.00	$414.00	$422.00	$522.00	$538.00	$398.00	$454.00
B210B	1.2	$350.00	$374.00	$396.00	$422.00	$450.00	$364.00	$392.00	$416.00	$422.00	$522.00	$538.00	$398.00	$454.00
B211B	1.9	$350.00	$374.00	$396.00	$422.00	$450.00	$364.00	$392.00	$416.00	$422.00	$522.00	$538.00	$398.00	$454.00
B212B	3	$354.00	$378.00	$398.00	$424.00	$452.00	$368.00	$396.00	$422.00	$422.00	$522.00	$538.00	$398.00	$454.00
B213B	4.7	$356.00	$380.00	$402.00	$428.00	$458.00	$370.00	$398.00	$424.00	$422.00	$522.00	$538.00	$398.00	$454.00
B214B	7.4	$358.00	$382.00	$404.00	$430.00	$460.00	$372.00	$400.00	$426.00	$422.00	$522.00	$538.00	$398.00	$454.00
B215B*	10	$362.00	$384.00	$406.00	$432.00	$462.00	$374.00	$402.00	$428.00	$424.00	$526.00	$536.00	$400.00	$456.00
B217B	4.7	$396.00	$422.00	$446.00	$468.00	$494.00	$408.00	$442.00	$464.00	$436.00	$536.00	$550.00	$412.00	$466.00
B218B	7.4	$398.00	$424.00	$448.00	$470.00	$496.00	$412.00	$444.00	$466.00	$436.00	$536.00	$550.00	$412.00	$466.00
B219B	10	$400.00	$426.00	$450.00	$472.00	$498.00	$414.00	$446.00	$468.00	$436.00	$536.00	$550.00	$412.00	$466.00
B220B*	24	$402.00	$428.00	$454.00	$476.00	$500.00	$416.00	$448.00	$470.00	$436.00	$538.00	$552.00	$412.00	$466.00
B3…B 3-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS														
B307B	0.3	$406.00	$432.00	$470.00	$492.00	$516.00	$422.00	$452.00	$474.00	$486.00	$590.00	$608.00	$466.00	$520.00
B308B	0.46	$406.00	$432.00	$470.00	$492.00	$516.00	$422.00	$452.00	$474.00	$486.00	$590.00	$608.00	$466.00	$520.00
B309B	0.8	$406.00	$432.00	$470.00	$492.00	$516.00	$422.00	$452.00	$474.00	$486.00	$590.00	$608.00	$466.00	$520.00
B310B	1.2	$408.00	$436.00	$472.00	$494.00	$520.00	$424.00	$454.00	$476.00	$486.00	$590.00	$608.00	$466.00	$520.00
B311B	1.9	$412.00	$438.00	$474.00	$496.00	$520.00	$426.00	$456.00	$478.00	$486.00	$590.00	$608.00	$466.00	$520.00
B312B	3	$416.00	$442.00	$476.00	$498.00	$522.00	$430.00	$460.00	$482.00	$486.00	$590.00	$608.00	$466.00	$520.00
B313B	4.7	$530.00	$446.00	$480.00	$502.00	$526.00	$434.00	$464.00	$486.00	$486.00	$590.00	$608.00	$466.00	$520.00
B315B*	10	$424.00	$448.00	$482.00	$506.00	$530.00	$438.00	$466.00	$488.00	$470.00	$566.00	$610.00	$450.00	$500.00
B317B	4.7	$454.00	$476.00	$518.00	$542.00	$560.00	$466.00	$494.00	$520.00	$498.00	$602.00	$622.00	$478.00	$534.00
B318B	7.4	$456.00	$478.00	$520.00	$544.00	$562.00	$468.00	$496.00	$522.00	$498.00	$602.00	$622.00	$478.00	$534.00
B320B*	24	$458.00	$480.00	$522.00	$546.00	$564.00	$470.00	$498.00	$526.00	$500.00	$604.00	$624.00	$480.00	$536.00

* Models without characterizing discs.

For corrected C_{VS} with piping reduction factor refer to page 6-5.

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B2 Series Characterized Control Valve, Non-Spring Return Actuator

2-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

BELIMO

Valve Specifications	
Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	½", ¾", 1", 1¼"
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
Pressure rating:	
600 psi	½" - 1¼" (B230)
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB

5 YEAR WARRANTY

Non-Spring Return Actuators

ACTUATOR PART #						TR24-3-T US	TR24-3 US	TR24-SR-T US	TR24-SR US	LRB24-3-T	LRB24-3	LRB24-SR-T	LRB24-SR	LRX24-MFT
Control type						On/Off, Floating Point	On/Off, Floating Point	Proportional	Proportional	On/Off, Floating Point	On/Off, Floating Point	Proportional	Proportional	Proportional/ MFT
Manual override						•	•	•	•	•	•	•	•	•
Running time						90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	150 sec. default/ 35 to 200 variable
Noise level						<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)
ELECTRICAL CONNECTION:														
3 ft. cable, 1/2" conduit fitting							•		•		•		•	•
Covered terminal strip						•		•		•		•		
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**										
B2... 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS														
B207	0.3	½	15	200		$204.00	$222.00	$310.00	$324.00	$234.00	$246.00	$332.00	$344.00	$450.00
B208	0.46	½	15	200		$204.00	$222.00	$310.00	$324.00	$234.00	$246.00	$332.00	$344.00	$450.00
B209	0.8	½	15	200		$204.00	$222.00	$310.00	$324.00	$234.00	$246.00	$332.00	$344.00	$450.00
B210	1.2	½	15	200		$210.00	$226.00	$312.00	$326.00	$236.00	$248.00	$334.00	$346.00	$454.00
B211	1.9	½	15	200		$210.00	$226.00	$312.00	$326.00	$236.00	$248.00	$334.00	$346.00	$454.00
B212	3	½	15	200		$214.00	$228.00	$314.00	$328.00	$238.00	$250.00	$336.00	$348.00	$458.00
B213	4.7	½	15	200		$218.00	$232.00	$320.00	$332.00	$250.00	$262.00	$340.00	$352.00	$466.00
B214	7.4	½	15	200		$224.00	$236.00	$324.00	$336.00	$256.00	$268.00	$344.00	$356.00	$470.00
B215*	10	½	15	200		$226.00	$238.00	$326.00	$338.00	$266.00	$278.00	$348.00	$362.00	$474.00
B217	4.7	¾	20	200		$260.00	$272.00	$342.00	$354.00	$276.00	$290.00	$356.00	$370.00	$484.00
B218	7.4	¾	20	200		$262.00	$274.00	$344.00	$356.00	$278.00	$292.00	$358.00	$372.00	$486.00
B219	10	¾	20	200		$264.00	$276.00	$348.00	$362.00	$280.00	$294.00	$362.00	$374.00	$488.00
B220*	24	¾	20	200		$266.00	$278.00	$350.00	$364.00	$282.00	$296.00	$364.00	$376.00	$490.00
B222	7.4	1	25	200						$294.00	$306.00	$376.00	$388.00	$516.00
B223	10	1	25	200						$298.00	$312.00	$378.00	$390.00	$522.00
B224	19	1	25	200						$298.00	$312.00	$382.00	$394.00	$530.00
B225*	30	1	25	200						$300.00	$314.00	$384.00	$396.00	$532.00
B229	10	1¼	32	200						$336.00	$348.00	$412.00	$426.00	$552.00
B230*	19	1¼	32	200						$338.00	$350.00	$416.00	$430.00	$554.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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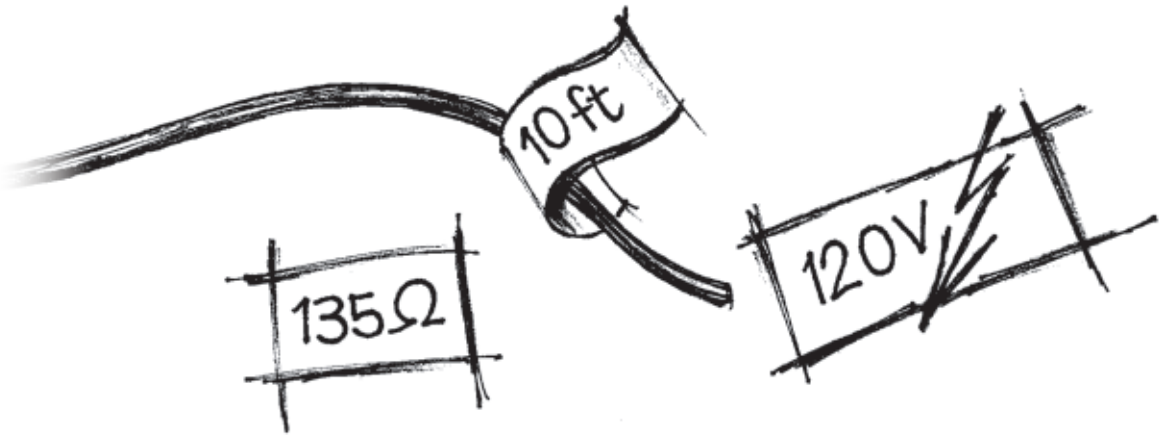
B2 Series Characterized Control Valve, Non-Spring Return Actuator

2-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

OPTIONS



Non-Spring Return Actuator Options

OPTIONS		TR24-3/300 US	TR24-SR/300 US	LRB24-3-S US	LRX24-MFT95	LRB120-3	LRB120-SR
Control type		On/Off, Floating Point	Proportional	On/Off, Floating Point	135 Ω	On/Off, Floating Point	Proportional
120 VAC power supply						•	•
Built-in auxiliary switch				•			
3 ft. [1m] cable				•	•	•	•
10 ft. [3m] cable		•	•				
CCV Model #	**C_V Rating**						
B2... 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS							
B207	0.3	$238.00	$340.00	$298.00	$544.00	$276.00	$376.00
B208	0.46	$238.00	$340.00	$298.00	$544.00	$276.00	$376.00
B209	0.8	$238.00	$340.00	$298.00	$544.00	$276.00	$376.00
B210	1.2	$242.00	$342.00	$300.00	$550.00	$278.00	$378.00
B211	1.9	$242.00	$342.00	$300.00	$550.00	$278.00	$378.00
B212	3	$244.00	$344.00	$302.00	$554.00	$270.00	$380.00
B213	4.7	$248.00	$348.00	$318.00	$558.00	$294.00	$384.00
B214	7.4	$252.00	$352.00	$324.00	$562.00	$300.00	$388.00
B215*	10	$254.00	$354.00	$334.00	$566.00	$312.00	$392.00
B217	4.7	$290.00	$372.00	$344.00	$578.00	$324.00	$400.00
B218	7.4	$292.00	$374.00	$346.00	$580.00	$326.00	$402.00
B219	10	$294.00	$378.00	$348.00	$582.00	$328.00	$404.00
B220*	24	$296.00	$380.00	$350.00	$584.00	$330.00	$406.00
B222	7.4			$362.00	$598.00	$340.00	$422.00
B223	10			$366.00	$606.00	$344.00	$424.00
B224	19			$366.00	$610.00	$344.00	$428.00
B225*	30			$368.00	$612.00	$346.00	$430.00
B229	10			$400.00	$634.00	$380.00	$458.00
B230*	19			$402.00	$636.00	$382.00	$462.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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B2 Series Characterized Control Valve, Non-Spring Return Actuator

2-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

BELIMO

Valve Specifications	
Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	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
Pressure rating:	
400 psi	1¼" (B231) - 3"
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB

5 YEAR WARRANTY

Non-Spring Return Actuators

ACTUATOR PART #					ARB24-3	ARB24-SR	ARX24-MFT
Control type					On/Off, Floating Point	Proportional	Proportional/MFT
Manual override					•	•	•
Running time					90 seconds	90 seconds	150 sec. default / 90 to 300 variable
Noise level					<45 dB(A)	<45 dB(A)	<45 dB(A)
ELECTRICAL CONNECTION:							
3 ft. cable, 1/2" conduit fitting					•	•	•
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**			
B2... 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS							
B231	25	1¼	32	200	$404.00	$534.00	$580.00
B232*	37	1¼	32	200	$412.00	$538.00	$594.00
B238	19	1½	40	200	$412.00	$546.00	$594.00
B239	29	1½	40	200	$412.00	$548.00	$598.00
B240*	37	1½	40	200	$414.00	$550.00	$600.00
B248	29	2	50	200	$534.00	$662.00	$706.00
B249	46	2	50	200	$536.00	$668.00	$710.00
B250*	57	2	50	200	$538.00	$672.00	$720.00
B251	65	2	50	100	$776.00		$972.00
B252	85	2	50	100	$842.00		$1,036.00
B253	120	2	50	100	$904.00		$1,098.00
B254*	240	2	50	100	$1,098.00		$1,298.00
B261	60	2½	65	100	$858.00		$1,052.00
B262	75	2½	65	100	$922.00		$1,116.00
B263	110	2½	65	100	$982.00		$1,180.00
B264	150	2½	65	100	$1,048.00		$1,230.00
B265*	210	2½	65	100	$1,178.00		$1,372.00
B277	70	3	80	100	$1,060.00		$1,256.00
B278	130	3	80	100	$1,122.00		$1,318.00
B280*	170	3	80	100	$1,384.00		$1,580.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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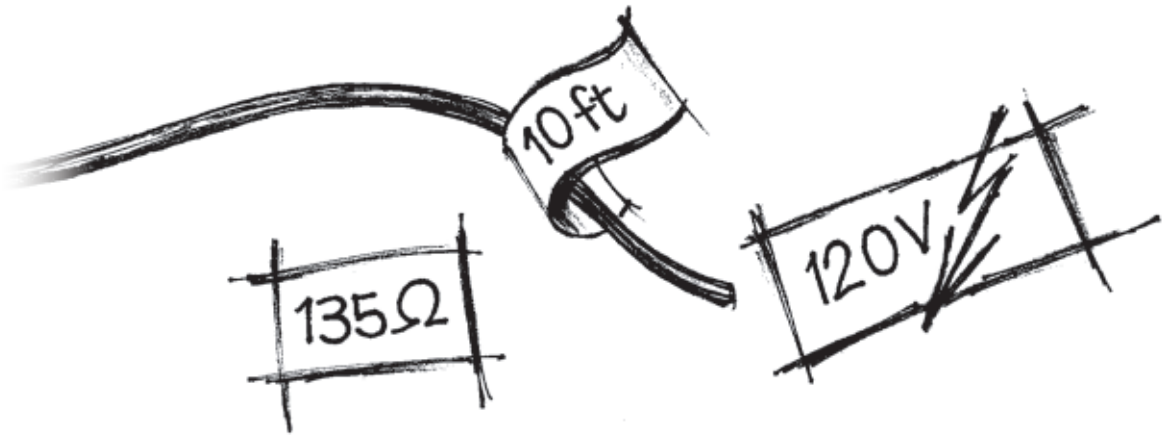
OPTIONS



Non-Spring Return Actuator Options

OPTIONS		ARX24-MFT95	ARB120-3	ARB120-SR
Control type		135 Ω	On/Off, Floating Point	Proportional
120 VAC power supply			•	•
3 ft. [1m] cable		•	•	•
CCV Model #	**C_V Rating**			
B2... 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS				
B231	25	$676.00	$440.00	$564.00
B232*	37	$686.00	$446.00	$354.00
B238	19	$686.00	$446.00	$578.00
B239	29	$690.00	$446.00	$580.00
B240*	37	$692.00	$448.00	$582.00
B248	29	$804.00	$564.00	$692.00
B249	46	$808.00	$566.00	$698.00
B250*	57	$812.00	$568.00	$702.00
B251	65	$1,064.00	$808.00	
B252	85	$1,128.00	$874.00	
B253	120	$1,158.00	$938.00	
B254*	240	$1,350.00	$1,130.00	
B261	60	$1,150.00	$890.00	
B262	75	$1,210.00	$956.00	
B263	110	$1,274.00	$1,014.00	
B264	150	$1,324.00	$1,080.00	
B265*	210	$1,468.00	$1,208.00	
B277	70	$1,338.00	$1,092.00	
B278	130	$1,412.00	$1,158.00	
B280*	170	$1,756.00	$1,414.00	

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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B3 Series Characterized Control Valve, Non-Spring Return Actuator

3-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

BELIMO

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage B-port modified linear for constant flow
Action	90° rotation
Sizes	½", ¾", 1"
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
Pressure rating:	
600 psi	½" - 1"
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB <2.0% for B to AB
C_V rating	A port: as stated in chart B port: 70% of A to AB C_V

5 YEAR WARRANTY

Non-Spring Return Actuators

ACTUATOR PART #					TR24-3-T US	TR24-3 US	TR24-SR-T US	TR24-SR US	LRB24-3-T	LRB24-3	LRB24-SR-T	LRB24-SR	LRX24-MFT
Control type					On/Off, Floating Point	On/Off, Floating Point	Proportional	Proportional	On/Off, Floating Point	On/Off, Floating Point	Proportional	Proportional	Proportional/ MFT
Manual override					•	•	•	•	•	•	•	•	•
Running time					90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	90 seconds	150 sec. default/ 35 to 200 variable
Noise level					<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)
ELECTRICAL CONNECTION:													
3 ft, cable, ½" conduit fitting						•		•		•		•	•
Covered terminal strip					•		•		•		•		
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**									
B3... 3-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS													
B307	0.3	½	15	200	$256.00	$268.00	$368.00	$380.00	$286.00	$300.00	$396.00	$408.00	$518.00
B308	0.46	½	15	200	$256.00	$268.00	$368.00	$380.00	$286.00	$300.00	$396.00	$408.00	$518.00
B309	0.8	½	15	200	$256.00	$268.00	$368.00	$380.00	$286.00	$300.00	$396.00	$408.00	$518.00
B310	1.2	½	15	200	$258.00	$270.00	$370.00	$382.00	$290.00	$302.00	$398.00	$412.00	$520.00
B311	1.9	½	15	200	$258.00	$270.00	$370.00	$382.00	$290.00	$302.00	$398.00	$412.00	$520.00
B312	3	½	15	200	$264.00	$276.00	$376.00	$388.00	$296.00	$310.00	$402.00	$416.00	$522.00
B313	4.7	½	15	200	$266.00	$278.00	$380.00	$392.00	$300.00	$314.00	$406.00	$422.00	$532.00
B315*	10	½	15	200	$268.00	$280.00	$382.00	$394.00	$304.00	$320.00	$412.00	$426.00	$534.00
B317	4.7	¾	20	200	$320.00	$332.00	$428.00	$442.00	$362.00	$374.00	$444.00	$456.00	$554.00
B318	7.4	¾	20	200	$324.00	$336.00	$430.00	$444.00	$364.00	$376.00	$446.00	$458.00	$556.00
B320*	24	¾	20	200	$328.00	$340.00	$432.00	$446.00	$370.00	$382.00	$450.00	$462.00	$558.00
B322	7.4	1	25	200					$392.00	$404.00	$504.00	$518.00	$636.00
B323	10	1	25	200					$394.00	$406.00	$506.00	$520.00	$638.00
B325*	30	1	25	200					$396.00	$408.00	$510.00	$526.00	$642.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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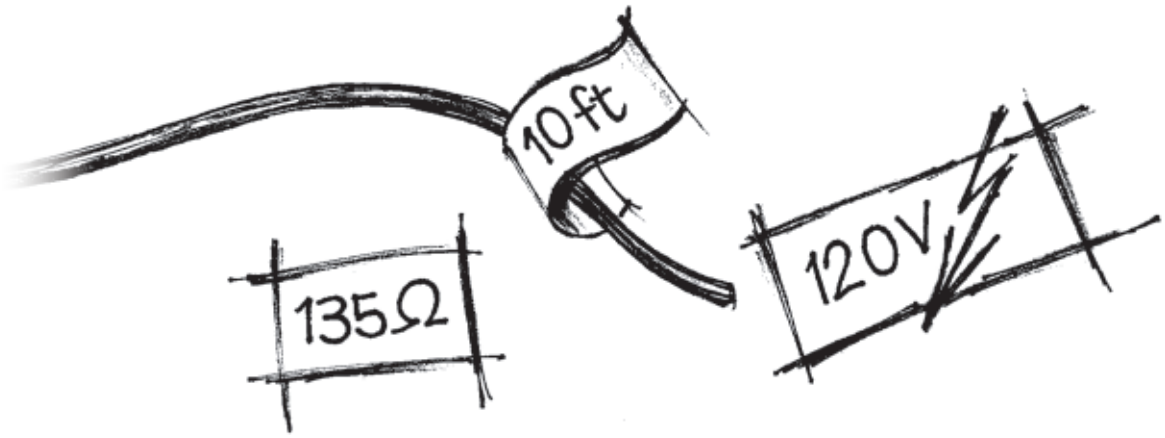
OPTIONS



	Non-Spring Return Actuator Options					
OPTIONS	**TR24-3/300 US**	**TR24-SR/300 US**	**LRB24-3-S US**	**LRB120-3**	**LRB120-SR**	**LRX24-MFT95**
Control type	On/Off, Floating Point	Proportional	On/Off, Floating Point	On/Off, Floating Point	Proportional	135 Ω
120 VAC power supply				•	•	
Built-in auxiliary switch			•			
3 ft [1m] cable			•	•	•	•
10 ft [3m] cable	•	•				
CCV Model # / **C_V Rating**						
B3… 3-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS						
B307 / 0.3	$284.00	$396.00	$354.00	$334.00	$444.00	$612.00
B308 / 0.46	$284.00	$396.00	$354.00	$334.00	$444.00	$612.00
B309 / 0.8	$284.00	$396.00	$354.00	$334.00	$444.00	$612.00
B310 / 1.2	$286.00	$398.00	$356.00	$336.00	$446.00	$616.00
B311 / 1.9	$286.00	$398.00	$356.00	$336.00	$446.00	$616.00
B312 / 3	$294.00	$404.00	$364.00	$342.00	$450.00	$618.00
B313 / 4.7	$296.00	$408.00	$368.00	$346.00	$454.00	$626.00
B315* / 10	$298.00	$412.00	$372.00	$350.00	$458.00	$630.00
B317 / 4.7	$348.00	$458.00	$428.00	$404.00	$486.00	$650.00
B318 / 7.4	$352.00	$460.00	$430.00	$406.00	$488.00	$626.00
B320* / 24	$356.00	$462.00	$438.00	$414.00	$492.00	$630.00
B322 / 7.4			$460.00	$440.00	$550.00	$632.00
B323 / 10			$462.00	$442.00	$552.00	$736.00
B325* / 30			$464.00	$444.00	$556.00	$742.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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B3 Series Characterized Control Valve, Non-Spring Return Actuator

3-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

BELIMO

Valve Specifications	
Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage B-port modified linear for constant flow
Action	90° rotation
Sizes	1¼", 1½", 2"
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
Pressure rating:	
400 psi	1¼" - 2"
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB <2.0% for B to AB
C_V rating	A port: as stated in chart B port: 70% of A to AB C_V

5 YEAR WARRANTY

Non-Spring Return Actuators

ACTUATOR PART #					ARB24-3	ARB24-SR	ARX24-MFT
Control type					On/Off, Floating Point	Proportional	Proportional/MFT
Manual override					•	•	•
Running time					90 seconds	90 seconds	150 sec. default / 90 to 300 variable
Noise level					<45 db(A)	<45 dB(A)	<45 dB(A)
ELECTRICAL CONNECTION:							
3 ft, cable, ½" conduit fitting					•	•	•
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**			
B3... 3-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS							
B329	10	1¼	32	200	$472.00	$552.00	$652.00
B330	19	1¼	32	200	$476.00	$556.00	$660.00
B331	25	1¼	32	200	$600.00	$728.00	$776.00
B338	19	1½	40	200	$608.00	$742.00	$800.00
B339	29	1½	40	200	$610.00	$746.00	$802.00
B340	37	1½	40	200	$612.00	$750.00	$806.00
B341	46	1½	40	200	$616.00	$754.00	$810.00
B347	29	2	50	200	$814.00	$928.00	$980.00
B348	37	2	50	200	$816.00	$930.00	$982.00
B349	46	2	50	200	$816.00	$934.00	$982.00
B350	57	2	50	200	$822.00	$936.00	$984.00
B351	68	2	50	200	$828.00	$944.00	$990.00
B352	83	2	50	200	$834.00	$950.00	$996.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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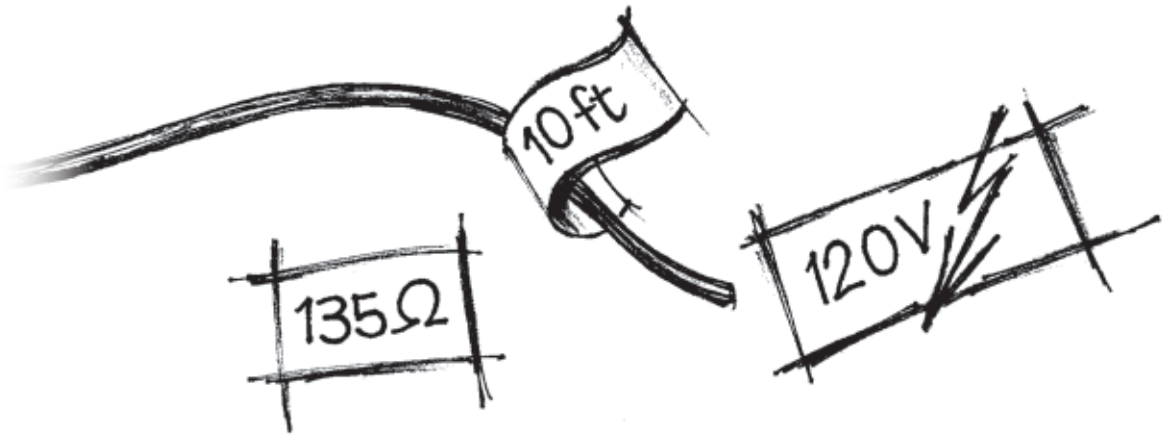
OPTIONS



Non-Spring Return Actuator Options

OPTIONS		ARB120-3	ARB120-SR	ARX24-MFT95
Control type		On/Off, Floating Point	Proportional	135 Ω
120 VAC power supply		•	•	
3 ft [1m] cable		•	•	•
CCV Model #	**C_V Rating**			
B3... 3-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS				
B329	10	$516.00	$582.00	$748.00
B330	19	$508.00	$588.00	$756.00
B331	25	$634.00	$760.00	$874.00
B338	19	$642.00	$772.00	$894.00
B339	29	$644.00	$776.00	$896.00
B340	37	$646.00	$698.00	$900.00
B341	46	$650.00	$844.00	$906.00
B347	29	$848.00	$962.00	$1,078.00
B348	37	$850.00	$964.00	$1,098.00
B349	46	$850.00	$966.00	$1,100.00
B350	57	$854.00	$968.00	$1,104.00
B351	68	$860.00	$974.00	$1,094.00
B352	83	$868.00	$980.00	$1,094.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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B2 Series Characterized Control Valve, Spring Return Actuator

2-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	½", ¾"
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
Pressure rating:	
600 psi	½" - ¾"
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB

5 YEAR WARRANTY

Spring Return Actuators

ACTUATOR PART #		TFX24 US	TF24-3 US	TF24-SR US	TF24-MFT US
Control type		On/Off	Floating Point	Proportional	Proportional/MFT
Manual override					
Running time	Motor	<75 seconds	95 seconds	95 seconds	150 sec. default / 75 to 300 variable
	Spring	<75 seconds	<25 seconds	<25 seconds	<25 seconds
Noise level	Running	<40 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)
	Spring	<40 dB(A)	<62 dB(A)	<62 dB(A)	<62 dB(A)
ELECTRICAL CONNECTION:					
3 ft, cable, ½" conduit fitting		•	•	•	•

CCV Model #	C_V Rating	Valve Nominal Size Inches	DN (mm)	Close-Off psi				
B2... 2-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS								
B207	0.3	½	15	200	$332.00	$378.00	$406.00	$478.00
B208	0.46	½	15	200	$332.00	$378.00	$406.00	$478.00
B209	0.8	½	15	200	$332.00	$378.00	$406.00	$478.00
B210	1.2	½	15	200	$334.00	$382.00	$408.00	$480.00
B211	1.9	½	15	200	$334.00	$382.00	$408.00	$480.00
B212	3	½	15	200	$342.00	$386.00	$414.00	$484.00
B213	4.7	½	15	200	$344.00	$388.00	$416.00	$486.00
B214	7.4	½	15	200	$346.00	$390.00	$418.00	$488.00
B215*	10	½	15	200	$348.00	$392.00	$422.00	$490.00
B217	4.7	¾	20	200	$382.00	$428.00	$458.00	$516.00
B218	7.4	¾	20	200	$384.00	$430.00	$460.00	$518.00
B219	10	¾	20	200	$386.00	$432.00	$462.00	$520.00
B220*	24	¾	20	200	$388.00	$438.00	$464.00	$522.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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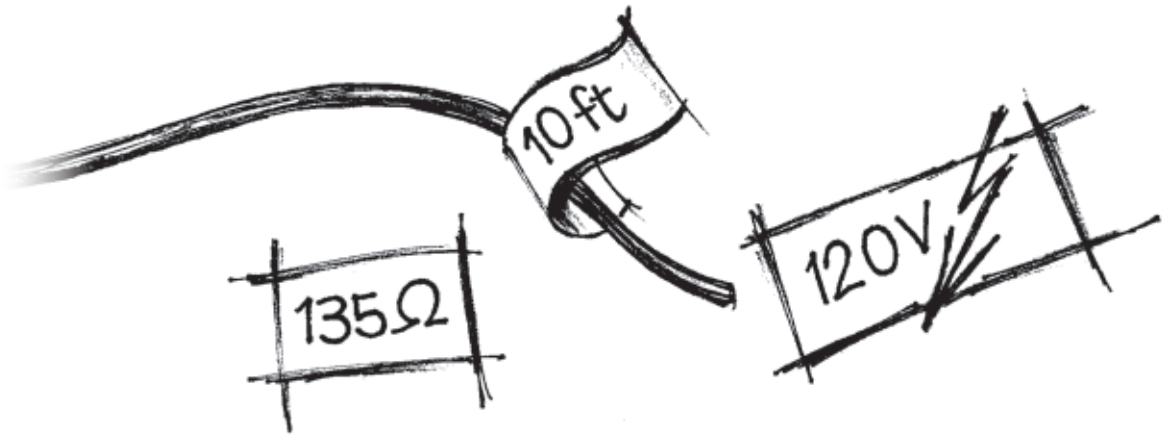
OPTIONS



Spring Return Actuator Options

OPTIONS		TFX24/300 US	TFX24-S US	TFX120 US	TFX120/300 US	TFX120-S US	TF24-3/300 US	TF24-3-S US	TF24-SR/300 US	TF24-SR-S US
Control type		On/Off	On/Off	On/Off	On/Off	On/Off	Floating Point	Floating Point	Proportional	Proportional
120 VAC power supply				•	•	•				
Built-in auxiliary switch			•			•		•		•
3 ft [1m] cable			•	•		•		•		•
10 ft [3m] cable		•			•		•		•	
CCV Model #	**C_V Rating**									
B2... 2-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS										
B207	0.3	$362.00	$384.00	$374.00	$402.00	$428.00	$406.00	$432.00	$440.00	$462.00
B208	0.46	$362.00	$384.00	$374.00	$402.00	$428.00	$406.00	$432.00	$440.00	$462.00
B209	0.8	$362.00	$384.00	$374.00	$402.00	$428.00	$406.00	$432.00	$440.00	$462.00
B210	1.2	$364.00	$386.00	$376.00	$404.00	$430.00	$412.00	$438.00	$442.00	$464.00
B211	1.9	$364.00	$386.00	$376.00	$404.00	$430.00	$412.00	$438.00	$442.00	$464.00
B212	3	$372.00	$394.00	$384.00	$414.00	$440.00	$416.00	$442.00	$446.00	$468.00
B213	4.7	$374.00	$386.00	$386.00	$416.00	$442.00	$418.00	$444.00	$448.00	$470.00
B214	7.4	$376.00	$398.00	$388.00	$418.00	$444.00	$422.00	$446.00	$450.00	$472.00
B215*	10	$378.00	$400.00	$390.00	$422.00	$446.00	$424.00	$448.00	$452.00	$474.00
B217	4.7	$412.00	$438.00	$426.00	$456.00	$478.00	$460.00	$482.00	$486.00	$508.00
B218	7.4	$414.00	$440.00	$428.00	$458.00	$480.00	$462.00	$484.00	$488.00	$510.00
B219	10	$416.00	$442.00	$430.00	$460.00	$482.00	$464.00	$486.00	$490.00	$512.00
B220*	24	$418.00	$444.00	$432.00	$462.00	$484.00	$468.00	$490.00	$492.00	$514.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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B2 Series Characterized Control Valve, Spring Return Actuator

2-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

BELIMO

Valve Specifications	
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
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]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB

5 YEAR WARRANTY

Spring Return Actuators

ACTUATOR PART #		LF24 US	LF24-3 US	LF24-SR US	LF24-MFT US	AF24 US	AF24-SR US	AF24-MFT US
Control type		On/Off	Floating Point	Proportional	Proportional/MFT	On/Off	Proportional	Proportional/MFT
Manual override					•	•	•	•
Running time	Motor	<40-75 seconds	150 seconds	150 seconds	150 sec. default/ 75 to 300 variable	150 seconds	150 seconds	150 sec. default/ 75 to 300 variable
	Spring	<25 seconds	<25 seconds	<25 seconds	<25 seconds	<20 seconds	<20 seconds	<20 seconds
Noise level	Running	<50 dB(A)	<30 dB(A)	<30 dB(A)	<30 dB(A)	<45 dB (A)	<45 dB (A)	<45 dB (A)
	Spring	<62 dB (A)	<62 dB (A)	<62 dB (A)	<62 dB (A)	<62 dB (A)	<62 dB (A)	<62 dB (A)
ELECTRICAL CONNECTION:								
3 ft, cable, ½" conduit fitting		•	•	•	•	•	•	•

CCV Model #	Cv Rating	Valve Nominal Size Inches	DN (mm)	Close-Off psi							
B2... 2-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS											
B207	0.3	½	15	200	$386.00	$484.00	$500.00	$578.00			
B208	0.46	½	15	200	$386.00	$484.00	$500.00	$578.00			
B209	0.8	½	15	200	$386.00	$484.00	$500.00	$578.00			
B210	1.2	½	15	200	$386.00	$484.00	$500.00	$580.00			
B211	1.9	½	15	200	$386.00	$484.00	$500.00	$580.00			
B212	3	½	15	200	$386.00	$484.00	$500.00	$582.00			
B213	4.7	½	15	200	$386.00	$484.00	$500.00	$586.00			
B214	7.4	½	15	200	$386.00	$484.00	$500.00	$594.00			
B215*	10	½	15	200	$382.00	$480.00	$496.00	$598.00			
B217	4.7	¾	20	200	$404.00	$518.00	$534.00	$604.00			
B218	7.4	¾	20	200	$406.00	$520.00	$536.00	$606.00			
B219	10	¾	20	200	$408.00	$522.00	$538.00	$608.00			
B220*	24	¾	20	200	$412.00	$526.00	$540.00	$610.00			
B222	7.4	1	25	200	$440.00	$544.00	$556.00	$634.00			
B223	10	1	25	200	$454.00	$552.00	$566.00	$636.00			
B224	19	1	25	200	$462.00	$558.00	$572.00	$638.00			
B225*	30	1	25	200	$468.00	$568.00	$580.00	$640.00			
B229	10	1¼	32	200	$476.00	$582.00	$550.00	$658.00			
B230*	19	1¼	32	200	$478.00	$586.00	$552.00	$660.00			
B231	25	1¼	32	200					$554.00	$688.00	$784.00
B232*	37	1¼	32	200					$556.00	$690.00	$786.00
B238	19	1½	40	200					$560.00	$696.00	$790.00
B239	29	1½	40	200					$562.00	$700.00	$792.00
B240*	37	1½	40	200					$564.00	$704.00	$794.00
B248	29	2	50	200					$780.00	$938.00	$980.00
B249	46	2	50	200					$790.00	$944.00	$988.00
B250*	57	2	50	200					$798.00	$950.00	$992.00
B251	65	2	50	100					$972.00		$1,098.00
B252	85	2	50	100					$1,036.00		$1,166.00
B253	120	2	50	100					$1,098.00		$1,228.00
B254*	240	2	50	100					$1,294.00		$1,410.00
B261	60	2½	65	100					$1,052.00		$1,184.00
B262	75	2½	65	100					$1,116.00		$1,246.00
B263	110	2½	65	100					$1,180.00		$1,308.00
B264	150	2½	65	100					$1,242.00		$1,376.00
B265*	210	2½	65	100					$1,376.00		$1,502.00
B277	70	3	80	100					$1,256.00		$1,388.00
B278	130	3	80	100					$1,322.00		$1,448.00
B280*	170	3	80	100					$1,580.00		$1,708.00

* Models without characterizing discs.

For corrected Cvs with piping reduction factor refer to page 6-5.

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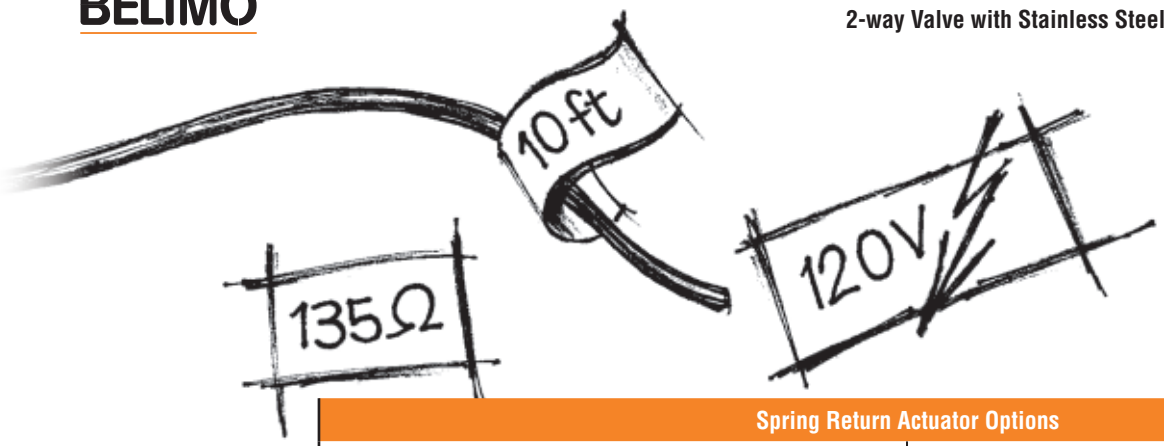
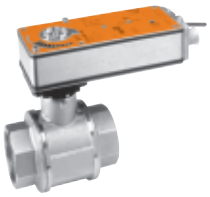


Spring Return Actuator Options



OPTIONS		LF24-S US	LF24-3-S US	LF24-SR-S US	LF120 US	LF120-S US	AF24-S US	AF24-MFT-S US	AF24-MFT95 US	AF120 US	AF120-S US
Control type		On/Off	Floating Point	Proportional	On/Off	On/Off	On/Off	Proportional/ MFT	135 Ω	On/Off	On/Off
120 VAC power supply					•	•				•	•
Built-in auxiliary switch		•	•	•		•	•	•			•
3 ft [1m] cable		•	•	•	•	•	•	•	•	•	•
CCV Model #	**C_V Rating**										
B2... 2-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS											
B207	0.3	$442.00	$540.00	$556.00	$418.00	$472.00					
B208	0.46	$442.00	$540.00	$556.00	$418.00	$472.00					
B209	0.8	$442.00	$540.00	$556.00	$418.00	$472.00					
B210	1.2	$442.00	$540.00	$556.00	$418.00	$472.00					
B211	1.9	$442.00	$540.00	$556.00	$418.00	$472.00					
B212	3	$442.00	$540.00	$556.00	$418.00	$472.00			$742.00		
B213	4.7	$442.00	$540.00	$556.00	$418.00	$472.00			$746.00		
B214	7.4	$442.00	$540.00	$556.00	$418.00	$472.00			$752.00		
B215*	10	$438.00	$536.00	$552.00	$414.00	$468.00			$758.00		
B217	4.7	$460.00	$570.00	$586.00	$440.00	$490.00			$764.00		
B218	7.4	$462.00	$572.00	$588.00	$442.00	$492.00			$766.00		
B219	10	$464.00	$576.00	$590.00	$444.00	$494.00			$768.00		
B220*	24	$464.00	$578.00	$592.00	$446.00	$496.00			$770.00		
B222	7.4	$490.00	$596.00	$608.00	$470.00	$526.00			$792.00		
B223	10	$506.00	$604.00	$620.00	$484.00	$540.00			$794.00		
B224	19	$516.00	$610.00	$626.00	$492.00	$548.00			$796.00		
B225*	30	$522.00	$622.00	$634.00	$498.00	$554.00			$798.00		
B229	10	$532.00	$636.00	$602.00	$508.00	$562.00			$814.00		
B230*	19	$534.00	$640.00	$604.00	$510.00	$564.00			$816.00		
B231	25						$640.00	$872.00	$810.00	$606.00	$692.00
B232*	37						$640.00	$874.00	$812.00	$608.00	$694.00
B238	19						$646.00	$876.00	$814.00	$612.00	$698.00
B239	29						$650.00	$878.00	$816.00	$616.00	$700.00
B240*	37						$652.00	$880.00	$820.00	$618.00	$702.00
B248	29						$868.00	$1,066.00	$1,006.00	$834.00	$918.00
B249	46						$876.00	$1,074.00	$1,014.00	$844.00	$928.00
B250*	57						$884.00	$1,080.00	$1,018.00	$852.00	$938.00
B251	65						$1,058.00	$1,184.00	$1,122.00	$1,026.00	$1,110.00
B252	85						$1,120.00	$1,250.00	$1,190.00	$1,090.00	$1,176.00
B253	120						$1,184.00	$1,312.00	$1,254.00	$1,154.00	$1,238.00
B254*	240						$1,380.00	$1,496.00	$1,438.00	$1,346.00	$1,434.00
B261	60						$1,136.00	$1,270.00	$1,208.00	$1,104.00	$1,190.00
B262	75						$1,202.00	$1,332.00	$1,272.00	$1,172.00	$1,258.00
B263	110						$1,266.00	$1,394.00	$1,334.00	$1,234.00	$1,318.00
B264	150						$1,326.00	$1,462.00	$1,400.00	$1,296.00	$1,382.00
B265*	210						$1,462.00	$1,590.00	$1,528.00	$1,426.00	$1,514.00
B277	70						$1,340.00	$1,474.00	$1,412.00	$1,308.00	$1,394.00
B278	130						$1,408.00	$1,534.00	$1,474.00	$1,378.00	$1,464.00
B280*	170						$1,664.00	$1,796.00	$1,734.00	$1,630.00	$1,716.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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B3 Series Characterized Control Valve, Spring Return Actuator

3-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

BELIMO

Valve Specifications	
Service	chilled or hot water, 60% glycol
Flow characteristic	A port equal percentage B port modified linear for constant flow
Action	90° rotation
Sizes	½ ", ¾"
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
Pressure rating:	
600 psi	½" - ¾"
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB <2.0% for B to AB
C_V rating	A-port: as stated in chart B-port: 70% of A to AB C_V

5 YEAR WARRANTY

Spring Return Actuators

ACTUATOR PART #		TFX24 US	TF24-3 US	TF24-SR US	TF24-MFT US
Control type		On/Off	Floating Point	Proportional	Proportional/MFT
Manual override					
Running time	Motor	<75 seconds	95 seconds	95 seconds	150 sec. default / 75 to 300 variable
	Spring	<75 seconds	<25 seconds	<25 seconds	<25 seconds
Noise level	Running	<40 dB(A)	<35 dB(A)	<35 dB(A)	<35 dB(A)
	Spring	<40 dB(A)	<62 dB(A)	<62 dB(A)	<62 dB(A)
ELECTRICAL CONNECTION:					
3 ft, cable, ½ " conduit fitting		•	•	•	•

CCV Model #	C_V Rating	Valve Nominal Size Inches	DN (mm)	Close-Off psi				
B3... 3-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS								
B307	0.3	½	15	200	$400.00	$464.00	$474.00	$546.00
B308	0.46	½	15	200	$400.00	$464.00	$474.00	$546.00
B309	0.8	½	15	200	$400.00	$464.00	$474.00	$546.00
B310	1.2	½	15	200	$402.00	$466.00	$476.00	$548.00
B311	1.9	½	15	200	$406.00	$468.00	$478.00	$550.00
B312	3	½	15	200	$412.00	$470.00	$482.00	$554.00
B313	4.7	½	15	200	$414.00	$474.00	$486.00	$558.00
B315*	10	½	15	200	$416.00	$476.00	$488.00	$560.00
B317	4.7	¾	20	200	$452.00	$518.00	$526.00	$594.00
B318	7.4	¾	20	200	$454.00	$520.00	$530.00	$598.00
B320*	24	¾	20	200	$456.00	$522.00	$532.00	$600.00

*Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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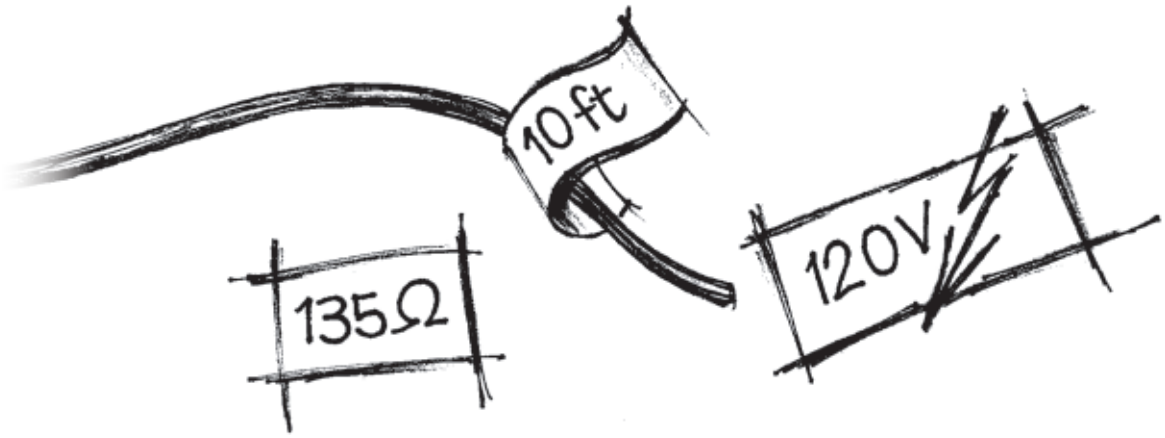
OPTIONS



Spring Return Actuator Options

OPTIONS		TFX24/300 US	TFX24-S US	TFX120 US	TFX120/300 US	TFX120-S US	TF24-3/300 US	TF24-3-S US	TF24-SR/300 US	TF24-SR-S US
Control type		On/Off	On/Off	On/Off	On/Off	On/Off	Floating Point	Floating Point	Proportional	Proportional
120 VAC power supply				•	•	•				
Built-in auxiliary switch			•			•		•		•
3 ft [1m] cable			•	•		•		•		•
10 ft [3m] cable		•			•		•		•	
CCV Model #	**C_V Rating**									
B3... 3-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS										
B307	0.3	$432.00	$456.00	$446.00	$474.00	$496.00	$492.00	$514.00	$504.00	$530.00
B308	0.46	$432.00	$456.00	$446.00	$474.00	$496.00	$492.00	$514.00	$504.00	$530.00
B309	0.8	$432.00	$456.00	$446.00	$474.00	$496.00	$492.00	$514.00	$504.00	$530.00
B310	1.2	$436.00	$458.00	$448.00	$476.00	$498.00	$494.00	$516.00	$506.00	$532.00
B311	1.9	$440.00	$462.00	$452.00	$480.00	$504.00	$496.00	$518.00	$508.00	$534.00
B312	3	$444.00	$466.00	$456.00	$484.00	$508.00	$498.00	$520.00	$514.00	$538.00
B313	4.7	$446.00	$468.00	$458.00	$486.00	$510.00	$502.00	$524.00	$518.00	$542.00
B315*	10	$448.00	$470.00	$460.00	$488.00	$514.00	$504.00	$528.00	$520.00	$544.00
B317	4.7	$480.00	$504.00	$492.00	$526.00	$548.00	$550.00	$574.00	$554.00	$578.00
B318	7.4	$482.00	$506.00	$494.00	$528.00	$550.00	$552.00	$576.00	$558.00	$582.00
B320*	24	$484.00	$508.00	$496.00	$530.00	$552.00	$532.00	$554.00	$560.00	$584.00

* Models without characterizing discs.

For corrected C_{VS} with piping reduction factor refer to page 6-5.

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B3 Series Characterized Control Valve, Spring Return Actuator

3-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

BELIMO

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A port equal percentage B port modified linear for constant flow
Action	90° rotation
Sizes	½ ", ¾", 1", 1¼", 1½", 2"
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
Pressure rating:	
600 psi	½" - 1"
400 psi	1¼" - 2"
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB <2.0% for B to AB
C_V rating	A-port: as stated in chart B-port: 70% of A to AB C_V

5 YEAR WARRANTY

Spring Return Actuators

ACTUATOR PART #		LF24 US	LF24-3 US	LF24-SR US	LF24-MFT US	AF24 US	AF24-SR US	AF24-MFT US
Control type		On/Off	Floating Point	Proportional	Proportional/MFT	On/Off	Proportional	Proportional/MFT
Manual override						•	•	•
Running time	Motor	<40-75 seconds	150 seconds	150 seconds	150 sec. default/ 75 to 300 variable	150 seconds	150 seconds	150 sec. default/ 75 to 300 variable
	Spring	<25 seconds	<25 seconds	<25 seconds	<25 seconds	<20 seconds	<20 seconds	<20 seconds
Noise level	Running	<50 dB(A)	<30 dB(A)	<30 dB(A)	<30 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)
	Spring	<62 dB(A)	<62 dB(A)	<62 dB(A)	<62 dB(A)	<62 dB(A)	<62 dB(A)	<62 dB(A)
ELECTRICAL CONNECTION:								
3 ft, cable, ½ " conduit fitting		•	•	•	•	•	•	•

CCV Model #	C_V Rating	Valve Nominal Size Inches	DN (mm)	Close-Off psi							
B3... 3-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS											
B307	0.3	½	15	200	$452.00	$554.00	$582.00	$636.00			
B308	0.46	½	15	200	$452.00	$554.00	$582.00	$636.00			
B309	0.8	½	15	200	$452.00	$554.00	$582.00	$636.00			
B310	1.2	½	15	200	$452.00	$554.00	$582.00	$638.00			
B311	1.9	½	15	200	$452.00	$554.00	$582.00	$638.00			
B312	3	½	15	200	$452.00	$554.00	$582.00	$640.00			
B313	4.7	½	15	200	$452.00	$554.00	$582.00	$642.00			
B315*	10	½	15	200	$438.00	$534.00	$564.00	$650.00			
B317	4.7	¾	20	200	$496.00	$596.00	$590.00	$680.00			
B318	7.4	¾	20	200	$504.00	$602.00	$590.00	$684.00			
B320*	24	¾	20	200	$510.00	$612.00	$592.00	$688.00			
B322	7.4	1	25	200	$526.00	$554.00	$584.00	$706.00			
B323	10	1	25	200	$532.00	$562.00	$596.00	$708.00			
B325*	30	1	25	200	$536.00	$568.00	$602.00	$710.00			
B329	10	1¼	32	200					$632.00	$756.00	$782.00
B330	19	1¼	32	200					$636.00	$760.00	$786.00
B331	25	1¼	32	200					$770.00	$912.00	$972.00
B338	19	1½	40	200					$782.00	$926.00	$974.00
B339	29	1½	40	200					$784.00	$944.00	$976.00
B340	37	1½	40	200					$790.00	$948.00	$978.00
B341	46	1½	40	200					$942.00	$1,112.00	$1,140.00
B347	29	2	50	200					$1,110.00	$1,262.00	$1,292.00
B348	37	2	50	200					$1,112.00	$1,264.00	$1,294.00
B349	46	2	50	200					$1,112.00	$1,266.00	$1,296.00
B350	57	2	50	200					$1,114.00	$1,276.00	$1,300.00
B351	68	2	50	200					$1,278.00	$1,476.00	$1,502.00
B352	83	2	50	200					$1,334.00	$1,530.00	$1,558.00

*Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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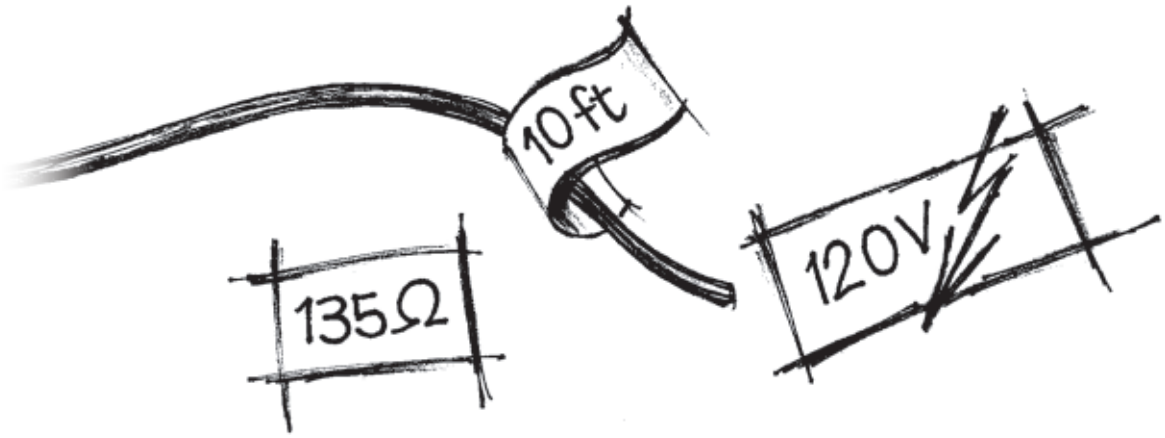
OPTIONS



Spring Return Actuator Options

OPTIONS		LF24-S US	LF120 US	LF120-S US	LF24-3-S US	LF24-SR-S US	AF24-S US	AF120 US	AF120-S US	AF24-MFT-S US	AF24-MFT95 US
Control type		On/Off	On/Off	On/Off	Floating Point	Proportional	On/Off	On/Off	On/Off	Proportional/ MFT	135 Ω
120 VAC power supply			•	•				•	•		
Built-in auxiliary switch		•		•	•	•	•		•	•	
3 ft [1m] cable		•	•	•	•	•	•	•	•	•	•
CCV Model #	**C_V Rating**										
B3... 3-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS											
B307	0.3	$504.00	$482.00	$538.00	$606.00	$636.00					
B308	0.46	$504.00	$482.00	$538.00	$606.00	$636.00					
B309	0.8	$504.00	$482.00	$538.00	$606.00	$636.00					
B310	1.2	$504.00	$482.00	$538.00	$606.00	$636.00					
B311	1.9	$504.00	$482.00	$538.00	$606.00	$636.00					
B312	3	$504.00	$482.00	$538.00	$606.00	$636.00					$798.00
B313	4.7	$504.00	$482.00	$538.00	$606.00	$636.00					$800.00
B315*	10	$488.00	$468.00	$522.00	$586.00	$618.00					$806.00
B317	4.7	$552.00	$532.00	$584.00	$652.00	$644.00					$840.00
B318	7.4	$558.00	$538.00	$590.00	$658.00	$644.00					$844.00
B320*	24	$564.00	$544.00	$596.00	$668.00	$646.00					$848.00
B322	7.4	$578.00	$556.00	$608.00	$606.00	$638.00					$868.00
B323	10	$584.00	$562.00	$616.00	$616.00	$652.00					$864.00
B325*	30	$588.00	$566.00	$620.00	$622.00	$658.00					$872.00
B329	10						$718.00	$684.00	$740.00	$838.00	$808.00
B330	19						$722.00	$688.00	$744.00	$842.00	$812.00
B331	25						$856.00	$824.00	$908.00	$1,058.00	$996.00
B338	19						$868.00	$838.00	$922.00	$1,060.00	$998.00
B339	29						$870.00	$840.00	$924.00	$1,062.00	$1,000.00
B340	37						$876.00	$844.00	$928.00	$1,064.00	$1,004.00
B341	46						$1,028.00	$992.00	$1,080.00	$1,222.00	$1,160.00
B347	29						$1,196.00	$1,166.00	$1,250.00	$1,378.00	$1,316.00
B348	37						$1,198.00	$1,168.00	$1,254.00	$1,380.00	$1,318.00
B349	46						$1,198.00	$1,168.00	$1,254.00	$1,382.00	$1,320.00
B350	57						$1,200.00	$1,170.00	$1,256.00	$1,386.00	$1,324.00
B351	68						$1,364.00	$1,332.00	$1,416.00	$1,586.00	$1,522.00
B352	83						$1,420.00	$1,388.00	$1,474.00	$1,642.00	$1,578.00

* Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

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B6 Series Flanged CCV, Non-Spring Return Actuator

2-way Valve with Stainless Steel Ball and Stem, Flanged Ends

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	2½" to 3"
Type of end fitting	pattern to mate with ANSI 125 flange
Materials:	
Body	forged brass, nickel plated
Ball	stainless steel
Stem	stainless steel
Seats	PTFE®
Characterizing disc	TEFZEL®
Packing	2 EPDM O-rings, lubricated
Pressure rating	400 psi
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi for typical applications
Leakage	0% for A to AB

5 YEAR WARRANTY

Non-Spring Return Actuators

OPTIONS

ACTUATOR PART #					ARB24-3	ARX24-MFT	ARB24-3-S	ARB120-3	ARX24-MFT95
Control type					On/Off, Floating Point	Proportional/MFT	On/Off, Floating Point	On/Off, Floating Point	135 Ω
Manual override					•	•	•	•	•
Running time					90 seconds	150 sec. default / 90 to 300 variable	90 seconds	90 seconds	150 sec. default / 90 to 300 variable
Noise level					<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)
ELECTRICAL CONNECTION:									
3 ft, cable, ½" conduit fitting					•	•	•	•	•
120 VAC power supply								•	
Built in auxiliary switch							•		
CCV Model #	**Cv Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**					
B6… 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS									
B661	60	2½	65	100	$1,414.00	$1,550.00	$1,470.00	$1,448.00	$1,608.00
B662	75	2½	65	100	$1,550.00	$1,692.00	$1,604.00	$1,584.00	$1,788.00
B663	110	2½	65	100	$1,618.00	$1,746.00	$1,674.00	$1,652.00	$1,844.00
B664	150	2½	65	100	$1,692.00	$1,822.00	$1,746.00	$1,724.00	$1,918.00
B665*	210	2½	65	100	$1,754.00	$1,888.00	$1,804.00	$1,786.00	$1,984.00
B677	70	3	80	100	$1,556.00	$1,756.00	$1,610.00	$1,590.00	$1,852.00
B678	130	3	80	100	$1,696.00	$1,896.00	$1,750.00	$1,728.00	$1,994.00
B680*	170	3	80	100	$2,018.00	$2,222.00	$2,070.00	$2,050.00	$2,304.00

MULTI-FUNCTION TECHNOLOGY

Description	P-CODE	Control Input	Running Time	Built-in Feedback	List Price
P-10001	A01	2-10 VDC	150	2-10 VDC	No Charge
P-10002	A02	0-10 VDC	150	0-10 VDC	No Charge
P-10028	A28	0-10 VDC	100	0-10 VDC	No Charge
P-10063	A63	0.5-4.5 VDC	150	0.5-4.5 VDC	No Charge
P-10064	A64	5.5-10 VDC	150	5.5-10 VDC	No Charge
P-20002	W02	0.02-5.00 seconds PWM	150	2-10 VDC	No Charge
P-20003	W03	0.10-25.5 seconds PWM	150	2-10 VDC	No Charge
P-30001	F01	Floating Point	150	2-10 VDC	No Charge

*Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

Example: ARX24-MFT is the basic model. Add the P… pre-set MFT configuration number and list price to the actuator when ordering, as needed.

Note: Most popular configurations available at no additional cost. All other configurations carry a $34.00 list price.

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Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	2½" to 3"
Type of end fitting	pattern to mate with ANSI 125 flange
Materials:	
Body	forged brass, nickel plated
Ball	stainless steel
Stem	stainless steel
Seats	PTFE®
Characterizing disc	TEFZEL®
Packing	2 EPDM O-rings, lubricated
Pressure rating	400 psi
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi for typical applications
Leakage	0% for A to AB

5 YEAR WARRANTY

Spring Return Actuators

OPTIONS

ACTUATOR PART #		AF24 US	AF24-MFT US	AF24-S US	AF120 US	AF120-S US	AF24-MFT-S US	AF24-MFT95 US
Control type		On/Off	Proportional/MFT	On/Off	On/Off	On/Off	Proportional/MFT	135 Ω
Manual override		•	•	•	•	•	•	•
Running time	Motor	150 seconds	150 sec. default / 75 to 300 variable	150 seconds	150 seconds	150 seconds	150 sec. default / 75 to 300 variable	150 sec. default / 75 to 300 variable
	Spring	<20 seconds	<20 seconds	<20 seconds	<20 seconds	<20 seconds	<20 seconds	<20 seconds
Noise level	Running	< 45 dB(A)	< 45 dB(A)	< 45 dB(A)	< 45 dB(A)	< 45 dB(A)	< 45 dB(A)	< 45 dB(A)
	Spring	62 dB(A)	62 dB(A)	62 dB(A)	62 dB(A)	62 dB(A)	62 dB(A)	62 dB(A)
ELECTRICAL CONNECTION:								
3 ft, cable, ½" conduit fitting		•	•	•	•	•	•	•
120 VAC power supply					•	•		
Built-in auxiliary switch				•		•	•	

CCV Model #	C_V Rating	Valve Nominal Size Inches	DN (mm)	Close-Off psi						
B6… 2-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS										
B661	60	2½	65	100	$1,506.00	$1,692.00	$1,592.00	$1,558.00	$1,644.00	$1,778.00	$1,716.00
B662	75	2½	65	100	$1,618.00	$1,822.00	$1,704.00	$1,674.00	$1,758.00	$1,908.00	$1,848.00
B663	110	2½	65	100	$1,692.00	$1,888.00	$1,778.00	$1,746.00	$1,830.00	$1,972.00	$1,912.00
B664	150	2½	65	100	$1,754.00	$1,956.00	$1,840.00	$1,808.00	$1,894.00	$2,040.00	$1,982.00
B665*	210	2½	65	100	$1,822.00	$2,022.00	$1,908.00	$1,878.00	$1,962.00	$2,108.00	$2,048.00
B677	70	3	80	100	$1,696.00	$1,964.00	$1,782.00	$1,750.00	$1,834.00	$2,050.00	$1,990.00
B678	130	3	80	100	$1,828.00	$2,080.00	$1,884.00	$1,884.00	$1,968.00	$2,166.00	$2,106.00
B680*	170	3	80	100	$2,158.00	$2,424.00	$2,242.00	$2,210.00	$2,298.00	$2,512.00	$2,452.00

*Models without characterizing discs.

For corrected C_VS with piping reduction factor refer to page 6-5.

Example: AF24-MFT US is the basic model. Add the P… pre-set MFT configuration number and list price to the actuator when ordering, as needed.

Note: Most popular configurations available at no additional cost. All other configurations carry a $34.00 list price.

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B6 Series Flanged CCV, Non-Spring Return Actuator

2-way Valve with Stainless Steel Ball and Stem, Flanged Ends

BELIMO

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	2½", 3"
Type of end fitting	pattern to mate with ANSI 125 flange
Materials:	
Body	cast iron - GG25
Ball	stainless steel
Stem	stainless steel
Seats	PTFE
Characterizing disc	stainless steel
Packing	2 EPDM O rings, lubricated
Pressure rating	According to ANSI 125, standard class B
Media temp. range	0°F to 250°F [-18°C to +120°C]
Maximum differential pressure (ΔP)	58 psi
Leakage	0% for A to AB

5 YEAR WARRANTY

Non-Spring Return Actuators

ACTUATOR PART #					ARB24-3	ARX24-MFT	ARB24-3-S	ARB120-3	ARX24-MFT95
Control type					On/Off, Floating Point	Proportional/MFT	On/Off, Floating Point	On/Off, Floating Point	135 Ω
Manual override					•	•	•	•	•
Running time					90 seconds	150 sec. default / 90 to 300 variable	90 seconds	90 seconds	150 sec. default / 90 to 300 variable
Noise level					<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)
ELECTRICAL CONNECTION:									
3 ft, cable, ½" conduit fitting					•	•	•	•	•
120 VAC power supply								•	
Built-in auxiliary switch							•		
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**					
B6…S 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS									
B6250S-070	70	2½	65	100	$1,550.00	$1,692.00	$1,604.00	$1,584.00	$1,788.00
B6250S-110	110	2½	65	100	$1,618.00	$1,746.00	$1,674.00	$1,652.00	$1,844.00
B6300S-110	110	3	80	100	$1,696.00	$1,896.00	$1,750.00	$1,728.00	$1,994.00

MULTI-FUNCTION TECHNOLOGY

Description	P-CODE	Control Input	Running Time	Built-in Feedback	List Price
P-10001	A01	2-10 VDC	150	2-10 VDC	No Charge
P-10002	A02	0-10 VDC	150	0-10 VDC	No Charge
P-10028	A28	0-10 VDC	100	0-10 VDC	No Charge
P-10063	A63	0.5-4.5 VDC	150	0.5-4.5 VDC	No Charge
P-10064	A64	5.5-10 VDC	150	5.5-10 VDC	No Charge
P-20002	W02	0.02-5.00 seconds PWM	150	2-10 VDC	No Charge
P-20003	W03	0.10-25.5 seconds PWM	150	2-10 VDC	No Charge
P-30001	F01	Floating Point	150	2-10 VDC	No Charge

*Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

Example: ARX24-MFT is the basic model. Add the P… pre-set MFT configuration number and list price to the actuator when ordering, as needed.

Note: Most popular configurations available at no additional cost. All other configurations carry a $34.00 list price.

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Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	2½", 3"
Type of end fitting	pattern to mate with ANSI 125 flange
Materials:	
Body	cast iron - GG25
Ball	stainless steel
Stem	stainless steel
Seats	PTFE
Characterizing disc	stainless steel
Packing	2 EPDM O rings, lubricated
Pressure rating	According to ANSI 125, standard class B
Media temp. range	0°F to 250°F [-18°C to +120°C]
Maximum differential pressure (ΔP)	58 psi
Leakage	0% for A to AB

5 YEAR WARRANTY

Spring Return Actuators

ACTUATOR PART #		AF24 US	AF24-MFT US	AF24-S US	AF120 US	AF120-S US	AF24-MFT-S US	AF24-MFT95 US
Control type		On/Off	Proportional/MFT	On/Off	On/Off	On/Off	Proportional/MFT	135 Ω
Manual override		•	•	•	•	•	•	•
Running time	Motor	150 seconds	150 sec. default / 75 to 300 variable	150 seconds	150 seconds	150 seconds	150 sec. default / 75 to 300 variable	150 sec. default / 75 to 300 variable
	Spring	<20 seconds	<20 seconds	<20 seconds	<20 seconds	<20 seconds	<20 seconds	<20 seconds
Noise level	Running	< 45 dB(A)	< 45 dB(A)	< 45 dB(A)	< 45 dB(A)	< 45 dB(A)	< 45 dB(A)	< 45 dB(A)
	Spring	62 dB(A)	62 dB(A)	62 dB(A)	62 dB(A)	62 dB(A)	62 dB(A)	62 dB(A)
ELECTRICAL CONNECTION:								
3 ft, cable, ½" conduit fitting		•	•	•	•	•	•	•
120 VAC power supply					•	•		
Built-in auxiliary switch				•		•	•	

CCV Model #	C_V Rating	Valve Nominal Size Inches	DN (mm)	Close-Off psi						
B6…S 2-WAY CHARACTERIZED CONTROL VALVE WITH SPRING RETURN ACTUATORS										
B6250S-070	70	2½	65	100	$1,618.00	$1,822.00	$1,704.00	$1,674.00	$1,758.00	$1,908.00	$1,848.00
B6250S-110	110	2½	65	100	$1,692.00	$1,888.00	$1,778.00	$1,746.00	$1,830.00	$1,972.00	$1,912.00
B6300S-110	110	3	80	100	$1,828.00	$2,080.00	$1,884.00	$1,884.00	$1,968.00	$2,166.00	$2,106.00

MULTI-FUNCTION TECHNOLOGY

Description	P-CODE	Control Input	Running Time	Built-in Feedback	List Price
P-10001	A01	2-10 VDC	150	2-10 VDC	No Charge
P-10002	A02	0-10 VDC	150	0-10 VDC	No Charge
P-10028	A28	0-10 VDC	100	0-10 VDC	No Charge
P-10063	A63	0.5-4.5 VDC	150	0.5-4.5 VDC	No Charge
P-10064	A64	5.5-10 VDC	150	5.5-10 VDC	No Charge
P-20002	W02	0.02-5.00 seconds PWM	150	2-10 VDC	No Charge
P-20003	W03	0.10-25.5 seconds PWM	150	2-10 VDC	No Charge
P-30001	F01	Floating Point	150	2-10 VDC	No Charge

*Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

Example: AF24-MFT US is the basic model. Add the P… pre-set MFT configuration number and list price to the actuator when ordering, as needed.

Note: Most popular configurations available at no additional cost. All other configurations carry a $34.00 list price.

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B2 Series Characterized Control Valve, NEMA 4X Non-Spring Return Actuator

2-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

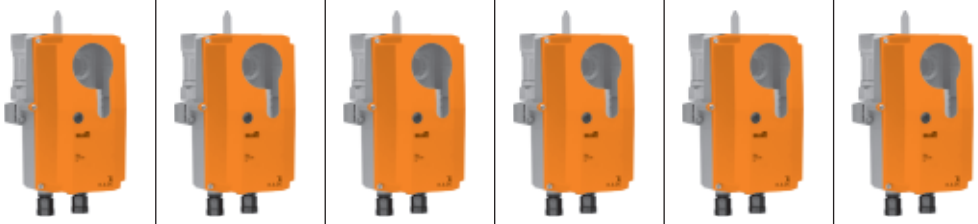
BELIMO

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	½", ¾", 1", 1¼"
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
Pressure rating:	
600 psi	½" - 1¼" (B230)
400 psi	1¼" (B231)
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB

5 YEAR WARRANTY

NEMA 4X Non-Spring Return Actuators



ACTUATOR PART #					NRB24-3-T N4	NRB24-SR-T N4	NRX24-MFT-T N4	NRB24-3-T N4H	NRB24-SR-T N4H	NRX24-MFT-T N4H
Control type					On/Off, Floating Point	Proportional	Proportional/MFT	On/Off, Floating Point	Proportional	Proportional/MFT
Manual override					•	•	•	•	•	•
Running time					90 seconds	90 seconds	150 sec. default / 60 to 200 variable	90 seconds	90 seconds	150 sec. default / 60 to 200 variable
Noise level					<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)
Built-in heater								•	•	•
ELECTRICAL CONNECTION:										
Terminal strip					•	•	•	•	•	•
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**						
B2… 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS										
B207	0.3	½	15	200	$516.00	$612.00	$720.00	$872.00	$960.00	$1,076.00
B208	0.46	½	15	200	$516.00	$612.00	$720.00	$872.00	$960.00	$1,076.00
B209	0.8	½	15	200	$516.00	$612.00	$720.00	$872.00	$960.00	$1,076.00
B210	1.2	½	15	200	$518.00	$614.00	$724.00	$874.00	$962.00	$1,080.00
B211	1.9	½	15	200	$518.00	$614.00	$724.00	$874.00	$962.00	$1,080.00
B212	3	½	15	200	$518.00	$614.00	$724.00	$874.00	$962.00	$1,080.00
B213	4.7	½	15	200	$522.00	$620.00	$728.00	$878.00	$966.00	$1,082.00
B214	7.4	½	15	200	$528.00	$626.00	$734.00	$884.00	$970.00	$1,082.00
B215*	10	½	15	200	$532.00	$630.00	$738.00	$890.00	$974.00	$1,086.00
B217	4.7	¾	20	200	$562.00	$642.00	$756.00	$918.00	$998.00	$1,112.00
B218	7.4	¾	20	200	$564.00	$644.00	$758.00	$922.00	$1,000.00	$1,114.00
B219	10	¾	20	200	$566.00	$646.00	$760.00	$924.00	$1,002.00	$1,116.00
B220*	24	¾	20	200	$570.00	$650.00	$764.00	$926.00	$1,002.00	$1,118.00
B222	7.4	1	25	200	$578.00	$660.00	$786.00	$926.00	$1,016.00	$1,144.00
B223	10	1	25	200	$582.00	$662.00	$792.00	$940.00	$1,018.00	$1,150.00
B224	19	1	25	200	$582.00	$666.00	$798.00	$940.00	$1,024.00	$1,156.00
B225*	30	1	25	200	$586.00	$670.00	$802.00	$944.00	$1,028.00	$1,160.00
B229	10	1¼	32	200	$618.00	$694.00	$822.00	$974.00	$1,052.00	$1,178.00
B230*	19	1¼	32	200	$620.00	$698.00	$824.00	$976.00	$1,056.00	$1,180.00

*Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

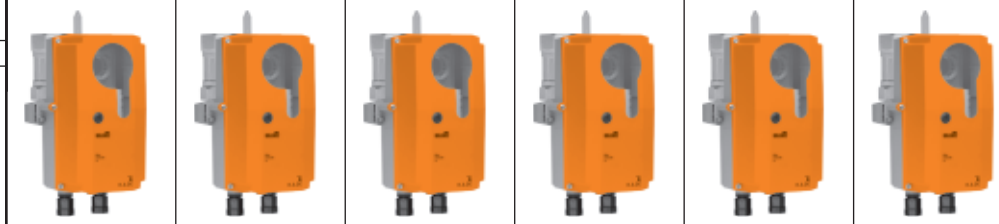
K20945 - 04/09 - Subject to change. © Belimo Aircontrols (USA), Inc.

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	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
Pressure rating:	
400 psi	1¼" - 3"
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB

5 YEAR WARRANTY

NEMA 4X Non-Spring Return Actuators



ACTUATOR PART #					ARB24-3-T N4	ARB24-SR-T N4	ARX24-MFT-T N4	ARB24-3-T N4H	ARB24-SR-T N4H	ARX24-MFT-T N4H
Control type					On/Off, Floating Point	Proportional	Proportional/MFT	On/Off, Floating Point	Proportional	Proportional/MFT
Manual override					•	•	•	•	•	•
Running time					90 seconds	90 seconds	150 sec. default / 90 to 300 variable	90 seconds	90 seconds	150 sec. default / 90 to 300 variable
Noise level					<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)
Built-in heater								•	•	•
ELECTRICAL CONNECTION:										
Terminal strip					•	•	•	•	•	•
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**						
B2… 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS										
B231	25	1¼	32	200	$674.00	$800.00	$848.00	$1,032.00	$1,158.00	$1,206.00
B232*	37	1¼	32	200	$676.00	$802.00	$852.00	$1,034.00	$1,160.00	$1,208.00
B238	19	1½	40	200	$682.00	$814.00	$866.00	$1,040.00	$1,164.00	$1,222.00
B239	29	1½	40	200	$682.00	$814.00	$866.00	$1,040.00	$1,172.00	$1,222.00
B240*	37	1½	40	200	$686.00	$818.00	$856.00	$1,042.00	$1,174.00	$1,226.00
B248	29	2	50	200	$704.00	$820.00	$872.00	$1,042.00	$1,176.00	$1,230.00
B249	46	2	50	200	$802.00	$932.00	$978.00	$1,160.00	$1,288.00	$1,336.00
B250*	57	2	50	200	$804.00	$936.00	$982.00	$1,162.00	$1,292.00	$1,340.00
B251	65	2	50	100	$806.00	$944.00	$990.00	$1,164.00	$1,300.00	$1,348.00
B252	85	2	50	100	$1,048.00	$1,182.00	$1,242.00	$1,404.00	$1,540.00	$1,598.00
B253	120	2	50	100	$1,110.00	$1,246.00	$1,306.00	$1,468.00	$1,602.00	$1,664.00
B254*	240	2	50	100	$1,176.00	$1,310.00	$1,370.00	$1,534.00	$1,668.00	$1,726.00
B261	60	2½	65	100	$1,188.00	$1,322.00	$1,384.00	$1,546.00	$1,680.00	$1,742.00
B262	75	2½	65	100	$1,190.00	$1,324.00	$1,386.00	$1,548.00	$1,682.00	$1,744.00
B263	110	2½	65	100	$1,192.00	$1,326.00	$1,388.00	$1,550.00	$1,684.00	$1,746.00
B264	150	2½	65	100	$1,254.00	$1,388.00	$1,450.00	$1,610.00	$1,746.00	$1,806.00
B265*	210	2½	65	100	$1,316.00	$1,452.00	$1,500.00	$1,674.00	$1,808.00	$1,858.00
B277	70	3	80	100	$1,448.00	$1,584.00	$1,642.00	$1,686.00	$1,822.00	$1,882.00
B278	130	3	80	100	$1,330.00	$1,466.00	$1,524.00	$1,752.00	$1,886.00	$1,948.00
B280*	170	3	80	100	$1,394.00	$1,528.00	$1,590.00	$1,804.00	$1,942.00	$1,998.00

*Models without characterizing discs.

For corrected C_Vs with piping reduction factor refer to page 6-5.

K20945 - 04/09 - Subject to change. © Belimo Aircontrols (USA), Inc.

B3 Series Characterized Control Valve, NEMA 4X Non-Spring Return Actuator

3-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

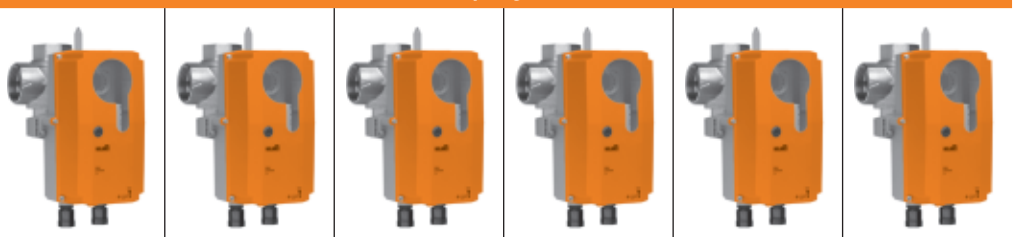
BELIMO

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage B-port modified linear for constant flow
Action	90° rotation
Sizes	½", ¾", 1"
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
Pressure rating:	
600 psi	½" - 1"
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB <2.0% for B to AB
Cv rating	A-port: as stated in chart B-port: 70% of A to AB C_V

5 YEAR WARRANTY

NEMA 4X Non-Spring Return Actuators



ACTUATOR PART #					NRB24-3-T N4	NRB24-SR-T N4	NRX24-MFT-T N4	NRB24-3-T N4H	NRB24-SR-T N4H	NRX24-MFT-T N4H
Control type					On/Off, Floating Point	Proportional	Proportional/MFT	On/Off, Floating Point	Proportional	Proportional/MFT
Manual override					•	•	•	•	•	•
Running time					90 seconds	90 seconds	150 sec. default / 60 to 200 variable	90 seconds	90 seconds	150 sec. default / 60 to 200 variable
Noise level					<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)
Built-in heater								•	•	•
ELECTRICAL CONNECTION:										
Terminal strip					•	•	•	•	•	•
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**						
B3… 3-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS										
B307	0.3	½	15	200	$558.00	$668.00	$788.00	$908.00	$1,012.00	$1,122.00
B308	0.46	½	15	200	$558.00	$668.00	$788.00	$908.00	$1,012.00	$1,122.00
B309	0.8	½	15	200	$558.00	$668.00	$788.00	$908.00	$1,012.00	$1,122.00
B310	1.2	½	15	200	$560.00	$670.00	$790.00	$910.00	$1,014.00	$1,124.00
B311	1.9	½	15	200	$560.00	$670.00	$790.00	$910.00	$1,014.00	$1,124.00
B312	3	½	15	200	$562.00	$672.00	$792.00	$912.00	$1,016.00	$1,134.00
B313	4.7	½	15	200	$562.00	$672.00	$792.00	$916.00	$1,020.00	$1,138.00
B315*	10	½	15	200	$564.00	$674.00	$794.00	$920.00	$1,024.00	$1,142.00
B317	4.7	¾	20	200	$634.00	$712.00	$984.00	$990.00	$1,070.00	$1,342.00
B318	7.4	¾	20	200	$636.00	$714.00	$986.00	$992.00	$1,072.00	$1,344.00
B320*	24	¾	20	200	$640.00	$718.00	$990.00	$996.00	$1,076.00	$1,348.00
B322	7.4	1	25	200	$654.00	$766.00	$892.00	$1,010.00	$1,122.00	$1,250.00
B323	10	1	25	200	$656.00	$778.00	$906.00	$1,012.00	$1,132.00	$1,260.00
B325*	30	1	25	200	$664.00	$776.00	$904.00	$1,020.00	$1,134.00	$1,262.00

* Models without characterizing discs.

For corrected Cvs with piping reduction factor refer to page 6-5.

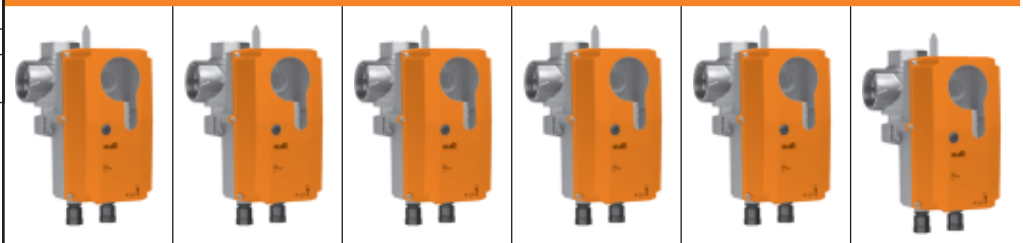
K20945 - 04/09 - Subject to change. © Belimo Aircontrols (USA), Inc.

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A port equal percentage B port modified linear for constant flow
Action	90° rotation
Sizes	1¼", 1½", 2"
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
Pressure rating:	
400 psi	1¼" - 2"
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB
C_V rating	A-port: as stated in chart B-port: 70% of A to AB C_V

5 YEAR WARRANTY

NEMA 4X Non-Spring Return Actuators



ACTUATOR PART #					ARB24-3-T N4	ARB24-SR-T N4	ARX24-MFT-T N4	ARB24-3-T N4H	ARB24-SR-T N4H	ARX24-MFT-T N4H
Control type					On/Off, Floating Point	Proportional	Proportional/MFT	On/Off, Floating Point	Proportional	Proportional/MFT
Manual override					•	•	•	•	•	•
Running time					90 seconds	90 seconds	150 sec. default / 90 to 300 variable	90 seconds	90 seconds	150 sec. default / 90 to 300 variable
Noise level					<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)
Built-in heater								•	•	•
ELECTRICAL CONNECTION:										
Terminal strip					•	•	•	•	•	•
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**						
B3… 3-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS										
B329	10	1¼	32	200	$744.00	$822.00	$922.00	$1,100.00	$1,178.00	$1,278.00
B330	19	1¼	32	200	$748.00	$826.00	$930.00	$1,104.00	$1,182.00	$1,286.00
B331	25	1¼	32	200	$872.00	$998.00	$1,048.00	$1,230.00	$1,356.00	$1,404.00
B338	19	1½	40	200	$880.00	$1,010.00	$1,072.00	$1,238.00	$1,368.00	$1,428.00
B339	29	1½	40	200	$882.00	$1,014.00	$1,074.00	$1,240.00	$1,372.00	$1,432.00
B340	37	1½	40	200	$884.00	$1,016.00	$1,076.00	$1,242.00	$1,374.00	$1,434.00
B341	46	1½	40	200	$886.00	$1,024.00	$1,082.00	$1,244.00	$1,380.00	$1,440.00
B347	29	2	50	200	$1,086.00	$1,198.00	$1,250.00	$1,444.00	$1,556.00	$1,606.00
B348	37	2	50	200	$1,088.00	$1,200.00	$1,254.00	$1,446.00	$1,558.00	$1,610.00
B349	46	2	50	200	$1,090.00	$1,206.00	$1,256.00	$1,448.00	$1,560.00	$1,612.00
B350	57	2	50	200	$1,094.00	$1,210.00	$1,262.00	$1,452.00	$1,564.00	$1,616.00
B351	68	2	50	200	$1,098.00	$1,212.00	$1,262.00	$1,456.00	$1,570.00	$1,618.00
B352	83	2	50	200	$1,102.00	$1,216.00	$1,266.00	$1,460.00	$1,574.00	$1,622.00

* Models without characterizing discs.

For corrected Cvs with piping reduction factor refer to page 6-5.

K20945 - 04/09 - Subject to change. © Belimo Aircontrols (USA), Inc.

B2 Series Characterized Control Valve, Quick Running Non-Spring Return Actuator

2-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

BELIMO

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	½", ¾", 1", 1¼", 1½", 2"
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
Pressure rating:	
600 psi	½" - 1¼" (B230)
400 psi	1¼" (B231) - 2"
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB

5 YEAR WARRANTY

Quick Running Non-Spring Return Actuators

ACTUATOR PART #					LRQB24-1	LRQX24-MFT	NRQB24-1	NRQX24-MFT
Control type					On/Off,	Proportional/MFT	On/Off,	Proportional/MFT
Manual override					•	•	•	•
Running time					5 seconds	5 seconds default	5 seconds	5 seconds default
Noise level					<35 dB(A)	<35 dB(A)	<45 dB(A)	<45 dB(A)
ELECTRICAL CONNECTION:								
3 ft, cable, ½ conduit fitting					•	•	•	•
CCV Model #	**Cv Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**				
B2… 2-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS								
B207	0.3	½	15	200	$556.00	$596.00		
B208	0.46	½	15	200	$556.00	$596.00		
B209	0.8	½	15	200	$556.00	$596.00		
B210	1.2	½	15	200	$560.00	$600.00		
B211	1.9	½	15	200	$560.00	$600.00		
B212	3	½	15	200	$564.00	$604.00		
B213	4.7	½	15	200	$572.00	$612.00		
B214	7.4	½	15	200	$576.00	$618.00		
B215*	10	½	15	200	$580.00	$622.00		
B217	4.7	¾	20	200	$590.00	$634.00		
B218	7.4	¾	20	200	$694.00	$636.00		
B219	10	¾	20	200	$594.00	$638.00		
B220*	24	¾	20	200	$596.00	$640.00		
B222	7.4	1	25	200	$622.00	$664.00		
B223	10	1	25	200	$630.00	$670.00		
B224	19	1	25	200	$636.00	$676.00		
B225*	30	1	25	200	$638.00	$678.00		
B229	10	1¼	32	200	$658.00	$698.00		
B230*	19	1¼	32	200	$660.00	$700.00		
B231	25	1¼	32	200			$686.00	$728.00
B232*	37	1¼	32	200			$700.00	$744.00
B238	19	1½	40	200			$700.00	$744.00
B239	29	1½	40	200			$704.00	$748.00
B240*	37	1½	40	200			$706.00	$750.00
B248	29	2	50	200			$812.00	$856.00
B249	46	2	50	200			$816.00	$860.00
B250*	57	2	50	200			$826.00	$868.00

* Models without characterizing discs.

For corrected Cvs with piping reduction factor refer to page 6-5.

K20945 - 04/09 - Subject to change. © Belimo Aircontrols (USA), Inc.

B3 Series Characterized Control Valve, Quick Running Non-Spring Return Actuator

3-way Valve with Stainless Steel Ball and Stem, NPT Female Ends

Valve Specifications

Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage B port modified linear for constant flow
Action	90° rotation
Sizes	½", ¾", 1", 1¼"
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
Pressure rating:	
600 psi	½" - 1"
400 psi	1¼
Media temp. range	0°F to 212°F [-18°C to +100°C]
Maximum differential pressure (ΔP)	30 psi
Leakage	0% for A to AB <2.0% for B to AB
C_V rating	A-port: as stated in chart B-port: 70% of A to AB C_V

5 YEAR WARRANTY

Quick Running Non-Spring Return Actuators

ACTUATOR PART #					LRQB24-1	LRQX24-MFT	NRQB24-1	NRQX24-MFT
Control type					On/Off,	Proportional/MFT	On/Off,	Proportional/MFT
Manual override					•	•	•	•
Running time					5 seconds	5 seconds default	5 seconds	5 seconds default
Noise level					<35 dB(A)	<35 dB(A)	<45 dB(A)	<45 dB(A)
ELECTRICAL CONNECTION:								
3 ft, cable, ½ conduit fitting					•	•	•	•
CCV Model #	**C_V Rating**	**Valve Nominal Size Inches**	**DN (mm)**	**Close-Off psi**				
B3… 3-WAY CHARACTERIZED CONTROL VALVE WITH NON-SPRING RETURN ACTUATORS								
B307	0.3	½	15	200	$624.00	$666.00		
B308	0.46	½	15	200	$624.00	$666.00		
B309	0.8	½	15	200	$624.00	$666.00		
B310	1.2	½	15	200	$626.00	$668.00		
B311	1.9	½	15	200	$626.00	$668.00		
B312	3	½	15	200	$630.00	$670.00		
B313	4.7	½	15	200	$638.00	$678.00		
B315*	10	½	15	200	$640.00	$680.00		
B317	4.7	¾	20	200	$660.00	$700.00		
B318	7.4	¾	20	200	$662.00	$702.00		
B320*	24	¾	20	200	$664.00	$704.00		
B322	7.4	1	25	200	$742.00	$782.00		
B323	10	1	25	200	$744.00	$784.00		
B325*	30	1	25	200	$748.00	$788.00		
B329	10	1¼	32	200			$758.00	$798.00
B330	19	1¼	32	200			$766.00	$806.00
B331	25	1¼	32	200			$882.00	$924.00

* Models without characterizing discs.

For corrected Cvs with piping reduction factor refer to page 6-5.

K20945 - 04/09 - Subject to change. © Belimo Aircontrols (USA), Inc.

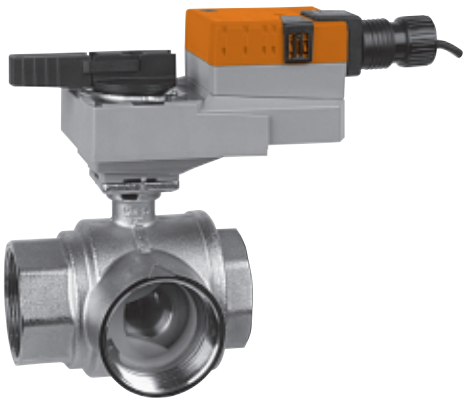
AR Series Valve Actuator

Custom, Direct Coupled, Non-Spring Valve Actuator, 180 in-lb Minimum Torque

Actuator Specifications

Torque	180 in-lb [20 Nm]
Angle of Rotation♦	max 95, adjustable with mechanical stop electronically variable
Fits Shaft Diameter	½" to 1.05" (centers on ½", ¾" and 1.05" shafts with insert)
Position Indication	reflective visual indicator (snap-on)
Manual Override	external push-button
Direction of Rotation♦	reversible with switch
Dimensions	7.47" x 3.45" x 2.52" [189.8 x 88 x 64 mm]
Electrical Connection	18 GA plenum rated cable, 1/2" conduit connector
Overload Protection	electronic throughout rotation
Auxiliary Switch(es)	(-S) Models: 1 SPDT, 3A (0.5A inductive) @ 250 V Adjustable 5° to 85°
Housing	NEMA 2/IP54
Agency Listings	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CSA C22.2 No. 24-93, CE acc. to 2006/95/EC and 89/336/EEC

♦ Variable with MFT



ARX24-SR

MFT

MFT= 2-10 VDC Default, or Set, Modify, Read:

- **Control (PWM, VDC range, Floating Point)**
- **Feedback (0-10 VDC, 0-5 VDC, 2-10 VDC, Variable)**
- **Motion (run time)**

All AR Actuators have BDCM

LISTED 94 D5 TEMP. IND. & REG. EQUIP.

5 YEAR WARRANTY

Non-Spring Valve Actuators

Model	Control Input	Feedback	Power Supply	Running Time(s)	VA Rating	Cable Length	Re-order Number	List Price	Valve Assembly Adder
ARX24-3	On/Off, Floating Point	Add on	24 VAC/VDC	95	5.5	10 ft.	AR000 0C3 000	$336.00	$28.00
ARX24-3	On/Off, Floating Point	Add on	24 VAC/VDC	95	5.5	16 ft.	AR000 0C5 000	$356.00	$48.00
ARX24-3-S	On/Off, Floating Point	Built-in	24 VAC/VDC	95	5.5	10 ft.	AR020 0A3 000	$402.00	$28.00
ARX24-3-S	On/Off, Floating Point	Built-in	24 VAC/VDC	95	5.5	16 ft.	AR020 0A5 000	$422.00	$48.00
ARX24-3-T	On/Off, Floating Point	Add on	24 VAC/VDC	95	5.5	N/A	ART00 0T2 000	$288.00	
ARX120-3	On/Off, Floating Point	Add on	100-230 VAC/VDC	95	7	10 ft.	AR060 0A3 000	$402.00	$28.00
ARX120-3	On/Off, Floating Point	Add on	100-230 VAC/VDC	95	7	16.ft.	AR060 0A5 000	$422.00	$48.00
ARX24-SR	2-10 VDC (4-20mA*)	2-10 VDC	24 VAC/VDC	95	5	10 ft.	AR030 0C3 000	$464.00	$28.00
ARX24-SR	2-10 VDC (4-20mA*)	2-10 VDC	24 VAC/VDC	95	5	16 ft.	AR030 0C5 000	$484.00	
ARX24-SR-T	2-10 VDC (4-20mA*)	2-10 VDC	24 VAC/VDC	95	5	N/A	ARTW0 0T2 000	$414.00	
ARX120-SR	2-10 VDC (4-20mA*)	2-10 VDC	100-230 VAC/VDC	95	7.5	10 ft.	AR450 0A3 000	$536.00	$28.00
ARX120-SR	2-10 VDC (4-20mA*)	2-10 VDC	100-230 VAC/VDC	95	7.5	16 ft.	AR4500A5 000	$556.00	$48.00
MFT Versions									
ARX24-MFT	Various	Various	24 VAC/VDC	Various	6	3 ft.	AR100 0C1 XXX**	$468.00	
ARX24-MFT	Various	Various	24 VAC/VDC	Various	6	10 ft.	AR100 0C3 XXX**	$496.00	$28.00
ARX24-MFT	Various	Various	24 VAC/VDC	Various	6	16 ft.	AR100 0C5 XXX**	$516.00	$48.00
ARX24-MFT95	0 to 135 Ω	Various	24 VAC/VDC	150	6	3 ft.	AR0L0 0C3 R01	$488.00	

*With 500 Ω resistor

** See next page for P-Codes available.

The P-Code programs the actuator for the desired Control Input, Feedback and Running Time.

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Actuator Specifications

Torque	45 in-lb [5 Nm]
Ambient Temperature	-22°F to 122°F [-30°C to 50°C]
Angle of Rotation♦	max. 90, adjustable with mechanical stop electronically variable
Position Indication	handle
Manual Override	external push-button
Direction of Rotation♦	reversible with switch
Dimensions	6.18" x 2.6" x 2.34" [157 x 66 x 59.4 mm]
Electrical Connection	18 GA plenum rated cable, 1/2" conduit fitting terminal strip (-T) models
Overload Protection	electronic throughout rotation
Auxiliary Switch	LRX24-3-S - 1SPDT, 3A (0.5A) @ 250 VAC, UL Listed, adjustable 0° to 100°
Housing	NEMA 2/IP54
Agency Listings	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CSA C22.2 No. 24-93, CE acc. to 2006/95/EC and 89/336/EEC

♦ Variable with MFT

LRX24-MFT

(shown with conduit fittings)

MFT

MFT= 2-10 VDC Default, or Set, Modify, Read:

- **Control (PWM, VDC range, Floating Point)**
- **Feedback (0-10 VDC, 0-5 VDC, 2-10 VDC, Variable)**
- **Motion (run time)**

All actuators have BDCM

LISTED 94 D5 TEMP. IND. & REG. EQUIP.

5 YEAR WARRANTY

Non-Spring Return Valve Actuators

Model	Control Input	Feedback	Power Supply	Running Time(s) [Default]	VA Rating	Cable Length	Re-order Number	List Price	Valve Assembly Adder
BASIC PRODUCTS									
LRX24-3	On/Off, Floating Point	Add on	24 VAC/DC	90	2	10 ft.	LR000 RC3 000	$218.00	$28.00
LRX24-3	On/Off, Floating Point	Add on	24 VAC/DC	90	2	16 ft.	LR000 RC5 000	$238.00	$48.00
LRX24-3-S	On/Off, Floating Point	Add on	24 VAC/DC	90	2	10 ft.	LR020 RA3 000	$284.00	$28.00
LRX24-3-S	On/Off, Floating Point	Add on	24 VAC/DC	90	2	16 ft.	LR020 RA5 000	$304.00	$48.00
LRX24-3-T	On/Off, Floating Point	Add on	24 VAC/DC	90	2	N/A	LRT00 RT2 000	$170.00	
LRX120-3	On/Off, Floating Point	Add on	100-230 VAC	90	4	10 ft.	LR060 RA3 000	$308.00	$28.00
LRX120-3	On/Off, Floating Point	Add on	100-230 VAC	90	4	16 ft.	LR060 RA5 000	$328.00	$48.00
LRX24-SR	2-10 VDC (4-20mA*)	2-10 VDC	24 VAC/DC	90	4.5	10 ft.	LR030RC3 000	$314.00	$28.00
LRX24-SR	2-10 VDC (4-20mA*)	2-10 VDC	24 VAC/DC	90	4.5	16 ft.	LR560RC5 000	$334.00	$48.00
LRX24-SR-T	2-10 VDC (4-20mA*)	2-10 VDC	24 VAC/DC	90	4.5	N/A	LRTW0 5T2 000	$256.00	
LRX120-SR	2-10 VDC (4-20mA*)	2-10 VDC	100-230 VAC	90	4.5	10 ft.	LR450 5A3 000	$362.00	$28.00
LRX120-SR	2-10 VDC (4-20mA*)	2-10 VDC	100-230 VAC	90	4.5	16 ft.	LR450 5A5 000	$382.00	$48.00
Customize It!									
LRX24-MFT	Various	Various	24 VAC/VDC	Various	5	3 ft.	LR100 RC1 XXX**	$354.00	
LRX24-MFT	Various	Various	24 VAC/VDC	Various	5	10 ft.	LR100 RC3 XXX**	$382.00	$28.00
LRX24-MFT	Various	Various	24 VAC/VDC	Various	5	16 ft.	LR100 RC5 XXX**	$402.00	$48.00
LRX24-MFT95	0 to 135 Ω	2-10 VDC	24 VAC/VDC	150	5	3 ft.	LR0L0 RC1 R01	$408.00	
LRX24-3-T	On/Off, Floating Point	Add on	24 VAC/VDC	90	2	N/A	LRT00 RT2 000	$170.00	
LRX120-3	On/Off, Floating Point	Add on	100-230 VAC	90	4	10 ft.	LR060 RA3 000	$308.00	$28.00

‡ Prices do not reflect additional programming code surcharge.
*With 500 Ω resistor
** See next page for P-Codes available
The P-Code programs the actuator for the desired Control Input, Feedback and Running Time.

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-3 and SR

CONFIGURATION DESCRIPTION	P-CODE	CONTROL: INPUT RANGE	CONTROL: FEEDBACK POSITION	CONTROL: RUNNING TIME	List Price
N/A	0	2.0 to 10.0 VDC (for -3)	2-10 VDC (for -3)	150 seconds	No Charge
N/A	2	2.0 to 10.0 VDC (for -SR)	2-10 VDC (for -SR)	90 seconds	No Charge

MFT and PC

CONFIGURATION DESCRIPTION	P-CODE	CONTROL: INPUT RANGE	CONTROL: FEEDBACK POSITION	CONTROL: RUNNING TIME	List Price ‡
P-10001	A01	2.0 to 10.0 VDC	2.0 to 10.0 VDC	150 seconds	No Charge*
P-10002	A02	0.5 to 10.0 VDC	0.0 to 10.0 VDC	150 seconds	No Charge
P-10003	A03	2.0 to 10.0 VDC	0.0 to 5.0 VDC	150 seconds	No Charge
P-10004	A04	4.0 to 7.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10005	A05	6.0 to 9.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10006	A06	10.5 to 13.5 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10007	A07	0.5 to 5.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10009	A09	5.0 to 10.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10010	A10	5.0 to 10.0 VDC	0.0 to 10.0 VDC	150 seconds	$34.00
P-10013	A13	0.5 to 10.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10015	A15	2.0 to 5.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10016	A16	2.0 to 6.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10017	A17	6.0 to 10.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10018	A18	14.0 to 17.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10020	A20	9.0 to 12.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10028	A28	0.5 to 10.0 VDC	0.5 to 10.0 VDC	100 seconds	No Charge
P-10031	A31	0.5 to 4.0 VDC	2.0 to 10.0 VDC	150 seconds	$34.00
P-10063	A63	0.5 to 4.5 VDC	0.5 to 4.5 VDC	150 seconds	No Charge
P-10032	A32	2.0 to 10.0 VDC	2.0 to 10.0 VDC	100 seconds	No Charge
P-10064	A64	5.5 to 10.0 VDC	5.5 to 10.0 VDC	150 seconds	No Charge
N/A	AAT	2.0 to 10.0 VDC	2.0 to 10.0 VDC	20 seconds	No Charge
P-20001	W01	0.59 to 2.93 sec.	2.0 to 10.0 VDC	150 seconds	$34.00
P-20002	W02	0.02 to 5.00 sec.	2.0 to 10.0 VDC	150 seconds	No Charge
P-20003	W03	0.10 to 25.50 sec.	2.0 to 10.0 VDC	150 seconds	No Charge
P-20004	W04	0.10 to 25.60 sec.	2.0 to 10.0 VDC	150 seconds	$34.00
P-20005	W05	0.10 to 5.20 sec.	0.0 to 5.0 VDC	150 seconds	$34.00
P-30001	F01	Floating Point	2.0 to 10.0 VDC	150 seconds	No Charge
P-30002	F02	Floating Point	0.0 to 10.0 VDC	150 seconds	$34.00
P-40002	J02	On/Off	2.0 to 10.0 VDC	150 seconds	No Charge
N/A	S01 (for -PC only)	Phasecut	2.0 to 10.0 VDC	150 seconds	No Charge
P-16001	R01 (for -MFT95 only)	0 to 135 Ω	2.0 to 10.0 VDC	150 seconds	No Charge

NOTE: More P-codes are available, consult factory.
‡ Add to list price on previous page.
*P-10001 is the default configuration for MFT.

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		Non-Spring Return Actuator		Spring Return Actuator		
WEATHERSHIELDS - NEMA 4		**LR**	**AR**	**LF**	**AF**	**List Price**
	ZS-CCV-90*			•	•	$190.00
	ZS-CCV-100*	•	•			$190.00
EXTENSION BRACKET						
	CCV-EXT-KIT CCV/PICCV valve neck extension kit	•	•	•	•	$170.00
AUXILIARY SWITCHES & POTENTIOMETERS						
	S1A Auxiliary switch - 1x SPDT, 3A (0.5A Inductive) @ 250 VAC	•	•			$74.00
	S2A Auxiliary switch - 1x SPDT, 3A (0.5A Inductive) @ 250 VAC	•	•			$110.00
	P140A Feedback potentiometer 140 Ω	•	•			$116.00
	P500A Feedback potentiometer 500 Ω	•	•			$116.00
	P1000A Feedback potentiometer 1000 Ω	•	•			$116.00
	P2800A Feedback potentiometer 2800 Ω	•	•			$116.00
	P5000A Feedback potentiometer 5000 Ω	•	•			$116.00
	P10000A Feedback potentiometer 10000 Ω	•	•			$116.00

NOTE: CCV-EXT-KIT is an option for all CCVs except for B6 flanged CCVs where it is factory mounted as a standard.
NOTE: For TF/TR actuators, no weathershield available at this time. Please call 800-543-9038 for assistance.
* Designed to NEMA 4 specifications.

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