

A detailed photograph of a complex industrial piping system, likely for water or steam distribution. The system features numerous large-diameter pipes, some insulated with grey material, and others in bare metal. Several vertical risers are equipped with pumps and control valves. The background shows a concrete ceiling with structural elements and other pipes, suggesting a large-scale facility like a hospital or university building.

**Increasing
Performance
and Efficiency**

Retrofit Solutions

EFFECTIVE FEBRUARY 2025

Table of Contents

Actuator Retrofit Solutions

- Retrofit and Replacement**
3 How to Select an Actuator

- Solutions for Specific Actuator Manufacturer**
5 Discontinued Belimo Products
7 Honeywell
9 Invensys
12 Johnson Controls
14 Siemens
15 Actuator Installation on Jackshaft
16 Accessories

Fire and Smoke Actuator Retrofit Solutions

- Solutions for Specific Fire & Smoke Actuator Manufacturer**
20 Honeywell
21 Ruskin, ECM, Prefco, Modulating, Pneumatic
22 Ruskin (Phillips), Multiproducts
23 Siemens, Siebe

Economizer Retrofit Solutions

- 25 ZIP Economizer Selection Guide
26 Honeywell
29 Retrofit Kits and ZIP Packs

Zone Valve Replacement Solutions

- 33 Belimo to Belimo
34 Retrofit and Replacement

Globe Valve Retrofit Solutions

- 39 How to Select a Globe Valve
41 UGLK.../UGSP... Retrofit Linkage for Globe Valves
44 UGVL Globe Valve Linkage
45 SGVL Globe Valve Linkage
46 FGVL Globe Valve Linkage
47 WGVL Warren Globe Valve Linkage
48 UGSL1200 Globe Valve Linkage for Siemens 599

Solutions for Specific Manufacturer

- 49 Honeywell
54 Johnson Controls
64 Robertshaw
64 Siebe\Invensys\Barber Colman\Schneider
69 Siemens\Landis\Powers
70 Warren Controls
72 Custom Globe Valve Solutions
73 UGSP Series Globe Valve Retrofit Solution
83 UGLK Retrofit, Components
84 Accessories

Butterfly Valve Retrofit Solutions

- 87 How to Select a Butterfly Valve Retrofit Solution
88 Butterfly Valve Retrofit Actuators
90 UFLK.../UFSP Linkages

Solutions for Specific Manufacturer

- 94 Bray
95 Centerline
96 Johnson Controls
97 Keystone
98 Milwaukee
98 Nibco
99 Victualic

Specialty Solutions for Valve Manufacturers

- 100 Apollo, Challenger, Chemtrol, Dezurik, Flowseal, FNW, Gruvlok, Hammond, Jamesbury, Jenkins, Keystone, Metraflex, Mueller, PDC, Quartermaster, Watts
101 Component Identification
102 Accessories

Ball Valve Retrofit Solutions

- 107 UBSP0004 Retrofit Linkage
108 UBSP0006 Retrofit Linkage
109 UBSP0008 Retrofit Linkage
110 UBSP0012 Retrofit Linkage
111 Component Identification

Actuator Retrofit Solutions

Belimo HVAC damper actuator retrofits are designed to replace failed or non-functioning actuators used in a wide variety of on/off, modulating or communicating damper applications. With a comprehensive torque range (9 in-lb to 1,400 in-lb), and the ability to direct mount on standard damper shafts or jackshafts, these actuator solutions are ideal for air handlers, economizer units, VAV terminal units, fan coil units, and unit ventilators.

3 Retrofit and Replacement

How to Select an Actuator

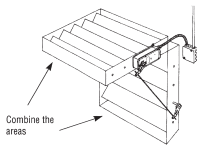
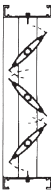
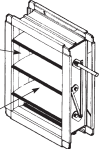
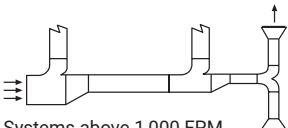
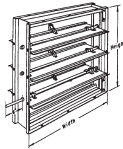
The “10 questions” method for sizing and selection shown below is recommended as the best method for your actuation requirements. Use the “Application Data” column in this chart as a worksheet to help in the selection process.

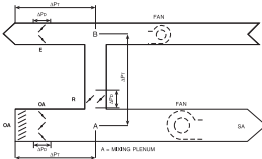
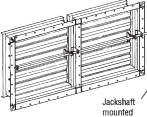
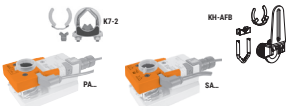
When determining the actuating force required, the damper manufacturer's specifications must be utilized if available.

Enter these values in question 5:

- in-lb/ft²
- total torque required
- Skip to question 6

If not available, complete the form.

APPLICATION INFO		APPLICATION DATA
1	What is the total area of the damper? 	_____ sq.ft.
2	Opposed blade or Parallel blade construction? L" x W" = Total sq. inches/144 = total sq. feet Opposed Blade w/o seals 3 in-lb/sq. feet* Opposed Blade w/ seals 5 in-lb/sq. feet Parallel Blade w/o seals 4 in-lb/sq. feet Parallel Blade w/ seals 7 in-lb/sq. feet *Less than 1,000 feet per minute  	☐ Opposed Blade ☐ Parallel Blade
3	Are there blade and edge seals on the damper? This will impact the proper selection as the seals add resistance requiring more torque. If unknown, use a worst case scenario, parallel blade with seals. 	☐ Yes ☐ No
4	What is the air velocity, static pressure, or design CFM?  Systems above 1,000 FPM require additional actuator torque	_____ W.G. _____ CFM _____ FPM
5	For the damper in question, what is the manufacturers recommended torque load per square foot?  If manufacture torque is not provided, calculate total in-lb required by using the example formula below. If manufacturer torque is provided, skip to question 6.	_____ in-lb/sq.ft. Total in-lb required

ACTUATOR REQUIREMENTS		APPLICATION DATA
6	Is fail-safe actuation required?  Consider the application. Is the actuator and/or damper exposed to outside air? If yes, use fail-safe actuator.	☐ Yes ☐ No
7	What is the supply voltage to the actuator? Do you need a step down transformer? If replacing an oil immersed gear train actuator, is the transformer in the defective actuator? You may need to purchase one.  • AC/DC 24 V • AC 120 V • AC 230 V single phase	☐ AC 24 V ☐ AC 120 V ☐ AC 230 V
8	What is the control signal to the actuator?  • 2 position • Floating point • Modulating • Sequencing • “Non-standard” voltage signals This will be a critical component to the selection of an actuator. Consider the .MFT actuator product range and the flexibility of its application.	☐ On/Off ☐ Floating Point ☐ 2...10 V ☐ 0.5...10 V ☐ 4...20 mA ☐ PWM____ range ☐ Other (MFT)
9	Can you direct couple to a damper shaft?  do not allow direct coupling. Refer to the Belimo “Mounting & Methods Guide” for application details.	☐ Yes ☐ No, see accessories page in the Product Guide and Price List
10	Are there additional accessories required?  For example, some applications require the addition of an auxiliary switch for proof of position; a retrofit application may require an additional mounting bracket and linkage kit. We advise that you identify these needs prior to leaving the job site or ordering products.	☐ No ☐ Yes, see accessories section or actuator series for details

TYPICAL DAMPER REQUIREMENTS AND SIZING

Calculate the Area (ft²) of Rectangular or Square Damper: ft² = h x w /144; (h = height, w = width, in inches)

EXAMPLE: Damper Area (8 ft²) x Rated Torque Loading of Damper (4 in-lb/ft²) = Total in-lb Required (32 in-lb) Belimo LF 35 in-lb/ LM 45 in-lb actuators

SQUARE	Torque Loading in-lb/ft²		
	Damper Blade Type	< 1000 FPM	2500-3500 FPM
	Parallel blade/edge seals	7 (Typical)	14
	Opposed blade/edge seals	5 (Typical)	10
	Parallel blade/no edge seals	4	8
	Opposed blade/no edge seals	3	6
	Round	10	20

TYPICAL DAMPER REQUIREMENTS AND SIZING EXAMPLE:

APPLICATION REQUIREMENTS	RECTANGULAR (OR SQUARE) DAMPER	ROUND DAMPER
Damper Length	24"	
Damper Width	12"	
Damper (Round)		12"
Blade Type	Opposed	Round
Edge Seals	Edge Seals	
Design CFM	1800 CFM	700 CFM
Fail-Safe	Yes	Yes
Supply Voltage	24 V	24 V
Control Signal	2...10 V	2...10 V
CALCULATIONS		
Damper Area (sq. inches)	24" x 12" = 288 in ²	$\pi r^2 = 113.04 \text{ in}^2$
Damper Area (sq. feet)*	288 in ² / 144 in-ft ² = 2 ft ²	113.04 in ² / 144 in-ft ² = 0.785 ft ²
Velocity	1800 ft ³ /min / 2 ft ² = 900 ft/min	700 ft ³ /min / .785 ft ² = 892 ft/min
	See chart under <1000 FPM (ft/min)	See chart under <1000 FPM (ft/min)
Rated Torque Loading (in-lb/ft ²)**	Select 5 in-lb/ft ² for Opposed Blade/Edge Seals	Select 10 in-lb/ft ² for Round Damper
EXAMPLE EQUATION		
	*Damper Area (ft²) x **Rated Torque Loading of Damper (in-lb/ft²) = Total in-lb Required	
	2 ft ² x 5 in-lb/ft ² = 10 in-lb Belimo TFB24-SR @ 22 in-lb	0.785 ft ² x 10 in-lb/ft ² = 7.85 in-lb Belimo TFB24-SR @ 22 in-lb

CONTROL SIGNAL OVERVIEW

Belimo actuators are compatible with many control inputs and all direct digital control (DDC) systems. There are many signals to select from with today's controllers.

On/Off (or open / close): The actuator is able to drive either to its full clockwise (CW) position, or to its full counter-clockwise (CCW) position.

Floating Point (or 3-point, Tri-State): The actuator has both clockwise (CW) and counter-clockwise (CCW) control inputs. One drives the actuator to its CW, the other to its CCW position. If there is no signal (Null point) on either input the actuator simply stays in its last position.

Modulating (Proportional) Control: The actuator drives to its control signal input throughout its angle of rotation. This control type is usually a variation of VDC with typical ranges of 0.5...10 V and 2...10 V.

It is common to also have a 4...20 mA output from a controller. This can be very easily converted to 2...10 V with a 500 Ω resistor.

Multi-Functional Technology (MFT): This technology was developed by Belimo for incorporation into our damper and valve actuators. MFT provides the ability to program certain characteristics of the actuators. Some of the key characteristics to change are:

- CONTROL INPUT
 - Selectable on/off, V, PWM or floating point
- MOTION VALUES
 - Selectable running time adjustment
- FEEDBACK
 - Selectable feedback values

0-135 Ω : The actuator drives to a modulating position proportional to the ohm signal of the controller.

Pulse Width Modulation (PWM): The actuator drives to a specified position according to a pulse duration, the "length" of signal. The pulse can originate from a dry contact closure or a triac sink or source controller. An example of PWM control:

Time base: 0...10 seconds

Output pulse: 5 seconds

Actuator position: 50%

See -MFT model actuators.

5 **Discontinued Belimo to Belimo**

Actuator Replacement Cross Reference

FAIL-SAFE ACTUATORS

DISCONTINUED MODEL	REPLACEMENT MODEL
AF120 US	AFBUP
AF120-S US	AFBUP-S
AF230 US	AFBUP
AF230-S US	AFBUP-S
AF24 US	AFB24
AF24-3 US	AFX24-MFT + F □□
AF24-3-S US	AFX24-MFT-S + F □□
AF24-MFT US	AFB24-MFT
AF24-MFT-S US	AFB24-MFT-S
AF24-PWM US	AFX24-MFT + W □□
AF24-S US	AFB24-S
AF24-SR US	AFB24-SR**
AF24-SR-S US	AFB24-SR-S**
AFA24-SR US**	AFB24-SR**
AFR120 US	AFBUP
AFR120-S US	AFBUP-S
AFR24 US	AFB24
AFR24-3 US	AFX24-MFT + F □□
AFR24-3-S US	AFX24-MFT-S + F □□
AFR24-S US	AFB24-S
AFR24-SR US	AFB24-SR**
FM24 US	AFB24
FM24-SR US	AFB24-SR
FS24	AFB24
FS24-S	AFB24-S
FSAF120 US	FSAF120A
FSAF120-S US	FSAF120A-S
FSAF230 US	FSAF230A
FSAF230-S US	FSAF230A-S
FSAF24 US	FSAF24A
FSAF24-BAL US	FSAFB24-SR + SGA24 or SGF24

* Purchased before May 2003.

** Not piggy back capable.

NON FAIL-SAFE ACTUATORS

DISCONTINUED MODEL	REPLACEMENT MODEL
AM24 US	AMB24-3
AM24-MFT US	AMX24-MFT + # AM100 1C1 □□□
AM24-PWM-A US	AMX24-MFT + # AM100 1C1 W02
AM24-PWM-B US	AMX24-MFT + # AM100 1C1 W03
AM24-PWM-C US	AMX24-MFT + # AM100 1C1 W01
AM24-S US	AMB24-3-S
AM24-SR US	AMB24-SR
AM24-SRS-A US	AMX24-MFT + # AM100 1C1 A04
AM24-SRS-B US	AMX24-MFT + # AM100 1C1 A05
AM24-SRS-C US	AMX24-MFT + # AM100 1C1 A06
GM24 US	GMB24-3
GM24-MFT US	GMX24-MFT+ # GM110 1C1 □□□
GM24-SR US	GMB24-SR
LM24 US	LMB24-3
LM24-3 US	LMB24-3
LM24-MFT US	LMX24-MFT + # LM100 1C1 □□□
LM24-MFT.1 US	LMX24-MFT+ # LM100 1C1 □□□
LM24-SR US	LMB24-SR
LM24-SR.1 US	LMB24-SR.1
LM24-SR-2.0 US	LMB24-SR
LM24-SR-T US	LMB24-SR-T

* Purchased before May 2003.

** Not piggy back capable.

□ Placeholder for custom options.

FAIL-SAFE ACTUATORS

DISCONTINUED MODEL	REPLACEMENT MODEL
FSAF24-BAL-S US	FSAFB24-SR-S + SGA24 or SGF24
FSAF24-S US	FSAF24A-S
FSAF24-SR US	FSAFB24-SR
FSAF24-SR-S US	FSAFB24-SR-S
LF24-SR-MP US	LF24-MFT-20 US
LF24-SR-S-MP US	LF24-MFT-S-20 US
NF120 US	NFBUP
NF120-S US	NFBUP-S
NF230 US	NFBUP
NF230-S US	NFBUP-S
NF24 US	NFB24
NF24-MFT US	NFB24-MFT
NF24-S US	NFB24-S
NF24-S2 US	NFB24-S
NF24-SR US	NFB24-SR
NF24-SR-S US	NFB24-SR-S
SF120 US	AFBUP
SF120-S US	AFBUP-S
SF24 US	AFB24
SF24-S US	AFB24-S
TF120 US	TFB120
TF120-S US	TFB120-S
TF24 US	TFB24
TF24-3 US	TFB24-3
TF24-3-S US	TFB24-3-S
TF24-MFT US	TFB24-MFT
TF24-MFT-S US	TFB24-MFT-S
TF24-S US	TFB24-S
TF24-SR US	TFB24-SR
TF24-SR-S US	TFB24-SR-S
TFC120-S US	TFCB120-S

NON FAIL-SAFE ACTUATORS

DISCONTINUED MODEL	REPLACEMENT MODEL
LM24-SR-T.1 US	LMB24-SR-T.1
LM24-SR-T-2.0 US	LMB24-SR-T
LMC24-SR US	LMCB24-SR
NM24 EU	NMB24-3
NM24 US	NMB24-3
NM24-1 US	NMB24-3
NM24-1/200 US	NMX24-3 + # NM00 1C3 000
NM24-1/300 US	NMX24-3 + # NM00 1C3 000
NM24-MFT US	NMX24-MFT + # NM100 1C1 □□□
NM24-MFT.1 US	NMX24-MFT + # NM100 1C1 □□□
NM24-PWM US	NMX24-MFT + # NM100 1C1 W □□
NM24-SR US	NMB24-SR
NM24-SRS US	NMX24-MFT + # NM100 1C1 A □□
NMQ24-MFT US	NMQX24-MFT + #NMQD00 1C1 □□□
NMV24-D US	NMV-D3-MFT
NMV24-V US	NMV-D3-MFT
SM24 US	AMB24-3
SM24-S US	AMX24-MFT + # AM110 1C1 □□□ + S1A/S2A
SM24-SR US	AMB24-SR
SM24-SRS US	AMX24-MFT + # AM100 1C1 A □□

Actuator Replacement Cross Reference

When replacing an actuator on a valve, whether Belimo or other manufacture, be sure to consider the application parameters. The new product maynot be the best fit for the application. For example, an existing MAR actuator mounted to a valve linkage. The direct replacement of the actuator would be the PR series actuator. The MAR and the PR have different linkage construction. The linkage would also need to be replaced. When retrofitting or replacing actuators, it is recommended to select the new product based on application parameters. This ensures the selected actuator is fit for the application.

Please consult Belimo for assistance with valve actuator replacement.

FAIL-SAFE ACTUATORS

DISCONTINUED MODEL	REPLACEMENT MODEL
AF24 US	AFRB24
AF24-SR US	AFRB24-SR
AF24-3 US	AFX24-MFT + F □□□
AF24-3-S US	AFX24-MFT-S + F □□□
AF24-PWM US	AFX24-MFT + W □□□
AF24-SR-S US	AFB24-SR-S
LF24-SR-MP US	LF24-MFT-20 US
LF24-SR-S-MP US	LF24-MFT-S-20 US
NVF24-MFT US	SVKX24-MFT* or SVKB24-SR*
NVF24-MFT-E US	SVKX24-MFT* or SVKB24-SR*

*New linkage required.

NON FAIL-SAFE ACTUATORS

DISCONTINUED MODEL	REPLACEMENT MODEL
LR24 US	LRB24-3
LR24/200 US*	LRX24-3 + # LR000 RC3 002
LR24/300 US	LRX24-3 + # LR000 RC3 002
LR24-1 US	LRB24-3
LR24-1/200 US*	LRX24-3 + # LR000 RC3 002
LR24-1/300 US	LRB24-3 + # LR000 RC3 002
LR24-3-1 US	LRB24-3
LR24-3-1/200 US*	LRX24-3 + # LR000 RC3 002
LR24-3-1/300 US	LRX24-3 + # LR000 RC3 002
LR24-MFT US	LRX24-MFT + # LR100 RC1 □□□
LR24-MFT/200 US*	LRX24-MFT + # LR100 RC3 □□□
LR24-MFT/300 US	LRX24-MFT + # LR100 RC3 □□□
LR24-SR/200 US*	LRX24-SR + # LR030 RC3 002
LR24-SR/300 US	LRX24-SR + # LR030 RC3 002
LR24-SR-1 US	LRB24-SR
LR24-SR-1/200 US*	LRX24-SR + # LR030 RC3 002
LR24-SR-1/300 US	LRX24-SR + # LR030 RC3 002
LR24-SR-1-2.0 US	LRB24-SR
LR24-SR-1-2.0/200 US*	LRX24-SR + # LR030 RC3 002
LR24-SR-1-2.0/300 US	LRX24-SR + # LR030 RC3 002
LR24-SR-2.0 US	LRB24-SR
LR24-SR-2.0/200 US*	LRX24-SR + # LR030 RC3 002
LR24-SR-2.0/300 US	LRX24-SR + # LR030 RC3 002
LV24 US	CCV with LR..or TR..or ZoneTight with CQ
LV24/200 US*	CCV with LR..or TR..or ZoneTight with CQ
LV24/300 US	CCV with LR..or TR..or ZoneTight with CQ
LV24-1 US	CCV with LR..or TR..or ZoneTight with CQ
LV24-1/200 US*	CCV with LR..or TR..or ZoneTight with CQ
LV24-1/300 US	CCV with LR..or TR..or ZoneTight with CQ
LV24-3 US	CCV with LR..or TR..or ZoneTight with CQ
LV24-3-1 US	CCV with LR..or TR..or ZoneTight with CQ
LV24-SR US	CCV with LR..or TR..or ZoneTight with CQ
LV24-SR/200 US*	CCV with LR..or TR..or ZoneTight with CQ
LV24-SR/300 US	CCV with LR..or TR..or ZoneTight with CQ
LV24-SR-1 US	CCV with LR..or TR..or ZoneTight with CQ
LV24-SR-1/200 US*	CCV with LR..or TR..or ZoneTight with CQ
LV24-SR-1/300 US	CCV with LR..or TR..or ZoneTight with CQ
LV24-SR-1-2.0 US	CCV with LR..or TR..or ZoneTight with CQ
LV24-SR-1-2.0/200 US*	CCV with LR..or TR..or ZoneTight with CQ
LV24-SR-1-2.0/300 US	CCV with LR..or TR..or ZoneTight with CQ

□ Placeholder for custom options.

*These models had a 2 m/6' long cable and the replacement is a 3 m/10' long cable. CV must be known for proper replacement.

NON FAIL-SAFE ACTUATORS

DISCONTINUED MODEL	REPLACEMENT MODEL
AM24 US	ARB24-3
AM24-MFT US	ARX24-MFT + # AR100 RC1 □□□
AM24-S US	ARB24-S US
NM24 US	ARB24-3
NM24-MFT US	ARX24-MFT + # AR100 RC1A □□□
NM24-SR US	ARX24-SR + # AR030 RC1 □□□
NM24-SRS US	ARX24-MFT + # AR100 RC1W □□□
NR24-3 US**	LRB24-3
NR24-SR US**	LRX24-MFT + # LR100 RC1 □□□
NV24-3 US	SVX24-3*
NV24-MFT US	SVX24-MFT* or SVB24-SR*
NVG24-MFT US	EVX24-MFT* or EVX24-3*

* New linkage required.

□ Placeholder for custom options.

** Consider ambient temperature for application.

NON FAIL-SAFE – AC 24 V

DISCONTINUED MODEL	Torque (in-lb)	REPLACEMENT MODEL	Torque (in-lb)
MAR100B-24V	1,500	SY4-24*	3,560
MAR160-B-24V	2,000	SY4-24*	3,560
MAR100BP-24V	1,800	SY4-24MFT*	3,560
MAR160-BP-24V	2,500	SY4-24MFT*	3,560
MAR250-60-24V	5,000	SY5-24*	4,450
MAR250-60P-24V	5,000	SY5-24MFT*	4,450

*New linkage required.

NON FAIL-SAFE – AC 24 V

DISCONTINUED MODEL	Torque (in-lb)	REPLACEMENT MODEL	Torque (in-lb)
MAR100B	1,500	SY4-110*	3,559
MAR160B	2,000	SY4-110*	3,560
MAR100BP	1,800	SY4-120MFT*	3,560
MAR160-BP	2,500	SY4-120MFT*	3,560
MAR250-30	5,000	SY5-110*	4,450
MAR250-30P	5,000	SY6-110*	6,450
MAR800-30	10,000	SY7-110*	9,790
MAR800-30P	10,000	SY8-110*	13,350
MAR1600-70	21,000	SY10-110*	22,250
MAR1600-70P	21,000	SY10-120MFT*	22,250
MAR4000-70	48,000	SY12-110*	31,150
MAR4000-70P	48,000	SY12-120MFT*	31,150

*New linkage required.

NON FAIL-SAFE – SY ACTUATORS

DISCONTINUED MODEL	Torque (in-lb)	REPLACEMENT MODEL	Torque (in-lb)
SY2-110*	800	PRBUP-3-T	1,400
SY3-110*	1,335	PRBUP-3-T	1,400
SY2-120MFT*	800	PRBUP-MFT-T	1,400
SY3-120MFT*	1,335	PRBUP-MFT-T	1,400
SY2-24*	800	PRBUP-3-T	1,400
SY3-24*	1,335	PRBUP-3-T	1,400
SY2-24MFT*	800	PRBUP-MFT-T	1,400
SY3-24MFT*	1,335	PRBUP-MFT-T	1,400

*New linkage required.

Honeywell to Belimo

Actuator Replacement Cross Reference

Auxiliary Switches

add S2A	2 auxiliary switches (add-on)
add S1A	1 auxiliary switch (add-on)
1	1 auxiliary switch (built-in)
2	2 auxiliary switches (built-in)

Legend	
HONEYWELL "WHITE"	BELIMO "GRAY"

✦ Belimo 24 V actuators are AC/DC

Model Numbers

HONEYWELL	BELIMO**	Spring Return	Control Signal		Power ✦		Torque (in-lbs)		Feedback	Auxiliary Switches		Timing (seconds)	
M4185A1001	NFBUP	Yes	On/Off	On/Off	120	24...240	60	90				30...60	<75
M4185B1009	NFBUP-S	Yes	On/Off	On/Off	120	24...240	60	90		1	2	30...60	<75
M4185B1058	NFBUP-S	Yes	On/Off	On/Off	100...230	24...240	60	90		1	2	30...60	<75
M4185C1007	NFBUP-S	Yes	On/Off	On/Off	120	24...240	60	90		2	2	30...60	<75
M6184A1015	AMB24-3	No	Floating Point	On/Off, Floating Pt.	24	24	150	180				30...60	150
M6184A1023	NMX120-3	No	Floating Point	On/Off, Floating Pt.	120	120	75	90				15...30	45
M6184D1001	NMBC24-3	No	Floating Point	On/Off, Floating Pt.	24	24	75	90				15...30	45
M6184D1035	AMCX24-MFT	No	Floating Point	On/Off, Floating Pt.	24	24	150	180	2...10 V			30...60	35-adj
M6184D1068	AMX24-MFT	No	Floating Point	On/Off, Floating Pt.	24	24	150	180	2...10 V			120...240	150-adj
M6184F1014	AMCX24-MFT	No	Floating Point	On/Off, Floating Pt.	24	24	150	180	2...10 V	2	add S2A	30...60	35-adj
M6194B1011	GMB24-3	No	Floating Point	On/Off, Floating Pt.	24	24	300	360		1	add S1A	60...120	150
M6194D1017	GMB24-3	No	Floating Point	On/Off, Floating Pt.	24	24	300	360				120...240	150
M6194E1006	GMB24-3	No	Floating Point	On/Off, Floating Pt.	24	24	300	360		1	add S1A	120...240	150
M6284A1055	AMCX24-MFT*	No	Floating Point	On/Off, Floating Pt.	120	24	150	180	2...10 V			30...60	35-adj
M6284D1000	AMCX24-MFT	No	Floating Point	On/Off, Floating Pt.	24	24	150	180	2...10 V			30...60	35-adj
M6284F1013	AMCX24-MFT	No	Floating Point	On/Off, Floating Pt.	24	24	150	180	2...10 V	2	add S2A	30...60	35-adj
M6285A1005	NFX24-MFT	Yes	Floating Point	MFT, 2...10 V default	24	24	60	90	2...10 V			30...60	150-adj
M6285C1001	NFX24-MFT-S	Yes	Floating Point	MFT, 2...10 V default	24	24	60	90	2...10 V	2	2	30...60	150-adj
M6294D1008	GMB24-3	No	Floating Point	On/Off, Floating Pt.	24	24	300	360				120...240	150
M7164A1017	LMCB24-SR	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	35	35	2...10 V			30...60	35
M7164G1030	LMCB24-SR*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	35	35	2...10 V			30...60	35
M7215A1008	LF24-SR US	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	25	35	2...10 V	2...10 V		90	95
M7284A1004	AMCX24-MFT*	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	150	180	2...10 V			30...60	35-adj
M7284A1012	AMCX24-MFT*	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	150	180	2...10 V			30...60	35-adj
M7284A1038	AMCX24-MFT*	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	75	180	2...10 V			15...30	35-adj
M7284A1079	AMCX24-MFT	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	180	2...10 V			30...60	35-adj
M7284C1000	AMCX24-MFT*	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	150	180	2...10 V	2	add S2A	30...60	35-adj
M7284C1059	AMCX24-MFT	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	150	180	2...10 V	2	add S2A	30	35-adj
M7284C1067	AMCX24-MFT	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	150	180	2...10 V	2	add S2A	60	35-adj
M7284Q1009	AMCX24-MFT*	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	150	180	2...10 V	2	add S2A	30...60	35-adj
M7284Q1033	AMCX24-MFT	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	180	2...10 V	2	add S2A	30	35-adj
M7284Q1041	AMCX24-MFT	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	180	2...10 V	2	add S2A	60	35-adj
M7285A1003	NFX24-MFT*	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	50	90	2...10 V			30...60	150-adj
M7285A1045	NFX24-MFT	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	50	90	2...10 V			30...60	150-adj
M7285C1009	NFX24-MFT-S*	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	50	90	2...10 V	2	2	30...60	150-adj
M7285Q1008	NFX24-MFT-S*	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	50	90	2...10 V	2	2	30...60	150-adj
M7286G1009	NFX24-MFT	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	60	90	2...10 V			30...60	150-adj
M7294A1010	GMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	300	360	2...10 V			60...120	150
M7294Q1007	GMB24-SR*	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	300	360	2...10 V	2	add S2A	60...120	150
M7415A1006	LF24-ECON-R03 US	Yes	Thermistor, 3000 ohm NTC	Thermistor, 3000 ohm NTC	24	24	25	35	2...10 V	2...10 V		90	95
M7415B1004	LF24-ECON-R03 US	Yes	Thermistor, 3000 ohm NTC	Thermistor, 3000 ohm NTC	24	24	25	35	2...10 V	2...10 V		90	95
M7685A1025	NFX24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	60	90	2...10 V			30...60	150-adj
M8185D1006	NFB24	Yes	On/Off	On/Off	24	24	60	90				30...60	<75
M8405A1006	LF24-SR-E US	Yes	On/Off, Floating Pt.	2...10 V, 4...20 mA	24	24	25	35	2...10 V	2...10 V		90	150-adj

* Add 120/24 volt transformer.

** Belimo actuators are 95° max rotation.

HONEYWELL	BELIMO**	Spring Return	Control Signal		Power +		Torque (in-lbs)		Feedback		Auxiliary Switches		Timing (seconds)	
ML6131B2001	LMQX24-MFT	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	6	35		2...10 V			15	2.5-adj
ML6161A2008	LMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	35	45					90	95
ML6161A2009	LMB24-3-P5-T	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	35	45	2 kΩ	5 kΩ			90	95
ML6161B2024	LMB24-3-T	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	35	45					90	95
ML6161B2024	LMB24-3-T	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	35	45					90	95
ML6174A2002	NMB24-3	No	Floating Point	Floating Point	24	24	70	90					90	95
ML6174A2010	AMB24-3	No	Floating Point	Floating Point	24	24	70	180					180	95
ML6174B2019	NMB24-3	No	Floating Point	Floating Point	24	24	70	90					90	95
ML6174B2019	NMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	90	90					90	95
ML6174D2009	NMB24-3	No	Floating Point	Floating Point	24	24	70	90					90	95
ML6174E2008	NMB24-3	No	Floating Point	Floating Point	24	24	70	90					90	95
ML7161A2008	LMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	35	45		2...10 V			90	95
ML7161A2008	LMB24-SR-T	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	35	45		2...10 V			90	95
ML7174A2001	NMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90		2...10 V			90	95
ML7174A2019	NMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90	2...10 V	2...10 V			90	95
ML7174E2007	NMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90	2...10 V	2...10 V			90	95
MN6120A1002	AMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	175	180					90	95
MN6120A1200	AMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	175	180			2	add S2A	90	95
MN6134A1003	GMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	300	360					90	150
MN6134A1003	GMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	300	360					90	150
MN7220A2007	AMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	175	180	2...10 V	2...10 V			90	95
MN7234A2008	GMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	300	360	2...10 V	2...10 V			90	150
MS4105A1002	LF230 US	Yes	On/Off	On/Off	100...250	230	35	35					90	40...75
MS4105A1002	LF120 US	Yes	On/Off	On/Off	100...250	120	35	35					90	40...75
MS4110A1002	NFBUP	Yes	On/Off, Floating Pt.	On/Off	100...250	24...240	88	90					90	<75
MS4110A1002	NFBUP	Yes	On/Off, Floating Pt.	On/Off	100...250	24...240	88	90					90	<75
MS4110A1200	LF120-S US	Yes	On/Off	On/Off	100...250	120	35	35			2	1	90	40...75
MS4110A1200	LF230-S US	Yes	On/Off	On/Off	100...250	230	35	35			2	1	90	40...75
MS4120A1001	AFBUP	Yes	On/Off	On/Off	100...250	24...240	175	180					90	<75
MS4120A1209	AFBUP-S	Yes	On/Off	On/Off	100...250	24...240	175	180			2	2	90	<75
MS7150A2206	LF24-SR-S	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	44	35	2...10 V	2...10 V	2	1	90	150
MS7505A2008	LFC24-3-R US	Yes	2...10 V, 4...20 mA, Floating Pt., On/Off	Floating Point	24	24	44	35	2...10 V	2...10 V			90	90
MS7510A2008	NFX24-MFT	Yes	2...10 V, 4...20 mA, Floating Pt., On/Off	MFT, 2...10 V default	24	24	88	90	2...10 V	2...10 V			90	150-adj
MS7510A2206	LF24-MFT-S US	Yes	2...10 V, 4...20 mA, Floating Pt., On/Off	MFT, 2...10 V default	24	24	88	35	2...10 V	2...10 V	2	1	90	150-adj
MS7520A2007	AFX24-MFT	Yes	2...10 V, 4...20 mA, Floating Pt., On/Off	MFT, 2...10 V default	24	24	175	180	2...10 V	2...10 V			90	150-adj
MS7520A2205	AFX24-MFT-S	Yes	2...10 V, 4...20 mA, Floating Pt., On/Off	MFT, 2...10 V default	24	24	175	180	2...10 V	2...10 V	2	2	90	150-adj
MS8105A1008	LF24 US	Yes	On/Off	On/Off	24	24	44	35					90	40...75
MS8110A1008	NFB24	Yes	On/Off, Floating Pt.	On/Off	24	24	88	90					90	<75
MS8110A1206	NFB24-S	Yes	On/Off, Floating Pt.	On/Off	24	24	88	90			2	2	90	<75
MS8120A1007	AFB24	Yes	On/Off	On/Off	24	24	175	180					90	<75
MS8120A1205	AFB24-S	Yes	On/Off	On/Off	24	24	175	180			2	2	90	<75
MS8309F1001	FSNF24 US	Yes	On/Off	On/Off	24	24	80	70					25	<15

* Add 120/24 volt transformer.

** Belimo actuators are 95° max rotation.

Invensys to Belimo

Actuator Replacement Cross Reference

Auxiliary Switches

add S2A	2 auxiliary switches (add-on)
add S1A	1 auxiliary switch (add-on)
1	1 auxiliary switch (built-in)
2	2 auxiliary switches (built-in)

Legend	
INVENSY "WHITE"	BELIMO "GRAY"

† Belimo 24 V actuators are AC/DC

Model Numbers

INVENSY	BELIMO**	Spring Return	Control Signal		Power		Torque (in-lbs)		Feedback	Auxiliary Switches		Timing (seconds)	
MA-305	TFB24	Yes	On/Off	On/Off	24	24	16	22					75
MA-305	TFB24-MFT	Yes	On/Off	On/Off	24	24	16	22	2...10 V				150-adj
MA-305-500	TFB24-S	Yes	On/Off	On/Off	24	24	16	22		1	1		75
MA-305-500	TFB24-MFT-S	Yes	On/Off	On/Off	24	24	16	22	2...10 V	1	1		150-adj
MA-318	NFBUP	Yes	On/Off	On/Off	120	24...240	60	90					<75
MA-318-500	NFBUP-S	Yes	On/Off	On/Off	230	24...240	60	90		1	2		<75
MA-405	TFB120	Yes	On/Off	On/Off	120	120	16	22					75
MA-405	TFCB120-S	Yes	On/Off	On/Off	120	120	16	22			1		<30
MA-405-500	TFB120-S	Yes	On/Off	On/Off	120	120	16	22		1	1		75
MA-405-500	TFCB120-S	Yes	On/Off	On/Off	120	120	16	22		1	1		<30
MA40-7040	LF120 US	Yes	On/Off	On/Off	120	120	35	35				50	40...75
MA40-7040-501	LF120-S US	Yes	On/Off	On/Off	120	120	35	35		1	1	50	40...75
MA40-7041	LF230 US	Yes	On/Off	On/Off	230	230	35	35				50	40...75
MA40-7041-501	LF230-S US	Yes	On/Off	On/Off	230	230	35	35		1	1	50	40...75
MA40-7043	LF24 US	Yes	On/Off	On/Off	24	24	35	35				50	40...75
MA40-7043-501	LF24-S US	Yes	On/Off	On/Off	24	24	35	35		1	1	50	40...75
MA40-7151	AFBUP	Yes	On/Off	On/Off	230	24...240	133	180				190	<75
MA40-7070	NFBUP	Yes	On/Off	On/Off	120	24...240	60	90				80	<75
MA40-7070-502	NFBUP-S	Yes	On/Off	On/Off	120	24...240	60	90		2	2	80	<75
MA40-7071	NFBUP	Yes	On/Off	On/Off	230	24...240	60	90				80	<75
MA40-7071-502	NFBUP-S	Yes	On/Off	On/Off	230	24...240	60	90		2	2	80	<75
MA40-7073	NFB24	Yes	On/Off	On/Off	24	24	60	90				80	<75
MA40-7073-502	NFB24-S	Yes	On/Off	On/Off	24	24	60	90		2	2	80	<75
MA40-7150	AFBUP	Yes	On/Off	On/Off	120	24...240	133	180				190	<75
MA40-7150-502	AFBUP-S	Yes	On/Off	On/Off	120	24...240	133	180		2	2	190	<75
MA40-7153	AFB24	Yes	On/Off	On/Off	24	24	133	180				190	<75
MA40-7153-502	AFB24-S	Yes	On/Off	On/Off	24	24	133	180		2	2	190	<75
MA40-7170	AFBUP	Yes	On/Off	On/Off	120	24...240	150	180				145	<75
MA40-7171	AFBUP	Yes	On/Off	On/Off	230	24...240	150	180				145	<75
MA40-7173	AFB24	Yes	On/Off	On/Off	24	24	150	180				145	<75
MA-416	NFBUP	Yes	On/Off	On/Off	208	24...240	60	90				104	<75
MA-416-500	NFBUP-S	Yes	On/Off	On/Off	208	24...240	60	90		1	2	104	<75
MA41-7073	NFB24	Yes	On/Off	On/Off	24	24		90					<75
MA-418-500	NFBUP-S	Yes	On/Off	On/Off	120	24...240	60	90		1	2		<75
MA-419	NFBUP	Yes	On/Off	On/Off	240	24...240	60	90				120	<75
MA-419-500	NFBUP-S	Yes	On/Off	On/Off	240	24...240	60	90		1	2	120	<75
MA40-7151-502	AFBUP-S	Yes	On/Off	On/Off	230	24...240	133	180		2	2	190	<75
MA5-419	NFBUP	Yes	On/Off	On/Off	240	24...240	60	90				120	<75
MA5-419-500	NFBUP-S	Yes	On/Off	On/Off	240	24...240	60	90		1	2	120	<75
MC-351	GMB24-3	No	On/Off	On/Off, Floating Pt.	24	24	220	360				70	95
MC-421	AMQX24-MFT	No	On/Off	MFT, 2...10 V default	24	24	175	140	2...10 V			20	7-adj
MC-431	GMB24-MFT	No	On/Off	MFT, 2...10 V default	24	24	220	360	2...10 V			30	150-adj
MC-4311	GMB24-MFT	No	On/Off	MFT, 2...10 V default	24	24	220	360	2...10 V			30	150-adj
MC5-4311	GMB24-MFT	No	On/Off	MFT, 2...10 V default	24	24	220	360	2...10 V			36	150-adj
MF40-6043	LMB24-3	No	Floating Point	Floating Point	24	24	35	45				<90	95
MF40-6043-502	LMB24-3	No	Floating Point	Floating Point	24	24	35	45		2	add S2A	<90	95
MF40-6043-510	LMB24-3	No	Floating Point	Floating Point	24	24	35	45				<90	95
MF40-6083	NMB24-3	No	Floating Point	Floating Point	24	24	70	90				120	95
MF40-6153	AMB24-3	No	Floating Point	Floating Point	24	24	133	180				120	95
MF40-7043	LF24-3 US	Yes	Floating Point	Floating Point	24	24	35	35	2...10 V			130	150
MF40-7043-501	LF24-3-S US	Yes	Floating Point	Floating Point	24	24	35	35		1	1	195	150
MF40-7073	NFX24-MFT	Yes	Floating Point	MFT, 2...10 V default	24	24	60	90	2...10 V			190	150-adj
MF40-7073-502	NFX24-MFT-S	Yes	Floating Point	MFT, 2...10 V default	24	24	60	90	2...10 V	2	2	195	150-adj
MF40-7153	AFX24-MFT	Yes	Floating Point	MFT, 2...10 V default	24	24	133	180	2...10 V			190	150-adj
MF40-7153-502	AFX24-MFT-S	Yes	Floating Point	MFT, 2...10 V default	24	24	133	180	2...10 V	2	2	190	150-adj
MF40-7173	AFX24-MFT	Yes	Floating Point	MFT, 2...10 V default	24	24	150	180	2...10 V			145	150-adj
MF41-6043	LMB24-3	No	Floating Point	Floating Point	24	24	35	45				90	95
MF41-6043-502	LMB24-3	No	Floating Point	Floating Point	24	24	35	45		2	add S2A	90	95
MF41-6043-510	LMB24-3-P10-T	No	Floating Point	Floating Point	24	24	35	45	1 kΩ 10 kΩ			90	95
MF41-6083	NMB24-3	No	Floating Point	Floating Point	24	24	70	90				90	95

** Belimo actuators are 95° max rotation.

INVENSY	BELIMO**	Spring Return	Control Signal		Power +		Torque (in-lbs)		Feedback		Auxiliary Switches		Timing (seconds)	
MF41-6083-502	NMB24-3	No	Floating Point	Floating Point	24	24	70	90			2	add S2A	90	95
MF41-6153	AMB24-3	No	Floating Point	Floating Point	24	24	133	180					90	95
MF41-6343	GMB24-3	No	Floating Point	Floating Point	24	24	300	360					90	150
MF41-7073	NFX24-MFT	Yes	Floating Point	MFT, 2...10 V default	24	24	60	90		2...10 V			195	150-adj
MF41-7073-502	NFX24-MFT-S	Yes	Floating Point	MFT, 2...10 V default	24	24	60	90		2...10 V	2	2	195	150-adj
MF41-7153	AFX24-MFT	Yes	Floating Point	MFT, 2...10 V default	24	24	133	180		2...10 V			190	150-adj
MF41-7153-502	AFX24-MFT-S	Yes	Floating Point	MFT, 2...10 V default	24	24	133	180		2...10 V	2	2	190	150-adj
MF-6343	GMB24-3	No	Floating Point	Floating Point	24	24	300	360					145	150
MM-400	LMCB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	45		2...10 V			50	35
MM-400-002	LMCB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	45		2...10 V	2	add S2A	50	35
MM-500	NFX24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90		2...10 V			55	150-adj
MM-500-002	NFX24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90		2...10 V	2	2	55	150-adj
MMR-400	LMCB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	45		2...10 V			50	35
MMR-400-002	LMCB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	45		2...10 V	2	add S2A	50	35
MMR-500	NFX24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90		2...10 V			55	150-adj
MMR-500-002	NFX24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90		2...10 V	2	2	55	150-adj
MP-361	NFB24-SR-S	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	50	90		2...10 V	1	2	95	95
MP-361-600	NFX24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90		2...10 V	1	2	90	150-adj
MP-361-691	NFX24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90		2...10 V	1	2	90	150-adj
MP-371	NFB24-SR-S	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	50	90		2...10 V	1	2	90	95
MP-371-600	NFX24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90		2...10 V	1	2	90	150-adj
MP-371-602	NFX24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90		2...10 V	1	2	90	150-adj
MP-381	GMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	220	360		2...10 V	1	add S1A	130	150
MP-382	GMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	220	360		2...10 V	1	add S1A	130	150
MP-421	NMX24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	60	90		2...10 V	1	add S1A	25	150-adj
MP-422	NMX24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	60	90		2...10 V	1	add S1A	25..250	150-adj
MP-424	NMX24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	60	90		2...10 V	1	add S1A	13...130	150-adj
MP-451	NMX24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	80	90		2...10 V	1	add S1A	80	150-adj
MP-453	GMX24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	220	360		2...10 V	1	add S1A	40	150-adj
MP-465	NFB24-SR-S*	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	50	90		2...10 V	1	2	50	95
MP-475	NFB24-SR-S*	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	50	90		2...10 V	1	2	50	95
MP-481	AMX24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	130	180		2...10 V	1	add S1A	130	150-adj
MP-483	NMX24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	65	90		2...10 V	1	add S1A	65	150-adj
MP-485	AMX24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	130	180		2...10 V	1	add S1A	130	150-adj
MP-495	2*GMB24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	450	720		2...10 V	1	add S1A	130	150-adj
MP-483	NMX24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	65	90		2...10 V	1	add S1A	65	150-adj

* Add 120/24 volt transformer.

** Belimo actuators are 95° max rotation.

11 Invensys to Belimo

Actuator Replacement Cross Reference

INVENSYS	BELIMO**	Spring Return	Control Signal		Power +		Torque (in-lbs)		Feedback		Auxiliary Switches		Timing (seconds)	
MP-485	AMX24-MFT*	No	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	130	180	2...10 V		1	add S1A	130	150-adj
MP-5233	TFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	19	22	2...10 V				60	150-adj
MP-5433	TFB24-MFT*	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	120	24	19	22	2...10 V				60	150-adj
MP-5613	TFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24		22	2...10 V				60	150-adj
MS-1233	TFB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	20	22	2...10 V				225	150-adj
MS-1233-002	TFB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	20	22	2...10 V				225	150-adj
MS-1233-100	TFB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	20	22	2...10 V				225	150-adj
MS-1233-102	TFB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	20	17	2...10 V				225	150-adj
MS40-7171	AFB24-SR	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	180	2...10 V	2...10 V			145	95
MS40-7171	AFB24-MFT	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	180	2...10 V	2...10 V			145	150-adj
MS40-7043	LF24-SR US	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	35	35	2...10 V	2...10 V			130	150
MS40-7043-501	LF24-SR-S US	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	35	35	2...10 V	2...10 V	1	1	130	150
MS40-7073-502	NFB24-SR-S	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	60	90	2...10 V	2...10 V	2	2	130	95
MS40-7153	AFB24-SR	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	133	180	2...10 V	2...10 V			130	95
MS40-7153-502	AFB24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	133	180	2...10 V	2...10 V	2	2	195	150-adj
MS40-7170	AFB24-SR*	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	150	180	2...10 V	2...10 V			145	95
MS40-7170	AFB24-MFT*	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	24	150	180	2...10 V	2...10 V			145	150-adj
MS40-7173	AFB24-SR	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	180	2...10 V	2...10 V			145	95
MS40-7173	AFB24-MFT	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	180	2...10 V	2...10 V			145	150-adj
MS41-6043	LMCB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	35	45	2...10 V	2...10 V				35
MS41-6043-502	LMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	35	45	2...10 V	2...10 V				95
MS41-6043-520	LMB24-MFT	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	35	45	2...10 V	2...10 V				150-adj
MS41-6043-522	LMB24-MFT	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	35	45	2...10 V	2...10 V				150-adj
MS41-6083	NMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90	2...10 V	2...10 V			150	95
MS41-6083-502	NMB24-MFT	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90	2...10 V	2...10 V			150	150-adj
MS41-6083-520	NMB24-MFT	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90	2...10 V	2...10 V			150	150-adj
MS41-6083-522	NMB24-MFT	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90	2...10 V	2...10 V			150	150-adj
MS41-6153	AMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	133	180	2...10 V	2...10 V				95
MS41-6343	GMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	300	360	2...10 V	2...10 V				150
MS41-7073	NFB24-SR	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	60	90	2...10 V	2...10 V			195	95
MS41-7153	AFB24-SR	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	133	180	2...10 V	2...10 V			190	95
MS50-E2001	AFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	150	180	2...10 V				145	150-adj
MS50-E2101	AFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	150	180	2...10 V				145	150-adj
MS50-E2301	AFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	150	180	2...10 V				145	150-adj
MS50-H2001	GMB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	300	360	2...10 V				145	150-adj
MS50-H2101	GMB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	300	360	2...10 V				145	150-adj
MS50-H2301	GMB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	300	360	2...10 V				145	150-adj

* Add 120/24 volt transformer.

** Belimo actuators are 95° max rotation.

Actuator Replacement Cross Reference

Auxiliary Switches

add S2A	2 auxiliary switches (add-on)
add S1A	1 auxiliary switch (add-on)
1	1 auxiliary switch (built-in)
2	2 auxiliary switches (built-in)

Legend	
JOHNSON CONTROLS "WHITE"	BELIMO "GRAY"

→ Belimo 24 V actuators are AC/DC

Model Numbers

JOHNSON CONTROLS	BELIMO**	Spring Return	Control Signal		Power		Torque (in-lbs)		Feedback		Auxiliary Switches		Timing (seconds)	
M110AAB-1	LF120-S US	Yes	On/Off, Floating Pt.	On/Off	120	120	25	35			1	1	40...75	
M110AGA-1	LF24-3 US	Yes	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	25	35					150	
M110AGB-1	LF24-3-S US	Yes	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	25	35			1	1	150	
M110GGA-3	LF24-MFT US	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	25	35	2...10 V	2...10 V			150-adj	
M110JGA-1	LF24-MFT US	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	25	35	2...10 V	2...10 V			150-adj	
M110JGB-1	LF24-MFT-S US	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	25	35	2...10 V	2...10 V	1	1	150-adj	
M120AAA-1	LMB120-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	120	120	35	45					95	
M120AAC-1	LMB120-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	120	120	35	45			2	add S2A	95	
M120AGA-1	LMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	35	45					95	
M120GGA-3	LMB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	35	45	2...10 V	2...10 V			150-adj	
M120JAA-1	LMX120-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	120	35	45	2...10 V	2...10 V			95	
M120JAC-1	LMX120-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	120	35	45	2...10 V	2...10 V	2	add S2A	95	
M120JGA-1	LMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	35	45	2...10 V	2...10 V			95	
M130AAA-1	NFBUP	Yes	On/Off, Floating Pt.	On/Off	120	24...240	50	90					<75	
M130AAB-1	NFBUP-S	Yes	On/Off, Floating Pt.	On/Off	120	24...240	50	90			1	2	<75	
M130AGA-1	NFB24	Yes	On/Off, Floating Pt.	On/Off	24	24	50	90					<75	
M130AGB-1	NFB24-S	Yes	On/Off, Floating Pt.	On/Off	24	24	50	90			1	2	<75	
M130GGA-3	NFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90	2...10 V	2...10 V			150-adj	
M130JGA-1	NFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90	2...10 V	2...10 V			150-adj	
M130JGB-1	NFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90	2...10 V	2...10 V	1		150-adj	
M130JGC-1	NFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	50	90	2...10 V	2...10 V	2		150-adj	
M140AAA-1	LMB120-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	120	120	75	45					95	
M140AGA-1	LMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	75	45					95	
M140GGA-3	LMB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	75	45	2...10 V	2...10 V			95	
M140JAA-1	LMX120-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	120	120	75	45	2...10 V	2...10 V			95	
M140JGA-1	LMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	75	45	2...10 V	2...10 V			95	
M150AAA-1	AMB120-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	120	120	150	180					95	
M150AAB-1	AMB120-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	120	120	150	180			1	add S1A	95	
M150AGA-1	AMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	150	180					95	
M150AGB-1	AMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	150	180			1	add S1A	95	
M150GGA-3	AMB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	150	180	2...10 V	2...10 V			150-adj	
M150JGA-1	AMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	180	2...10 V	2...10 V			95	
M150JGB-1	AMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	180	2...10 V	2...10 V	1	add S1A	95	
M150JGC-1	AMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	150	180	2...10 V	2...10 V	2	add S2A	95	
M150MGA-1	AMB24-MFT	No	0...135 ohm	MFT, 2...10 V default	24	24	150	180	2...10 V	2...10 V			150-adj	
M9108-GGA-2	NMCB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90		2...10 V			60	45
M9101-AGA-2N	LMB24-3-T	No	Floating Point	Floating Point	24	24	10	45					15	95
M9104-AGA-2N	LMB24-3-T	No	On/Off, Floating Pt.	Floating Point	24	24	35	45					90	95
M9104-AGA-2N	LMB24-3	No	Floating Point	Floating Point	24	24	35	45					90	95
M9106-AGA-2	LMB24-3	No	Floating Point	Floating Point	24	24	53	45					60	95
M9106-AGA-2N01	LMCB24-3	No	On/Off, Floating Pt.	Floating Point	24	24	53	45					60	35
M9106-AGA-2N01	LMCB24-3-T	No	Floating Point	Floating Point	24	24	53	45					60	35
M9106-AGA-2N02	LMB24-MFT	No	On/Off, Floating Pt.	MFT, 2...10 V default	24	24	53	45	2...10 V				120	150-adj
M9106-AGA-2N02	LMX24-MFT	No	Floating Point	MFT, 2...10 V default	24	24	53	45	2...10 V				120	150-adj
M9106-AGC-2	LMB24-3	No	Floating Point	Floating Point	24	24	53	45			2	add S2A	60	95
M9106-AGF-2	LMB24-3-P10-T	No	Floating Point	Floating Point	24	24	53	45	10 kΩ				60	95
M9106-GGA-2	LMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	53	45	2...10 V				60	95
M9106-IGA-2	LMB24-MFT	No	Floating Point	Floating Point	24	24	53	45	2...10 V				60	150-adj
M9108-AGA-2	NMCB24-3	No	Floating Point	Floating Point	24	24	70	90					25...50	45
M9108-AGC-2	NMCB24-3	No	Floating Point	Floating Point	24	24	70	90			2	add S2A	25...50	45
M9108-GGC-2	NMCB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90	2...10 V		2	add S2A	25...50	45
M9108-HGA-2	NMB24-MFT	No	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	70	90	2...10 V				25...50	150-adj
M9108-HGC-2	NMB24-MFT	No	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	70	90	2...10 V		2	add S2A	25...50	150-adj
M9109-AGA-2	NMB24-3	No	Floating Point	Floating Point	24	24	80	90					60	95
M9109-AGC-2	NMB24-3	No	Floating Point	Floating Point	24	24	80	90			2	add S2A	60	95
M9109-GGA-2	NMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	80	90	2...10 V				60	95
M9109-GGC-2	NMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	80	90	2...10 V		2	add S2A	60	95
M9116-AGA-2	AMB24-3	No	Floating Point	On/Off, Floating Pt.	24	24	140	180	0...10 V				70...115	95
M9116-AGA-2	AMB24-3	No	Floating Point	Floating Point	24	24	140	180					70...115	95

** Belimo actuators are 95° max rotation.

13 Johnson Controls to Belimo

Actuator Replacement Cross Reference

JOHNSON CONTROLS	BELIMO**	Spring Return	Control Signal		Power		Torque (in-lbs)		Feedback		Auxiliary Switches		Timing (seconds)	
M9116-AGC-2	AMB24-3-S	No	Floating Point	On/Off, Floating Pt.	24	24	140	180	0...10 V		2	add S2A	70...115	95
M9116-AGC-2	AMB24-3	No	Floating Point	Floating Point	24	24	140	180			2	add S2A	70...115	95
M9116-AGD-2	AMB24-3 + P140A	No	Floating Point	On/Off, Floating Pt.	24	24	140	180	0...10 V	0...140 Ω			70...115	95
M9116-AGE-2	AMB24-3 + P1000A	No	Floating Point	On/Off, Floating Pt.	24	24	140	180	0...10 V	0...1000 Ω			70...115	95
M9116-AGE-2	AMB24-3 + P1000A	No	Floating Point	Floating Point	24	24	140	180		0...1000 Ω			70...115	95
M9116-GGA-2	AMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	140	180	0...10 V	2...10 V			70...115	95
M9116-GGA-2	AMB24-MFT	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	140	180	0...10 V	2...10 V			70...115	150-adj
M9116-GGC-2	AMB24-SR-S	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	140	180	0...10 V	2...10 V	2	add S2A	70...115	95
M9116-GGC-2	AMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	140	180		2...10 V	2	add S2A	70...115	95
M9116-HGA-2	AMB24-MFT	No	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	140	180	0...10 V	2...10 V			70...115	150-adj
M9116-HGA-2	AMB24-MFT	No	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	140	180		2...10 V			70...115	150-adj
M9116-HGC-2	AMB24-MFT	No	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	140	180	0...10 V	2...10 V	2		70...115	150-adj
M9124-AGA-2	GMB24-3	No	Floating Point	On/Off, Floating Pt.	24	24	210	360					115...175	150
M9124-AGC-2	GMB24-3	No	Floating Point	On/Off, Floating Pt.	24	24	210	360			2	add S2A	70...130	150
M9124-AGD-2	GMB24-3 + P140A	No	Floating Point	On/Off, Floating Pt.	24	24	210	360		0...140 Ω			115...175	150
M9124-AGE-2	GMB24-3 + P1000A	No	Floating Point	On/Off, Floating Pt.	24	24	210	360		0...1000 Ω			70...130	150
M9124-GGA-2	GMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	210	360		2...10 V			70...130	150
M9124-HGA-2	GMB24-MFT	No	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	210	360		2...10 V			70...130	150-adj
M9124-HGC-2	GMB24-MFT	No	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	210	360		2...10 V	2	add S2A	70...130	150-adj
M9132-AGA-2	GMB24-3	No	Floating Point	On/Off, Floating Pt.	24	24	280	360					115...205	150
M9132-AGC-2	GMB24-3	No	Floating Point	On/Off, Floating Pt.	24	24	280	360			2	add S2A	70...130	150
M9132-AGE-2	GMB24-3 + P1000A	No	Floating Point	On/Off, Floating Pt.	24	24	280	360		0...1000 Ω			115...205	150
M9132-GGA-2	GMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	280	360		2...10 V			70...130	150
M9132-GGC-2	GMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	280	360		2...10 V	2	add S2A	70...130	150
M9206-AGA-2	NFX24-MFT	Yes	Floating Point	MFT, 2...10 V default	24	24	53	90		2...10 V			90	150-adj
M9206-AGC-2	NFX24-MFT	Yes	Floating Point	MFT, 2...10 V default	24	24	53	90		2...10 V	2		90	150-adj
M9206-BAA-2S	NFBUP	Yes	On/Off	On/Off	120	24...240	53	90					90	<75
M9206-BAC-2S	NFBUP-S	Yes	On/Off	On/Off	120	24...240	53	90			2	2	90	<75
M9206-BGA-2S	NFB24	Yes	On/Off	On/Off	24	24	53	90					60	<75
M9206-BGB-2S	NFB24-S	Yes	On/Off	On/Off	24	24	53	90			1	2	60	<75
M9206-BGC-2	NFB24-S	Yes	On/Off	On/Off	24	24	53	90			2	2	60	<75
M9206-GGA-2	NFB24-SR	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	53	90		2...10 V			60	95
M9206-GGA-2MP	LF24-MFT-20 US	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	53	35		2...10 V			90	150-adj
M9206-GGC-2	LF24-SR-S US	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	53	35		2...10 V	2	1	90	40-75
M9206-GGC-2MP	LF24-MFT-S-20 US	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	53	35		2...10 V	2	1	90	150-adj
M9216-AGA-2	AFX24-MFT	Yes	Floating Point	MFT, 2...10 V default	24	24	140	180		2...10 V			70...130	150-adj
M9216-AGC-2	AFX24-MFT-S	Yes	Floating Point	MFT, 2...10 V default	24	24	140	180		2...10 V	2	2	70...130	150-adj
M9216-BAA-2	AFBUP	Yes	On/Off	On/Off	120	24...240	140	180					70...130	<75
M9216-BAC-2	AFBUP-S	Yes	On/Off	On/Off	120	24...240	140	180			2	2	70...115	<75
M9216-BGA-2	AFB24	Yes	On/Off	On/Off	24	24	140	180					70...130	<75
M9216-BGC-2	AFB24-S	Yes	On/Off	On/Off	24	24	140	180			2	2	70...130	<75
M9216-GGA-2	AFB24-SR	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	140	180		2...10 V			70...130	95
M9216-GGC-2	AFB24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	140	180		2...10 V	2	2	70...130	150-adj
M9216-HGA-2	AFB24-MFT	Yes	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	140	180		2...10 V			70...130	150-adj
M9216-HGC-2	AFB24-MFT-S	Yes	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	140	180		2...10 V	2	2	70...130	150-adj
M9216-JGA-2	AFX24-MFT	Yes	Floating Point	Floating Point	24	24	140	180		2...10 V			70...130	150-adj
M9208-AGA-1	NFX24-MFT	Yes	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	70	90					150	150-adj
M9208-AGC-1	NFX24-MFT-S	Yes	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	70	90			2	2	150	150-adj
M9208-BGA-1	NFB24	Yes	On/Off	On/Off	24	24	70	90					55...71	<75
M9208-BGC-1	NFB24-S	Yes	On/Off	On/Off	24	24	70	90			2	2	55...71	<75
M9208-BDA-1	NFBUP	Yes	On/Off	On/Off	230	24...240	70	90					55...71	<75
M9208-BDC-1	NFBUP-S	Yes	On/Off	On/Off	230	24...240	70	90			2	2	55...71	<75
M9208-GGA-1	NFB24-SR	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90	2...10 V	2...10 V			150	95
M9208-GGC-1	NFB24-SR-S	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	70	90	2...10 V	2...10 V	2	2	150	95

** Belimo actuators are 95° max rotation.

Actuator Replacement Cross Reference

Auxiliary Switches

add S2A	2 auxiliary switches (add-on)
add S1A	1 auxiliary switch (add-on)
1	1 auxiliary switch (built-in)
2	2 auxiliary switches (built-in)

Legend

SIEMENS
"WHITE"BELIMO
"GRAY"

+ Belimo 24 V actuators are AC/DC

Model Numbers

SIEMENS	BELIMO**	Spring Return	Control Signal		Power		Torque (in-lbs)		Feedback		Auxiliary Switches		Timing (seconds)	
GBB151.1U	AMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	177	180		2...10 V			150	95
GBB156.1U	AMB24-SR	No	On/Off	2...10 V, 4...20 mA	24	24	177	180		2...10 V	2	add S2A	150	95
GBB161.1U	AMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	177	180	2...10 V	2...10 V			150	95
GBB163.1U	AMB24-MFT	No	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	177	180	2...10 V	2...10 V			150	150-adj
GBB164.1U	AMB24-MFT	No	2...10 V w/ adj. start and span	MFT, 2...10 V default	24	24	177	180	2...10 V	2...10 V		add S2A	150	150-adj
GBB166.1U	AMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	177	180	2...10 V	2...10 V	2		150	95
GBB171.1U	AMB24-3	No	On/Off	On/Off, Floating Pt.	24	24	177	180					150	95
GBB175.1U	AMB24-SR	No	On/Off	2...10 V, 4...20 mA	24	24	177	180		2...10 V			150	95
GCA121.1U	AFB24	Yes	On/Off	On/Off	24	24	160	180					90	<75
GCA126.1U	AFB24-S	Yes	On/Off	On/Off	24	24	160	180			2	2	90	<75
GCA131.1P	AFB24	Yes	On/Off	On/Off	24	24	160	180					90	<75
GCA135.1U	AFB24-S	Yes	On/Off	On/Off	24	24	160	180			2	2	90	<75
GCA151.1U	AFB24-MFT	Yes	4...20 mA	MFT, 2...10 V default	24	24	160	180		2...10 V			90	150-adj
GCA156.1U	AFB24-MFT-S	Yes	4...20 mA	MFT, 2...10 V default	24	24	160	180		2...10 V	2	2	90	150-adj
GCA161.1U	AFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	160	180	2...10 V	2...10 V			90	150-adj
GCA163.1U	AFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	160	180	2...10 V	2...10 V			90	150-adj
GCA164.1U	AFB24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	160	180	2...10 V	2...10 V	2	2	90	150-adj
GCA166.1U	AFB24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	160	180	2...10 V	2...10 V	2	2	90	150-adj
GCA166.1U	AFB24-MFT	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	160	180	2...10 V	2...10 V	2	2	90	150-adj
GCA221.1U	AFBUP	Yes	On/Off	On/Off	120	120	160	180					90	<75
GCA226.1U	AFBUP-S	Yes	On/Off	On/Off	120	120	160	180			2	2	90	<75
GDE131.1P	LMB24-3	No	3 position	On/Off, Floating Pt.	24	24	44	45			2	add S2A	90	95
GDE136.1P	LMB24-3	No	3 position	On/Off, Floating Pt.	24	24	44	45					90	95
GDE161.1P	LMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	44	45		2...10 V			90	95
GDE163.1P	LMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	44	45		2...10 V			90	95
GDE164.1P	LMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	44	45		2...10 V	2	add S2A	90	95
GDE166.1P	LMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	44	45		2...10 V	2	add S2A	90	95
GEB131.1U	LMB24-3	No	3 position	On/Off, Floating Pt.	24	24	44	45					90	95
GIB151.1U	GMB24-SR	No	4...20 mA	2...10 V, 4...20 mA	24	24	310	360		2...10 V			150	150
GIB156.1U	GMB24-SR	No	4...20 mA	2...10 V, 4...20 mA	24	24	310	360		2...10 V	2	add S2A	150	150
GIB161.1U	GMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	310	360	2...10 V	2...10 V			150	150
GIB163.1U	GMB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	310	360	2...10 V	2...10 V			150	150-adj
GIB164.1U	GMB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	310	360	2...10 V	2...10 V	2	add S2A	150	150-adj
GIB166.1U	GMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	310	360	2...10 V	2...10 V	2	add S2A	150	150
GIB171.1U	GMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	310	360					150	150
GIB171.1U	GMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	310	360					150	150
GIB175.1U	GMB24-3	No	On/Off, Floating Pt.	On/Off, Floating Pt.	24	24	310	360			2	add S2A	150	150
GLB131.1P	NMB24-3	No	3 position	On/Off, Floating Pt.	24	24	88	90					150	150
GLB136.1P	NMB24-3	No	3 position	On/Off, Floating Pt.	24	24	88	90			2	add S2A	150	150
GLB161.1P	NMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	88	90	2...10 V	2...10 V			150	150
GLB163.1P	NMB24-MFT	No	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	88	90	2...10 V	2...10 V			150	150-adj
GLB164.1P	NMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	88	90	2...10 V	2...10 V	2	add S2A	150	150
GLB166.1P	NMB24-SR	No	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	88	90	2...10 V	2...10 V	2	add S2A	150	150
GMA121.1U	NFB24	Yes	On/Off	On/Off	24	24	62	90					90	<75
GMA126.1U	NFB24-S	Yes	On/Off	On/Off	24	24	62	90			2	2	90	<75
GMA131.1U	NFX24-MFT	Yes	3 position	MFT, 2...10 V default	24	24	62	90		2...10 V			90	150-adj
GMA136.1U	NFX24-MFT-S	Yes	3 position	MFT, 2...10 V default	24	24	62	90		2...10 V	2	2	90	150-adj
GMA161.1U	NFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	62	90	2...10 V	2...10 V			90	150-adj
GMA163.1U	NFB24-MFT	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	62	90	2...10 V	2...10 V			90	150-adj
GMA166.1U	NFB24-MFT-S	Yes	2...10 V, 4...20 mA	MFT, 2...10 V default	24	24	62	90	2...10 V	2...10 V	2	2	90	150-adj
GMA221.1U	NFBUP	Yes	On/Off	On/Off	120	24...240	62	90					90	<75
GMA226.1U	NFBUP-S	Yes	On/Off	On/Off	120	24...240	62	90			2	2	90	<75
GQD121.1P	TFB24	Yes	On/Off	On/Off	24	24	20	22					40...75	<75
GQD131.1P	TFB24-3	Yes	Floating Point	Floating Point	24	24	20	22					40...75	95
GQD151.1P	TFB24-MFT	Yes	2...10 V, 4...20 mA	2...10 V, 4...20 mA	24	24	20	22	2...10 V	2...10 V			40...75	150-adj
GQD221.1U	TFB120-S*	Yes	On/Off	On/Off	120	120	20	22					40...75	30

** Belimo actuators are 95° max rotation.

15 **Actuator Retrofit Linkage**

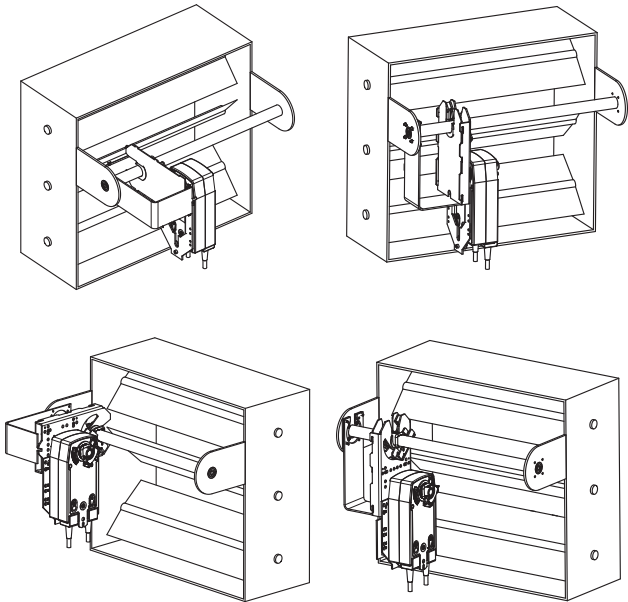
Quick Actuator Installation on Jackshaft



5-year warranty

Technical Data	ZG-JSL, ZG-JSLA
Fits shaft diameter	½" to ¾" with insert, 1.05" without insert
Materials:	
Housing	galvanized steel
Bearings	GF Delrin
Shafts	steel
Max torque output	90% of rated actuator torque
Max actuator yield	see chart on right
Mech. angle of rotation	90° mountable
Ambient temperature	-22...122°F [-33...50°C]
Storage temperature	-40...176°F [-40...80°C]
Housing type	NEMA 2
Weight	3.25 lbs [1.47 kg]

Mounting Configurations



Application

The ZG-JSL jackshaft linkage is designed to easily attach to any part of a jackshaft and allows easy installation of select Belimo actuators.

The unique open ended design and clamp insert allows the ZG-JSL to be used with any jackshaft from ½" to ¾" in diameter. Removal of the insert will allow the linkage to attach to a maximum shaft diameter of 1.05". Changing the anti-rotation plate will allow various actuators to be mounted.

Default/Configuration

The ZG-JSL linkage can also be configured by moving the anti-rotation plate 90° for space saving applications. See mounting configurations below. The ZG-JSLA will have a factory mounted actuator on the linkage in the vertical position only.

Operation

The ¾" diameter built-in steel shaft allows direct coupling to Belimo series actuators (chart below). There is a torque reduction when using the ZG-JSL linkage. Verify application requirements before ordering.

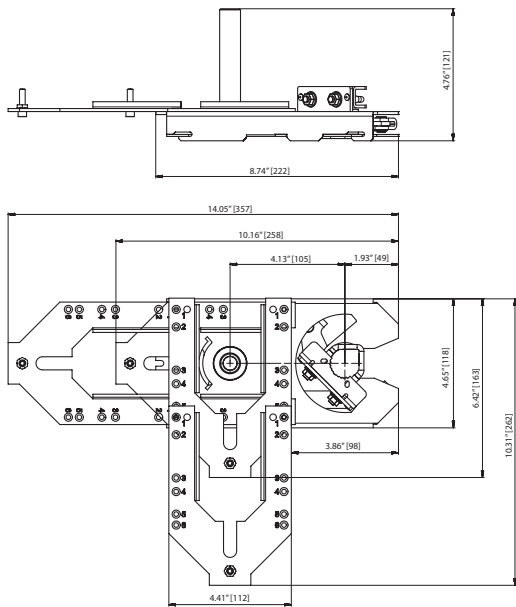
Actuator	Torque Reduction
EF Series*	239 in-lb
Classic AF Series	123 in-lb
AF Series	166 in-lb
NF Series	87 in-lb
LF Series***	33 in-lb
GM/GK Series**	288 in-lb
AM Series	166 in-lb
NM Series	87 in-lb

* ZG-121 adapter must be used with EF.

** EF, GM/GK not for use with ½" shafts.

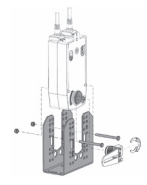
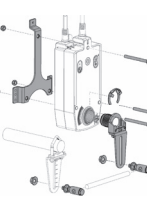
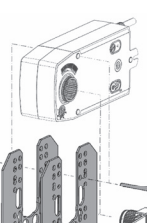
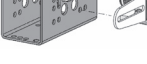
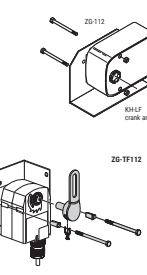
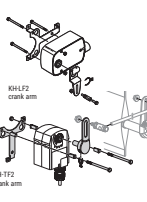
*** K6-1 clamp must be used with LF.

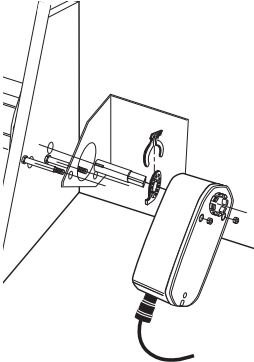
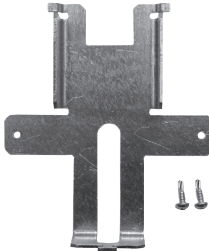
Dimensions (Inches [mm])



D314

CRANK ARM KITS AND MOUNTING PLATES

	ZG-AFB118 Crank arm adaptor kit	The ZG-AFB118 is provided with hole patterns to mount the NF and AF series actuators in either a horizontal or vertical position to meet space requirements. The ZG-AFB118 mounting bracket is designed to mount the NF and AF series actuator in the same mounting locations as common foot mounted, crank arm style actuators. Hole patterns in the base match common Honeywell®, Siebe® (Barber Colman®), and Johnson Controls® actuators for easy retrofit.
	ZG-AFB Crank arm adaptor kit	The ZG-AFB crank arm adaptor kit is designed for applications where the actuator cannot be mounted directly to the damper shaft. ZG-100 and ZG-101 universal mounting brackets are needed to fully convert to crank arm operation.
	ZG-100 and ZG-101 Universal mounting brackets	The ZG-100 and ZG-101 universal mounting brackets are designed for applications where the actuator cannot be mounted directly to the shaft, and no proper mounting surface is available. It can be used for outside or inside the duct mounting, fastened to the duct work or directly to the damper assembly. It can also be used to mount to other surfaces rather than the duct. The ZG-100 and ZG-101 are provided with pre-punched hole patterns for the AM, GM, NF, and AF series actuators. The ZG-100 hole pattern layout allows mounting these actuators in three different, mounting orientations.
	ZG-118 Universal mounting brackets	The ZG-118 is provided with hole patterns to mount the NF and AF series actuators in either a horizontal or vertical position to meet space requirements. The ZG-118 is designed to mount the NF and AF series actuators in the same mounting locations as common foot mounted, crank arm style actuators. Hole patterns in the base match common Honeywell®, Siebe® (Barber Colman®), and Johnson Controls® actuators for easy retrofit. The ZG-118 is designed to place the KH-AFB crank arm in the same relative position as the Honeywell® Mod IV and Mod III actuators.
	KH-AFB Crank arm	The KH-AFB crank arm is required to fully convert the AF for crank arm operation.
	ZG-LF112 and ZG-TF112 Crank arm adaptor kit	The ZG-112/113 is provided with hole patterns to mount the LF and TF series actuators in either a horizontal or vertical position to meet space requirements. The ZG-112/113 mounting bracket is designed to mount the LF and TF series actuator in the same mounting locations as common foot mounted, crank arm style actuators. Hole patterns in the base match common Honeywell®, Siebe® (Barber Colman®), and Johnson Controls® actuators for easy retrofit. Note: May require crank arm and ball joints.
	ZG-LF2 and ZG-TF2 Crank arm adaptor kit	The ZG-LF2 and ZG-TF2 crank arm adaptor kits can be used to replace foot mounted, crank arm style actuators. The ZG-LF2 allows for easy retrofit of Honeywell®, Siebe® (Barber Colman®), and Johnson Controls® actuators. Note: May require additional damper shaft crank arm and ball joints.
	ZG-GMA and ZG-NMA Crank arm adaptor kits	The ZG-GMA and ZG-NMA crank arm adaptor kits are designed for applications where the actuator cannot be mounted directly to the damper shaft. ZG-100, ZG-101, ZG-103 and ZG-104 universal mounting brackets are needed to fully convert to crank arm operation.
	ZG-103 and ZG-104 Universal mounting brackets	The ZG-103 and ZG-104 universal mounting brackets are designed for applications where the actuator cannot be mounted directly to the shaft, and no proper mounting surface is available. It may be used for outside or inside the duct mounting, fastened to the duct work or directly to the damper assembly. It may also be used to mount to other surfaces rather than the duct. The ZG-103 and ZG-104 are provided with pre-punched hole patterns for the NM, AM, GM, NF, and AF series actuators. The ZG-103 and ZG-104 hole pattern layout allows mounting these actuators in two different, mounting orientations.

MOUNTING PLATES		
	ZG-102 GM and AF dual mounting bracket	The ZG-102 multiple actuator mounting bracket is designed for where it is necessary to mount two actuators to one shaft to provide extra torque. The dual mounting bracket is typically used with AF and GM series actuators offering the highest torque range available.
	ZG-LFC114 Mounting kit for Trane Voyager unit retrofit	The ZG-LFC114 crank arm adaptor kit is designed for use with a LF actuator for a Trane Voyager® economizer actuator retrofit. Use this kit when replacing Honeywell® M84... and M7... actuators.
	ZG-121 Support plate for ZG-JSL with EF actuator	The ZG-121 support plate is designed for use with the ZG-JSL jackshaft shaft linkage and the EF actuator.
	ZG-EFB Crank arm adaptor kit	The ZG-EFB crank arm adaptor kit is designed for applications where the actuator cannot be mounted directly to the damper shaft. ZG-100 and ZG-1010 universal mounting brackets are needed to fully convert to crank arm operation.

Fire and Smoke Actuator Replacement Solutions

Belimo fire and smoke actuators are designed for operation in smoke and combination fire and smoke dampers in ventilation and air conditioning systems with a torque range from 18 in-lb to 180 in-lb @ 350°F. For maximum safety in all situations, the fire and smoke actuators meet all codes for commercial buildings in the U.S., passes UL 555 & UL 555S at 350°F and tested for 30,000 open-closed cycles with approved dampers. Belimo fire and smoke actuators exceed UL's requirement of 20,000 cycles at damper static load.

The Fire Code Requires Periodic Testing of Life Safety Dampers

The building owner's responsibility is to record periodic testing and corrective actions regarding fire and smoke dampers. When inspecting a building, the fire marshal or building official will request the record, a requirement of the NFPA 80 (fire) & NFPA 105 (smoke) standards.

Chapter 7 IBC Containment Dampers

Every 4 years. In hospitals, every 6 years

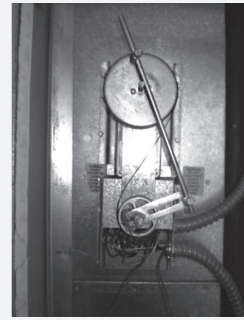
Chapter 9 Smoke Control System Dampers

Dedicated	Non-dedicated
Semi-annually	Annually

Belimo's Fire and Smoke Damper Actuator Replacement Solutions

- Meets UL 555 and UL 555S listing with all damper manufacturers
- New York City OTCR and MEA certified
- UL 2043 compliant - suitable for use in air plenums per Section 300.22(c) of the NEC and Section 602.2 of the IMC
- Extensive range of torque offerings to fit a variety of applications (18, 30, 70, and 180 in-lb)
- Save energy and cost with the lowest current draws versus the competition
- Compact solutions for space-constrained locations
- Upgrade your retrofit and enable remote testing with the Industry's first remote testing module, the FSKN

For replacement guidelines, visit www.belimo.com/firesmoke or contact a Belimo Regional Application Consultant.



Problem: Failed MultiProducts motor



Solution: Belimo FSLF120 US



Problem: Failed motor



Solution: Belimo FSTF with linkage



Discover the advantages
www.belimo.com/firesmoke



5-year warranty



Fire and Smoke Actuator Replacement Solutions

For Fire and Smoke Actuators use the UL555S test to select the correct actuator for your application - do not match actuator to actuator.

Different methods are employed by different manufacturers to achieve the fire spring-closed function. For example, Pottorff damper with the MA220 actuator is a single spring. To replace the discontinued MA220, the fusible link must be removed and a thermal sensor installed.

Ruskin dampers use an external spring and a thermal sensor, so removal of the old MA220 and external spring and replacement with Belimo is all that is required.

Note: NFPA 80 and NFPA 105 require that dampers be repaired as soon as possible. In most jurisdictions, this is a normal repair. In all cases, a log of periodic testing and any repairs must be maintained within the facility. Repair of any fire and smoke damper is required by codes. A permit and retest may be required if the replacement is not an ordinary repair.

When any fire alarm wiring is touched, or any structural changes are made, the fire department or building official must be consulted, and a permit plus inspection is required.

Visit www.belimo.com/firesmoke for detailed instructions for each damper manufacturer.

All Belimo FSXX actuators are spring return. "-S" models have two auxiliary switches. All 24 V models are DC capable as long as the minimum voltage is DC 24 V and a filtered and regulated power supply is used.

MODEL		BELIMO REPLACEMENT MODEL		
Notes	HONEYWELL	BELIMO	Power	Torque (in-lb)
Go to www.belimo.com/firesmoke for Installation Instructions. At velocities <2,000fpm FSTF may be used on dampers <1.5 sq.ft. Use FSLF for dampers < 4 sq.ft. Use FSNF for dampers between 4 sq.ft. and 12 sq.ft. Use FSAF*A for dampers up to 16 sq.ft. Multi-section dampers should be investigated for number of actuators required. See data sheets for linkages. FSLF is direct couple only.	ML4105A1000	FSLF120 US	AC 120 V	30
	ML4105B1009			
	ML4105C1008	FSLF230 US	AC 230 V	
	ML4105D1007			
	ML4115A1009	FSLF120 US	AC 120 V	
	ML4115A1017			
	ML4115B1008			
	ML4115B1016			
	ML4115C1007	FSLF230 US	AC 230 V	
	ML4115C1015			
	ML4115D			
	ML4115D1006			
	ML4115H	FSLF120 US	AC 120 V	
	ML4115H1002			
	ML4115J			
	ML4202			
	ML4202F1000			
	ML4302F1008			
	ML4702			
	ML4802	FSLF230 US	AC 230 V	
	ML8105A1006	FSLF24 US	AC 24 V	
	ML8105B1005			
	ML8115A1005			
	ML8115A1013			
	ML8115B1004			
	ML8115B1012			
	ML8115H			
	ML8115J			
	ML8202			
	ML8302			
	MS4104F1010	FSLF120 US	AC 120 V	70
	MS4104F1210	FSLF120-S US		
	MS4109F1010	FSNF120 US		
	MS4109F1210	FSNF120-S US		
	MS4120F1006	FSAF120A		180
	MS4120F1204	FSAF120A-S		
	MS4209F	FSNF120 US		70
	MS4209F1007			
	MS4309F			
	MS4309F1005			
	MS4604F1010	FSLF230 US	AC 230 V	30
	MS4604F1210	FSLF230-S US		

Honeywell/Ruskin to Belimo

Fire and Smoke Actuator Replacement Cross Reference

MODEL		BELIMO REPLACEMENT MODEL		
Notes	HONEYWELL	BELIMO	Power	Torque (in-lb)
Go to www.belimo.com/firesmoke for Installation Instructions. At velocities <2,000fpm FSTF may be used on dampers <1.5 sq.ft. Use FSLF for dampers < 4 sq.ft. Use FSNF for dampers between 4 sq.ft. and 12 sq.ft. Use FSAF*A for dampers up to 16 sq.ft. Multi-section dampers should be investigated for number of actuators required. See data sheets for linkages. FSLF is direct couple only.	MS4609F1010	FSNF230 US	AC 230 V	70
	MS4609F1210	FSNF230-S US		
	MS4620F1005	FSAF230A		180
	MS4620F1203	FSAF230A-S		
	MS4709F	FSNF230 US	AC 230 V	70
	MS4709F1014			
	MS4809F			
	MS4809F1012	FSAFB24-SR		180
	MS7520A2015			
	MS8104F1010	FSLF24 US	AC 24 V	30
	MS8104F1210			
	MS8109F1010	FSNF24 US		70
	MS8109F1210	FSNF24-S US		
	MS8120F1002	FSAF24A		180
	MS8120F1200	FSAF24A-S		
	MS8209F	FSNF24 US	AC 24 V	70
	MS8209F1003			
	MS8309F			
	MS8309F1001			
	MS8103F10XX	FSLF24 US		30
	MS8103F12XX	FSLF24-S US		
	MS4103F10XX	FSLF120 US	AC 120 V	
	MS4103F12XX	FSLF120 US	AC 120 V	
	S20230-F	FSAF230A	AC 230 V	180
	S20230-F-SW2	FSAF230A-S		
	S2024-F	FSAF24A	AC 24 V	
	S2024-F-SW2	FSAF24A-S		
	Auxiliary switch packages	32003532-002 Aux Switch Package	Use Belimo “-S” models	

ECM	Call Belimo for assistance. Digital photographs of damper and old motor mounting will be needed. Generally replaced by FSLF for direct coupled and FSNF if linkages are needed. Motors were non-spring. Damper OEM external spring must be removed or disabled.
Prefco	Honeywell, 5800 EMB 2X and other models can easily be replaced if damper shaft is present. Call Belimo for more information. Refer to Multiproducts on page 22-5
Modulating	Various models of Honeywell and other modulating can be replaced. FSAFB24-SR and FSAFB24-SR-S are available.
Pneumatic	Retrofit of pneumatic actuators with Belimo electronic ones will usually require some re-control also. Depending on age and manufacturer, the fusible links, fusible air valve, smoke control relays, or other components may have to be replaced or upgraded.

	MODEL	BELIMO REPLACEMENT MODEL		
Notes	RUSKIN	BELIMO	Power	Torque (in-lb)
The Ruskin/HW motors vary irregularly in torque. It is best to use damper size to select. < 4 sq.ft. use FSLF Series. > 4 sq.ft. use FSNF Series.	H-2000A/3 Low	FSLF120 US	AC 120 V	30
	H-2000A/6 Medium	FSNF120 US		70
	H-2000A/8 High			30
	H-2000B/3 Low	FSLF120 US		70
	H-2000B/6 Medium	FSNF120 US		30
	H-2000B/8 High			70
	H-2024A/3 Low	FSLF24 US	AC 24 V	30
	H-2024A/6 Medium	FSNF24 US		70
	H-2024A/8 High			30
	H-2024B/3 Low	FSLF24 US		70
	H-2024B/6 Medium	FSNF24 US		30
	H-2024B/8 High			70
	H-2230A/3 Low	FSLF230 US	AC 230 V	30
	H-2230A/6 Medium	FSNF230 US		70
	H-2230A/8 High			30
	H-2230B/3 Low	FSLF230 US		70
	H-2230B/6 Medium	FSNF230 US		
	H-2230B/8 High			
	RH-24	FSNF24 US	AC 24 V	70
	RH-24-S	FSNF24-S US		
	RH-120	FSNF120 US	AC 120 V	180
	RH-120-S	FSNF120-S US		
	RH-24-MOD	FSAFB24-SR	AC 24 V	

Fire and Smoke Actuator Replacement Cross Reference

Notes - PHILLIPS P150	MODEL	BELIMO REPLACEMENT MODEL		
	RUSKIN	BELIMO	Power	Torque (in-lb)
Shaft spring must be disabled. See Ruskin with Phillips P150 at www.belimo.com/firesmoke Linkages and switch model available. Some used with Negator springs; if so, call for assistance. Use FSNF for dampers up to 12 sq.ft. Use FSAF*A for dampers up to 16 sq.ft	Phillips P150	See notes on left	On/Off	See notes on left.

MODEL		BELIMO REPLACEMENT MODEL		
Notes	MULTIPRODUCTS	BELIMO	Power	Torque (in-lb)
Greenheck. Typically these were linkaged using a crank arm on the square motor shaft and the spring was on the round shaft. Remove all linkage parts and direct couple to damper shaft.	2430	FSLF120 US if direct coupled. See notes 1, 2, 3 below	AC 120 V	30
Air Balance. Square shaft inserted into damper sleeve with special crankarm. If a smoke damper, replacement may be possible and requires a new shaft and other linkage parts. If a combination fire and smoke damper, it is possible Belimo cannot be used. Most dampers must be replaced.	2553A			
Greenheck. Typically these were linkaged using a crank arm on the square motor shaft and the spring was on the round shaft. Remove all linkage parts and direct couple to damper shaft.	2585, 2586			
Safe-Air / Imperial. Typically linkaged. There was an internal spring and fusible link for the fire function.	2659			
Air Balance. FSLF < 3 sq.ft.; FSNF 3...8 sq.ft. Remove old motor and external spring. Belimo mounts on shaft without linkages. Use old motor as a mounting platform for anti-rotation strap.	2724			
Ruskin. FSLF120/MP Kit available from Ruskin Reps. See instructions for negator spring removal. Some dampers will need fusible link replaced and thermal sensor installed.	2781 or 1161B		AC 24...120 V	
Ruskin. 10 in-lb. "A" model = CW rotation; plain = CCW. Check voltage. FSLF replaces both in most cases. Use FSTF when linkages necessary.	2814A-SQ			
Depends on specific geometry of installation. All FSTF & FSNF parts can be used. Inside clamp mounting or a shaft extension required. Inside clamp mounting or a shaft extension may be required.	2920			
Greenheck. Typically these were linkaged using a crank arm on the square shaft and the spring was on the round shaft. Remove all linkage parts and direct couple to damper shaft. (Model difference is CW vs. CCW.)	2985, 2986			
Greenheck. Some were direct coupled to the damper shaft with an external spring. Some were linkaged using a crank arm on the square motor shaft and the spring was on the round shaft. Remove all linkage parts and direct couple to damper shaft. (Model difference is CW vs. CCW.)	3158, 3159			
Prefco. Outside the duct, 1 is top mount, power open. 10 is bottom mount, power closed. Review of linkages, springs, fusible link or McCabeLink® must be performed. Power closed typically used in smoke control systems so switches may be needed.	5800EMB1,10	AC 120 V		
Prefco. Review of linkages, springs, fusible link or McCabeLink® must be performed.	5800EMB2XPC, PO, 5800EMB8, 9			
Prefco. Inside the duct, 5 is top mount, power open. 7 is bottom mount, power closed. Review of linkages, springs, fusible link or McCabeLink® must be performed. Power closed typically used in smoke control systems so switches may be needed.	5800EMB5, 7			
Nailor. Remove linkage parts and mount to damper shaft. FSLF for dampers <4 sq.ft. and FSNF for dampers >4 sq.ft.	6247			
	MZRHM			
Greenheck and others. Typically these were linkaged using a crank arm on the square motor shaft and the spring was on the round shaft. Remove all linkage parts and direct couple to damper shaft.	TB2001, TSB2000			
	ML4202F1000			

1. In general, use FSLF if a shaft is available for direct coupling and damper is < 4 sq.ft. Use FSNF and ZG-AF US or other linkage if linkage is necessary and damper is > 4 sq.ft. Use FSTF if damper < 1.5 sq.ft. Linkage or direct couple.
2. Note that in almost all cases the old linkage, spring, and motor can be removed and mounting Belimo to the shaft is the accepted procedure to make the assembly conform to modern fire & smoke dampers.
3. Investigation of each application is necessary. Check voltage and breakers. In all cases disconnect external motor spring without compromising fusible link and internal spring ability to close the blades. These are quite old and changes may have been made by others over the years. Check fusible links or McCabeLink®. Verify damper functions after replacement by testing damper open and spring closed.

Fire and Smoke Actuator Replacement Cross Reference

MODEL	BELIMO REPLACEMENT MODEL			MODEL	BELIMO REPLACEMENT MODEL		
SIEMENS*	BELIMO	Power	Torque (in-lb)	SIEMENS*	BELIMO	Power	Torque (in-lb)
GGD121.1U	FSAF24A	AC 24 V	180	GJD326.1U	FSTF230-S	AC 230 V	18
GGD121.3U	FSAF24A	AC 24 V	180	GKD121.1U	FSNF24	AC 24 V	70
GGD221.1U	FSAF120A	AC 120 V	180	GKD126.1U	FSNF24-S	AC 24 V	70
GGD221.3U	FSAF120A	AC 120 V	180	GKD221.1U	FSNF120	AC 120 V	70
GGD321.1U	FSAF230A	AC 230 V	180	GKD226.1U	FSNF120-S	AC 120 V	70
GND12x.1x	FSLF24 US	AC 24 V	30	GKD321.1U	FSNF230	AC 230 V	70
GND22x.1x	FSLF120 US	AC 120 V	30	GKD326.1U	FSNF230-S	AC 230 V	70
GND32x.1x	FSLF230 US	AC 230 V	30	GVD121.1U	FSAF24A	AC 24 V	180
GJD121.1U	FSTF24	AC 24 V	18	GVD126.1U	FSAF24A-S	AC 24 V	180
GJD126.1U	FSTF24-S	AC 24 V	18	GVD221.1U	FSAF120A	AC 120 V	180
GJD221.1U	FSTF120	AC 120 V	18	GVD226.1U	FSAF120A-S	AC 120 V	180
GJD226.1U	FSTF120-S	AC 120 V	18	GVD321.1U	FSAF230A	AC 230 V	180
GJD321.1U	FSTF230	AC 230 V	18	GVD326.1U	FSAF230A-S	AC 230 V	180
ASK79.165	BAE165 US						

*While drive torque of Siemens is 142 in-lb, spring torque is 110 in-lb. Belimo has passed UL555S at 16 sq.ft.

	MODEL	BELIMO REPLACEMENT MODEL		
Notes	SIEBE	BELIMO	Power	Torque (in-lb)
Where linkages are needed, use FSNF. Timing is a function of damper spring.	MA220	FSLF120 US	AC 120 V	"For <4 sq. ft. dampers use FSLF Series For >4 sq. ft. use FSNF Series"
	MA221	FSLF230 US	AC 24 V	
	MA223	FSLF24 US		
When replacing the actuator, remove the old spring from the damper.	MA230	FSNF120 US	AC 240 V	
	MA231	FSNF230 US		
	MA233	FSNF24 US		
If the damper has one spring, add a new electric thermal sensor. (Belimo BAE 165)	MA240	CALL BELIMO		
	MA250	FSNF120 US		
	MA251	FSNF230 US		
	MA253	FSNF24 US		
	MA-318	FSNF24 US		
	MA-318-500	FSNF24 -S US		
	MA-418	FSNF120 US		
A -500 part number indicates an auxiliary switch. Replace with a Belimo "-S" version.	MA-418-500	FSNF120-S US	AC 120 V	

Qualifications for Belimo in Replacing Defective Competitive Actuators

Belimo is UL 555S Listed with all damper manufacturers. In addition, all Belimo Fire and Smoke actuators have passed UL 2043 in accordance to requirements of the NEC 300.22 (c) and the IMC 602 for use in plenums. The basic UL listings are either UL 873 or UL 60730 which has supplanted UL 873. UL 873 has been grandfathered.

Infrequently, the fire alarm standard, UL 864, and list of qualified smoke control systems, UUKL, are specified. UL has clearly stated that it will not investigate dampers or actuators in accordance with these standards and that UL 555 (fire) and UL 555S (smoke) are the only correct standards.

UL has stated that while field replacement of actuators is allowed, the local AHJ is in charge; UL does not regulate field repairs. NFPA 80 (fire) & NFPA 105 (smoke) are the standards referenced by the IBC which regulate replacement and repair.

Visit www.belimo.com/firesmoke for detailed instructions for each damper manufacturer.



FSAF*A Actuators 180 in-lb [20 Nm] Honeywell Replacements

MS4120 is replaced by the FSAF120A
MS8120 is replaced by the FSAF24A

Economizer Retrofit Solutions

Airside economizers provide the correct ratio of outside air and return air to deliver proper indoor air quality (IAQ) to meet codes; many economizer systems are not accomplishing these goals. Belimo offers a drop-in economizer replacement solution. The Belimo ZIP Packs provide a packaged solution for selection and simple retrofitting of non-functioning energy wasting economizers. The ZIP Economizer has built-in all the relevant climate zone and energy code data, by entering in your ZIP code you automatically maximize energy savings for your location. The packs are in one box with a single part number. ZIP Packs include the ZIP Economizer, air sensors, energy module for Demand Control Ventilation (DCV) integration, spring return actuator, and retrofit hardware backed with a 5-year warranty. The ZIP Packs can get systems back on track and meets compliance criteria with the latest energy codes, standards, and IAQ requirements.

ZIP Economizer

Select Economizer Base and ZIP-10K



ECON-ZIP-BASE

AND



ECON-ZIP-10K
(Supply Air
Temperature Sensor)

Select Actuator



TFB24-SR
up to 7.5 Tons



LF24-SR US
7.5...12 Tons



NFB24-SR
12...15 Tons



AFB24-SR
15...30 Tons

Select Additional Sensors*

SINGLE DRY BULB



ECON-ZIP-10K

DIFFERENTIAL DRY BULB



OR

SINGLE ENTHALPY



ECON-ZIP-TH

DIFFERENTIAL ENTHALPY



Optional Add-On Modules



ECON-ZIP-EM

- Demand Control Ventilation (DCV)** - ECON-ZIP-EM + CO₂ sensor of your choice (0...2000 PPM, 0...10 V)
- Preoccupancy Purge**
 - Requires thermostat with purge setting and contacts
- Remote Damper Override - ECON-ZIP-EM + SGA24
- Exhaust Fan
- 2 Speed fan control or remote diagnostic alarm notification



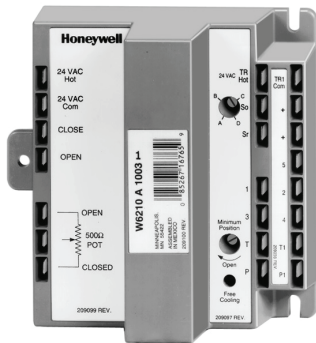
ECON-ZIP-COM

- Remote Diagnostic Alarm Notification**
 - Required for BACnet MS/TP communication

* Selection based upon high limit changeover strategy chosen.

** May be required by local codes.

Economizer Replacement Cross Reference



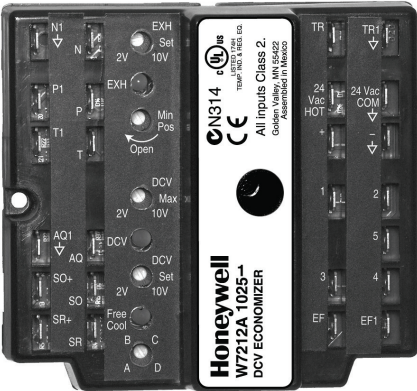
Honeywell W7210



27

Honeywell to Belimo

Economizer Replacement Cross Reference

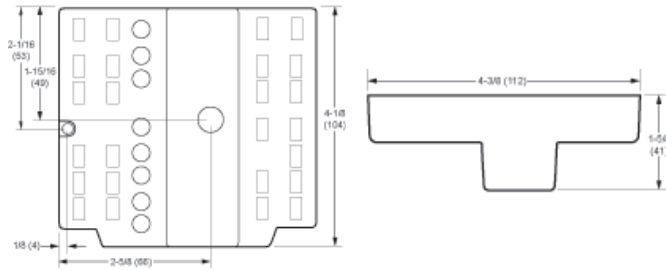


Honeywell W7212

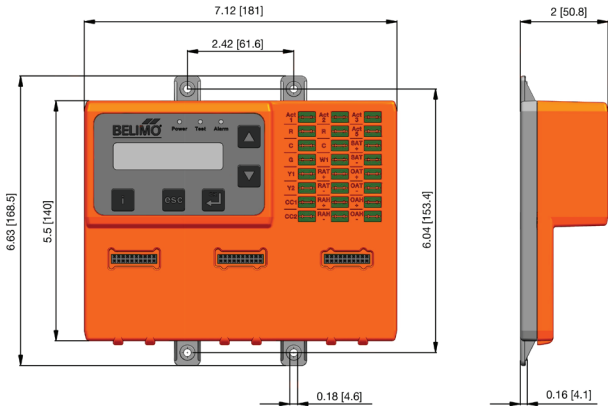


Belimo ZIP Economizer

Dimensions (Inches [mm])



Dimensions (Inches [mm])



W7212 WIRE TERMINATION	ZIP ECONOMIZER WIRE TERMINATION
1	Y1
2	CC1
3	Y2
4	CC2
5	NA
TR	R
TR1	C
N	G
P-P1	AUX2
T-T1	Located on ECON-ZIP-EM
So-So+	Supply Air – New Sensor
	Outside Air- New Sensor
	New Sensors
AQ-AQ1	C02 +/-
EF-EF1	EF*

*EF, EFH1 provide 24 VAC out. Interposing relay or contactor may be needed for exhaust fan control. Verify with RTU wiring.

Economizer Replacement Cross Reference

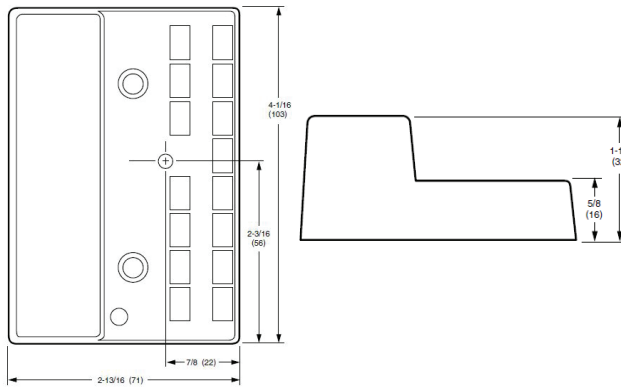


Honeywell W7459

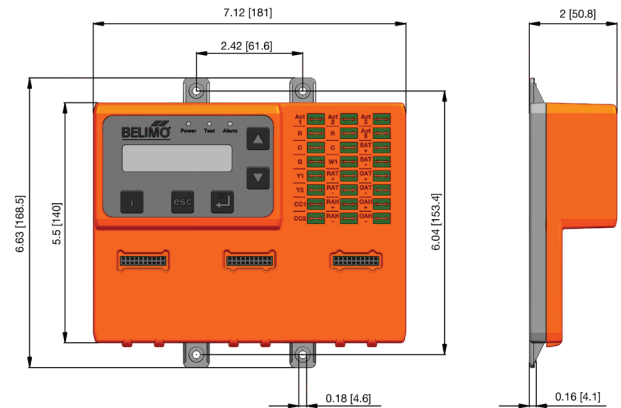


Belimo ZIP Economizer

Dimensions (Inches [mm])



Dimensions (Inches [mm])



W7459 WIRE TERMINATION

1
2
3
4
5
TR
TR1
N
P-P1
T-T1
So-So+
Sr-Sr+

ZIP ECONOMIZER WIRE TERMINATION

Y1
CC1
Y2
CC2
NA
R
C
G
AUX2
Located on ECON-ZIP-EM
Supply Air - New Sensor
Outside Air - New Sensor
New Sensors

Retrofit Kits and ZIP Packs**BELIMO RETROFIT KITS**

Part Number	Description	Components (# included in kit)
ECON-ZIP-ACT	Actuator Shaft Adapter allows easy retrofit from Honeywell® black box motors (M7XXX) to Belimo spring return actuator.	Shaft, M4x8 Screws (4), Locking Nuts (4)
ECON-ZIP-LF1	Bracket with hole patterns to mount the LF Series actuator, horizontal or vertical position to meet space requirements.	ECON-ZIP-ACT, ZG-112, Screws
ECON-ZIP-TF1	Bracket with hole patterns to mount the TF Series actuator, horizontal or vertical position to meet space requirements.	ECON-ZIP-ACT, ZG-113, Spacers and Screws

BELIMO ZIP PACK

Part Number	Description	Components (# included in kit)
ECON-ZIP-SDTF	Single Dry Bulb with DCV Capability and TF Spring Return Actuator (22 in-lb)	ECON-ZIP-Base, ECON-ZIP-EM, ECON-ZIP-10K (2), TFB24-SR, ECON-ZIP-TF1
ECON-ZIP-DDTF	Differential Dry Bulb with DCV Capability and TF Spring Return Actuator (22 in-lb)	ECON-ZIP-BASE, ECON-ZIP-EM, ECON-ZIP-10K (3), TFB24-SR, ECON-ZIP-TF1
ECON-ZIP-SETF	Single Enthalpy with DCV Capability and TF Spring Return Actuator (22 in-lb)	ECON-ZIP-BASE, ECON-ZIP-EM, ECON-ZIP-10K, ECON-ZIP-TH, TFB24-SR, ECON-ZIP-TF1
ECON-ZIP-SDLF	Single Dry Bulb with DCV Capability and LF Spring Return Actuator (35 in-lb)	ECON-ZIP-BASE, ECON-ZIP-EM, ECON-ZIP-10K (2), LF24-SR US, ECON-ZIP-LF1
ECON-ZIP-DDLF	Differential Dry Bulb with DCV Capability and LF Spring Return Actuator (35 in-lb)	ECON-ZIP-BASE, ECON-ZIP-EM, ECON-ZIP-10K (3), LF24-SR US, ECON-ZIP-LF1
ECON-ZIP-SELF	Single Enthalpy with DCV Capability and LF Spring Return Actuator (35 in-lb)	ECON-ZIP-BASE, ECON-ZIP-EM, ECON-ZIP-TH, ECON-ZIP-10K, LF24-SR US, ECON-ZIP-LF1

HONEYWELL Y PACK

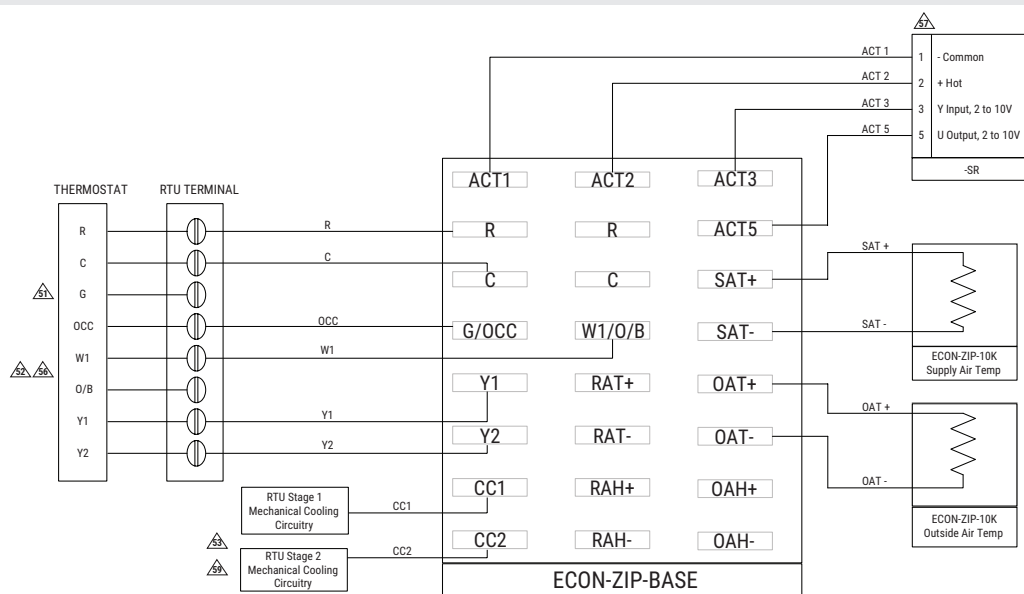
Part Number	Description
Y7220A7215	Dry Bulb with black motor
YL7220A7503	Dry Bulb with non-communicating DCA
YL7220AJ3103	Dry Bulb with communicating 27 in-lb DCA
YL7220AJ3105	Dry Bulb with communicating 44 in-lb DCA
Y7220S7215	Enthalpy with black motor
YL7220S7503	Enthalpy with non-communicating DCA
YL7220SJ3103	Enthalpy with communicating 27 in-lb DCA
YL7220SJ3105	Enthalpy with communicating 44 in-lb DCA

BELIMO ZIP PACK

Part Number	Description
ECON-ZIP-SDTF	Single Dry Bulb with DCV Capability, 22 in-lb
ECON-ZIP-SDTF	Single Dry Bulb with DCV Capability, 22 in-lb
ECON-ZIP-SDTF*	Single Dry Bulb with DCV Capability, 22 in-lb
ECON-ZIP-SDLF*	Single Dry Bulb with DCV Capability, 35 in-lb
ECON-ZIP-SETF	Single Enthalpy with DCV Capability, 22 in-lb
ECON-ZIP-SETF	Single Enthalpy with DCV Capability, 22 in-lb
ECON-ZIP-SETF*	Single Enthalpy with DCV Capability, 22 in-lb
ECON-ZIP-SELF*	Single Enthalpy with DCV Capability, 35 in-lb

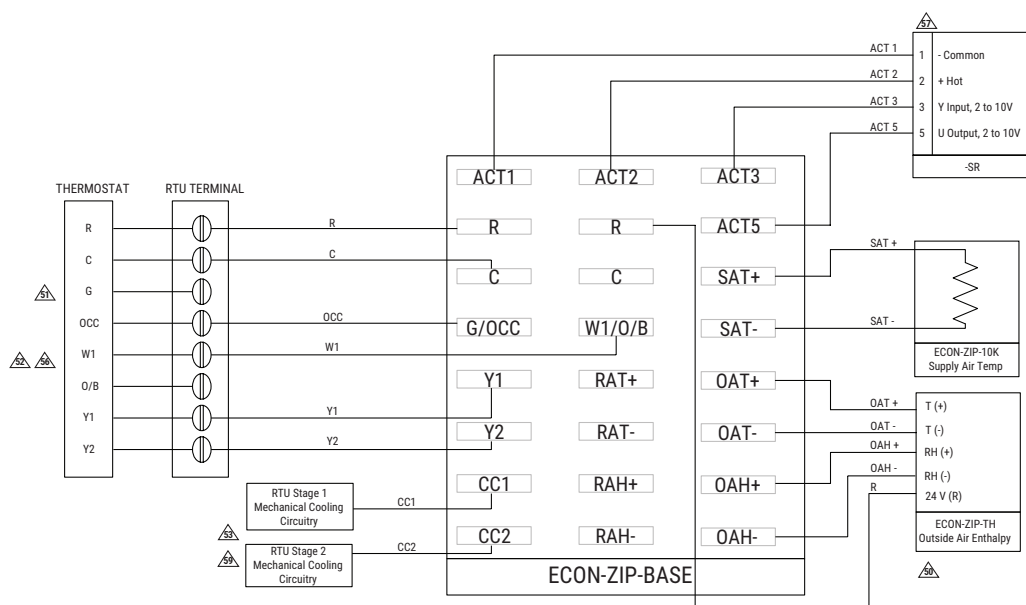
*May be a lower torque cross, but acceptable for damper.

Single Dry Bulb



- ⚠ When the thermostat is not equipped with occupancy control, "Fan On" output "G" shall be wired to the ECON-ZIP-BASE.
- ⚠ W1 must be wired for Heat Pump operation if conventional thermostat is used in conjunction with Defrost Board. If Thermostat and RTU use O/B control reversing valve position, O/B must be wired to W1 on ECON-ZIP-BASE.
- ⚠ Existing refrigeration safety devices may exist, consult RTU wiring diagram
- ⚠ If RTU is not a Heat Pump using a conventional thermostat and it is desired to record heating operation hours, connect W1 to ECON-ZIP-BASE.
- ⚠ Actuators can be mounted in parallel with the ACT3 output from the ZIP Economizer. The ACT5 feedback input should be wired to the Outside Air damper actuator feedback wire.
- ⚠ Iso relay may be required with certain RTU manufacturers.

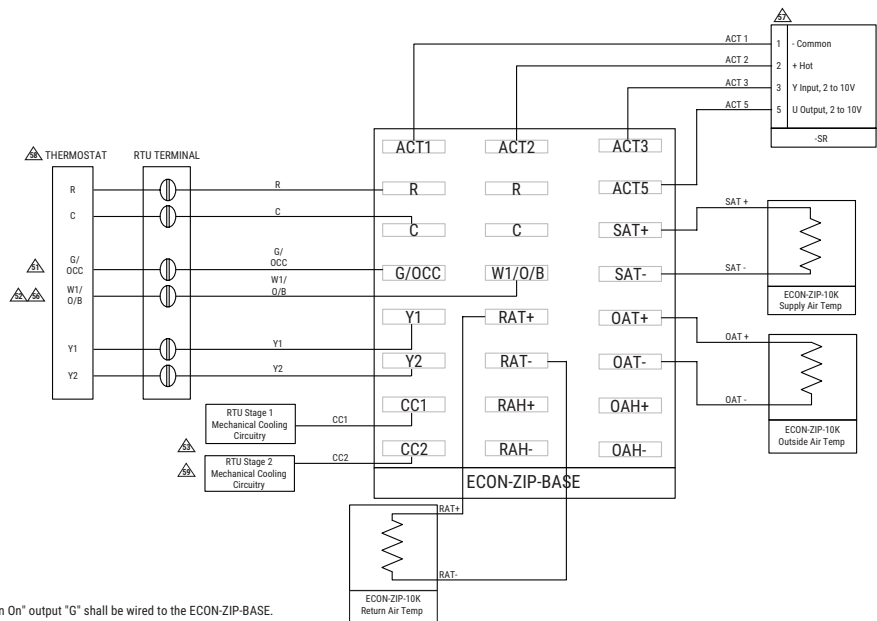
Single Enthalpy



- ⚠ Power source should be the same as ECON-ZIP-BASE.
- ⚠ When the thermostat is not equipped with occupancy control, "Fan On" output "G" shall be wired to the ECON-ZIP-BASE.
- ⚠ W1 must be wired for Heat Pump operation if conventional thermostat is used in conjunction with Defrost Board. If Thermostat and RTU use O/B control reversing valve position, O/B must be wired to W1 on ECON-ZIP-BASE.
- ⚠ Existing refrigeration safety devices may exist, consult RTU wiring diagram
- ⚠ If RTU is not a Heat Pump using a conventional thermostat and it is desired to record heating operation hours, connect W1 to ECON-ZIP-BASE.
- ⚠ Actuators can be mounted in parallel with the ACT3 output from the ZIP Economizer. The ACT5 feedback input should be wired to the Outside Air damper actuator feedback wire.
- ⚠ Thermostat with two (2) stages of cooling required. Thermostats with mercury switches are not compatible with the ZIP Economizer.
- ⚠ Iso relay may be required with certain RTU manufacturers.

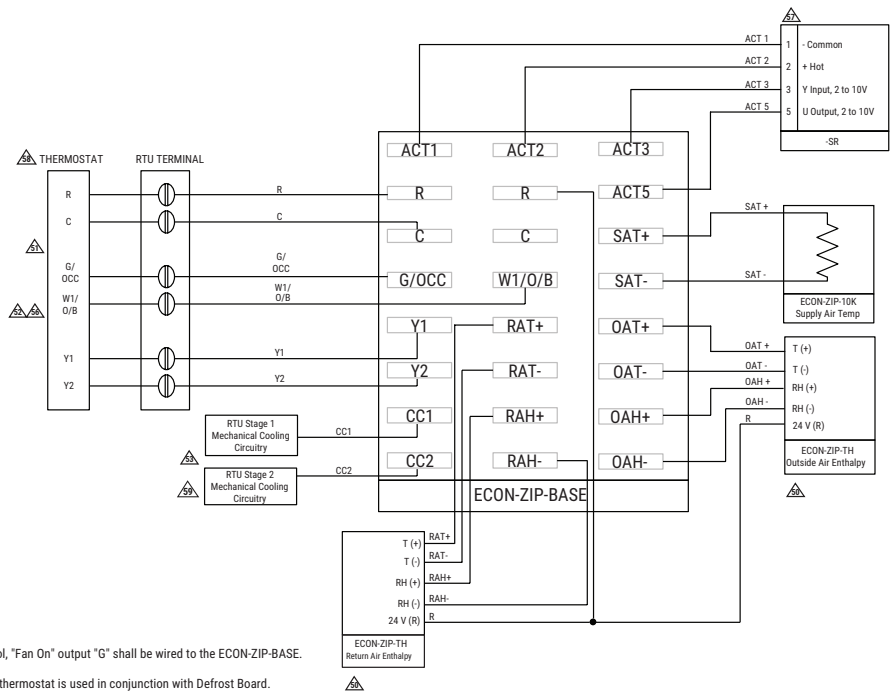
Wiring Diagrams

Differential Dry Bulb



- ⚠ Power source should be the same as ECON-ZIP-BASE.
- ⚠ When the thermostat is not equipped with occupancy control, "Fan On" output "G" shall be wired to the ECON-ZIP-BASE.
- ⚠ W1 must be wired for Heat Pump operation if conventional thermostat is used in conjunction with Defrost Board. If Thermostat and RTU use O/B control reversing valve position, O/B must be wired to W1 on ECON-ZIP-BASE.
- ⚠ Existing refrigeration safety devices may exist, consult RTU wiring diagram
- ⚠ If RTU is not a Heat Pump using a conventional thermostat and it is desired to record heating operation hours, connect W1 to ECON-ZIP-BASE.
- ⚠ Actuators can be mounted in parallel with the ACT3 output from the ZIP Economizer. The ACT5 feedback input should be wired to the Outside Air damper actuator feedback wire.
- ⚠ Thermostat with two (2) stages of cooling required. Thermostats with mercury switches are not compatible with the ZIP Economizer.
- ⚠ Iso relay may be required with certain RTU manufacturers.

Differential Enthalpy



- ⚠ Power source should be the same as ECON-ZIP-BASE.
- ⚠ When the thermostat is not equipped with occupancy control, "Fan On" output "G" shall be wired to the ECON-ZIP-BASE.
- ⚠ W1 must be wired for Heat Pump operation if conventional thermostat is used in conjunction with Defrost Board. If Thermostat and RTU use O/B control reversing valve position, O/B must be wired to W1 on ECON-ZIP-BASE.
- ⚠ Existing refrigeration safety devices may exist, consult RTU wiring diagram
- ⚠ If RTU is not a Heat Pump using a conventional thermostat and it is desired to record heating operation hours, connect W1 to ECON-ZIP-BASE.
- ⚠ Actuators can be mounted in parallel with the ACT3 output from the ZIP Economizer. The ACT5 feedback input should be wired to the Outside Air damper actuator feedback wire.
- ⚠ Thermostat with two (2) stages of cooling required. Thermostats with mercury switches are not compatible with the ZIP Economizer.
- ⚠ Iso relay may be required with certain RTU manufacturers.

Zone Valve Replacement Solutions

Belimo zone valve retrofit solutions are designed to replace failed or non-functioning valves used in a variety of applications. Belimo offers a full product range of zone valves. The self-cleaning ball design helps minimize energy losses caused by clogging and eliminates overflow from pump pressure seat lift. Also offering high close-off capabilities allow for true equal percentage flow characteristics. Zone valves are suited for commercial applications where higher close-off is required such as fin tube casing, fan coils, radiant panels and duct coils.

Belimo to Belimo**ZONE VALVES***

DISCONTINUED MODEL	Size	C_v Rating	Close-off (psi)	REPLACEMENT MODEL	Size	C_v Rating	Close-off (psi)
Z214T+SEF24 NO	½"	2.3	43.5	ZONE215N-10+ZONE24NO	½"	1	75
Z215T+SEF24 NO	½"	3.7	30	ZONE215N-25+ZONE24NO	½"	2.5	50
Z220T+SEF24 NO	¾"	3.7	30	ZONE215N-35+ZONE24NO	½"	3.5	30
				ZONE220N-35+ZONE24NO	¾"	3.5	30
				ZONE220N-50+ZONE24NO	¾"	5	25
Z214T+SEF120 NO	½"	2.3	43.5	ZONE215N-10+ZONE120NO	½"	1	75
Z215T+SEF120 NO	½"	3.7	30	ZONE215N-25+ZONE120NO	½"	2.5	50
Z220T+SEF120 NO	¾"	3.7	30	ZONE215N-35+ZONE120NO	½"	3.5	30
				ZONE220N-35+ZONE120NO	¾"	3.5	30
				ZONE220N-50+ZONE120NO	¾"	5	25
Z214T+SEF24 NC	½"	2.3	43.5	ZONE215N-10+ZONE24NC	½"	1	75
Z215T+SEF24 NC	½"	3.7	30	ZONE215N-25+ZONE24NC	½"	2.5	50
Z220T+SEF24 NC	¾"	3.7	30	ZONE215N-35+ZONE24NC	½"	3.5	30
				ZONE220N-35+ZONE24NC	¾"	3.5	30
				ZONE220N-50+ZONE24NC	¾"	5	25
Z214T+SEF120 NC	½"	2.3	43.5	ZONE215N-10+ZONE120NC	½"	1	75
Z215T+SEF120 NC	½"	3.7	30	ZONE215N-25+ZONE120NC	½"	2.5	50
Z220T+SEF120 NC	¾"	3.7	30	ZONE215N-35+ZONE120NC	½"	3.5	30
				ZONE220N-35+ZONE120NC	¾"	3.5	30
				ZONE220N-50+ZONE120NC	¾"	5	25
Z214T+SEF24 NC	½"	2.3	43.5	ZONE215N-10+ZONE24NC	½"	1	75
Z215T+SEF24 NC	½"	3.7	30	ZONE215N-25+ZONE24NC	½"	2.5	50
Z220T+SEF24 NC	¾"	3.7	30	ZONE215N-35+ZONE24NC	½"	3.5	30
				ZONE220N-35+ZONE24NC	¾"	3.5	30
				ZONE220N-50+ZONE24NC	¾"	5	25
Z214T+SEF120 NC	½"	2.3	43.5	ZONE215N-10+ZONE120NC	½"	1	75
Z215T+SEF120 NC	½"	3.7	30	ZONE215N-25+ZONE120NC	½"	2.5	50
Z220T+SEF120 NC	¾"	3.7	30	ZONE215N-35+ZONE120NC	½"	3.5	30
				ZONE220N-35+ZONE120NC	¾"	3.5	30
				ZONE220N-50+ZONE120NC	¾"	5	25
Z315T+SEF24 NC	½"	5	30	ZONE315N-10+ZONE24NC	½"	1	75
				ZONE315N-25+ZONE24NC	½"	2.5	50
				ZONE315N-35+ZONE24NC	½"	3.5	30
Z315T+SEF120 NC	½"	5	30	ZONE315N-10+ZONE120NC	½"	1	75
				ZONE315N-25+ZONE120NC	½"	2.5	50
				ZONE315N-35+ZONE120NC	½"	3.5	30
Z320T+SEF24 NC	¾"	5.4	30	ZONE320N-35+ZONE24NC	¾"	3.5	30
				ZONE320N-50+ZONE24NC	¾"	5	25
Z320T+SEF120 NC	¾"	5.4	30	ZONE320N-35+ZONE120NC	¾"	3.5	30
				ZONE320N-50+ZONE120NC	¾"	5	25
Z814T+SEF24 NO	½"	2.3	43.5	ZONE215S-10+ZONE24NC	½"	1	75
Z815T+SEF24 NO	½"	3.7	30	ZONE215S-25+ZONE24NC	½"	2.5	50
Z820T+SEF24 NO	¾"	3.7	30	ZONE215S-35+ZONE24NO	½"	3.5	30
				ZONE220S-35+ZONE24NO	¾"	3.5	30
				ZONE220S-50+ZONE24NO	¾"	5	25
Z814T+SEF120 NO	½"	2.3	43.5	ZONE215S-10+ZONE120NO	½"	1	75
Z815T+SEF120 NO	½"	3.7	30	ZONE215S-25+ZONE120NO	½"	2.5	50
Z820T+SEF120 NO	¾"	3.7	30	ZONE215S-35+ZONE120NO	½"	3.5	30
				ZONE220S-35+ZONE120NO	¾"	3.5	30
				ZONE220S-50+ZONE120NO	¾"	5	25
Z814T+SEF24 NC	½"	2.3	43.5	ZONE215S-10+ZONE24NC	½"	1	75
Z815T+SEF24 NC	½"	3.7	30	ZONE215S-25+ZONE24NC	½"	2.5	50
Z820T+SEF24 NC	¾"	3.7	30	ZONE215S-35+ZONE24NC	½"	3.5	30
				ZONE220S-35+ZONE24NC	¾"	3.5	30
				ZONE220S-50+ZONE24NC	¾"	5	25
Z814T+SEF120 NC	½"	2.3	43.5	ZONE215S-10+ZONE120NC	½"	1	75
Z815T+SEF120 NC	½"	3.7	30	ZONE215S-25+ZONE120NC	½"	2.5	50
Z820T+SEF120 NC	¾"	3.7	30	ZONE215S-35+ZONE120NC	½"	3.5	30
				ZONE220S-35+ZONE120NC	¾"	3.5	30
				ZONE220S-50+ZONE120NC	¾"	5	25
Z915T+SEF24 NC	½"	5	30	ZONE315S-10+ZONE24NC	½"	1	75
				ZONE315S-25+ZONE24NC	½"	2.5	50
				ZONE315S-35+ZONE24NC	½"	3.5	30
Z915T+SEF120 NC	½"	5	30	ZONE315S-10+ZONE120NC	½"	1	75
				ZONE315S-25+ZONE120NC	½"	2.5	50
				ZONE315S-35+ZONE120NC	½"	3.5	30
Z920T+SEF24 NC	¾"	5.4	30	ZONE320S-35+ZONE24NC	¾"	3.5	30
				ZONE320S-50+ZONE24NC	¾"	5	25
Z920T+SEF120 NC	¾"	5.4	30	ZONE320S-35+ZONE120NC	¾"	3.5	30
				ZONE320S-50+ZONE120NC	¾"	5	25

*The recommended replacements must be considered depending on the C_v rating and Close-off requirement involving your application.



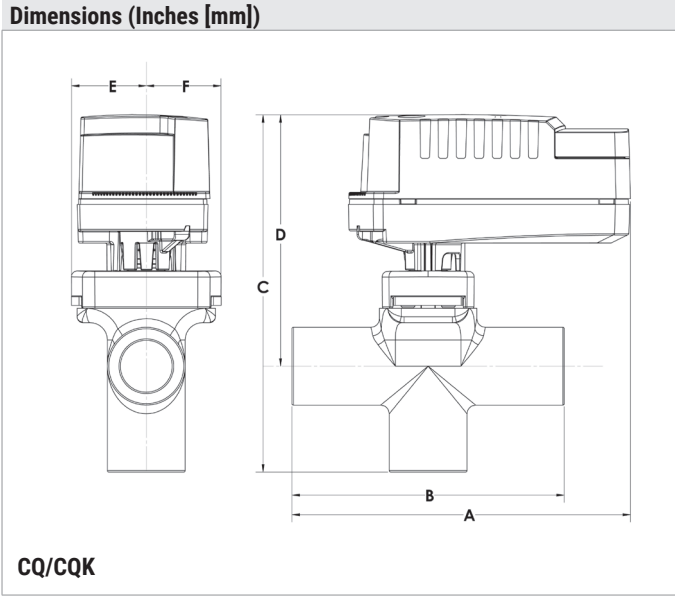
Technical Data	UBLK1000
Hardware	stainless steel
Stem Adaptor	stainless steel
Collar	Nylon 66
Coupling	Stainless Steel
Weight	0.13 lb [0.60 kg]
Fluid Temp Range (water)	Please Refer to Manufacturer's Valve Specifications

*Actuator not included

Application

The UBLK1000 retrofit kit is designed to easily attach to the TACO Zone Sentry zone valve utilizing Belimo CQ and CQK series actuators. This ensures minimal downtime and reliable actuation all backed by a 5-year warranty.

Suitable Actuators		
Non Fail-Safe		Electronic Fail-Safe
UBLK1000	CQB(X)	CQKB(X)



A	B	C	D	E	F
4.6" [118]	3.7" [95]	4.9" [124]	3.4" [87]	1" [25]	1" [26]

35 **Retrofit and Replacement, Erie VM Zone Valves**

UBLK1100 Retrofit Kit for CQ and CQK Series Actuators



5-year warranty

Technical Data	UBLK1100
Hardware	stainless steel
Stem Adaptor	stainless steel
Collar	Nylon 66
Coupling	stainless steel
Bearing	Nylon 66
Weight	0.13 lb [0.60 kg]
Fluid Temp Range (water)	Please Refer to Manufacturer's Valve Specifications

*Actuator not included

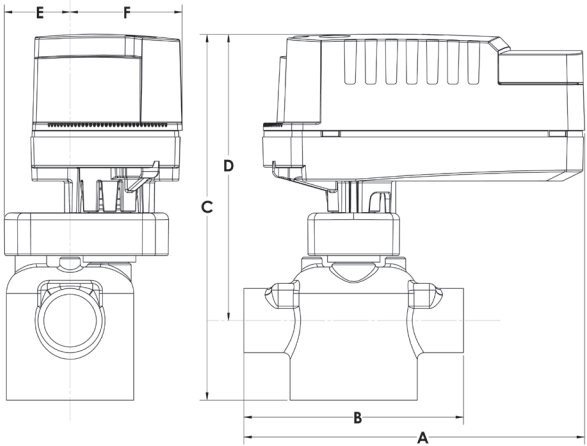
Application

The UBLK1100 retrofit kit is designed to easily attach to the Erie VM Zone valve utilizing Belimo CQ and CQK series actuators. This ensures minimal downtime and reliable actuation all backed by a 5-year warranty.

Suitable Actuators

	Non Fail-Safe	Electronic Fail-Safe
UBLK1100	CQB(X)	CQKB(X)

Dimensions (Inches [mm])



CQ/CQK

A	B	C	D	E	F
4.1" [105]	2.7" [69]	4.3" [108]	3.4" [87]	0.7" [19]	1.3" [33]

UBLK1200 Retrofit Kit for CQ and CQK Series Actuators



5-year warranty

Technical Data	UBLK1200
Hardware	stainless steel
Stem Adaptor	stainless steel
Collar	Nylon 66
Coupling	stainless steel
Bearing	Nylon 66
Weight	0.13 lb [0.60 kg]
Fluid Temp Range (water)	Please Refer to Manufacturer's Valve Specifications

*Actuator not included

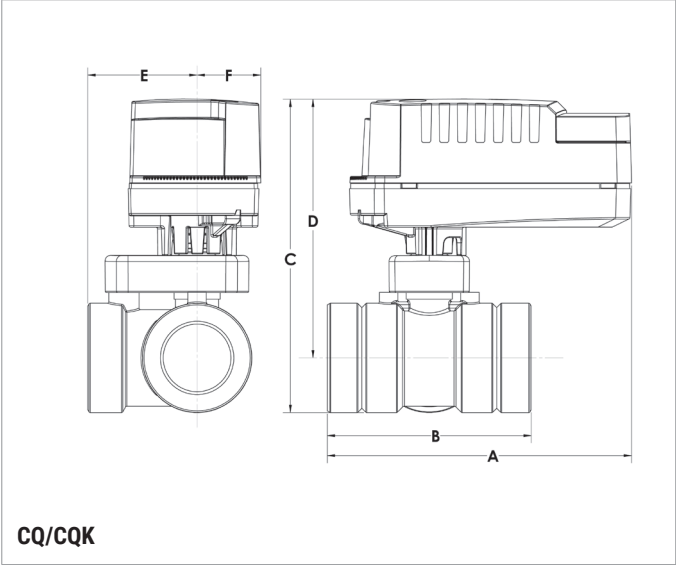
Application

The UBLK1200 retrofit kit is designed to easily attach to the Schneider VBB ball valve utilizing Belimo CQ and CQK series actuators. This ensures minimal downtime and reliable actuation all backed by a 5-year warranty.

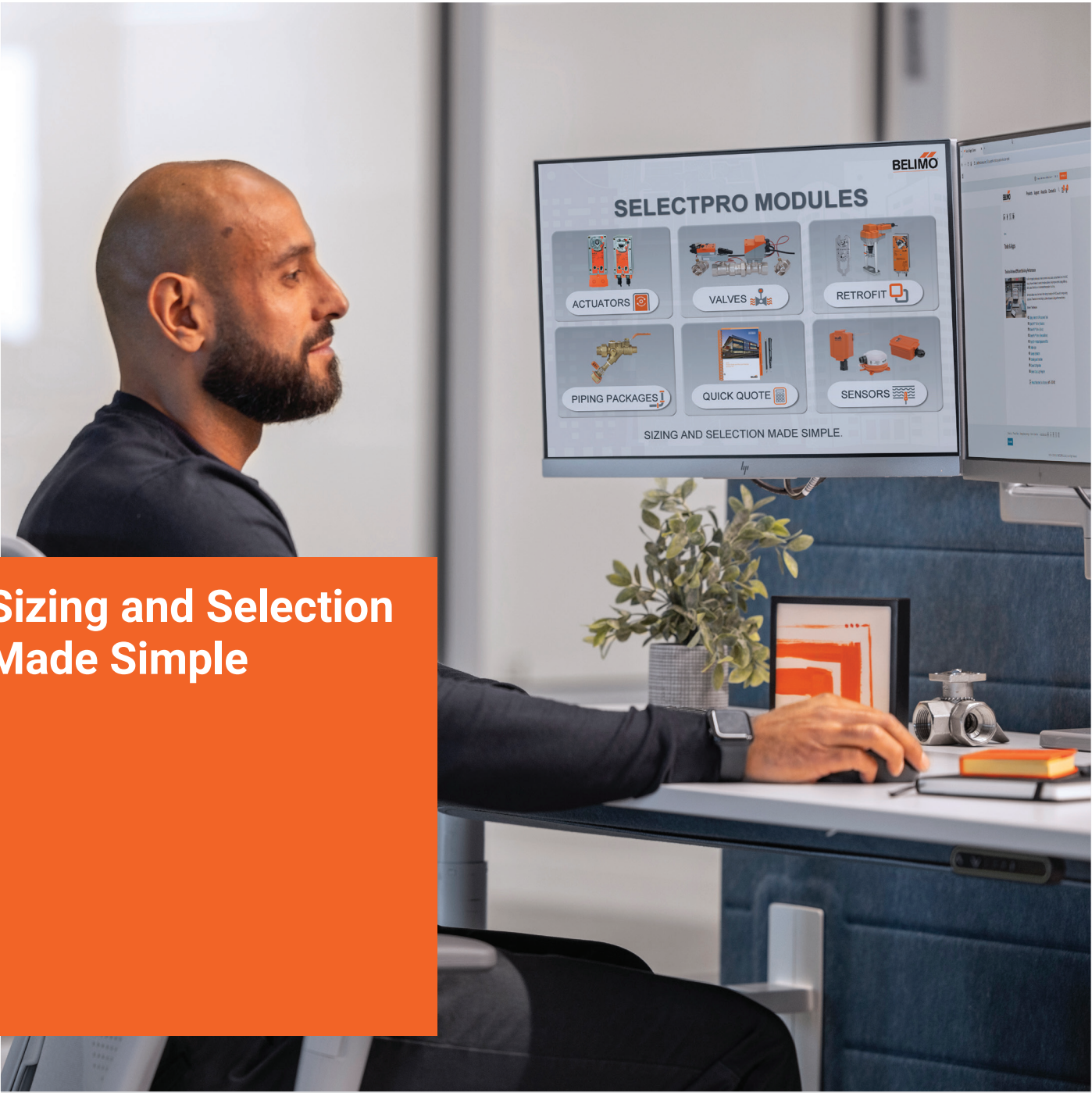
Suitable Actuators

	Non Fail-Safe	Electronic Fail-Safe
UBLK1200	CQB(X)	CQKB(X)

Dimensions (Inches [mm])



A	B	C	D	E	F
4.2" [106]	2.8" [70]	4.3" [108]	3.5" [89]	1.5" [39]	0.9" [24]



Sizing and Selection Made Simple

Belimo SelectPro™

SelectPro is a quick and easy online or offline tool for accurately sizing and selecting actuators, valves, sensors, and replacement solutions. The software walks you through step by step, providing optimal product selection.



Discover the advantages
www.belimo.com

BELIMO®

Globe Valve Retrofit Solutions

Globe valve retrofit solutions are designed to easily attach to the valve bonnet and stem of other manufacturers globe valves utilizing Belimo actuators. Actuator and linkages restore service without having to remove the valve saving on down time and costs.

How to Select a Globe Valve Retrofit Solution

Follow the four steps listed below when ordering a globe valve retrofit kit for either UGLK or GVL series linkages.

Example: Siemens 599 Flowrite, 1½" valve, needing **200 psid** close-off pressure and **Fail-Safe** actuation.

- Based on the **Valve Number, Configuration** and **Size**, select the proper linkage or linkages for your valve.
Some valves will have more than one linkage offered, use the actuator or combination pages to determine the appropriate linkage for a given application. In this example there is a **UGLK1208** and a **UGVL** series linkage available.
- Use the selection guide and your close-off pressure requirement to select the correct actuator series for your application. Looking at the **UGLK1208** or **UGVL**, the **AF** or **SVK** Series actuator will provide over **200 psid close-off** for the 1½" valve.
- Use the actuator listings to make your final actuator selection.

4 HOW TO ORDER:

Option One:

Item 1 1pc UGLK1208
Item 2 1pc AFB24-MFT

Option Two:

Item 1 1pc UGVL + SVKB24-MFT



5-year warranty

1

Select linkage solution based on the **Valve Number, Configuration**, and **Size**; select the proper **Linkage Solution** for your valve.

Example: **Siemens 599 Flowrite, 2-Way, 1½"** valve to be retrofitted.

Choose correct kit **UGLK1208** or **UGVL**.

Siemens\Landis\Powers 599 Flowrite Series Valves Linkage/Actuator Selection Guide

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
599 Flowrite	1½"	No	221	AM	UGLK1208
		Yes		AF	UGLK1208
		No	236	SV	UGVL
		Yes		SVK	UGVL
		Yes	110	NF	UGLK1208

2

Verify close-off is suitable for application. Looking at the **UGLK** or **UGVL**, the **AF** and **SVK** Series actuator will provide **221 psid (AF)** or **236 psid (SVK)** close-off for the 1½" valve.

3

Select actuator based on needed control type. Decide between **AFB24, AFB24-MFT**

or **SVKX24-3, SVKB24-MFT**. Consult actuator overview section for full details.

4

Complete Ordering Example
Option One:
Item 1: **UGLK1208**
Item 2: **AFB24-MFT**

4

Complete Ordering Example
Option Two:
Item 1: **UGVL + SVKB24-MFT**

BASIC PRODUCTS

Model	Control Input	Feedback	Power Supply	Running Time(s)		VA Rating	Auxiliary Switch
AFB24	On/Off	-	AC/DC 24 V	<75 seconds	20 s	7.5	-
AFB24-S	On/Off	-	AC/DC 24 V	<75 seconds	20 s	7.5	Built-In
AFBUP	On/Off	-	AC 24...240 V	<75 seconds	20 s	8.5	-
AFBUP-S	On/Off	-	AC 24...240 V	<75 seconds	20 s	8.5	Built-In
AFB24-SR	2...10 V (4...20mA)	2...10 V	AC/DC 24 V	95 seconds	<20 s	8.5	-
AFB24-SR-S	2...10 V (4...20mA)	2...10 V	AC/DC 24 V	95 seconds	<20 s	8.5	Built-In
AFB24-MFT	2...10 V (4...20mA)	2...10 V	AC/DC 24 V	150 seconds	<20 s	10	-
AFB24-MFT-S	2...10 V (4...20mA)	2...10 V	AC/DC 24 V	150 seconds	<20 s	10	Built-In

ACTUATOR PART #	LVKX24-3	LVKB24-SR	LVKB24-MFT	SVKX24-3	SVKB24-SR	SVKB24-MFT
Control type	On/Off, Floating Point	Modulating	Modulating/MFT	On/Off, Floating Point	Modulating	Modulating/MFT
Input signal / Feedback	-	2...10 V	Variable	-	2...10 V	Variable
Running time	Motor	150 seconds	150 seconds	150 seconds	150 seconds	Variable
	Fail-Safe	35 seconds	35 seconds	35 seconds	35 seconds	35 seconds
Actuator travel		24 mm	24 mm	24 mm	24 mm	24 mm
Actuator noise level		<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)
GVL LINKAGES						
UGVL	Universal Adjustable for 1/2" ... 2"	\$	\$	\$	\$	\$
SGVL	Schnieder VB7..., VB9...	\$	\$	\$	\$	\$

ROTARY ACTUATORS SUGGESTION

SERIES	TORQUE	MODEL	Spring Return	Electronic Fail-Safe	Tandem Mounting Available	Control Input	Feedback Position	Power Supply	Standard Running Time
LF Series*	35 in-lb [4 Nm]	LF24 US	•			On/Off	-	AC/DC 24 V	Consult Specifications
		LF24-MFT US	•			Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V	
NF Series*	90 in-lb [10 Nm]	NFBUP-X1	•			On/Off	-	AC 24...240 V	
		NFX24-MFT-X1	•			(AC/DC 24 V) Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V	
AF Series*	180 in-lb [20 Nm]	AFBUP-X1	•		•	On/Off	-	AC 24...240 V	
		AFX24-MFT-X1	•		•	Variable with MFT (V, PWM, Floating Pt., On/Off)	variable V	AC/DC 24 V	
LM Series*	45 in-lb [5 Nm]	LMB24-3-X1				Floating Point, On/Off	-	AC/DC 24 V	
		LMX24-MFT-X1				Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V	
NM Series*	90 in-lb [10 Nm]	NMB24-3-X1				Floating Point, On/Off	-	AC/DC 24 V	
		NMX24-MFT-X1				Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V	
AM Series*	180 in-lb [20 Nm]	AMB24-3-X1				Floating Point, On/Off	-	AC/DC 24 V	
		AMX24-MFT-X1				Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V	
GM Series*	360 in-lb [40 Nm]	GMB24-3-X1				Floating Point, On/Off	-	AC/DC 24 V	
		GMX24-MFT-X1			•	Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V	
GK Series*	360 in-lb [40 Nm]	GKB24-3-X1		•		Floating Point, On/Off	-	AC 24 V	
		GKX24-MFT-X1		•	•	Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V	

*Please consult the damper actuator sections for a full list of product offerings. Standard run times should be considered in the selection. All airside products are applicable for retrofit kits.

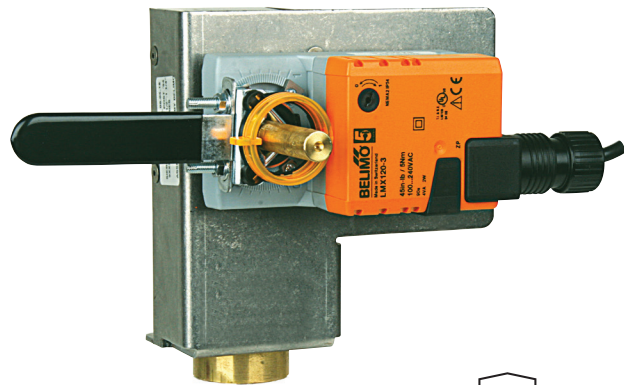
Select "X1" actuators come with a handle.

MULTI-FUNCTION TECHNOLOGY

	PROGRAMMING CODE	Control Input	Running Time	Built-in Feedback
ROTARY ACTUATOR	A01	2...10 V	150 seconds	2...10 V
	A02	0.5...10 V	150 seconds	0.5...10 V
	A28	0.5...10 V	100 seconds	0.5...10 V
	A63	0.5...4.5 V	150 seconds	0.5...4.5 V
	A64	5.5...10 V	150 seconds	5.5...10 V
	W02	0.02...5 seconds PWM	150 seconds	2...10 V
	W03	0.10...25.5 seconds PWM	150 seconds	2...10 V
	F01	Floating Point	150 seconds	2...10 V
	J02	On/Off	150 seconds	2...10 V
	G01	On/Off	35 seconds	2...10 V MFT only
LINEAR ACTUATOR	G02	On/Off	60 seconds	2...10 V MFT only
	G03	On/Off	90 seconds	2...10 V MFT only
	G04	On/Off	150 seconds	2...10 V MFT only
	G11	Floating Point	35 seconds	2...10 V MFT only
	G12	Floating Point	60 seconds	2...10 V MFT only
	G13	Floating Point	90 seconds	2...10 V MFT only
	G14	Floating Point	150 seconds	2...10 V MFT only
	G41 (G21 for -SR)	2...10 V	35 seconds	2...10 V
	G42 (G22 for -SR)	2...10 V	60 seconds	2...10 V
	G43 (G23 for -SR)	2...10 V	90 seconds	2...10 V
	G44 (G24 for -SR)	2...10 V	150 seconds	2...10 V
	G51	0.5...10 V	35 seconds	0.5...10 V
	G52	0.5...10 V	60 seconds	0.5...10 V
	G53	0.5...10 V	90 seconds	0.5...10 V
	G54	0.5...10 V	150 seconds	0.5...10 V
	G2A	5.5...10 V	150 seconds	5.5...10 V
	G2B	0.5...4.5 V	150 seconds	0.5...4.5 V
	G2C	2...10 V	150 seconds	0.5...5 V
	G2D	6...9 V	150 seconds	2...10 V
	G2E	10.5...13.5 V	150 seconds	2...10 V
	W3M	0.02...5 seconds PWM	90 seconds	2...10 V
	W3P	0.2...5 seconds PWM	90 seconds	2...10 V

41 **UGLK.../UGSP... Retrofit Linkage for Globe Valves**

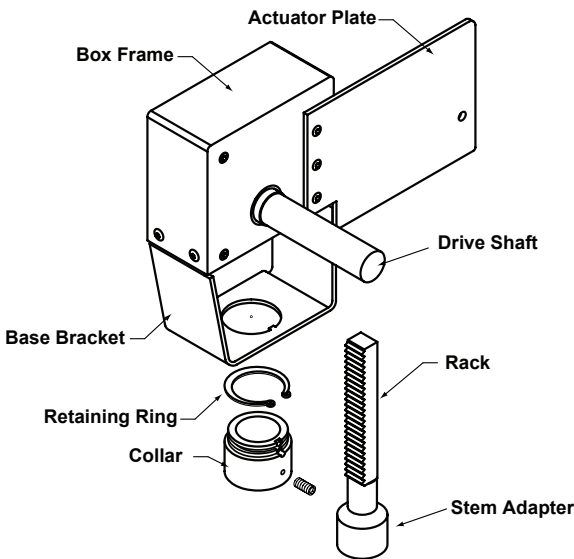
For LM and LF Series Actuators



5-year warranty

Technical Data	UGLK... / UGSP...
Materials:	
Frame, plate, base	stainless steel
Collar	brass
Drive shaft	½" brass
Gears, rack	sintered steel
Bearing	bronze
Stem adaptor	brass
Stroke max (gear teeth)	½" (12 teeth)
Mounting position	360° mountable
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40°C to +80°C]
Servicing	chilled or hot water max steam inlet 50 psi
Weight	2.8 lbs [1.3 kg]

UGLK / UGSP Parts Breakdown



Application

The UGLK/UGSP retrofit kit is designed to easily attach to the valve bonnet on select competitor valves utilizing Belimo LM and LF series actuators. The kit is used to restore service to the valve without removal of the valve, saving down time.

The unique collar design allows the UGLK to be mounted on various two-way or three-way valves. The rack and pinion construction allow the linkage to be used with normally open and normally closed valves.

Default/Configuration

The actuator is sold separately from the linkage. This allows users to select the actuator with the desired control signal. The linkage utilizes standard air-side actuators that can be purchased at any time and mounted in the field. With the free spring design of the linkage, clearance is not an issue. The linkage can be oriented at any angle on the bonnet.

Operation

The UGLK/UGSP linkage provides approximately ½" of downward stroke with 95° rotation on the actuator. The linkage travel is based on the size of gear inside. The gear size is stamped on the frame. This allows the valve to extend fully open or closed based on signal. When directional needs vary, the actuator can be flipped or the directional switch turned to a new rotation. The compact design allows for installation in tight spaces.

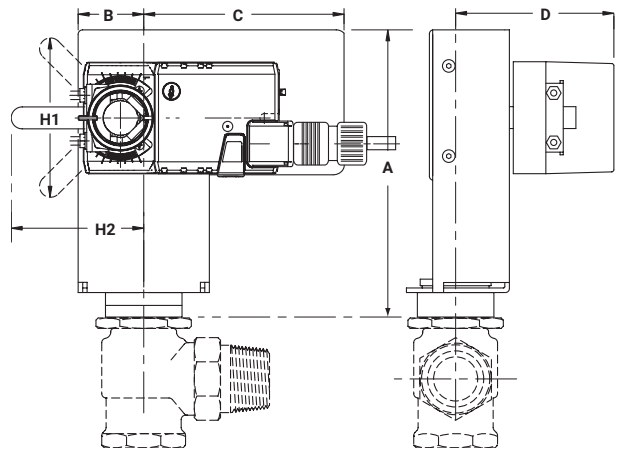
Suitable Actuators	Close-Off Ranges
LM Series	2...250 psi
LF Series	22...250 psi

Competitor Valves**

Honeywell
JCI
Siemens / Powers
Siebe / Invensys / TAC / Schneider

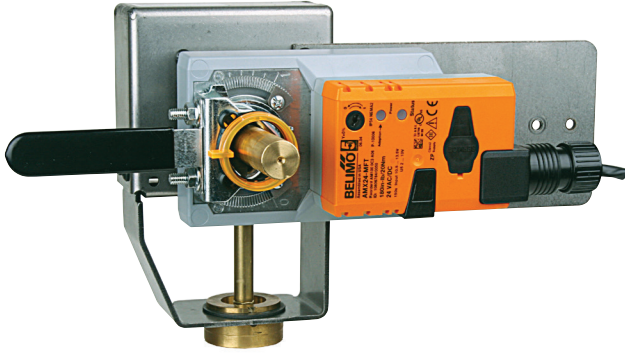
**Consult SelectPro for close-off pressures and a cross reference of each valve.

Dimensions (Inches [mm]) UGLK / UGSP



A	B	C	D	H1	H2
6.5" [165]	1.5" [33]	5.0" [127]	4.0" [102]	4.0" [102]	3.5" [89]

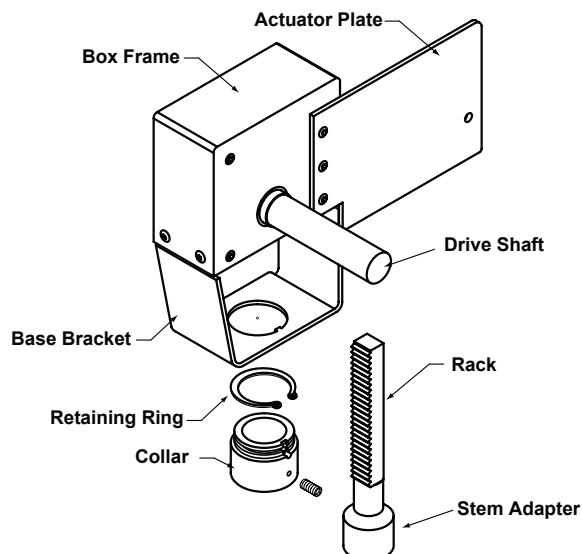
For Single Mounted GK, AF, NF, GM, AM and NM Series Actuators



5-year warranty

Technical Data	UGLK... / UGSP...
Materials:	
Frame, plate, base	stainless steel
Collar	brass
Drive shaft	¾" brass
Gears, rack	sintered steel
Bearing	bronze
Stem adaptor	brass
Stroke max (gear teeth)	½" (12 teeth) ¾" (17 teeth) 1-1/8" (25 teeth) 1½" (33 teeth)
Mounting position	360° mountable
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Servicing	chilled or hot water, and steam
Weight	5.7 lbs [2.6 kg]

UGLK / UGSP Parts Breakdown



Application

The UGLK/UGSP retrofit kit is designed to easily attach to the valve bonnet on select competitor valves utilizing Belimo GK, AF, NF, GM, AM and NM series actuators. The kit is used to restore service to the valve without removal of the valve, saving down time.

The unique collar design allows the UGLK to be mounted on various two-way or three-way valves. The rack and pinion construction allow the linkage to be used with normally open and normally closed valves.

Default/Configuration

The actuator is sold separately from the linkage. This allows users to select the actuator with the desired control signal. The linkage utilizes standard air-side actuators that can be purchased at any time and mounted in the field. Due to the free spring design of the linkage, clearance is not an issue. The linkage can be oriented at any angle on the bonnet.

Operation

The UGLK/UGSP linkage provides approximately ½...1½" of downward stroke with 95° rotation on the actuator. The linkage travel is based on the size of gear inside. The gear size is stamped on the frame. This allows the valve to extend fully open or closed based on signal. When directional needs vary, the actuator can be flipped or directional switch turned to a new rotation.

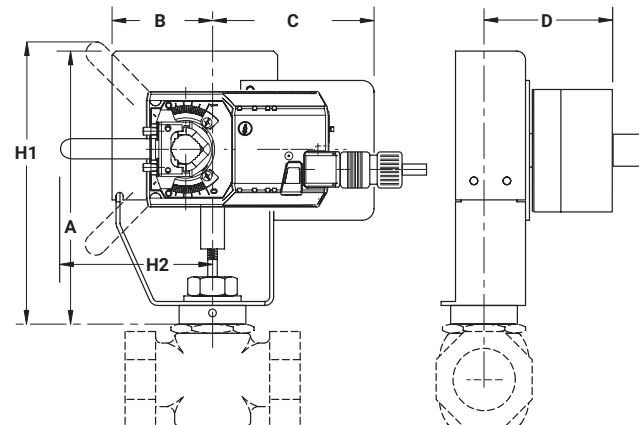
Suitable Actuators	Close-Off Ranges
GK Series	10...250 psi
AF Series	4...250 psi
NF Series	10...250 psi
GM Series	10...250 psi
AM Series	4...250 psi
NM Series	10...250 psi

Competitor Valves**

Honeywell
JCI
Siemens / Powers
Siebe / Invensys / TAC / Schneider
Warren Controls

**Consult SelectPro for close-off pressures and a cross reference of each valve.

Dimensions (Inches [mm]) UGLK / UGSP



A	B	C	D	H1	H2
9...11" [178...356]	1.5" [33]	5.0" [127]	4.0" [102]	4.0" [102]	3.5" [89]

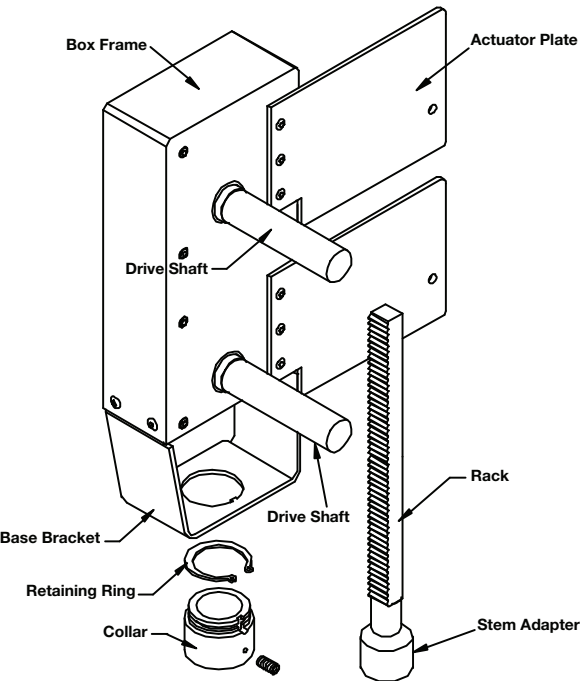
43 **UGLK.../UGSP... Retrofit Linkage for Globe Valves**

For Dual Mounted AF, GM, and GK Series Actuators



Technical Data	UGLK... / UGSP...
Materials:	
Frame, plate, base	stainless steel
Collar	brass
Drive shaft	¾" brass
Gears, rack	sintered steel
Bearing	bronze
Stem adaptor	brass
Stroke max (gear teeth)	½" (12 teeth) ¾" (17 teeth) 1-1/8" (25 teeth) 1½" (33 teeth)
Mounting position	360° mountable
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Servicing	chilled or hot water, and steam max steam inlet 50 psi
Weight	10 lbs [4.5 kg]

UGLK / UGSP Parts Breakdown



Application

The UGLK/UGSP retrofit kit is designed to easily attach to the valve bonnet on select competitor valves utilizing tandem Belimo AF, GM, and GK series actuators when higher close-off is required. The kit is used to restore service to the valve without removal of the valve, saving down time.

The unique collar design allows the UGLK to be mounted on various two-way or three-way valves. The rack and pinion construction allow the linkage to be used with normally open and normally closed valves.

Default/Configuration

The actuator is sold separately from the linkage. This allows users to select any actuator with the desired control signal. The linkage utilizes standard air-side actuators that can be purchased at any time and mounted in the field. With the free spring design of the linkage, clearance is not an issue. The linkage can be oriented at any angle on the bonnet.

Operation

The UGLK/UGSP linkage provides approximately ½...1½" of downward stroke with 95° rotation on the actuator. The linkage travel is based on the size of gear inside. The gear size is stamped on the frame. This allows the valve to extend fully open or closed based on signal. When directional needs vary, the actuators can be flipped or directional switch turned to a new rotation. Refer to Primary / Secondary wiring for dual mounted actuators.

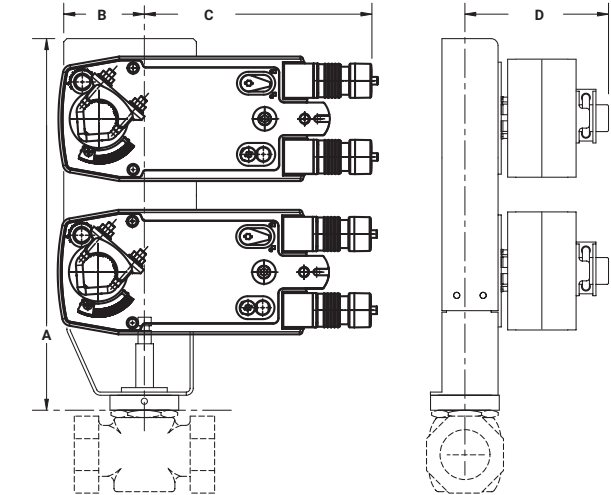
Suitable Actuators	Close-Off Ranges
2*AF Series	10...250 psi
2*GM Series	25...250 psi
2*GK Series	25...250 psi

Competitor Valves**

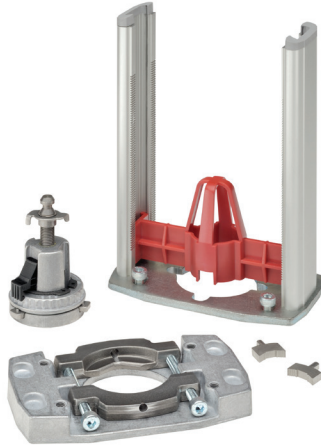
Honeywell
JCI
Siemens / Powers
Siebe / Invensys / TAC / Schneider
Warren Controls

**Consult SelectPro for close-off pressures and a cross reference of each valve.

Dimensions (Inches [mm]) UGLK / UGSP



A	B	C	D
13...17" [483]	3" [76]	9" [229]	5" [127]



5-year warranty

Technical Data

Service	chilled or hot water and steam
Applicable valve size	½" [13], ¾" [19], 1" [25], 1¼" [32], 1½" [38], 2" [50]
Stem	fits slotted or threaded
Frame, plate, base	aluminum and steel
Collar	aluminum and steel, (fits bonnets up to 1.7" dia.)
Stem adaptor	aluminum and steel (fits 0.66" dia. threaded or slotted)
Stroke	0.6" [15 mm] LVK, 0.75" [20 mm] SVK
Mounting position	360°
Media temp range (water)	20...250°F [-7...120°C]
Media temp range (steam)	32...388°F [0...170°C]
Weight	1.9 lbs

Application

The UGVL retrofit kit is designed to easily attach LV and SV series actuators to select globe valves. Its unique adjustable design allows the UGVL to be mounted on ½...2" two-way or three-way valves in both normally open and normally closed configurations.

Default/Configuration

The default set up for a UGVL linkage will be factory installed along with a LV or SV series actuator. Included in the kit will be all the necessary hardware to facilitate mounting to the valve.

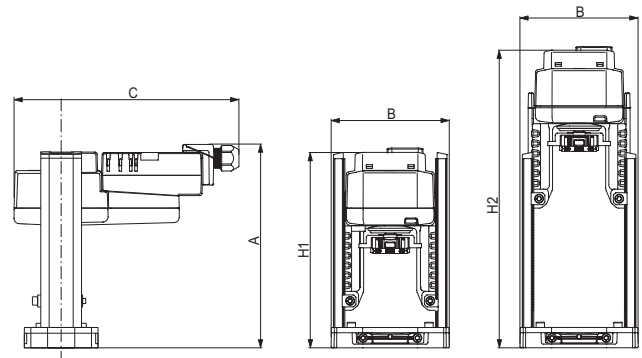
Operation

The UGVL linkage with actuator will provide 20 mm of linear travel to accommodate a wide range of valves.

Suitable Actuators

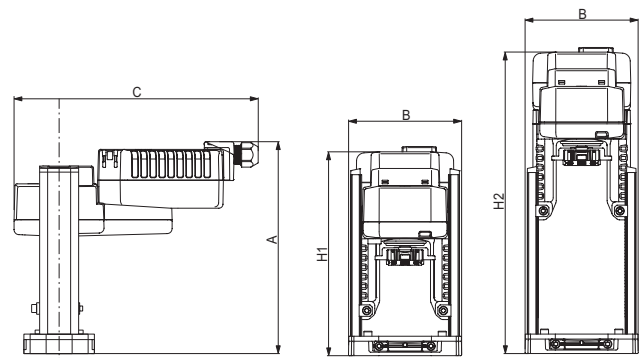
Linkage	Non-Spring Return	Electronic Fail-Safe
UGVL	LV, SV	LVK, SVK

Dimensions (Inches [mm]) with LV and SV Series Actuators



A	B	C	H1	H2
8" [203.2]	4.4" [113]	8.60" [218]	7.5" [190]	11.4" [290]

Dimensions (Inches [mm]) with LVK and SVK Series Actuators



A	B	C	H1	H2
8.5" [217]	4.4" [113]	9.6" [244]	8.4" [207]	12.1" [307]

Application Notes

**Consult SelectPro for close-off pressures and a cross reference of each valve.

45 **SGVL Schneider Globe Valve Linkage**

For use with LV and SV Series Actuators



Technical Data

Service	chilled or hot water and steam
Applicable valve size	½" [13], ¾" [19], 1" [25], 1¼" [32], 1½" [38], 2" [50]
Frame, plate, base	aluminum
Collar*	aluminum (fits VB7 ½"...2"/VB9 ½"...1¼" valves)
Coupling	aluminum
Stem adaptor	steel
Stroke	0.6" [15 mm] LVK, 0.75" [20 mm] SVK
Mounting position	360°
Media temp range (water)	20...250°F [-7...120°C]
Media temp range (steam)	20...250°F [-7...120°C]
Housing material	aluminum die cast and plastic casing
Weight	0.5 lbs

*Will also fit post 1994 VB9 1½"...2" valves.

Application

The SGVL retrofit kit is designed to easily attach LV and SV series actuators to select Schneider® globe valves. The cast base and free spinning collar allow the SGVL to be mounted on ½"...2" two-way or three-way valves in both normally open and normally closed configurations.

Default/Configuration

The default set up for a SGVL linkage will be factory installed along with a LV or SV series actuator. Included in the kit is all the necessary hardware to facilitate mounting to the Schneider valve.

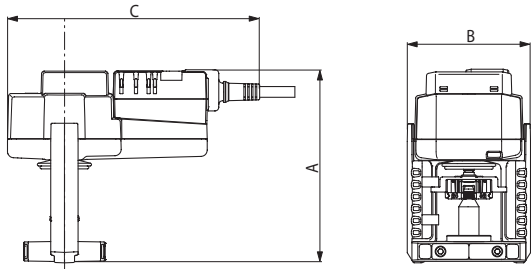
Operation

The SGVL linkage with actuator will provide 20 mm of linear travel to accommodate a wide range of valve sizes.

Suitable Actuators

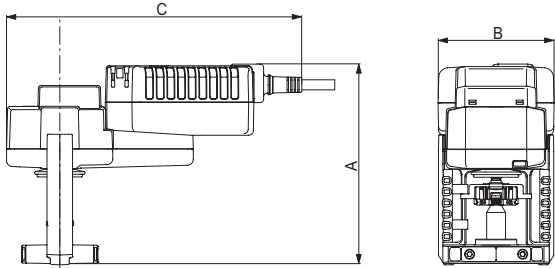
Linkage	Non-Spring Return	Electronic Fail-Safe
SGVL	LV, SV	LVK, SVK

Dimensions (Inches [mm]) with LV and SV Series Actuators



A	B	C
6" [152]	3.9" [98]	7.8" [199]

Dimensions (Inches [mm]) with LVK and SVK Series Actuators



A	B	C
6.7" [169]	3.9" [98]	8.2" [209]

Application Notes

**Consult SelectPro for close-off pressures and a cross reference of each valve.

For Use with AVK, EV, and RV Series Actuators



Technical Data	
Service	chilled or hot water and steam
Applicable valve size	2½" [64], 3" [80], 4" [101], 5" [127], 6" [152]
Stem	316 stainless steel
Frame, plate, base	aluminum and steel (fits competitor bonnets up to 2.3" dia.)
Collar	aluminum
Coupling	GF nylon, supplied
Housing material	aluminum die cast and plastic casing
Stem adaptor	aluminum and steel (fits 1.18" dia. threaded or slotted)
Stroke	1.25" [32 mm] AVK, 2" [50 mm] EV/RV
Mounting position	360°
Media temp range (water)	20...250°F [-7...120°C]
Media temp range (steam)	32...388°F [0...170°C]
Weight	5 lbs

Application

The FGVL retrofit kit is designed to easily attach AVK, EV, and RV series actuators to select flanged globe valves requiring larger stem travels and higher forces. Its casted base and lower locking clamp allow the FGVL to be mounted on 2½...6" two-way or three-way valves in both normally open and normally closed configurations.

Default/Configuration

The default set up for a FGVL linkage will be factory installed along with an AVK, EV, or RV series actuator. Included in the kit will be all the necessary hardware to facilitate mounting to the valve.

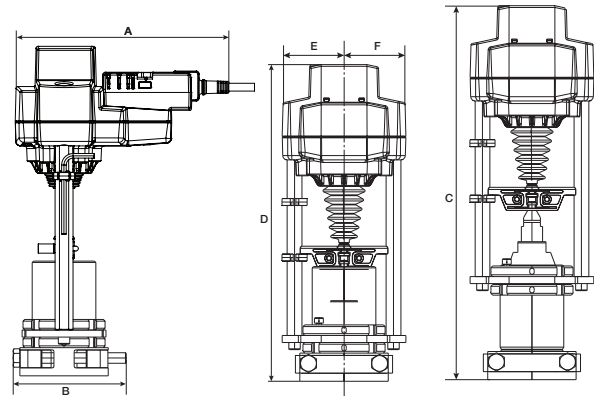
Operation

The FGVL linkage with actuator will provide up to 2" [50 mm] of linear travel to accommodate a wide range of valves.

Suitable Actuators

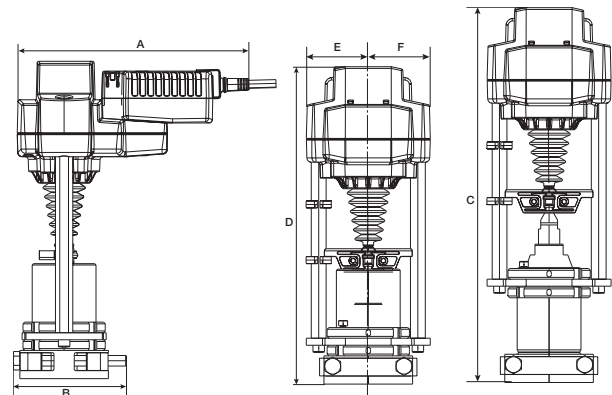
Linkage	Non-Spring Return	Electronic Fail-Safe
FGVL	EVB(X), RVB(X)	AVKB(X)

Dimensions (Inches [mm]) with EV and RV Series Actuators



A	B	C	D	E	F
9.2" [234]	5.00" [127]	16.33" [425]	14.00" [356]	2.78" [71]	

Dimensions (Inches [mm]) with AVK Series Actuators



A	B	C	D	E	F
10.25" [260]	5.00" [127]	16.73" [425]	14.00" [356]	2.78" [71]	

Application Notes

**Consult SelectPro for close-off pressures and a cross reference of each valve.

47 WGVL Warren Globe Valve Linkage

For use with EV, RV and AVK Series Actuators



5-year warranty

Technical Data

Service	chilled or hot water and steam
Applicable valve size	2" [50], 2½" [65], 3" [80], 4" [100], 5" [125], 6" [150]
Stem	316 stainless steel
Frame, plate, base	aluminum, steel (fits Warren Type 20, 22, 23, 30, and 32) (Belimo G6 & G7 series)
Collar	steel
Stem adaptor	steel
Stroke	2" [50 mm]
Mounting position	360°
Media temp range (water)	20...250°F [-7...120°C]
Media temp range (steam)	32...388°F [0...170°C]
Housing material	aluminum die cast and plastic casing
Weight	2.59 lbs

Application

The WGVL retrofit kit is designed to easily attach AVK, EV and RV series actuators to select Warren® globe valves. The cast base and lower lock nut allow the WGVL to be mounted on 2½...6" two-way or three-way valves in both normally open and normally closed configurations.

Default/Configuration

The default set up for a WGVL linkage will be factory installed along with an AVK or EV, RV series actuator. Included in the kit is all the necessary hardware to facilitate mounting to the Warren valve.

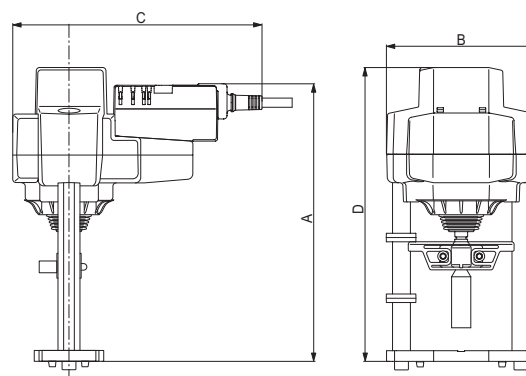
Operation

The WGVL linkage with actuator will provide 50 mm of linear travel to accommodate a wide range of valve sizes.

Suitable Actuators

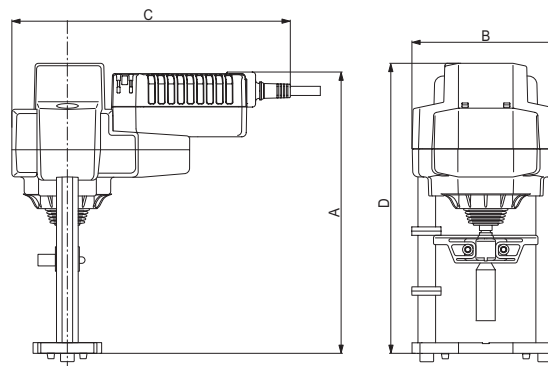
Linkage	Non-Spring Return	Electronic Fail-Safe
WGVL	EV, RV	AVK

Dimensions (Inches [mm]) with EV and RV Series Actuators



A	B	C	D
10.2" [259]	5.5" [140]	9.2" [233]	10.9" [276]

Dimensions (Inches [mm]) with AVK Series Actuators



A	B	C	D
10.4" [264]	5.5" [140]	10.3" [262]	10.9" [276]

Application Notes

**Consult SelectPro for close-off pressures and a cross reference of each valve.

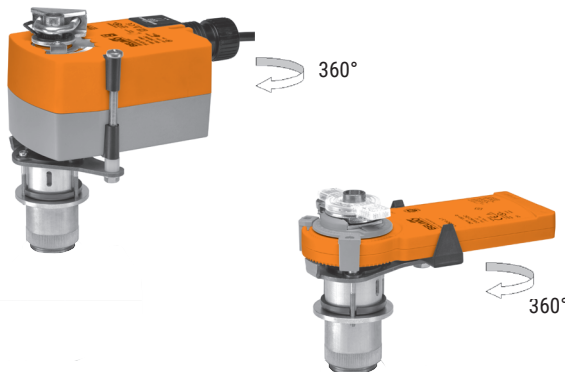
UGSL1200 Short-Stroke Valve Retrofit Kit for CM and TF Series Actuators



5-year warranty

Technical Data	UGSL1200
Housing	aluminum
Materials:	
Coupling nut	brass
Shafts	stainless steel
Base plate	aluminum
Upper plate	stainless steel
Cams	nylon 6/6 with MDS
Stroke	6 mm in CW direction
Max out force	67 lbf [300 N]
Mounting position	360° mountable as shown
Ambient temperature	-22...+122°F [-30...+50°C]
Storage temperature	-40...+176°F [-40...+80°C]
Fluid	chilled or hot water max steam inlet 15 psi
Weight	1.25 lb [0.57 kg]
Accessories	UGSL-ADPT Collar for: • Danfoss • HW Braukman • Oventrop • JCI • Cazzaniga • Taco • Spartan

Mounting Configurations



TF Actuator*

CM Actuator**

Application

The UGSL1200 retrofit kit is designed to easily attach to the valve bonnet on select Siemens 599 MT/MZ short-stroke valves utilizing Belimo CM and TF* series actuators. See accessories in Technical Data table for all available competitor collars.

The unique coupler design allows the UGSL1200 to be mounted on any ½...1¼" two-way or three-way valves. In addition, the linkage is suitable for both normally open and normally closed valves.

Default/Configuration

The default set up for this linkage is for usage with the CM actuator. Included in the kit is an extension piece for TF actuators. Hardware is supplied to attach the shaft extension and anti-rotation screws to both a CM or TF actuator.

Operation

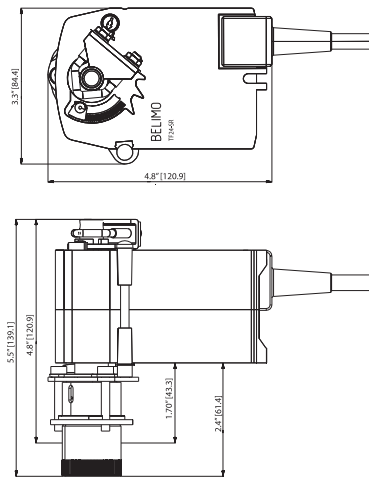
The UGSL1200 linkage provides 6 mm of downward stroke with 95° CW rotation on the actuator. This allows the valve to extend fully open or closed based on signal. The slot located on the housing provides indication when the maximum stroke has been reached. For troubleshooting when using a CM actuator, the operator may use the manual override feature to rotate the linkage up or down. When using the TF, refer to electronic override instructions according to actuator model.

Note: Linkage cannot be used on 1½" normally closed valves.

*TFL actuators required for on/off applications.

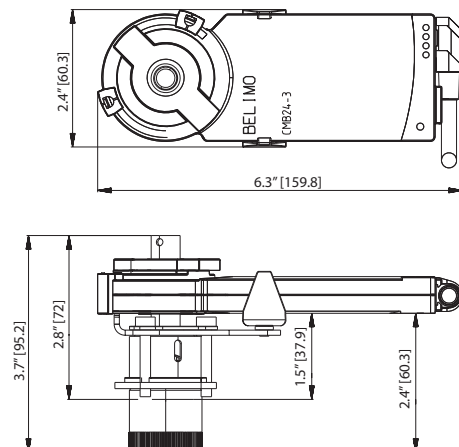
** CMB24-SR-R for 2V stem down, CMB24-SR-L for 2V stem up.

TF Dimensions (Inches [mm])



D315

CM Dimensions (Inches [mm])



D316

VP5.., V5011, V5013, V5045 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
VP526 Series	5/8"	No	58	CM	UGLK1808
		Yes		TF	UGLK1808
VP531 Series		No	70	CM	UGLK1808
		Yes		TF	UGLK1808
VP531 Series	No	CM		UGLK1808	
	Yes	TF		UGLK1808	
		No		LV	UGVL
V5011 Series	½"	Yes	236	LVK	UGVL
				LF	UGLK1806
				NF	UGLK1800
V5011F (1014, 1022, 1030, 1048, 1121, 1139)				LF	UGLK1806
V5011G (1137, 1145, 1152, 1160, 1178, 1186)				NF	UGLK1800
				LF	UGLK1806
				NF	UGLK1800
V5011H (1002, 1010)				LF	UGLK1806
				NF	UGLK1800
V5011J (1012, 1079)				LF	UGLK1806
		NF		UGLK1800	
		LF		UGLK1806	
V5013 Series		No		LV	UGVL
		Yes		LVK	UGVL
V5013F (1004, 1012, 1079)				NF	UGLK1800
		LF		UGLK1806	
		No		LV	UGVL
V5013N Series		Yes		LVK	UGVL
		No		LF	UGLK1806
V5045			AM	UGLK1804	
		Yes	NF	UGLK1804	
VP525 Series		No	CM	UGLK1808	
		Yes	TF	UGLK1808	
VP526 Series		No	CM	UGLK1808	
		Yes	TF	UGLK1808	
VP527 Series		No	CM	UGLK1808	
		Yes	TF	UGLK1808	
VP531 Series		No	CM	UGLK1808	
		Yes	TF	UGLK1808	
			NF	UGLK1800	
V5011 (H1028, G1194, J1023)			LF	UGLK1806	
		No	LV	UGVL	
V5011 Series	LVK		UGVL		
	Yes	LF	UGLK1806		
		NF	UGLK1800		
V5011F (1055, 1147)		LF	UGLK1806		
		LV	UGVL		
V5013 Series	No	LVK	UGVL		
	Yes	NF	UGLK1800		
		LF	UGLK1806		
V5013F (1020, 1087)		LV	UGVL		
		LVK	UGVL		
V5013N Series	Yes	LF	UGLK1806		
		NF	UGLK1804		
V5045		CM	UGLK1808		
		TF	UGLK1808		
VP525 Series	No	CM	UGLK1808		
	Yes	TF	UGLK1808		
VP531 Series	No	CM	UGLK1808		
	Yes	TF	UGLK1808		
		AF	UGLK1800		
V5011 (F1063, F1154, H1028, G1194)		LF	UGLK1806		
	No	SV	UGVL		
		SVK	UGVL		
V5011 Series	Yes	AF	UGLK1800		
	No	LV	UGVL		
	Yes	LVK	UGVL		
	Yes	LF	UGLK1806		
	No	SV	UGVL		
V5013 Series	Yes	SVK	UGVL		
	No	LV	UGVL		
	Yes	LVK	UGVL		
	Yes	236	AF	UGLK1800	
V5013F (1038, 1095)		65	LF	UGLK1806	

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

V5013, V5045, V5011, V3350 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
V5013N Series	1"	No	236	SV	UGVL
		Yes		SVK	UGVL
				AF	UGLK1800
		No	93	LV	UGVL
		Yes		LVK	UGVL
V5045			65	LF	UGLK1806
V5011 (H1044, G1210, J1049)		No	236	AM	UGLK1804
				NF	UGLK1804
		Yes	221	AF	UGLK1800
V5011 Series			40	LF	UGLK1806
			221	AF	UGLK1800
		No	236	SV	UGVL
V5011F (1071, 1162)				SVK	UGVL
V5013 Series		Yes	40	LF	UGLK1806
			221	AF	UGLK1800
			40	LF	UGLK1806
V5013F (1046, 1103)		No	236	SV	UGVL
V5013N Series				SVK	UGVL
		Yes	221	AF	UGLK1800
			40	LF	UGLK1806
V5045			221	AF	UGLK1800
V5011 (F1089, F1178, G1228)		No	236	SV	UGVL
		Yes		SVK	UGVL
			40	LF	UGLK1806
V5011 Series		No	236	AM	UGLK1804
				NF	UGLK1804
		Yes	160	AF	UGLK1800
V5013 Series			153	LF	UGLK1806
V5013F (1053, 1111)		No	26	SV	UGVL
V5013N Series			160	SVK	UGVL
		Yes		AF	UGLK1800
			26	LF	UGLK1806
V5045		No	160	SV	UGVL
V5011 (F1097, F1188, G1103)				SVK	UGVL
		Yes	153	AF	UGLK1800
			26	LF	UGLK1806
V5011 Series		No	160	SV	UGVL
V5013 Series				SVK	UGVL
V5013F (1061, 1129)		Yes	153	AF	UGLK1800
V5013N Series			26	LF	UGLK1806
		No	160	SV	UGVL
		Yes		SVK	UGVL
V5045			153	AF	UGLK1800
V5011 Series		No	26	LF	UGLK1806
				SV	UGVL
		Yes	160	SVK	UGVL
V5013 Series			173	GK	UGLK1800
V5013F (1061, 1129)		Yes	86	AF	UGLK1800
V5013N Series			40	NF	UGLK1800
			14	LF	UGLK1806
			173	GK	UGLK1800
V5045		No	86	AF	UGLK1800
V3350 (A2009, A2017, B2007, C2013, D2003)		Yes	85	SV	UGVL
				SVK	UGVL
		Yes	14	LF	UGLK1806
V3350 (A2009, A2017, B2007, C2013, D2003)		No	85	SV	UGVL
		Yes		SVK	UGVL
			120	AM	UGLK1804
V3350 (A2009, A2017, B2007, C2013, D2003)		Yes	211	AF	UGLK1804
				2*GK	UGLK1870
		No	110	2*AF	UGLK1870
V5013 Series		No	55	SV	UGVL
V5045		Yes		SVK	UGVL

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

V3350, V3351, V3360, V3450, V3451, V3460, V5011, V5013 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
V3351 (A2008, C2005, D2002)	2½"	Yes	211	2*GK	UGLK1870
			110	2*AF	UGLK1870
		No	55	SV	UGVL
				SVK	UGVL
Yes		211	2*GK	UGLK1870	
			110	2*AF	UGLK1870
No		55	SV	UGVL	
			SVK	UGVL	
V3360E2008, V3361E2007		Yes	52	AF	UGLK1800
				211	2*GK
		110	2*AF	UGLK1870	
			No	55	SV
SVK		UGVL			
V3450 (A2008, A2016, B2006, C2012, D2002)		Yes	52	AF	UGLK1800
				211	2*GK
		110	2*AF	UGLK1870	
			No	55	SV
SVK		UGVL			
V3451 (A2007, C2003, C2004)		Yes	52	AF	UGLK1800
				211	2*GK
		110	2*AF	UGLK1870	
			No	77	SV
SVK		UGVL			
V3460E2007, V3461E2006		Yes	52	AF	UGLK1800
				211	2*GK
		110	2*AF	UGLK1870	
			No	55	SV
SVK		UGVL			
V5011 (A1734, F1105, F1196, G1111)	Yes	52	AF	UGLK1800	
211			2*GK	UGLK1870	
V5011 Series	No	52	SV	UGVL	
SVK			UGVL		
V5013 (B1003, C1001)	Yes	211	2*GK	UGLK1870	
52			AF	UGLK1800	
V5013 Series	No	52	SV	UGVL	
SVK			UGVL		
V3350 (A3007, A3015, B3005, C3011, D3001)	Yes	136	2*GK	UGLK1870	
			77	2*AF	UGLK1870
	No	38	AF	UGLK1800	
			SV	UGVL	
V3351 (A3006, C3002, C3003)	Yes	136	2*GK	UGLK1870	
			77	2*AF	UGLK1870
	No	38	AF	UGLK1800	
			SV	UGVL	
V3360E3006, V3361E3005	Yes	136	2*GK	UGLK1870	
			77	2*AF	UGLK1870
	No	38	AF	UGLK1800	
			SV	UGVL	
V3450 (A3006, A3014, B3004, C3010, D3000)	Yes	136	2*GK	UGLK1870	
			77	2*AF	UGLK1870
	No	38	AF	UGLK1800	
			SV	UGVL	
V3451 (A3005, C3001, C3002)	Yes	136	2*GK	UGLK1870	
			77	2*AF	UGLK1870
	No	38	AF	UGLK1800	
			SV	UGVL	
V3460E3005, V3461E3004	Yes	136	2*GK	UGLK1870	
			77	2*AF	UGLK1870
	No	38	AF	UGLK1800	
			SV	UGVL	
V5011 (A1767, F1113, F1204, G1129)	Yes	136	2*GK	UGLK1870	
38			AF	UGLK1800	
V5011 Series	No	40	SV	UGVL	
SVK			UGVL		
V5013 (B1011, C1019)	Yes	136	2*GK	UGLK1870	
77			GK	UGLK1800	
V5013 Series	No	40	SV	UGVL	
Yes			SVK	UGVL	

V5011, V5013, V3350, V3351, V3360, V3450, V3451, V3460 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
V3350 (A4005, A4013, B4003, C4019, D4009)	4"	No	40	RV	FGVL
		Yes		2*GK	UGLK1872
		No	22	EV	FGVL
		Yes		2*AF	UGLK1872
V3351 (A4004, C4000, C4001)		No	40	RV	FGVL
		Yes		2*GK	UGLK1872
		No	22	EV	FGVL
		Yes		2*AF	UGLK1872
V3360E4004, V3361E4003		No	40	RV	FGVL
		Yes		2*GK	UGLK1872
		No	22	EV	FGVL
		Yes		2*AF	UGLK1872
V3450 (A4004, A4012, B4002, C4018, D4008)		No	40	RV	FGVL
		Yes		2*GK	UGLK1872
		No	22	EV	FGVL
		Yes		2*AF	UGLK1872
V3451 (A4003, C4000, C4009)		No	40	RV	FGVL
		Yes		2*GK	UGLK1872
		No	22	EV	FGVL
		Yes		2*AF	UGLK1872
V3460E4003, V3461E4002		No	40	RV	FGVL
		Yes		2*GK	UGLK1872
		No	22	EV	FGVL
		Yes		2*AF	UGLK1872
V5011 (A1858, B1013)		No	40	RV	FGVL
		Yes		2*GK	UGLK1872
		No	22	EV	FGVL
		Yes		10	AF
V5013 (B1029, C1027)		No	40	RV	FGVL
		Yes		2*GK	UGLK1872
		No	22	EV	FGVL
		Yes		GK	UGLK1802
V3350 (A5002, A5010, B5000, C5016, D5006)	No	22	RV	FGVL	
	Yes		2*GK	UGLK1872	
	No	14	EV	FGVL	
	Yes		GK	UGLK1802	
V3351 (A5001, C5008, D5005)	No	10	AF	UGLK1802	
	Yes		2*AF	UGLK1872	
	No	22	RV	FGVL	
	Yes		2*GK	UGLK1872	
V3360E5001, V3361E5000	No	14	EV	FGVL	
	Yes		GK	UGLK1802	
	No	10	2*AF	UGLK1872	
	Yes		AF	UGLK1802	
V3450 (A5001, A5019, B5009, C5015, D5005)	No	22	RV	FGVL	
	Yes		2*GK	UGLK1872	
	No	14	EV	FGVL	
	Yes		GK	UGLK1802	
V3451 (A5000, C5006, C5007)	No	10	2*AF	UGLK1872	
	Yes		AF	UGLK1802	
	No	22	RV	FGVL	
	Yes		2*GK	UGLK1872	
V3451 (A5000, C5006, C5007)	No	14	EV	FGVL	
	Yes		GK	UGLK1802	
	No	10	2*AF	UGLK1872	
	Yes		AF	UGLK1802	

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

V3360, V3450, V3451, V3460, V5011, V5013, V3350, V3351, VGF2, VGF3 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
V3460E5000, V3461E5009	5"	No	22	RV	FGVL
		Yes		2*GK	UGLK1872
		No	14	EV	FGVL
		Yes		GK	UGLK1802
				2*AF	UGLK1872
				AF	UGLK1802
No		22	RV	FGVL	
Yes		2*GK	UGLK1872		
		14	GK	UGLK1802	
			2*AF	UGLK1872	
			10	AF	UGLK1802
V5013 (B1037, C1035)		No	22	RV	FGVL
		Yes	22	2*GK	UGLK1872
		No		EV	FGVL
		Yes	14	GK	UGLK1802
				2*AF	UGLK1872
			10	AF	UGLK1802
6"				No	22
	Yes	10	2*GK	UGLK1872	
			GK	UGLK1802	
		2*AF	UGLK1872		
	No	22	RV	FGVL	
			2*GK	UGLK1872	
		Yes	10	GK	UGLK1802
	2*AF	UGLK1872			
	No	22		RV	FGVL
			2*GK	UGLK1872	
		Yes	10	GK	UGLK1802
	2*AF	UGLK1872			
No	22	RV		FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		
	Yes	10	GK	UGLK1802	
2*AF	UGLK1872				
No	22		RV	FGVL	
		2*GK	UGLK1872		

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

V-37, V-38, V-39, V-43, VG7, VTM, V(B)-37, V(B)-39, V(B)-43, V(B)-58 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
V-3766	½"	No	236	LM	UGLK1552
		Yes		LF	UGLK1552
V-3854-5		No		LM	UGLK1554
		Yes		LF	UGLK1554
V-3966		No		LM	UGLK1552
		Yes		LF	UGLK1552
V-4332		No		LV	UGVL
		Yes		LVK	UGVL
VG7000 Series		No		LV	UGVL
		Yes		LVK	UGVL
VG7XXX-(C, E, GT) *Threaded Stem Only		No		LF	UGLK1416
		Yes		LM	UGLK1550
VTM-TN-(007, 019, 047) *Threaded Stem Only		No		LF	UGLK1550
		Yes		LV	UGVL
		Yes		LVK	UGVL
V(B)-3754 Series, Bronze Trim	¾"	No	211	LV	UGVL
		Yes		LVK	UGVL
V(B)-3974 Series, Bronze Trim		No		LV	UGVL
		Yes		LVK	UGVL
V(B)-4324 Series, Bronze Trim		No		LV	UGVL
		Yes		LVK	UGVL
V(B)-5844 Series		No		LV	UGVL
		Yes		LVK	UGVL
V-3754-(4, 1008, 1022, 1026) V-3974-(4, 1004, 1010) V-4324-(4, 1005, 1006, 1013)		Yes		LF	UGLK1550
				LF	UGLK1550
				LF	UGLK1550
V-4332		No		LV	UGVL
		Yes		LVK	UGVL
VG7000 Series		No		LV	UGVL
		Yes		LVK	UGVL
VG7XXX-LT *Threaded Stem Only				169	LF
V(B)-3754 Series, Bronze Trim		1"	No	236	SV
	Yes			SVK	UGVL
	No		93	LV	UGVL
	Yes			LVK	UGVL
V(B)-3974 Series, Bronze Trim	No		236	SV	UGVL
	Yes			SVK	UGVL
	No		93	LV	UGVL
	Yes			LVK	UGVL
V(B)-4324 Series, Bronze Trim	No		236	LV	UGVL
	Yes			LVK	UGVL
	No			SV	UGVL
V(B)-4324 Series, Bronze Trim	Yes		236	SVK	UGVL
	No			SV	UGVL
	Yes			SVK	UGVL
V(B)-5844 Series	No		93	LV	UGVL
	Yes			LVK	UGVL
V-3754-(5, 1010, 1023, 1027)	Yes		236	AF	UGLK1402
			173	NF	UGLK1402
V-3974-(5, 1005, 1011)			236	AF	UGLK1402
			173	NF	UGLK1402
V-4324-(5, 1007, 1008, 1014)			236	AF	UGLK1402
			173	NF	UGLK1402
V-4332	No		236	SV	UGVL
	Yes			SVK	UGVL
	No		93	LV	UGVL
	Yes			LVK	UGVL
	No		236	SV	UGVL
	Yes			SVK	UGVL
VG7000 Series	No		93	LV	UGVL
	Yes			LVK	UGVL
VG7XXX-NT *Threaded Stem Only				LF	UGLK1418
V(B)-3754 Series, Bronze Trim	1¼"	No	236	SV	UGVL
		Yes		SVK	UGVL
V(B)-3974 Series, Bronze Trim		No		SV	UGVL
		Yes		SVK	UGVL
V(B)-4324 Series, Bronze Trim		No		SV	UGVL
		Yes		SVK	UGVL
V(B)-5844 Series		No		SV	UGVL
		Yes		SVK	UGVL

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

V(B)-58, V-37, V-39, V-43, VG7, V(B)-37, V(B)-39, V(B)-43, V-58, V-52, V-54 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage		
V-3754-8	1¼"	Yes	221	AF	UGLK1402		
V-4324-8			110	NF	UGLK1402		
			221	AF	UGLK1402		
			110	NF	UGLK1402		
V-4332		No	236	SV	UGVL		
VG7000 Series		Yes		SVK	UGVL		
		No		SV	UGVL		
		Yes		SVK	UGVL		
VG7XXX-PT *Threaded Stem Only			65	LF	UGLK1418		
V(B)-3754 Series, Bronze Trim	1½"	No	160	SV	UGVL		
V(B)-3974 Series, Bronze Trim		Yes		SVK	UGVL		
		No		SV	UGVL		
V(B)-4324 Series, Bronze Trim		Yes		SVK	UGVL		
		No		SV	UGVL		
V(B)-5844 Series		Yes		SVK	UGVL		
		No		SV	UGVL		
V-3754-(6, 1028, 1029, 1030)		Yes			236	GK	UGLK1402
			211		2*AF	UGLK1478	
			153		AF	UGLK1402	
			77		NF	UGLK1402	
			236		GK	UGLK1402	
211			2*AF		UGLK1478		
153			AF		UGLK1402		
77			NF		UGLK1402		
V-3974-(6, 1012, 1013)			236		GK	UGLK1402	
			211		2*AF	UGLK1478	
			153		AF	UGLK1402	
			77		NF	UGLK1402	
V-4324-(6,1015, 1016, 1017)			236		GK	UGLK1402	
			211		2*AF	UGLK1478	
			153		AF	UGLK1402	
			77		NF	UGLK1402	
V-4332		No	160	SV	UGVL		
Yes		SVK		UGVL			
V-5254-(1, 2, 3, 11)		No	236	GM	UGLK1404		
		2*GM		UGLK1472			
		V-5254-(1, 2, 3, 11)	Yes	153	AM	UGLK1404	
				77	AF	UGLK1404	
V-5464-(1, 2, 11)				236	NF	UGLK1404	
					GK	UGLK1404	
		2*AF	UGLK1472				
		2*GK	UGLK1472				
		GM	UGLK1404				
		2*GM	UGLK1472				
V-5844-(1, 2, 3, 11)		Yes	GK	UGLK1404			
			2*AF	UGLK1472			
			2*GK	UGLK1472			
			153	AM	UGLK1404		
			77	AF	UGLK1404		
			NF	UGLK1404			
VG7000 Series		No	236	2*GM	UGLK1472		
		Yes		GK	UGLK1404		
				2*AF	UGLK1472		
				2*GK	UGLK1472		
				153	AF	UGLK1404	
VG7XXX-RT *Threaded Stem Only		Yes	77	NF	UGLK1404		
			26	LF	UGLK1420		
			V(B)-3754 Series, Bronze Trim	85	SV	UGVL	
					Yes	SVK	UGVL
					V(B)-3974 Series, Bronze Trim	No	SV
Yes		SVK			UGVL		
V(B)-4324 Series, Bronze Trim		No			SV	UGVL	
Yes		SVK			UGVL		
V(B)-5844 Series		No		SV	UGVL		
		Yes		SVK	UGVL		

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

VG7, V-37, V-39, V-43, V-52, V-54, V-58 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage	
V-3754-7	2"	No	236	2*GM	UGLK1474	
		Yes		2*GK	UGLK1474	
		No	173	GM	UGLK1406	
		Yes		GK	UGLK1406	
				2*AF	UGLK1474	
				AF	UGLK1406	
				NF	UGLK1406	
V-3974-7		No	236	2*GM	UGLK1474	
		Yes		2*GK	UGLK1474	
		No	173	GM	UGLK1406	
		Yes		GK	UGLK1406	
				2*AF	UGLK1474	
				AF	UGLK1406	
				40	NF	UGLK1406
V-4324-7		No	236	2*GM	UGLK1474	
		Yes		2*GK	UGLK1474	
		No	173	GM	UGLK1406	
		Yes		GK	UGLK1406	
				2*AF	UGLK1474	
				AF	UGLK1406	
				40	NF	UGLK1406
V-4332		No	85	SV	UGVL	
		Yes		SVK	UGVL	
		No	236	2*GM	UGLK1474	
		Yes		2*GK	UGLK1474	
				AF	UGLK1406	
				GM	UGLK1406	
				GK	UGLK1406	
V-5254-(4, 5, 6, 12)		Yes	173	2*AF	UGLK1474	
		No		GM	UGLK1406	
		Yes	GK	UGLK1406		
			2*AF	UGLK1474		
		No	86	AM	UGLK1406	
		Yes	40	NF	UGLK1406	
		V-5464-(3, 4, 12)	No	236	2*GM	UGLK1474
Yes			2*GK		UGLK1474	
No			173	GM	UGLK1406	
Yes				GK	UGLK1406	
				2*AF	UGLK1474	
				AM	UGLK1406	
				AF	UGLK1406	
V-5844-(4, 5, 6, 12)		Yes	40	NF	UGLK1406	
		No	236	2*GM	UGLK1474	
		Yes		2*GK	UGLK1474	
		No	173	GM	UGLK1406	
		Yes		GK	UGLK1406	
				2*AF	UGLK1474	
				AM	UGLK1406	
AF				UGLK1406		
VG7000 Series		Yes	40	NF	UGLK1406	
		No	236	2*GM	UGLK1474	
		Yes		2*GK	UGLK1474	
		VG7XXX-ST *Threaded Stem Only	No	173	GM	UGLK1406
			Yes		GK	UGLK1406
					2*AF	UGLK1474
					AF	UGLK1406
40					NF	UGLK1406
14			LF	UGLK1420		
V-5210-4595			No	136	RV	FGVL
		Yes	2*GK		UGLK1478	
		No	75	RV	FGVL	
	Yes	AVK		FGVL		
		2*AF		UGLK1478		
		AF		UGLK1412		
	V-5252-(2, 4, 5, 6, 7, 8, 32, 33)	38	AF	UGLK1412		
No		110	RV	FGVL		
Yes			AVK	FGVL		
No		52	EV	FGVL		
Yes			AF	UGLK1404		
			2*GK	UGLK1472		
V-5252-(4, 5, 6, 7, 8, 32, 33)		110	2*AF	UGLK1472		

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage										
V-5410-4595	2½"	No	136	RV	FGVL										
		Yes		2*GK	UGLK1478										
		No	75	RV	FGVL										
		Yes		2*AF	UGLK1478										
		V-5462-(6, 7, 34)	2½"	No	38	AF	UGLK1412								
RV						FGVL									
Yes				211	2*GK	UGLK1472									
					RV	FGVL									
V-5842-(7, 8, 31)				2½"	No	110	AVK	FGVL							
		2*AF					UGLK1472								
		Yes			52	EV	FGVL								
						AF	UGLK1404								
		VB-3752-19			2½"	No	211	RV	FGVL						
2*GK								UGLK1472							
Yes						110	RV	FGVL							
							AVK	FGVL							
VB-3970-11						2½"	Yes	52	2*AF	UGLK1472					
		EV							FGVL						
		No					211	AF	UGLK1404						
								2*GK	UGLK1472						
		VB-4322-9					2½"	Yes	200	RV	FGVL				
120										AVK	FGVL				
No								110	2*AF	UGLK1472					
									75	EV	FGVL				
VG2231 TM								2½"	Yes	52	AF	UGLK1404			
		211									2*GK	UGLK1472			
		No							110	RV	FGVL				
										AVK	FGVL				
		VG2431 TM							2½"	Yes	52	2*AF	UGLK1472		
EV												FGVL			
No										211	AF	UGLK1404			
											2*GK	UGLK1472			
VG2831 TM										2½"	No	110	RV	FGVL	
		AVK											FGVL		
		Yes									52	2*AF	UGLK1472		
												AF	UGLK1404		
		V-5210-4596									3"	No	211	RV	FGVL
2*GK														UGLK1472	
Yes												110	EV	FGVL	
													AVK	FGVL	
No												93	2*AF	UGLK1472	
		AF											UGLK1404		
V-5252-(12, 13, 35)		3"										Yes	26	RV	FGVL
														2*GK	UGLK1476
												No	52	EV	FGVL
														AVK	FGVL
												Yes	26	2*AF	UGLK1476
AF														UGLK1410	

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

V-52, V-54, V-58 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
V-5252-(9, 10, 11, 34)	3"	Yes	136	2*GK	UGLK1472
		No	93	RV	FGVL
		Yes	77	2*AF	UGLK1472
		No	52	EV	FGVL
		Yes		AVK	FGVL
V-5410-4596		No	93	AF	UGLK1404
		Yes		RV	FGVL
		No	52	2*GK	UGLK1478
		Yes		EV	FGVL
		V-5462-10	No	93	AVK
Yes			2*AF		UGLK1478
No			52	AF	UGLK1412
Yes				RV	FGVL
V-5462-35			No	93	2*GK
		Yes	EV		FGVL
		No	52	AVK	FGVL
		Yes		2*AF	UGLK1478
		V-5462-36	No	93	AF
Yes			RV		FGVL
No			52	2*GK	UGLK1476
Yes				EV	FGVL
V-5462-8			No	93	AVK
		Yes	2*AF		UGLK1476
		No	52	AF	UGLK1410
		Yes		RV	FGVL
		V-5462-9	No	93	2*GK
Yes			EV		FGVL
No			52	AVK	FGVL
Yes				2*AF	UGLK1476
V-5842-10			No	93	UGLK1410
		Yes	AF		UGLK1410
		No	52	RV	FGVL
		Yes		2*GK	UGLK1476
		V-5842-17	No	93	EV
Yes			AVK		FGVL
No			52	2*AF	UGLK1476
Yes				AF	UGLK1410
V-5842-18			No	93	RV
		Yes	2*GK		UGLK1478
		No	52	EV	FGVL
		Yes		AVK	FGVL
		V-5842-32	No	93	2*AF
Yes			AF		UGLK1412
No			52	RV	FGVL
Yes				2*GK	UGLK1476
V-5842-32			No	93	EV
		Yes	AVK		FGVL
		No	52	2*AF	UGLK1476
	Yes	AF		UGLK1410	



Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage	
V-5842-33	3"	No	93	RV	FGVL	
		Yes		2*GK	UGLK1478	
		No	52	EV	FGVL	
		Yes		2*AF	UGLK1478	
				26	AF	UGLK1412
		V-5842-9		No	93	RV
Yes			2*GK	UGLK1476		
No			52	EV	FGVL	
Yes				2*AF	UGLK1476	
				26	AF	UGLK1410
VB-3752-22				No	93	RV
		Yes	2*GK	UGLK1476		
		No	70	EV	FGVL	
		Yes		60	AVK	FGVL
				52	2*AF	UGLK1476
		VB-3970-14		26	AF	UGLK1410
No			93	RV	FGVL	
Yes				2*GK	UGLK1476	
No			52	EV	FGVL	
Yes				AVK	FGVL	
				2*AF	UGLK1476	
VB-4322-11		26		AF	UGLK1410	
		No	93	RV	FGVL	
		Yes		2*GK	UGLK1476	
		No	52	EV	FGVL	
		Yes		AVK	FGVL	
				2*AF	UGLK1476	
VG2231 UM		26		AF	UGLK1410	
		No	93	RV	FGVL	
		Yes		2*GK	UGLK1476	
		No	52	2*AF	UGLK1476	
		Yes		EV	FGVL	
				AVK	FGVL	
VG2231 UN		26		AF	UGLK1410	
		No	93	RV	FGVL	
		Yes		2*GK	UGLK1478	
		No	52	EV	FGVL	
		Yes		AVK	FGVL	
				2*AF	UGLK1478	
VG2431 UM		26		AF	UGLK1412	
		No	93	RV	FGVL	
		Yes		2*GK	UGLK1476	
		No	52	EV	FGVL	
		Yes		AVK	FGVL	
				2*AF	UGLK1476	
VG2431 UN		26		AF	UGLK1410	
		No	93	RV	FGVL	
		Yes		2*GK	UGLK1478	
	No	52	EV	FGVL		
	Yes		AVK	FGVL		
			2*AF	UGLK1478		
VG2831 UM	26		AF	UGLK1412		
	No	93	RV	FGVL		
	Yes		2*GK	UGLK1476		
	No	52	EV	FGVL		
	Yes		AVK	FGVL		
			2*AF	UGLK1476		
VG2831 UN	26		AF	UGLK1410		
	No	93	RV	FGVL		
	Yes		2*GK	UGLK1478		
	No	52	EV	FGVL		
	Yes		AVK	FGVL		
			2*AF	UGLK1478		

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

V-52, V-54, V-58 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
V-5210-4597	4"	No	52	RV	FGVL
		Yes		2*GK	UGLK1478
		No	26	EV	FGVL
		Yes		AVK	FGVL
				2*AF	UGLK1478
		14	AF	UGLK1412	
V-5252-(14, 36)		No	52	RV	FGVL
		Yes		2*GK	UGLK1476
		No	26	EV	FGVL
		Yes		AVK	FGVL
				2*AF	UGLK1476
		14	AF	UGLK1410	
V-5252-(15, 16, 37)		No	52	RV	FGVL
		Yes		2*GK	UGLK1478
		No	26	EV	FGVL
		Yes		AVK	FGVL
				2*AF	UGLK1478
		14	AF	UGLK1412	
V-5410-4597		No	52	RV	FGVL
		Yes		2*GK	UGLK1478
		No	26	EV	FGVL
		Yes		AVK	FGVL
				2*AF	UGLK1478
		14	AF	UGLK1412	
V-5462-11		No	52	RV	FGVL
		Yes		2*GK	UGLK1476
		No	26	EV	FGVL
		Yes		AVK	FGVL
	2*AF			UGLK1476	
	14	AF	UGLK1410		
V-5462-12	No	52	RV	FGVL	
	Yes		2*GK	UGLK1476	
	No	26	EV	FGVL	
	Yes		AVK	FGVL	
			2*AF	UGLK1476	
	14	AF	UGLK1410		
V-5462-13	No	52	RV	FGVL	
	Yes		2*GK	UGLK1478	
	No	26	EV	FGVL	
	Yes		AVK	FGVL	
			2*AF	UGLK1478	
	14	AF	UGLK1412		
V-5462-14	No	52	RV	FGVL	
	Yes		2*GK	UGLK1478	
	No	26	EV	FGVL	
	Yes		AVK	FGVL	
			2*AF	UGLK1478	
	14	AF	UGLK1412		
V-5462-37	No	52	RV	FGVL	
	Yes		2*GK	UGLK1476	
	No	26	EV	FGVL	
	Yes		AVK	FGVL	
			2*AF	UGLK1476	
	14	AF	UGLK1410		
V-5462-38	No	52	RV	FGVL	
	Yes		2*GK	UGLK1478	
	No	26	EV	FGVL	
	Yes		AVK	FGVL	
			2*AF	UGLK1478	
	14	AF	UGLK1412		
V-5842-11	No	52	RV	FGVL	
	Yes		2*GK	UGLK1478	
	No	26	EV	FGVL	
	Yes		AVK	FGVL	
			2*AF	UGLK1478	
	14	AF	UGLK1412		



V-58, VB-37, VB-39, VB-43, VG22, VG24, VG28 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage	
V-5842-12	4"	No	52	RV	FGVL	
		Yes		2*GK	UGLK1478	
		No	26	EV	FGVL	
		Yes		AVK	FGVL	
				2*AF	UGLK1478	
14		AF	UGLK1412			
V-5842-34		No	52	RV	FGVL	
		Yes		2*GK	UGLK1478	
		No	26	EV	FGVL	
		Yes		AVK	FGVL	
				2*AF	UGLK1478	
14		AF	UGLK1412			
VB-3752-25		No	52	RV	FGVL	
		Yes		2*GK	UGLK1476	
		No	40	EV	FGVL	
		Yes		30	AVK	FGVL
				26	2*AF	UGLK1476
14		AF	UGLK1410			
VB-3970-17		No	52	RV	FGVL	
		Yes		2*GK	UGLK1476	
		No	26	EV	FGVL	
		Yes		AVK	FGVL	
				2*AF	UGLK1476	
14		AF	UGLK1410			
VB-4322-13		No	52	RV	FGVL	
		Yes		2*GK	UGLK1476	
		No	26	EV	FGVL	
		Yes		AVK	FGVL	
	2*AF			UGLK1476		
14	AF	UGLK1410				
VG2231 VM	No	52	RV	FGVL		
	Yes		2*GK	UGLK1476		
	No	26	EV	FGVL		
	Yes		AVK	FGVL		
			2*AF	UGLK1476		
14	AF	UGLK1410				
VG2231 VN	No	52	RV	FGVL		
	Yes		2*GK	UGLK1478		
	No	26	EV	FGVL		
	Yes		AVK	FGVL		
			2*AF	UGLK1478		
14	AF	UGLK1412				
VG2431 VM	No	52	RV	FGVL		
	Yes		2*GK	UGLK1476		
	No	26	EV	FGVL		
	Yes		AVK	FGVL		
			2*AF	UGLK1476		
14	AF	UGLK1410				
VG2431 VN	No	52	RV	FGVL		
	Yes		2*GK	UGLK1478		
	No	26	EV	FGVL		
	Yes		AVK	FGVL		
			2*AF	UGLK1478		
14	AF	UGLK1412				
VG2831 VM	No	52	RV	FGVL		
	Yes		2*GK	UGLK1476		
	No	26	EV	FGVL		
	Yes		AVK	FGVL		
			2*AF	UGLK1476		
14	AF	UGLK1410				
VG2831 VN	No	52	RV	FGVL		
	Yes		2*GK	UGLK1478		
	No	26	EV	FGVL		
	Yes		AVK	FGVL		
			2*AF	UGLK1478		
14	AF	UGLK1412				

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

V-52, V-54, V-58, VB-37, VB-39 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
V-5252-17	5"	No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
10				AF	UGLK1414
V-5252-18		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
10				AF	UGLK1414
V-5252-38		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
10				AF	UGLK1414
V-5462-15		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
10				AF	UGLK1414
V-5462-16		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
10				AF	UGLK1414
V-5462-39		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
10				AF	UGLK1414
V-5842-13		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
	2*AF			UGLK1480	
10	AF			UGLK1414	
V-5842-14	No	22	RV	FGVL	
	Yes		2*GK	UGLK1480	
	No	14	EV	FGVL	
	Yes		GK	UGLK1414	
			2*AF	UGLK1480	
10			AF	UGLK1414	
V-5842-35	No	22	RV	FGVL	
	Yes		2*GK	UGLK1480	
	No	14	EV	FGVL	
	Yes		GK	UGLK1414	
			2*AF	UGLK1480	
10			AF	UGLK1414	
VB-3752-28	No	22	RV	FGVL	
	Yes		2*GK	UGLK1480	
	No	14	EV	FGVL	
	Yes		GK	UGLK1414	
			2*AF	UGLK1480	
10			AF	UGLK1414	
VB-3970-20	No	22	RV	FGVL	
	Yes		2*GK	UGLK1480	
	No	14	EV	FGVL	
	Yes		GK	UGLK1414	
			2*AF	UGLK1480	
10			AF	UGLK1414	

Tech.Doc - 02/25 - Subject to change. © Belimo Aircontrols (USA), Inc.

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

VB-37, VG22, VG24, VG28, V-52, V-54, V-58, Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
VB-4322-19	5"	No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
VG2231 WN		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
VG2431 WN		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
VG2831 WN		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	14	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
V-5252-19		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	10	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
V-5252-39		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	10	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
V-5462-17		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	10	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
V-5462-18		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	10	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
V-5462-40		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	10	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
V-5842-15		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	10	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
V-5842-16		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	10	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
V-5842-36		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	10	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414
VB-3752-31		No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	10	EV	FGVL
		Yes		GK	UGLK1414
				2*AF	UGLK1480
				AF	UGLK1414

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
VB-3970-23	6"	No	22	RV	FGVL
		Yes		2*GK	UGLK1480
		No	10	EV	FGVL
		Yes		GK	UGLK1414
VB-4322-18		No	22	2*AF	UGLK1480
		Yes		RV	FGVL
		No	10	2*GK	UGLK1480
		Yes		EV	FGVL
VG2231 YN		No	22	GK	UGLK1414
		Yes		2*AF	UGLK1480
		No	10	RV	FGVL
		Yes		2*GK	UGLK1480
VG2431 YN		No	22	EV	FGVL
		Yes		GK	UGLK1414
		No	10	2*AF	UGLK1480
		Yes		RV	FGVL
VG2831 YN		No	22	2*GK	UGLK1480
		Yes		EV	FGVL
		No	10	GK	UGLK1414
		Yes		2*AF	UGLK1480
ROBERTSHAW					
V6600	½"	No	236	LV	UGVL
V6700		Yes		LVK	UGVL
		No		LV	UGVL
		Yes		LVK	UGVL
V6600	¾"	No	211	LV	UGVL
V6700, V6800		Yes		LVK	UGVL
		No		LV	UGVL
		Yes		LVK	UGVL
V6600	1"	No	236	SV	UGVL
		Yes		SVK	UGVL
		No	93	LV	UGVL
		Yes		LVK	UGVL
V6700		No	236	SV	UGVL
		Yes		SVK	UGVL
		No	93	LV	UGVL
		Yes		LVK	UGVL
V6600	1¼"	No	236	SV	UGVL
Yes		SVK		UGVL	
No		SV		UGVL	
Yes		SVK		UGVL	
V6600	1½"	No	160	SV	UGVL
Yes		SVK		UGVL	
No		SV		UGVL	
Yes		SVK		UGVL	
V6600	2"	No	85	SV	UGVL
Yes		SVK		UGVL	
No		SV		UGVL	
Yes		SVK		UGVL	
SIEBE\INVENSYS\BARBER COLMAN\SCHNEIDER					
Belimo USA G2/G2S Series (OLD = pre April 2018)	½"	Yes	250	LF	UGLK1150**
		No		LV	SGVL
		Yes		LVK	SGVL
Belimo USA G3 Series (OLD = pre April 2018)		Yes	236	LF	UGLK1150**
		No		LV	SGVL
		Yes		LVK	SGVL
VB304X-0-1-4		No	236	LM	UGLK1002
		Yes		LF	UGLK1002
VB7000 Series		No		AF	UGLK1004
		Yes		LV	SGVL
		Yes	LVK	SGVL	



Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage	
VB7XXX-0-4-1	½"	Yes	236	LF	UGLK1150**	
VB7XXX-0-4-2				LF	UGLK1150**	
VB7XXX-0-4-3				LF	UGLK1150**	
VB7XXX-0-4-4				LF	UGLK1150**	
VB804X-0-1-4		No		LM	UGLK1002	
VB9000 Series		Yes		LF	UGLK1002	
		No		AF	UGLK1004	
				LV	SGVL	
VB9XXX-0-4-1				Yes	LVK	SGVL
		LF			UGLK1150**	
		LF			UGLK1150**	
		LF			UGLK1150**	
		LF			UGLK1150**	
VB9XXX-0-4-4						
Belimo USA G2/G2S Series (OLD = pre April 2018)	¾"	No	250	LV	SGVL	
		Yes	215	LF	UGLK1150**	
Belimo USA G3 Series (OLD = pre April 2018)		No	250	LVK	SGVL	
				LV	SGVL	
Yes		215	LF	UGLK1150**		
			NM	UGLK1002		
VB304X-0-1-7		Yes	110	LF	UGLK1002	
VB7000 Series		No	211	LV	SGVL	
				LVK	SGVL	
VB7XXX-0-4-5		Yes	211	LF	UGLK1150**	
LF				UGLK1150**		
VB7XXX-0-4-6		No	236	NM	UGLK1002	
VB804X-0-1-7				Yes	110	LF
VB9000 Series		No	211	LV	SGVL	
				LVK	SGVL	
VB9XXX-0-4-5		Yes	211	LF	UGLK1150**	
LF				UGLK1150**		
VB9XXX-0-4-6						
Belimo USA G2/G2S Series (OLD = pre April 2018)		1"	No	250	AF	UGLK1000**
					SV	SGVL
Yes	236		SVK	SGVL		
			95	LF	UGLK1150**	
Belimo USA G3 Series (OLD = pre April 2018)	No		250	AF	UGLK1000**	
				SV	SGVL	
Yes	236		SVK	SGVL		
			95	LF	UGLK1150**	
VB304X-0-1-8	No		236	AM	UGLK1004	
	Yes			AF	UGLK1004	
	No		173	NM	UGLK1002	
	Yes		65	LF	UGLK1002	
VB7000 Series	No		236	SV	SGVL	
	Yes			SVK	SGVL	
	No		93	SV	SGVL	
				SVK	SGVL	
VB7XXX-0-4-(7, 8)	Yes		236	AF	UGLK1000**	
LF				UGLK1150**		
VB7XXX-0-4-7	93		93	LF	UGLK1150**	
VB7XXX-0-4-8						
VB804X-0-1-8	No	236	AM	UGLK1004		
	Yes		AF	UGLK1004		
	No	173	NM	UGLK1002		
	Yes	65	LF	UGLK1002		
VB9000 Series	No	236	SV	SGVL		
	Yes		SVK	SGVL		
	No	93	SV	SGVL		
			LVK	SGVL		
VB9XXX-0-4-(7, 8)	Yes	236	AF	UGLK1000**		
LF			UGLK1150**			
VB9XXX-0-4-8			93	LF	UGLK1150**	

**Not compatible with the new Belimo G2..B-x, G2..S-x, and G3..B-x globe valves.

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

VB80.., VB9.., Belimo USA G2, Belimo USA G3, VB30.., VB7.. Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
Belimo USA G2/G2S Series (OLD = pre April 2018)	1¼"	Yes	250	AF	UGLK1000**
			236	SVK	SGVL
		No	235	SV	SGVL
Yes			61	LF	UGLK1150**
		Yes	250	AF	UGLK1000**
No			236	SVK	SGVL
		No	235	SV	SGVL
Yes			61	LF	UGLK1150**
		No	221	AM	UGLK1004
AF				UGLK1004	
Yes		110	NM	UGLK1002	
			LF	UGLK1002	
No		236	SV	SGVL	
			SVK	SGVL	
Yes		236	AF	UGLK1000**	
			65	LF	UGLK1150**
No		221	AM	UGLK1004	
			AF	UGLK1004	
Yes		110	NM	UGLK1002	
			LF	UGLK1002	
No		236	SV	SGVL	
			SVK	SGVL	
Yes		65	AF	UGLK1000**	
			LF	UGLK1150**	
No		217	AF	UGLK1000**	
			SV	SGVL	
Yes		217	SVK	SGVL	
	AF		UGLK1000**		
No	160	SV	SGVL		
		SVK	SGVL		
Yes	236	GM	UGLK1004		
		GK	UGLK1004		
No	153	AM	UGLK1004		
		AF	UGLK1004		
Yes	77	NM	UGLK1002		
		LF	UGLK1002		
No	160	SV	SGVL		
		SVK	SGVL		
Yes	211	AF	UGLK1000**		
		GM	UGLK1004		
Yes	236	GK	UGLK1004		
		AM	UGLK1004		
No	153	AF	UGLK1004		
		NM	UGLK1002		
Yes	77	NM	UGLK1002		
		LF	UGLK1002		
No	236	2*GM	UGLK1066		
		2*GK	UGLK1066		
Yes	211	2*AF	UGLK1066		
		GM	UGLK1016		
No	160	GK	UGLK1016		
		AF	UGLK1016		
Yes	79	2*GM	UGLK1064		
		2*GK	UGLK1064		
No	211	GM	UGLK1008		
		GK	UGLK1008		
Yes	110	2*AF	UGLK1064		
		AF	UGLK1008		
No	110	SV	UGVL		
		SVK	UGVL		
Belimo USA G2/G2S Series (OLD = pre April 2018)	2"	Yes	122	AF	UGLK1000**
		No	90	SV	SGVL
Yes		85	SVK	SGVL	
		122	AF	UGLK1000**	
Belimo USA G3 Series (OLD = pre April 2018)		No	90	SV	SGVL
		Yes	85	SVK	SGVL

**Not compatible with the new Belimo G2..B-x, G2..S-x, and G3..B-x globe valves.

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
VB304X-0-1-11	2"	No	173	GM	UGLK1004
		Yes		GK	UGLK1004
		No	86	AM	UGLK1004
		Yes		AF	UGLK1004
		No	40	NM	UGLK1002
		Yes	14	LF	UGLK1002
VB7000 Series		No	85	SV	SGVL
VB7XXX-0-4-11		Yes		SVK	SGVL
VB804X-0-1-11			120	AF	UGLK1000**
		No		GM	UGLK1004
		Yes	173	GK	UGLK1004
		No		AM	UGLK1004
		Yes	86	AF	UGLK1004
		No	40	NM	UGLK1002
VB9XXX-0-4-11 (Post '94)*		Yes	14	LF	UGLK1002
		No	211	2*GM	UGLK1066
		Yes		2*GK	UGLK1066
			110	2*AF	UGLK1066
		No		89	GM
		Yes	40	GK	UGLK1016
		AF		UGLK1016	
VB9XXX-0-4-11 (Pre '94)		No	211	2*GM	UGLK1064
		Yes		2*GK	UGLK1064
		No	110	GM	UGLK1008
		Yes		GK	UGLK1008
				2*AF	UGLK1064
		SVK		UGVL	
	No	SV	UGVL		
	Yes	52	AF	UGLK1008	
VB304X-0-2-12	2½"	No	136	2*GM	UGLK1072
		Yes		2*GK	UGLK1072
			2*AF	UGLK1072	
			38	AF	UGLK1006
		No	90	RV	FGVL
		Yes	80	AVK	FGVL
No		45	EV	FGVL	
VB804X-0-2-12			136	2*GM	UGLK1072
		Yes		2*GK	UGLK1072
		No	90	RV	FGVL
		Yes	85	AVK	FGVL
			75	2*AF	UGLK1072
			38	AF	UGLK1006
VB9XXX-0-4-12		No	40	EV	FGVL
		136	2*GM	UGLK1070	
			2*GK	UGLK1070	
			GM	UGLK1010	
		Yes	75	GK	UGLK1010
			2*AF	UGLK1070	
No			38	AM	UGLK1010
VB9XXX-0-5-12		Yes	150	AF	UGLK1010
		No		RV	FGVL
		Yes	136	2*GK	UGLK1070
		No	80	EV	FGVL
		Yes		AVK	FGVL
		75		2*AF	UGLK1070
VB304X-0-2-13	3"	No	93	2*GM	UGLK1072
				2*GK	UGLK1072
		No	70	RV	FGVL
		Yes	60	AVK	FGVL
			52	2*AF	UGLK1072
		No	35	EV	FGVL
Yes		26	AF	UGLK1006	

*Will also work with UGVL+SV+SGVL kit

**Not compatible with the new Belimo G2..B-x, G2..S-x, and G3..B-x globe valves.

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage	
VB804X-0-2-13	3"	No	93	2*GM	UGLK1072	
		Yes		2*GK	UGLK1072	
		No	65	RV	FGVL	
		Yes	60	AVK	FGVL	
			52	2*AF	UGLK1072	
		No	30	EV	FGVL	
Yes		26	AF	UGLK1006		
VB9XXX-0-4-13		No	93	2*GM	UGLK1070	
		Yes		2*GK	UGLK1070	
		No	52	GM	UGLK1010	
		Yes		GK	UGLK1010	
				2*AF	UGLK1070	
		No	26	AM	UGLK1010	
Yes		AF		UGLK1010		
VB9XXX-0-5-13		93	2*GK	UGLK1070		
		No	90	RV	FGVL	
		Yes	52	2*AF	UGLK1070	
		No	40	EV	FGVL	
				AVK	FGVL	
				AF	UGLK1010	
VB304X-0-2-14		No	52	2*GM	UGLK1072	
		Yes		2*GK	UGLK1072	
		No	35	RV	FGVL	
		Yes	30	AVK	FGVL	
			26	2*AF	UGLK1072	
	No	20	EV	FGVL		
VB804X-0-2-14	Yes	14	AF	UGLK1006		
	No	52	2*GM	UGLK1072		
	Yes		2*GK	UGLK1072		
	No	45	RV	FGVL		
	Yes	30	AVK	FGVL		
		26	2*AF	UGLK1072		
VB9XXX-0-5-14	No	20	EV	FGVL		
	Yes	14	AF	UGLK1006		
	No	40	2*GM	UGLK1074		
	Yes		2*GK	UGLK1074		
	No	30	RV	FGVL		
	Yes	25	AVK	FGVL		
22		2*AF	UGLK1074			
VB304X-0-2-15	No	15	EV	FGVL		
	Yes	10	AF	UGLK1012		
	VB804X-0-2-15	5"	24	RV	FGVL	
			22	2*GM	UGLK1076	
			2*GK	UGLK1076		
	No	15	EV	FGVL		
Yes	14	2*AF	UGLK1076			
	22	2*GK	UGLK1076			
VB9XXX-0-5-15	No	20	RV	FGVL		
	VB304X-0-2-16	6"	No	22	2*GM	UGLK1076
			Yes	2*GK	UGLK1076	
No			15	RV	FGVL	
			13	EV	FGVL	
Yes			10	2*AF	UGLK1076	
			22	2*GK	UGLK1076	
VB804X-0-2-16	No		13	RV	FGVL	
	10		EV	FGVL		
VB9XXX-0-5-16	Yes	10	2*AF	UGLK1076		
	No	15	RV	FGVL		



591, 599, 656, 658 Series Valves

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
591 Series	½"	Yes	236	LV	UGVL
				LVK	UGVL
				NF	UGLK1200
599 Flowrite		No	10-120	LV	UGVL
		Yes		LVK	UGVL
				NF	UGLK1208
599 MZ/MT Series	¾"	No	236	CM	UGSL1200
656, 658 Series		Yes		TF	UGSL1200
			236	LF	UGLK1350
591 Series		Yes	211	NF	UGLK1200
		No		LV	UGVL
		Yes		LVK	UGVL
599 Flowrite		No	236	AM	UGLK1208
		Yes		AF	UGLK1208
		No	211	LV	UGVL
		Yes		LVK	UGVL
599 MZ/MT Series		No	10-120	CM	UGSL1200
656, 658 Series		Yes		TF	UGSL1200
	1"		211	LF	UGLK1350
591 Series		No	236	SV	UGVL
				AM	UGLK1200
				SVK	UGVL
		Yes	173	AF	UGLK1200
				NF	UGLK1208
599 Flowrite		No	236	SV	UGVL
				AM	UGLK1208
		Yes		SVK	UGVL
				AF	UGLK1208
599 MZ/MT Series		No	10-120	CM	UGSL1200
656, 658 Series		Yes		TF	UGSL1200
			93	LF	UGLK1350
		No	236	SV	UGVL
658 Series		Yes		SVK	UGVL
		No	93	LV	UGVL
		Yes		LVK	UGVL
591 Series	1¼"	No	236	SV	UGVL
				AM	UGLK1200
				SVK	UGVL
		Yes	160	AF	UGLK1200
				NF	UGLK1200
599 Flowrite		No	236	SV	UGVL
		Yes		SVK	UGVL
		No	221	AM	UGLK1208
		Yes		AF	UGLK1208
			110	NF	UGLK1208
599 MZ/MT Series		No		CM	UGSL1200
656, 658 Series		Yes		TF	UGSL1200
			65	LF	UGLK1350
658 Series		No	236	SV	UGVL
		Yes		SVK	UGVL
				GM	UGLK1200
591 Series	1½"	Yes	211	GK	UGLK1200
		No		SV	UGVL
				AM	UGLK1200
		Yes	209	SVK	UGVL
				AF	UGLK1200
		No	104	GM	UGLK1202
		Yes		GK	UGLK1202
		No	77	AM	UGLK1202
		Yes		AF	UGLK1202
599 Flowrite		Yes	153	NF	UGLK1208
		No		SV	UGVL
			153	AM	UGLK1208
		Yes		SVK	UGVL
599 Flowrite		No	236	AF	UGLK1208
				GM	UGLK1208
		Yes		GK	UGLK1208
		No	153	SV	UGVL

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



5-year warranty

Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage			
599 MZ/MT Series	1½"	No	10-120	CM	UGSL1200			
		Yes		TF	UGSL1200			
591 Series	2"	No	236	GM	UGLK1200			
		Yes	120	GK	UGLK1200			
		No		AM	UGLK1200			
		Yes	85	AF	UGLK1200			
		No		SV	UGVL			
		Yes	52	SVK	UGVL			
		No		LV	UGVL			
		Yes	173	LVK	UGVL			
		No		GM	UGLK1208			
		Yes	86	GK	UGLK1208			
No	AM	UGLK1208						
599 Flowrite	2½"	Yes	85	AF	UGLK1208			
		No		SV	UGVL			
		Yes	40	SVK	UGVL			
				No	NF	UGLK1208		
		No	211	RV	FGVL			
Yes		2*GK		UGLK1270				
No		110	EV	FGVL				
Yes			211	AVK	FGVL			
		2*AF		UGLK1270				
599 Flowrite		110	2*GK	UGLK1272				
			2*AF	UGLK1272				
591 Series		3"	No	136	RV	FGVL		
			Yes		2*GK	UGLK1270		
			No	90	EV	FGVL		
			Yes	77	AVK	FGVL		
	136			2*AF	UGLK1270			
2*GK				UGLK1272				
2*AF				UGLK1272				
599 Flowrite	4"		77	2*AF	UGLK1272			
			No	40	RV	FGVL		
					2*GK	UGLK1274		
		Yes	30	EV	FGVL			
		Yes		22	GK	UGLK1206		
2*AF			UGLK1274					
10			AF		UGLK1206			
40			2*GK		UGLK1276			
22			GK		UGLK1212			
2*AF			UGLK1276					
599 Flowrite	10	AF	UGLK1212					
		No	25	RV	FGVL			
				22	2*GK	UGLK1274		
				20	EV	FGVL		
		591 Series	5"	Yes	14	GK	UGLK1206	
2*AF						UGLK1274		
2*GK	UGLK1276							
22	14			GK	UGLK1212			
				2*AF	UGLK1276			
		599 Flowrite		2*AF	UGLK1276			
No	22				RV	FGVL		
		2*GK		UGLK1274				
		2*AF		UGLK1274				
591 Series	6"	Yes		10	2*AF	UGLK1274		
			WARREN CONTROLS					
		100 SGL SEAT		2½"	Yes	110	2*GK	UGLK2272
					No	52	RV	WGVL
					Yes		AVK	WGVL
1800 3-Way		No			26	EV	WGVL	
		Yes			110	2*GM	UGLK2272	
						2*GK	UGLK2272	
1800 BAL		No			52	EV	WGVL	
		Yes	110		2*GM	UGLK2272		
	2*GK				UGLK2272			
Type 20-22	No	52	EV		WGVL			
	No	185	RV		WGVL			
		93	EV		WGVL			
Type 23	Yes	71	AVK		WGVL			
	No	211	EV		WGVL			
	Yes		AVK		WGVL			

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



71 **Warren Controls**
100, 1800, Type 20-22, Type 23, Type 30-32 Series Valves

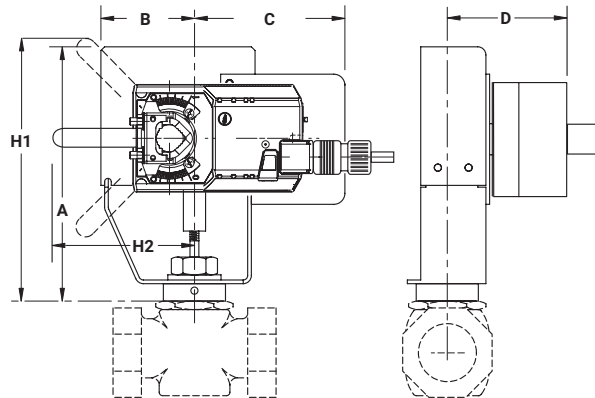
Valve Body Model	Size	Fail-Safe	Close-Off (psid)	Belimo Actuator Series	Belimo Linkage
Type 30-32	2½"	No	185	RV	WGVL
			93	EV	WGVL
		Yes	71	AVK	WGVL
70	2*GK		UGLK2272		
100 SGL SEAT	3"	No	RV	WGVL	WGVL
			40	AVK	WGVL
		Yes	22	EV	WGVL
70			2*GM	UGLK2272	
1800 3-Way		Yes	2*GK	UGLK2272	
			40	EV	WGVL
		No	70	2*GM	UGLK2272
Yes			2*GK	UGLK2272	
1800 BAL		No	40	EV	WGVL
			126	RV	WGVL
		Yes	65	EV	WGVL
40			AVK	WGVL	
Type 20-22		No	160	EV	WGVL
			Yes	AVK	WGVL
		Type 23	No	126	RV
65				EV	WGVL
Yes			40	AVK	WGVL
		Type 30-32	No	40	AVK
65				EV	WGVL
100 SGL SEAT			Yes	40	2*GK
		No		RV	WGVL
		1800 3-Way	Yes	22	AVK
No				EV	WGVL
1800 BAL			Yes	10	AF
		No		2*GM	UGLK2272
		Type 20-22	Yes	40	2*GK
No				EV	WGVL
Type 23			Yes	22	2*GM
		40		2*GK	UGLK2272
		Type 30-32	No	22	EV
40				2*GM	UGLK2272
100 SGL SEAT			Yes	22	EV
		65		RV	WGVL
		1800 3-Way	Yes	236	EV
AVK				WGVL	
1800 BAL			No	65	RV
		236		EV	WGVL
		Type 20-22	Yes	22	2*GK
No	RV			WGVL	
Type 23	Yes		10	AF	UGLK2202
		No	2*GM	UGLK2272	
	Type 30-32	Yes	22	2*GK	UGLK2272
No			RV	WGVL	
100 SGL SEAT		Yes	14	AVK	WGVL
	10		AF	UGLK2202	
	1800 3-Way	No	22	2*GM	UGLK2272
Yes			2*GK	UGLK2272	
1800 BAL		No	14	EV	WGVL
	22		2*GM	UGLK2272	
	Type 20-22	Yes	14	EV	WGVL
22			2*GK	UGLK2272	
Type 23		Yes	40	AVK	WGVL
	No		RV	WGVL	
	Type 30-32	Yes	40	EV	WGVL
236			AVK	WGVL	
100 SGL SEAT		No	40	RV	WGVL
	22		2*GK	UGLK2272	
	1800 3-Way	Yes	10	AF	UGLK2202
No			2*GM	UGLK2272	
1800 BAL		Yes	22	2*GK	UGLK2272
	No		EV	WGVL	
	Type 20-22	Yes	22	2*GM	UGLK2272
10			2*AF	UGLK2272	
Type 30		Yes	22	2*GK	UGLK2272
	10		2*AF	UGLK2272	
	Type 32	Yes	22	2*GK	UGLK2272
10			2*AF	UGLK2272	

All close-off pressures listed are approximate and actual close-off pressures are based on valve condition and application.



Globe valve retrofits that cannot be matched to one of the Belimo UGLK part numbers; please use part number UGSP0000 for valves requiring single actuation and UGSP0002 for valves requiring dual actuation. These part numbers have no Bill of Materials (BOM) associated with them, therefore cannot be produced and shipped. When these two part numbers are quoted, sold and orders processed, the "Globe Valve Retrofit" form must be completed and accompany the order. Belimo's engineering department will establish the correct UGSP linkage number for production. UGSP0000 and UGSP0002 will NOT show up on final paperwork. The correct UGSP part number will be stated.

UGSP0004

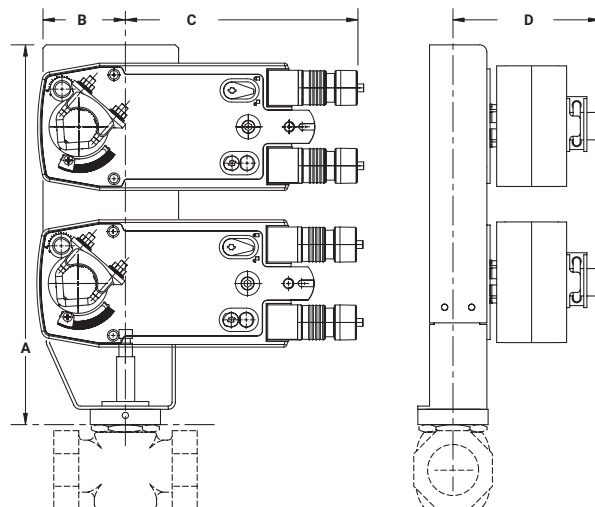


The single actuated globe retrofit linkage (shown left) depicts dimensional data for use in determining the envelope space required to mount the linkage. These dimensions do NOT include VALVE dimensions which will affect combined height requirements.

Dims H1 & H2 are used only when override handles are utilized on the linkage system, and are not required for proper operation of the linkage system.

Dim A	7½ [190]...14" [356]	Dim H1	9½" [242]
Dim B	3" [76]	Dim H2	9½" [242]
Dim C	9" [229]		
Dim D	5" [127]		

UGSP0002



The dual actuated globe retrofit linkage (shown left) depicts dimensional data for use in determining the envelope space required to mount the linkage. These dimensions do NOT include VALVE dimensions which will affect combined height requirements.

Dim A	9½ [241]...19" [483]
Dim B	3" [76]
Dim C	9" [229]
Dim D	5" [127]

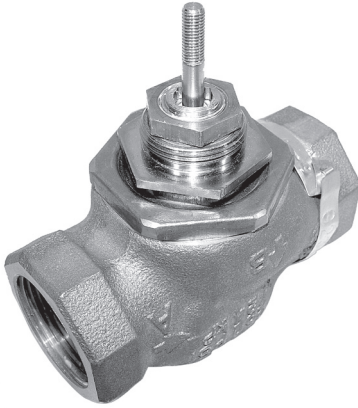
Custom kits are designed to your unique specifications and are not returnable.

New smart retrofit forms for butterfly valves, globe valves, and ball valves can be found on www.belimo.com.

Legacy paper forms will no longer be accepted.

73 UGSP Series Globe Valve Retrofit Solution

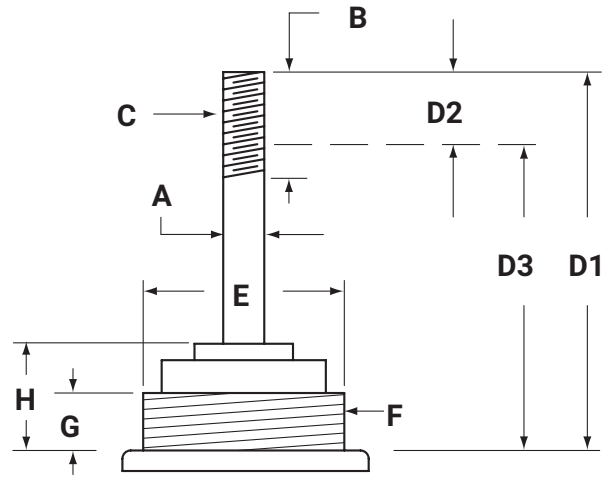
Retrofitting STYLE 1 Globe Valves Typical for Siebe\Invensys\Barber Colman



Identification & Measurement of Existing Valves

The valve should be stripped down to its basic form, as shown. Remove all other linkage components in order to obtain correct dimensional data for the retrofit kit. Note that the bonnet nut is permanently attached to the valve body, and that it also spins freely.

Dimensions Needed

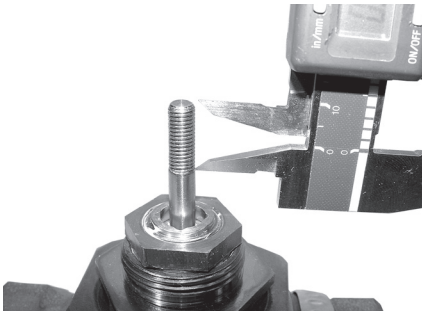


Follow these important steps to properly measure STYLE 1 type globe valves for a retrofit linkage. Reference the photos and line drawing to help guide you through the data collection process.

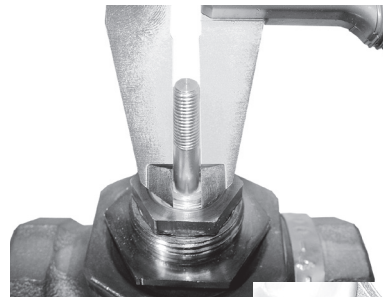
1. Dimension A on the retrofit form is measured as shown, with the end of the calipers laying PERPENDICULAR to the center line of the valve stem. Record this reading to three decimal places.



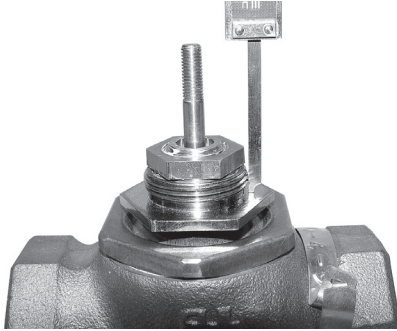
2. Measure the LENGTH of the threaded area of the valve stem, and record this information for Dimension B on the retrofit form.



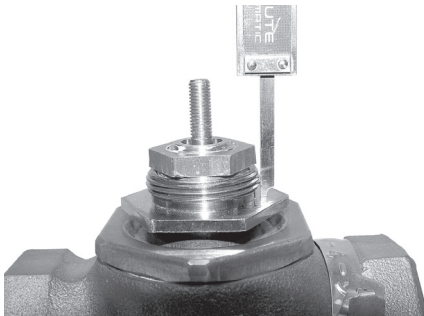
3. Using the WIDE area of the calipers, measure the MAJOR Diameter of the stem threads. Record this information for Dimension C on the retrofit form. Count how many threads per inch. Typical thread specs are 1/4-28, 3/8-24 & 1/2-20. If available, you should use a thread gauge to determine the correct thread spec. Alternatively, you may send a valve stem nut to Belimo and we will determine the correct thread spec. Correct thread identification is important as this is the point of highest mechanical stress after the retrofitting has been completed.



4. Dimension D1 on the retrofit form is measured as shown, with the depth gauge used to measure the STEM UP distance to the bonnet base.

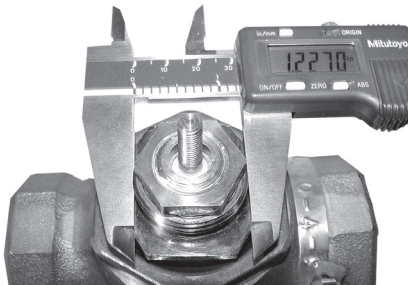


5. Dimension D3 on the retrofit form is measured as shown, with the depth gauge used to measure the STEM DN distance to the bonnet base.

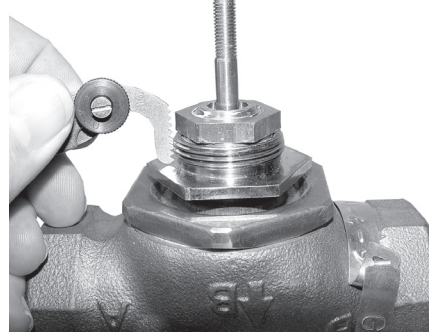


6. Dimension D2 on the retrofit form is the measured distance between the STEM UP and STEM DN heights, which gives the full travel of the valve. Only TWO of the three dimensions D1, D2 & D3 are needed.

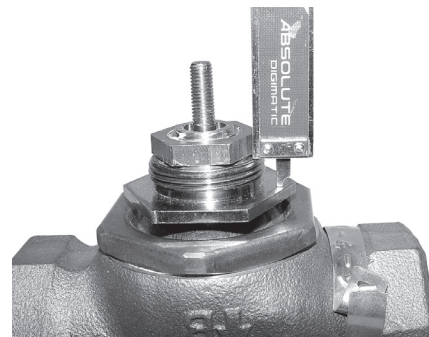
7. Dimension E is measured across the MAJOR diameter of the bonnet threads. Use the calipers as shown to determine the correct dimension and record accordingly on the retrofit form.



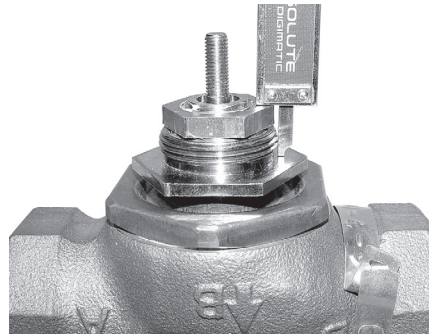
8. Dimension F is measured using a thread gauge or by counting the number of threads per inch.



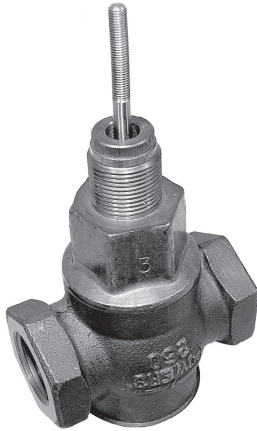
9. Measure Dimension G using the caliper depth gauge, and record on the retrofit form.



10. Dimension H is measured as the distance between the bonnet mounting base height and the TOP of the stem packing retainer.



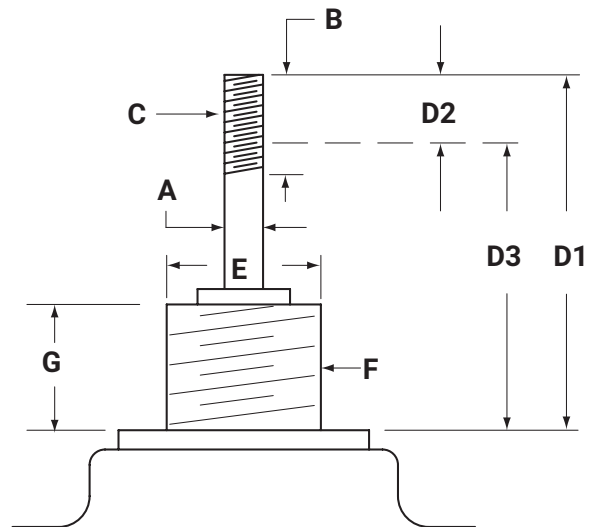
75 **UGSP Series Globe Valve Retrofit Solution**
Retrofitting STYLE 2 Globe Valves Typical for Internal Packing Nut Type Valves



Identification & Measurement of Existing Valves

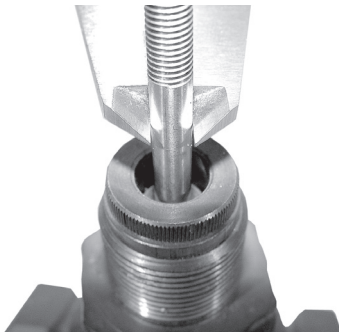
The valve should be stripped down to its basic form, as shown. Remove all other linkage components in order to obtain correct dimensional data for the retrofit kit. Note that the packing nut is inside the bonnet, and does NOT interfere with the bonnet threads.

Dimensions Needed



Follow these important steps to properly measure STYLE 2 type globe valves for a retrofit linkage. Reference the photos and line drawing to help guide you through the data collection process.

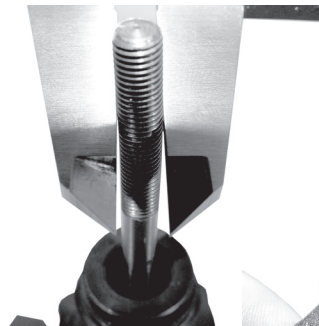
1. Dimension A on the retrofit form is measured as shown, with the end of the calipers laying PERPENDICULAR to the center line of the valve stem. Record this reading to three decimal places.



2. Measure the LENGTH of the threaded area of the valve stem, and record this information for Dimension B on the retrofit form.



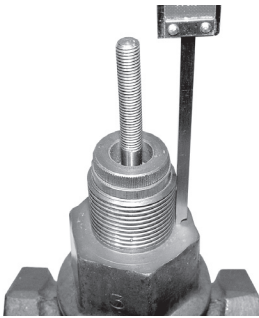
3. Using the WIDE area of the calipers, measure the MAJOR Diameter of the stem threads. Record this information for Dimension C on the retrofit form. Count how many threads per inch. Typical thread specs are 1/4-28, 3/8-24 & 1/2-20. If available, you should use a thread gauge to determine the correct thread spec. Alternatively, you may send a valve stem nut to Belimo and we will determine the correct thread spec. Correct thread identification is important as this is the point of highest mechanical stress after the retrofitting has been completed.



4. Dimension D1 on the retrofit form is measured as shown, with the depth gauge used to measure the STEM UP distance to the bonnet base.

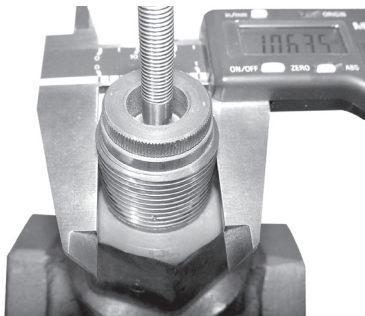


5. Dimension D3 on the retrofit form is measured as shown, with the depth gauge used to measure the STEM DN distance to the bonnet base.

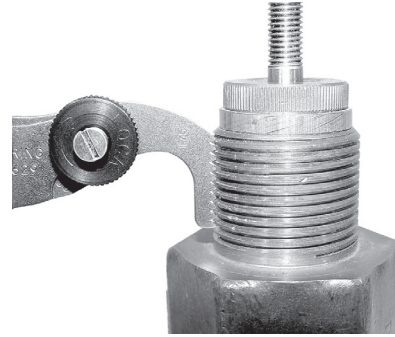


6. Dimension D2 on the retrofit form is the measured distance between the STEM UP and STEM DN heights, which gives the full travel of the valve. Only TWO of the three dimensions D1, D2 & D3 are needed.

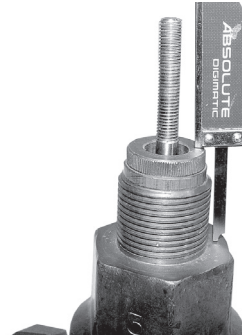
7. Dimension E is measured across the MAJOR diameter of the bonnet threads. Use the calipers as shown to determine the correct dimension and record accordingly on the retrofit form.



8. Dimension F is measured using a thread gauge or by counting the number of threads per inch.

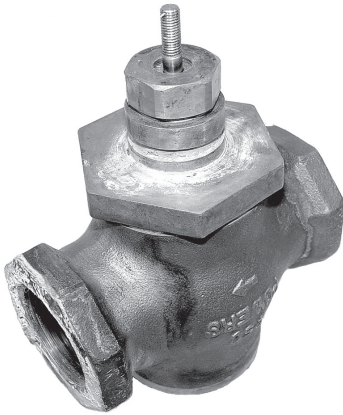


9. Measure Dimension G using the caliper depth gauge, and record on the retrofit form.



77 UGSP Series Globe Valve Retrofit Solution

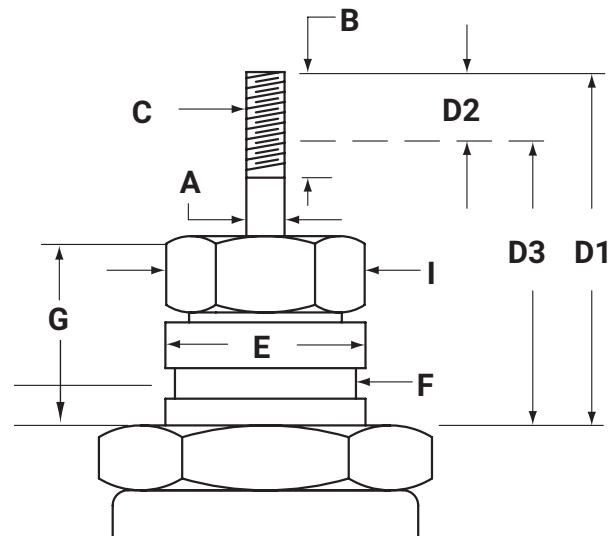
Retrofitting STYLE 3 Globe Valves Typical for Powers 599 Series and Other Non-Threaded, Non-Tapered Bonnet Valves



Identification & Measurement of Existing Valves

The valve should be stripped down to its basic form, as shown. Remove all other linkage components in order to obtain correct dimensional data for the retrofit kit. Note that there are no threads on the bonnet. The packing nut is smaller than the diameter of the bonnet. There is a groove in the bonnet used to secure the retrofit collar to the valve.

Dimensions Needed

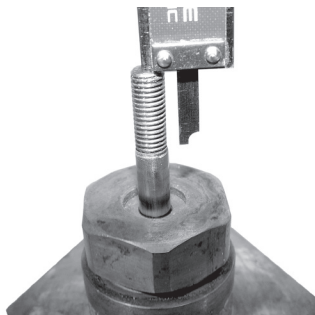


Follow these important steps to properly measure STYLE 3 type globe valves for a retrofit linkage. Reference the photos and line drawing to help guide you through the data collection process.

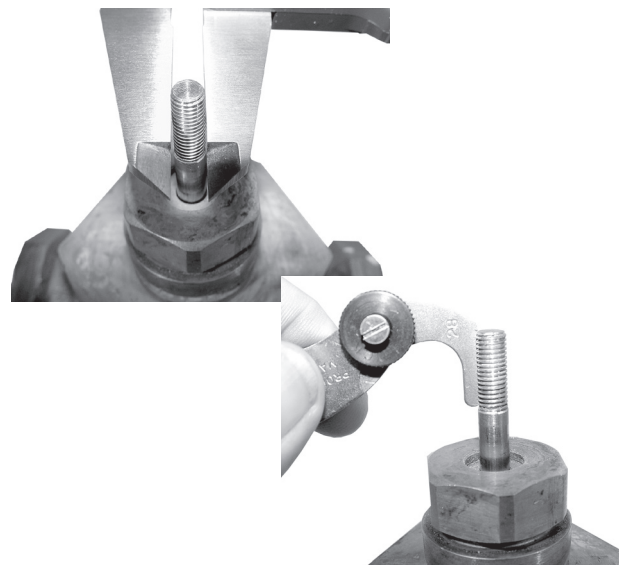
1. Dimension A on the retrofit form is measured as shown, with the end of the calipers laying PERPENDICULAR to the center line of the valve stem. Record this reading to three decimal places.



2. Measure the LENGTH of the threaded area of the valve stem, and record this information for Dimension B on the retrofit form.

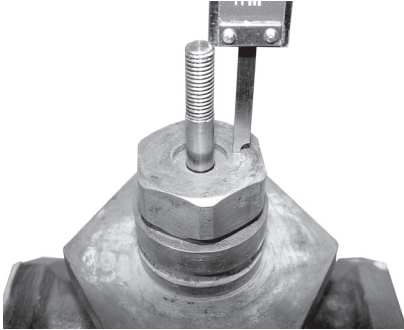


3. Using the WIDE area of the calipers, measure the MAJOR Diameter of the stem threads. Record this information for Dimension C on the retrofit form. Count how many threads per inch. Typical thread specs are 1/4-28, 3/8-24 & 1/2-20. If available, you should use a thread gauge to determine the correct thread spec. Alternatively, you may send a valve stem nut to Belimo and we will determine the correct thread spec. Correct thread identification is important as this is the point of highest mechanical stress after the retrofitting has been completed.

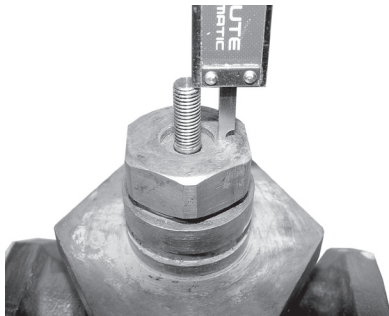


Retrofitting STYLE 3 Globe Valves Typical for Powers 599 Series and Other Non-Threaded, Non-Tapered Bonnet Valves

4. Dimension D1 on the retrofit form is measured as shown, with the depth gauge used to measure the STEM UP distance to the bonnet base.

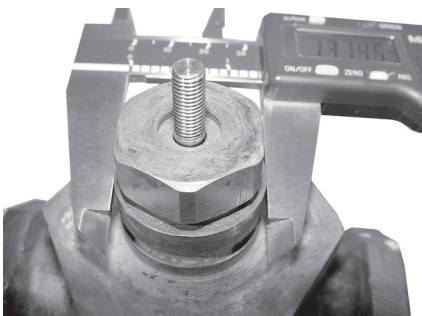


5. Dimension D3 on the retrofit form is measured as shown, with the depth gauge used to measure the STEM DN distance to the bonnet base.

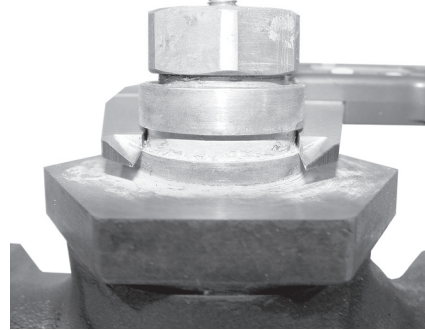


6. Dimension D2 on the retrofit form is the measured distance between the STEM UP and STEM DN heights, which gives the full travel of the valve. Only TWO of the three dimensions D1, D2 & D3 are needed.

7. Dimension E is measured across the MAJOR diameter of the bonnet. Use the calipers as shown to determine the correct dimension and record accordingly on the retrofit form. This dimension should be checked both above and below the locking groove.



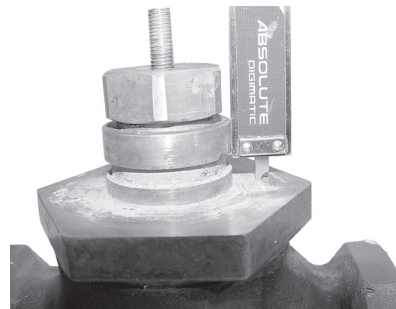
8. Dimension F is measured using calipers across the MINOR diameter of the bonnet. This may be a square or a round groove. Measure the SMALLEST dimension of this groove.



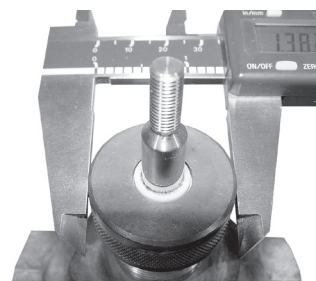
9. Measure Dimension G using the caliper depth gauge, and record on the retrofit form.



10. Measure Dimension H using the caliper depth gauge, and record on the retrofit form.

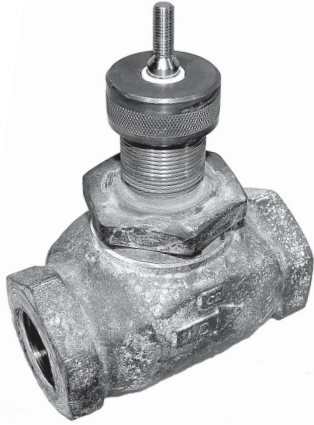


11. Dimension I is measured on the outside diameter of the external packing nut.



79 UGSP Series Globe Valve Retrofit Solution

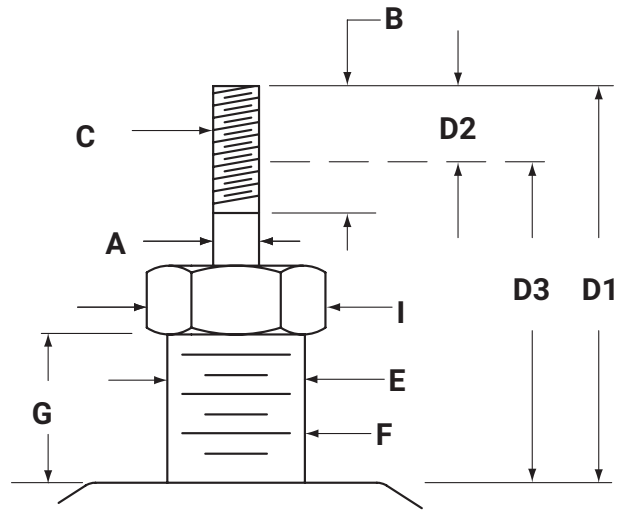
Retrofitting STYLE 4 Globe Valves Typical for Johnson Controls and Other External Packing Nut Type Valves



Identification & Measurement of Existing Valves

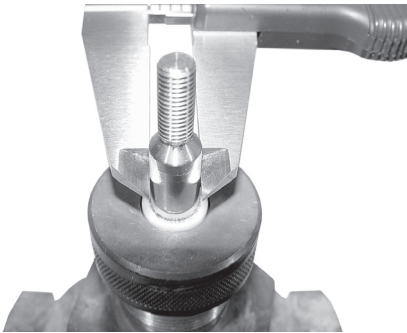
The valve should be stripped down to its basic form, as shown. Remove all other linkage components in order to obtain correct dimensional data for the retrofit kit. Note that many pneumatically operated valves have hardware that must be removed from the threaded bonnet area before measurements can be taken.

Dimensions Needed



Follow these important steps to properly measure STYLE 4 type globe valves for a retrofit linkage. Reference the photos and line drawing to help guide you through the data collection process.

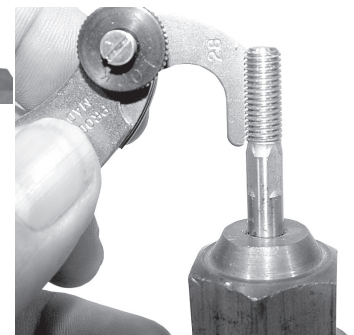
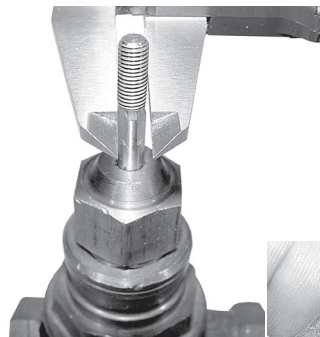
1. Dimension A on the retrofit form is measured as shown, with the end of the calipers laying PERPENDICULAR to the center line of the valve stem. Record this reading to three decimal places.



2. Measure the LENGTH of the threaded area of the valve stem, and record this information for Dimension B on the retrofit form.

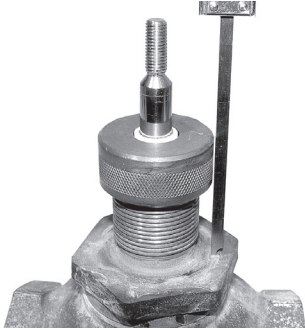


3. Using the WIDE area of the calipers, measure the MAJOR Diameter C of the stem threads. Record this information for Dimension C on the retrofit form. Count how many threads per inch. Typical thread specs are 1/4-28, 3/8-24 & 1/2-20. If available, you should use a thread gauge to determine the correct thread spec. Alternatively, you may send a valve stem nut to Belimo and we will determine the correct thread spec. Correct thread identification is important as this is the point of highest mechanical stress after the retrofitting has been completed.

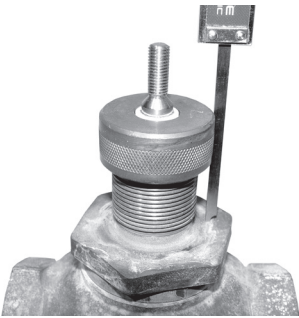


Retrofitting STYLE 4 Globe Valves Typical for Johnson Controls and Other External Packing Nut Type Valves

4. Dimension D1 on the retrofit form is measured as shown, with the depth gauge used to measure the STEM UP distance to the bonnet base.

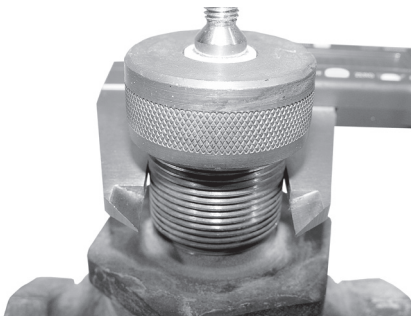


5. Dimension D3 on the retrofit form is measured as shown, with the depth gauge used to measure the STEM DN distance to the bonnet base.



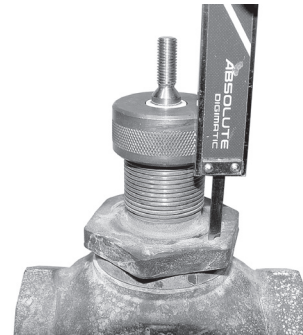
6. Dimension D2 on the retrofit form is the measured distance between the STEM UP and STEM DN heights, which gives the full travel of the valve. Only TWO of the three dimensions D1, D2 & D3 are needed.

7. Dimension E is measured across the MAJOR diameter of the bonnet. Use the calipers as shown to determine the correct dimension and record accordingly on the retrofit form. Do NOT measure the diameter of the packing nut for this dimension.

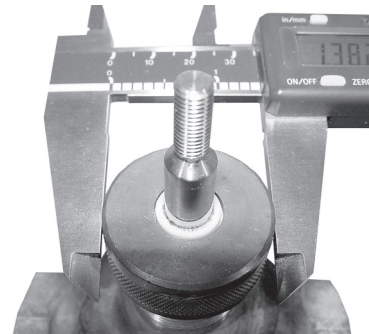


8. Dimension F is measured using a thread gauge or by counting the number of threads per inch. It is easier to use a thread gauge with the external packing nut removed.

9. Measure Dimension G using the caliper depth gauge to measure the distance between the bottom on the packing nut and the valve collar seating surface.

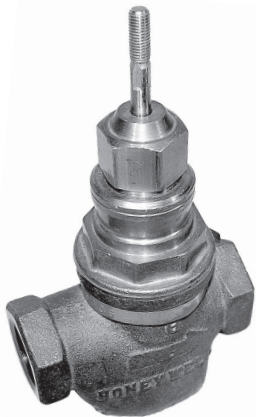


10. Dimension I is measured on the outside diameter or point of the external packing nut.



81 UGSP Series Globe Valve Retrofit Solution

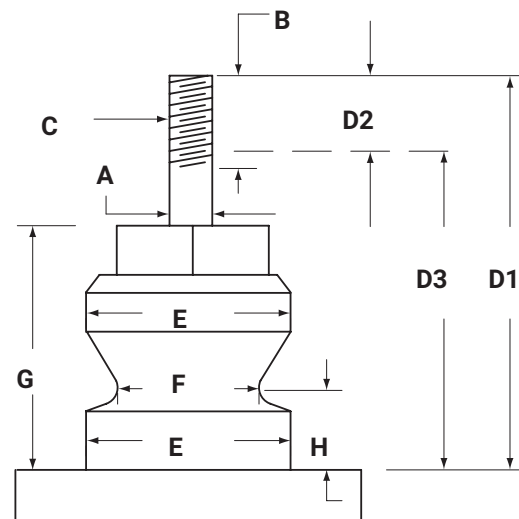
Retrofitting STYLE 5 Globe Valves Typical for Honeywell and Other Non-Threaded, Tapered Bonnet Valves



Identification & Measurement of Existing Valves

The valve should be stripped down to its basic form, as shown. Remove all other linkage components in order to obtain correct dimensional data for the retrofit kit. Note that there are no threads on the bonnet. The packing nut is smaller than the diameter of the bonnet. There is a groove in the bonnet used to secure the retrofit collar to the valve.

Dimensions Needed



Follow these important steps to properly measure STYLE 5 type globe valves for a retrofit linkage. Reference the photos and line drawing to help guide you through the data collection process.

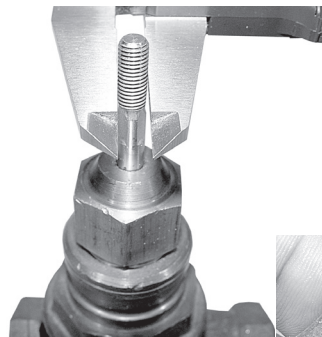
1. Dimension A on the retrofit form is measured as shown, with the end of the calipers laying PERPENDICULAR to the center line of the valve stem. Record this reading to three decimal places.



2. Measure the LENGTH of the threaded area of the valve stem, and record this information for Dimension B on the retrofit form.



3. Using the WIDE area of the calipers, measure the MAJOR Diameter of the stem threads. Record this information for Dimension C on the retrofit form. Count how many threads per inch. Typical thread specs are 1/4-28, 3/8-24 & 1/2-20. If available, you should use a thread gauge to determine the correct thread spec. Alternatively, you may send a valve stem nut to Belimo and we will determine the correct thread spec. Correct thread identification is important as this is the point of highest mechanical stress after the retrofitting has been completed.



Retrofitting STYLE 5 Globe Valves Typical for Honeywell and Other Non-Threaded, Tapered Bonnet Valves

4. Dimension D1 on the retrofit form is measured as shown, with the depth gauge used to measure the STEM UP distance to the bonnet base.

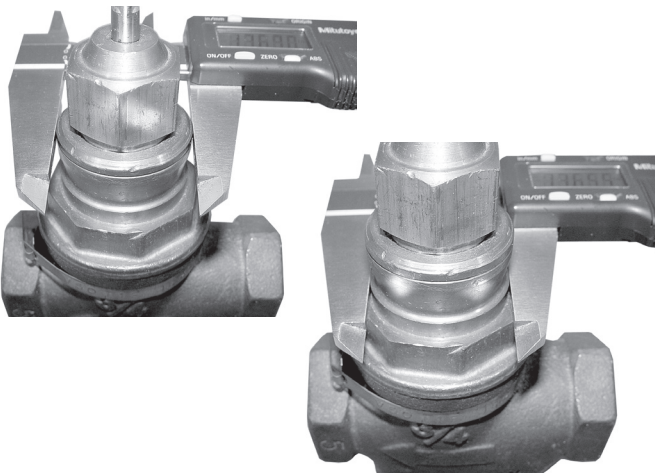


5. Dimension D3 on the retrofit form is measured as shown, with the depth gauge used to measure the STEM DN distance to the bonnet base.

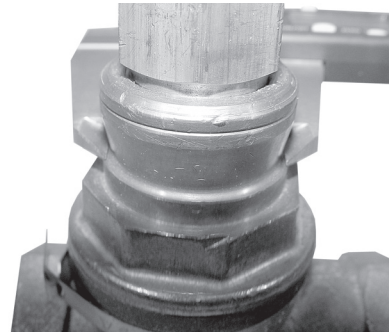


6. Dimension D2 on the retrofit form is the measured distance between the STEM UP and STEM DN heights, which gives the full travel of the valve. Only TWO of the three dimensions D1, D2 & D3 are needed.

7. Dimension E is measured across the MAJOR diameter of the bonnet. Use the calipers as shown to determine the correct dimension and record accordingly on the retrofit form. This dimension should be checked both above and below the locking groove.



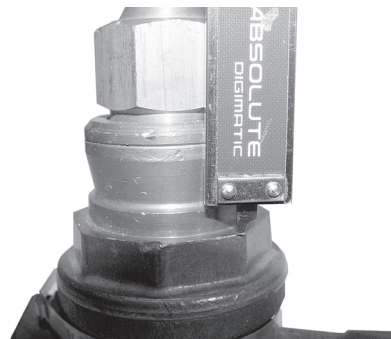
8. Dimension F is measured using calipers across the MINOR diameter of the bonnet. This may be a square or a round groove. Measure the SMALLEST dimension of this groove.



9. Measure Dimension G using the caliper depth gauge, and record on the retrofit form.



10. Measure Dimension H using the caliper depth gauge, and record on the retrofit form.



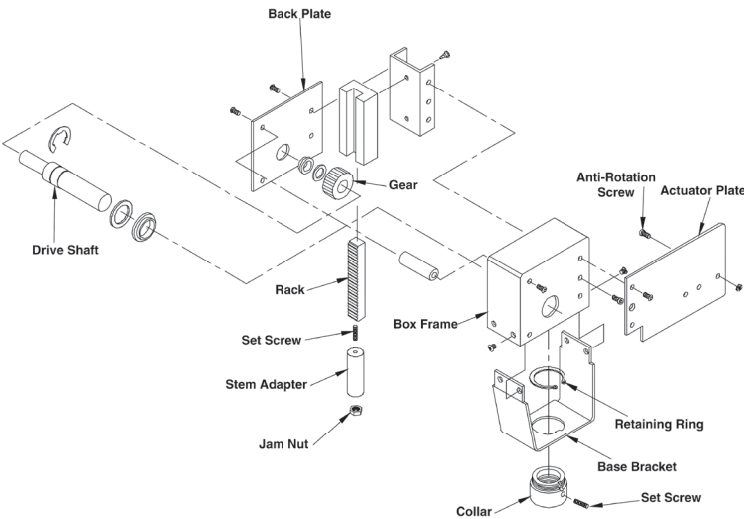
Components

UGLK COLLARS*			MOST COMMONLY USED VALVE STYLE				
Part Number	Inside Diameter	Description	Style 1	Style 2	Style 3	Style 4	Style 5
UGLK-COL-1005	1.000"	3 setscrews, for frame type		•			
UGLK-COL-1063	1.063"	3 setscrews, for frame type		•			
UGLK-COL-1100	1.100"	3 setscrews, for frame type, counterbored top				•	
UGLK-COL-1255	1.250"	3 setscrews, for frame type		•			
UGLK-COL-1315	1.315"	3 setscrews, for frame type, can be used with VB7 with shim			•		
UGLK-COL-1375	1.375"	3 setscrews, for frame type		•			
UGLK-COL-BC10	1.250"- 16 Thd.	Fits Siebe VB7/VB9. Use on frame type only	•				
UGLK-COL-HY02	1.370"	1 setscrew, for frame type					•
UGLK-COL-LG02	1.740"	1 setscrew, for frame type			•		
UGLK-COL-LG04	1.740"	1 setscrew, for frame type			•		
UGLK-COL-JC05	1.070"	3 setscrews, for frame type		•			
UGLK-COL-JC06	1.562"- 14 Thd.	Threaded, brass		•			
UGLK-COL-JC08	0.760"	3 setscrews, for frame type, counterbored top				•	
UGLK-COL-0880	0.880"	3 setscrews, for frame type, counterbored top				•	
UGLK-COL-WNUT	1.375"- 20 Thd.	Replacement Warren nut. Will not go over damaged threads		•			
UGLK-COL-AD01	1.250"- 16 Thd.	Fits Siebe VB7/VB9. For VB7 frame only	•				
UGLK-COL-UNIV	Custom	3 setscrews, for frame type. Must be machined		•	•	•	•
UGSL-ADPT	Custom	Custom collar for UGSL1200. Must be machined					

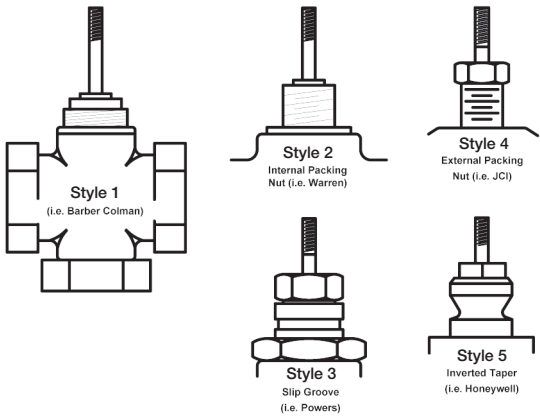
* Must reuse retaining clip and set screws.

UGLK STEM ADAPTERS			MOST COMMONLY USED VALVE STYLE				
Part Number	Inside Diameter	Description	1	2	3	4	5
UGLK-STM-1800	1/4" 28 Stem Thd.	Stem adapter for 1/4" 28 valve stems	•	•	•	•	•
UGLK-STM-1801	3/8" 24 Stem Thd.	Stem adapter for 3/8" 24 valve stems	•	•	•	•	•
UGLK-STM-1802	1/2" 20 Stem Thd.	Stem adapter for 1/2" 20 valve stems	•			•	•
UGLK-STM-1803	7/16" 20 Stem Thd.	Stem adapter for 7/16" 20 valve stems					•
UGLK-STM-1501	3/8" 24 Stem Thd.	For Warren FLG valves with UGLK		•			
UGLK-STM-1805	3/8" OD Grooved	Landis 2.5...3" 599 Series			•		
UGLK-STM-2305	1/2" OD Grooved	Landis 4...6" 599 Series			•		
UGLK-STM-UNIV	Custom	Must be machined	•	•	•	•	•

UGLK Stem Adapters



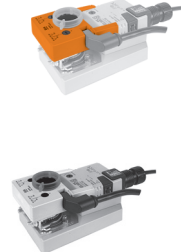
UGLK Collars





5-year warranty

WEATHER SHIELDS		GM	2* GM	GR/ GKR	LF	NF	AF	2* AF	GK	2* GK	LV/ SV	EV/ RV	LVK/ SVK	AVK
	ZS-SPGV-60 For LF actuators on NPT series				.									
	ZS-SPGV-10 For dual AF series actuators on flanged globe valves							.						
	ZS-SPGV-20 For single NF, AF actuator series					.	.							
	ZS-SPGV-40 For GM, GK series on flanged globe valves	.							.					
	ZS-SPGV-50 For dual GM, GK series on flanged globe valves		.							.				
	ZS-GV-001 For LV, SV actuators on NPT series										.		.	
	ZS-GV-002 For EV, RV, AVK actuator on flanged series											.		.

AUXILIARY SWITCHES & POTENTIOMETERS		LR/LM	NR/NM	AR/AM	GR/GM	AK	GK/GKR	DK
	S1A Auxiliary switch 1x SPDT, 3A (0.5A inductive) @ AC 250 V	•	•	•	•	•	•	•
	S2A Auxiliary switch 2x SPDT, 3A (0.5A inductive) @ AC 250 V	•	•	•	•	•	•	•
	P140A GR Feedback potentiometer 140 Ω	•	•	•	•	•	•	•
	P1000A GR Feedback potentiometer 1000 Ω	•	•	•	•	•	•	•
	P10000A GR Feedback potentiometer 10000 Ω	•	•	•	•	•	•	•
	S2A-GV Auxiliary switch 2x SPDT, 3A (0.5A inductive) @ AC 250 V for LV, SV, EV, and AVK series actuators	•	•	•	•	•	•	•

GLOBE VALVE ACCESSORIES

	ZG-GV60 Stem repacking kit for G2B, G2S, G3B series NPT valves
	ZG-GV15 Stem repacking for G6, G7 series flanged valves
	GVA-CPL Coupler repair kit for LV, LVK, SV, SVK Globe Valve actuators
	FGVL-ADPT Stem adapter replacement for EV, RV, AVK Globe Valve actuators

Remote Testing Module



A Simple, Cost Effective Damper Test Method

Belimo's FSKN remote inspection module allows testing of actuated life safety dampers without the need for costly visual inspections, and it meets testing requirements of NFPA 80 and NFPA 105 referenced by the International Building Code (IBC). The module initiates damper cycling and verifies the damper position to ensure proper operation in emergencies. The FSKN connects seamlessly to Fire Alarm panels or Building Automation Systems using BACnet or Modbus communication protocols.



Discover the advantages
www.belimo.com



Butterfly Valve Retrofit Solutions

Belimo's butterfly retrofit solutions are designed to easily attach to the valve-mounting pad of competitor valves utilizing Belimo actuators. Butterfly valves can quickly and conveniently be restored without interruption in service and the removal of the valve, saving on down time and costs. Belimo retrofit solutions increase performance and efficiency of integrated building technology.

How to Select a Butterfly Valve Retrofit Solution

Follow the four steps listed below when ordering a butterfly valve retrofit kit.

Example: Centerline C200 Series, 2½" valve, using a **Non Fail-Safe** Belimo actuator.

- 1

Identify the **Valve Manufacturer, Valve Series** and **Valve Size**.
- 2

Determine the type of actuator you require: Belimo non fail-safe, spring return, or electronic fail-safe. Belimo non fail-safe and fail-safe actuators are typically only available on smaller sizes.
- 3

Use the actuator listings to make your final actuator selection. Decide between **GMB24-3-X1** and **GMB24-MFT-X1**.

ACTUATOR NOT INCLUDED IN THE LIST PRICE OF THE LINKAGE.

- 4

HOW TO ORDER: **Item 1 1pc UFLK1300**
Item 2 1pc GMB24-MFT-X1



1

Select linkage solution based on the **Valve Number, Configuration**, and **Size**; select the proper **Linkage Solution** for your valve.

UFLK1300
Example: **Centerline C200 Series, 2½"** valve using a **non fail-safe** Belimo actuation.
Choose correct linkage **UFLK1300**.

Centerline
C200 Square Top Series Butterfly Valves
Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Fail-Safe	Size	Belimo Linkage	Belimo Actuator Series
C200 Square Top Series Butterfly Valves	2-way	No	2"	UFLK1300	AM
				UFLKP004	PR
			2½"	UFLK1300	GM
				UFLKP004	PR
			3"	UFLK1300	GM
				UFLKP004	PR

- 2

Select actuator based on needed control type. Decide between **GMB24-3-X1** and **GMB24-MFT-X1**.
- 3

Consult actuator overview section for full details.

BASIC PRODUCTS							
Model	Control Input	Feedback	Power Supply	Running Time(s) [Default]	VA Rating	Auxiliary Switch	Cable Length
GMB24-3-X1	On/Off, Floating Point	Add-on	AC/DC 24 V	150 seconds	6	Add-on	3 ft.
GMB24-SR	2...10 V (4...20 mA*)	2...10 V	AC/DC 24 V	150 seconds	6.5	Add-on	3 ft.
GMB24-MFTX1	2...10 V	2...10 V	AC/DC 24 V	150 seconds	7	Add-on	3 ft.
◆ Variable with MFT							

- 4

Complete Ordering Example:
Item 1: **UFLK1300**
Item 2: **GMB24-MFT-X1**

SY ACTUATORS

SERIES	MODEL	Run Time(s) 90°@60 Hz	Torque	Power Supply	Duty Cycle	CONTROL TYPE			
						Modulating	Floating Point	On/Off	Feedback
SY4	SY4-110	19 seconds	3540 in-lb [400 Nm]	AC 120 V ±10%, 50/60 Hz	30%		•	•	none
	SY4-24	20 seconds		AC/DC 24 V ±10%, 50/60 Hz	30%		•	•	none
	SY4-220	20 seconds		AC 230 V ±10%, 50/60 Hz	30%		•	•	none
	SY4-24MFT	20 seconds		AC/DC 24 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
	SY4-120MFT	24 seconds		AC 120 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
SY5	SY4-230MFT	22 seconds	4450 in-lb [500 Nm]	AC 230 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
	SY5-110	26 seconds		AC 120 V ±10%, 50/60 Hz	30%		•	•	none
	SY5-24	26 seconds		AC/DC 24 V ±10%, 50/60 Hz	30%		•	•	none
	SY5-24MFT	26 seconds		AC/DC 24 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
	SY5-120MFT	28 seconds		AC 120 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
SY6	SY5-230MFT	28 seconds	5785 in-lb [650 Nm]	AC 230 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
	SY6-110	34 seconds		AC 120 V ±10%, 50/60 Hz	30%		•	•	none
	SY6-120MFT	38 seconds		AC 120 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
SY7	SY6-230MFT	35 seconds	8900 in-lb [1000 Nm]	AC 230 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
	SY7-110	50 seconds		AC 120 V ±10%, 50/60 Hz	30%		•	•	none
	SY7-120MFT	59 seconds		AC 120 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
SY8	SY7-230MFT	59 seconds	13350 in-lb [1500 Nm]	AC 230 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
	SY8-110	51 seconds		AC 120 V ±10%, 50/60 Hz	30%		•	•	none
	SY8-120MFT	79 seconds		AC 120 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
SY9	SY8-230MFT	79 seconds	17800 in-lb [2000 Nm]	AC 230 V ±10%, 50/60 Hz	75%	•			2...10 V/4...20 mA
	SY9-110	62 seconds		AC 120 V ±10%, 50/60 Hz	30%		•	•	none
	SY9-120MFT	65 seconds		AC 120 V ±10%, 50/60 Hz	50%	•			2...10 V/4...20 mA
SY10	SY9-230MFT	72 seconds	22250 in-lb [2500 Nm]	AC 230 V ±10%, 50/60 Hz	50%	•			2...10 V/4...20 mA
	SY10-110	62 seconds		AC 120 V ±10%, 50/60 Hz	30%		•	•	none
	SY10-120MFT	76 seconds		AC 120 V ±10%, 50/60 Hz	50%	•			2...10 V/4...20 mA
SY11	SY10-230MFT	85 seconds	26700 in-lb [3000 Nm]	AC 230 V ±10%, 50/60 Hz	50%	•			2...10 V/4...20 mA
	SY11-110	62 seconds		AC 120 V ±10%, 50/60 Hz	30%		•	•	none
	SY11-120MFT	71 seconds		AC 120 V ±10%, 50/60 Hz	50%	•			2...10 V/4...20 mA
SY12	SY11-230MFT	61 seconds	31150 in-lb [3500 Nm]	AC 230 V ±10%, 50/60 Hz	50%	•			2...10 V/4...20 mA
	SY12-110	62 seconds		AC 120 V ±10%, 50/60 Hz	30%		•	•	none
	SY12-120MFT	76 seconds		AC 120 V ±10%, 50/60 Hz	50%	•			2...10 V/4...20 mA
	SY12-230MFT	65 seconds		AC 230 V ±10%, 50/60 Hz	50%	•			2...10 V/4...20 mA

Modulating actuators will accept 0.5...10 V, 2...10 V, or 4...20 mA control signals as standard.

All SY-MFT actuators are 0.5 V start. Below this will be considered a loss of signal.

All SY actuators are non fail-safe, but can be used with NSV-SY back up systems for spring return applications.

These products carry a two year warranty when sold as part of an assembly or with a UFLK retrofit kit.

89 Butterfly Valve Retrofit Actuators

Actuator Selection Guide

ROTARY ACTUATORS

SERIES	TORQUE	MODEL	Spring Return	Electronic Fail-Safe	Tandem Mounting Available	Control Input	Feedback Position	Power Supply
AF Series*	180 in-lb [20 Nm]	AFBUP-X1	•		•	On/Off	-	AC 24...240 V
		AFX24-MFT-X1	•		•	Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V
AM Series*	180 in-lb [20 Nm]	AMB24-3-X1				Floating Point, On/Off	-	AC/DC 24 V
		AMX24-MFT-X1				Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V
GM Series*	360 in-lb [40 Nm]	GMB24-3-X1				Floating Point, On/Off	-	AC/DC 24 V
		GMX24-MFT-X1			•	Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V
GK Series*	360 in-lb [40 Nm]	GKB24-3-X1		•		Floating Point, On/Off	-	AC 24 V
		GKX24-MFT-X1		•	•	Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC/DC 24 V
PR Series	1400 in-lb [160 Nm]	PRBUP-3-T				Floating Point, On/Off	-	AC 24...240 V/ DC 24...125 V, 50/60 Hz
		PRBUP-MFT-T				Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	
PKR Series		PKRBUP-MFT-T		•		Variable with MFT (V, PWM, Floating Point, On/Off)	variable V	AC 24...240 V/ DC 24...125 V, 50/60 Hz

*Please consult the Damper sections of the Product Guide and Price List for a full list of product offerings. Standard run times should be considered in the selection. All air side products are applicable for retrofit kits.

Select "X1" actuators come with a handle.

MULTI-FUNCTION TECHNOLOGY

ROTARY ACTUATOR CODES	MFT CODE	Control Input	Running Time	Built-in Feedback
	A01	2...10 V	150 seconds	2...10 V
	A02	0.5...10 V	150 seconds	0.5...10 V
	A28	0.5...10 V	150 seconds	0.5...10 V
	A63	0.5...4.5 V	150 seconds	0.5...4.5 V
	A64	5.5...10 V	150 seconds	5.5...10 V
	W02	0.02...5 seconds PWM	150 seconds	2...10 V
	W03	0.10...25.5 seconds PWM	150 seconds	2...10 V
	F01	Floating Point	150 seconds	2...10 V
	J02	On/Off	150 seconds	2...10 V

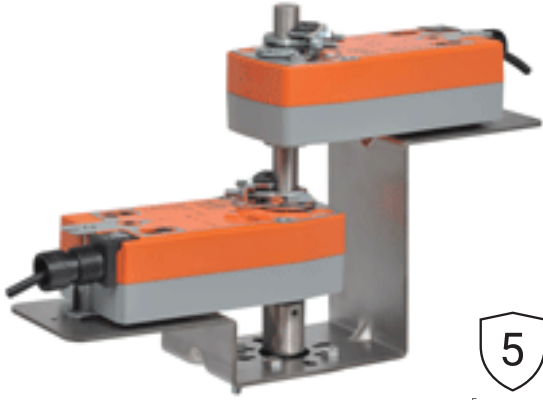
Consult Belimo for programming code, if not shown on chart.

SY MULTI-FUNCTION TECHNOLOGY

Description	MFT CODE	Control Input	Built-in Feedback	Loss of Signal	Running Time
MFT	ACE	2...10 V	2...10 V	stop	actuator(s) constant
MFT	ACF	0.5...10 V	0.5...10 V	stop	actuator(s) constant
MFT	ACG	4...20 mA	4...20 mA	stop	actuator(s) constant
MFT	ACH	4...20 mA	2...10 V	stop	actuator(s) constant
MFT	ACJ	2...10 V	2...10 V	open	actuator(s) constant
MFT	ACK	0.5...10 V	0.5...10 V	open	actuator(s) constant
MFT	ACL	4...20 mA	4...20 mA	open	actuator(s) constant
MFT	ACM	4...20 mA	2...10 V	open	actuator(s) constant
MFT	ACN	2...10 V	2...10 V	close	actuator(s) constant
MFT	ACP	0.5...10 V	0.5...10 V	close	actuator(s) constant
MFT	ACR	4...20 mA	4...20 mA	close	actuator(s) constant
MFT	ACS	4...20 mA	2...10 V	close	actuator(s) constant

Standard delivery may vary, please consult your customer service representative for the latest lead time(s).

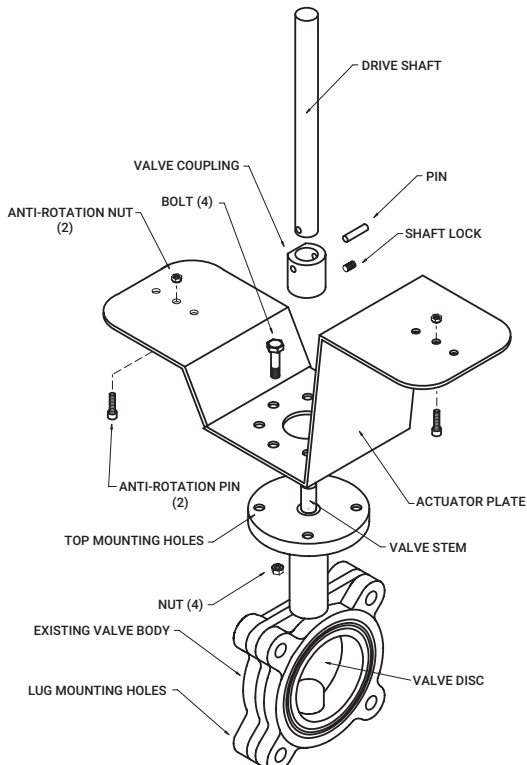
For 2-Way AF and GM Series Actuators



5-year warranty

Technical Data	UFLK... / UFSP
Materials:	
Plate	stainless steel
Coupling	stainless steel
Shafts	stainless steel
Mounting position	360° mountable
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Servicing	chilled or hot water max steam inlet 50 psi
Weight	4.8 lbs [2.2 kg]

UFLK / UFSP Parts Breakdown- Single Shown



Application

The UFLK/UFSP retrofit kit is designed to easily attach to the valve mounting pad on select 2-way competitor valves utilizing Belimo AF and GM series actuators. This kit will help to restore service without removal of the valve, saving down time. The UFLK/UFSP retrofit kit is available in various configurations for use with both 2-way and 3-way valves utilizing single or dual actuation.

Default/Configuration

The actuator is sold separately from the linkage. This allows users to select any actuator with the desired control signal. Since the linkage utilizes standard air-side actuators, they can be purchased at any time and mounted in the field.

Operation

The UFLK/UFSP and mounted actuator(s) are capable of rotating 95° in both CW and CCW directions. This allows the disc to fully open or close. When directional needs vary, the actuators can be flipped or directional switch turned to a new rotation. Refer to the actuator wiring guides on Primary/Secondary wiring for dual mounted actuators.

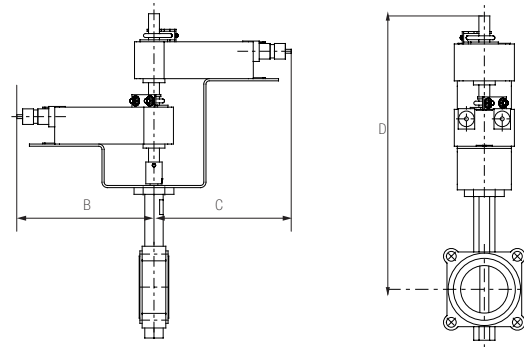
Suitable Actuators	Close-Off Ranges
AF Series	50...200 psi
GM Series	50...300 psi
GK Series	50...300 psi
2*AF Series	50...300 psi
2*GM Series	50...740 psi
2*GK Series	50...740 psi

Competitor Valves**

Bray	Victaulic	Nibco
PDC	Keystone	Flowseal
Centerline	JCI	Milwaukee

**Consult SelectPro for close-off pressures and cross reference of each valve.

UFLK / UFSP Dual Shown



Maximum Dimensions (Inches)

Size	B	C	D(Max)	Actuator
2"	9	9	19.5	AF/GK
2"	7	7	15	AMB(X)
2½"	9	9	20	AF
2½"	9	9	20	2*AF/2*GK
2½"	7	7	15.5	AMB(X)
3"	7	7	16	AMB(X)
3"	8	8	16	GMB(X)
3"	9	9	20.5	2*AF/2*GK
4"	8	8	17	GMB(X)
4"	9	9	21	2*AF/ 2*GK
4"	8	8	21	2*GMB(X)
5"	8	8	17.5	GMB(X)
5"	9	9	22	2*AF/ 2*GK
6"	8	8	22.5	GMB(X)

91 UFLK.../UFSP... Retrofit Linkage for Butterfly Valves

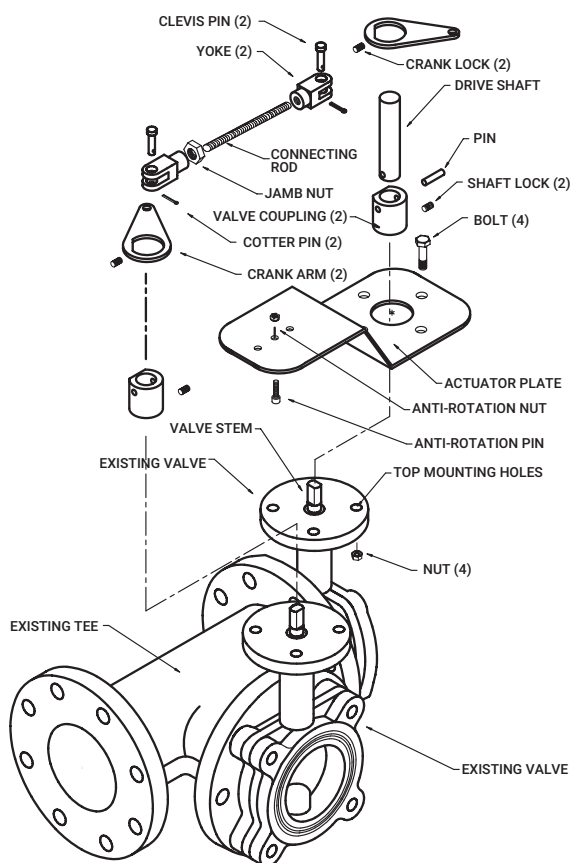
For 3-Way AF and GM Series Actuators



5-year warranty

Technical Data	UFLK... / UFSP
Materials:	
Bracket	stainless steel
Couplings	stainless steel
Crank arms	steel
Yoke	steel
Rod	steel
Mounting position	configuration specific (X10-X35)
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Servicing	chilled or hot water
Weight	7 lbs [3.2 kg]

UFLK / UFSP Parts Breakdown- Single Shown



Application

The UFLK/UFSP retrofit kit is designed to easily attach to the valve mounting pad on select 3-way competitor valves utilizing Belimo AF and GM series actuators. This kit will help to restore service without removal of the valve, saving down time. The UFLK/UFSP retrofit kit is available in various configurations for use with both 2-way and 3-way valves utilizing single or dual actuation.

Default/Configuration

The actuator is sold separately from the linkage. This allows users to select any actuator with the desired control signal. Since the linkage utilizes standard air-side actuators, they can be purchased at any time and mounted in the field.

Operation

The UFLK/UFSP and mounted actuator(s) are capable of rotating 95° in both CW and CCW directions. This allows the disc to fully open or close. When directional needs vary, the actuators can be flipped or directional switch turned to a new rotation. Refer to the actuator wiring guides on Primary / Secondary wiring for dual mounted actuators.

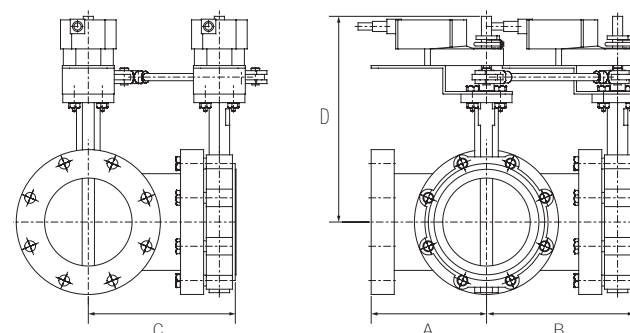
Suitable Actuators	Close-Off Ranges
AF Series	50...200 psi
GM Series	50...300 psi
GK Series	50...300 psi
2*AF Series	50...300 psi
2*GM Series	50...740 psi
2*GK Series	50...740 psi

Competitor Valves**

Bray	Victaulic	Nibco
PDC	Keystone	Flowseal
Centerline	JCI	Milwaukee

**Consult SelectPro for close-off pressures and cross reference of each valve.

UFLK / UFSP Dual Shown



Maximum Dimensions (Inches)

Size	A	B	C	D(Max)	Actuator
2"	7	9	9	19.5	AF/GK
2"	5	7	7	15	AMB(X)
2½"	7	9	9	20	AF
2½"	7	9	9	20	2*AF/2*GK
2½"	5	7	7	15.5	AMB(X)
3"	5	7	7	16	AMB(X)
3"	6	8	8	16	GMB(X)
3"	7	9	9	20.5	2*AF/2*GK
4"	6	8	8	17	GMB(X)
4"	7	9	9	21	2*AF/ 2*GK
4"	6	8	8	21	2*GMB(X)
5"	6	8	8	17.5	GMB(X)
5"	7	9	9	22	2*AF/ 2*GK
6"	6	8	8	22.5	GMB(X)

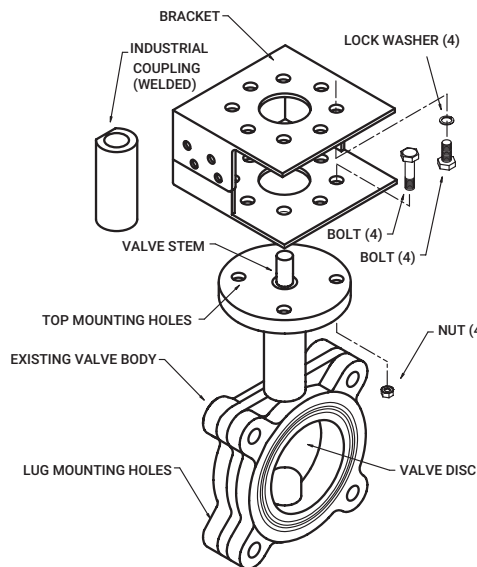
For 2-way SY, PR and PKR Industrial Actuators



5-year warranty

Technical Data	UFLK... / UFSP
Materials:	
Bracket	stainless steel
Couplings	stainless steel
Crank arms	steel
Yoke	steel
Rod	steel
Mounting position	360° mountable
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Servicing	chilled or hot water
Weight	7 lbs [3.2 kg]

UFLK / UFSP Parts Breakdown



Application

The UFLK/UFSP retrofit kit is designed to easily attach to the valve mounting pad on select 2-way competitor valves utilizing Belimo SY industrial series actuators. This kit will help to restore service without removal of the valve, saving down time. The UFLK/UFSP retrofit kit is available in various configurations for use with both 2-way and 3-way valves.

Default/Configuration

The actuator is sold separately from the linkage. This allows users to select any actuator with the desired control signal. Since the linkage utilizes standard SY actuators, they can be purchased at any time and mounted in the field.

Operation

The UFLK/UFSP and mounted actuator(s) are capable of rotating 95° in both CW and CCW directions. This allows the disc to fully open or close. When directional needs vary, the actuator's directional switch can be flipped to change the rotation. The SY is NEMA 4 rated and can be used outdoors.

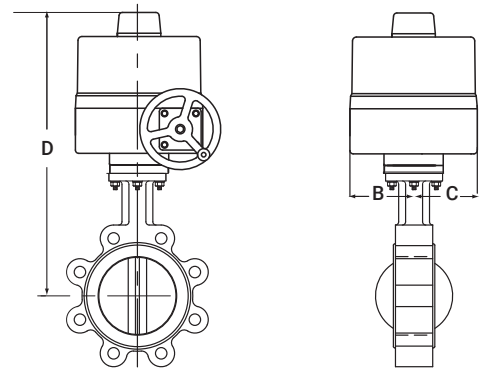
Suitable Actuators	Close-Off Ranges
PR/PKR Series	50...200 psi
SY4 Series	50...780 psi
SY5 Series	150...300 psi
SY6-SY12 Series	150...780 psi

Competitor Valves**

Bray	Victaulic	Nibco
PDC	Keystone	Flowseal
Centerline	JCI	Milwaukee

**Consult SelectPro for close-off pressures and cross reference of each valve.

UFLK / UFSP



Maximum Dimensions (Inches)

Size	B	C	D(Max)	Actuator
2"	3.94	3.94	18.5	PR/PKR
2½"	3.94	3.94	18.75	PR/PKR
3"	3.94	3.94	19	PR/PKR
4"	3.94	3.94	19.75	PR/PKR
5"	3.94	3.94	20.25	PR/PKR
6"	3.94	3.94	20.75	PR/PKR
8"	3.94	3.94	22.25	PR/PKR
8"	11.37	11.37	29	SY4...
10"	13.58	13.58	30	SY4...
12"	15.01	15.01	32	SY4...
12"	15.01	15.01	32	SY5...
14"	17.02	17.02	33	SY6...
16"	18.39	18.39	38.5	SY7...
18"	20.63	20.63	39.5	SY9...
20"	23	23	41.5	SY9...
24"	27.9	27.9	53.25	SY12...

93 UFLK.../UFSP... Retrofit Linkage for Butterfly Valves

For 3-way SY, PR and PKR Industrial Actuators



5-year warranty

Technical Data	UFLK... / UFSP
Materials:	
Bracket	stainless steel
Couplings	stainless steel
Crank arms	steel
Yoke	steel
Rod	steel
Mounting position	configuration specific (X10-X35)
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Servicing	chilled or hot water
Weight	12.6 lbs [5.73 kg]

Application

The UFLK/UFSP retrofit kit is designed to easily attach to the valve mounting pad on select 3-way competitor valves utilizing Belimo SY industrial series actuators. This kit will help to restore service without removal of the valve, saving down time. The UFLK/UFSP retrofit kit is available in various configurations for use with both 2-way and 3-way valves.

Default/Configuration

The actuator is sold separately from the linkage. This allows users to select any actuator with the desired control signal. Since the linkage utilizes standard SY actuators, they can be purchased at any time and mounted in the field.

Operation

The UFLK/UFSP and mounted actuator(s) are capable of rotating 95° in both CW and CCW directions. This allows the disc to fully open or close. When directional needs vary, the actuator's directional switch can be flipped to change the rotation. The SY is NEMA 4 rated and can be used outdoors.

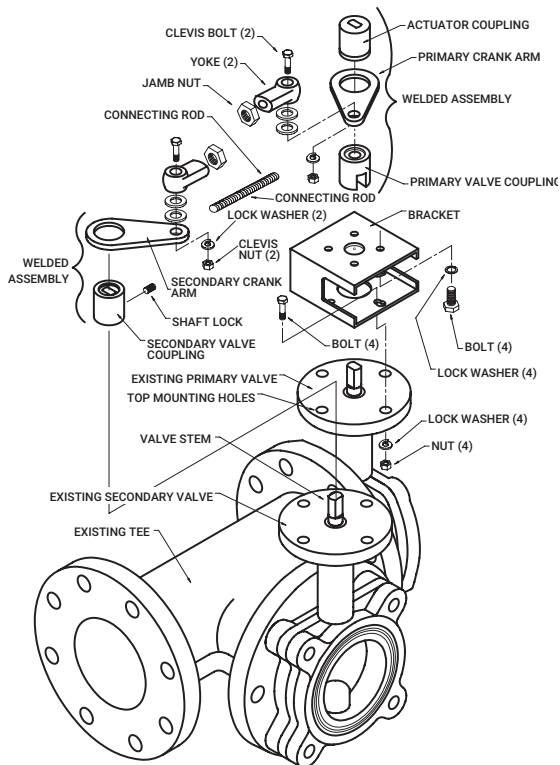
Suitable Actuators	Close-Off Ranges
PR/PKR Series	50...200 psi
SY4 Series	50...780 psi
SY5 Series	150...300 psi
SY6-SY12 Series	150...780 psi

Competitor Valves**

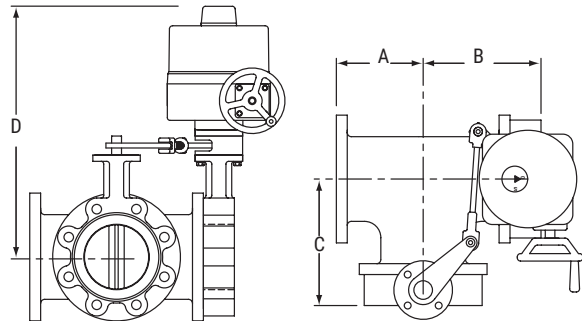
Bray	Victaulic	Nibco
PDC	Keystone	Flowseal
Centerline	JCI	Milwaukee

**Consult SelectPro for close-off pressures and cross reference of each valve.

UFLK / UFSP Parts Breakdown



UFLK / UFSP



Maximum Dimensions (Inches)

Size	A	B	C	D(Max)	Actuator
2"	4.15	6.15	6.15	18.25	PR/PKR
2½"	4.76	6.76	6.76	18.75	PR/PKR
3"	5.28	7.28	7.28	19	PR/PKR
4"	6.55	8.55	8.55	19.75	PR/PKR
5"	7.64	9.64	9.64	20.25	PR/PKR
6"	8.19	10.19	10.19	20.75	PR/PKR
8"	9.37	11.37	11.37	22.25	PR/PKR
8"	9.37	11.37	11.37	29	SY4...
10"	11.58	13.58	13.58	30	SY4...
12"	13.01	15.01	15.01	32	SY4...
12"	13.01	15.01	15.01	32	SY5...
14"	15.02	17.02	17.02	33	SY6...
16"	16.39	18.39	18.39	38.5	SY7...
18"	18.63	20.63	20.63	39.5	SY9...
20"	21	23	23	41.5	SY9...
24"	25.9	27.9	27.9	53.25	SY12...

30/31, 40/41 Series Butterfly Valves

Valve Body Model	Valve Configuration	Fail-Safe	Size	Belimo Linkage	Belimo Actuator Series
30/31 Series Butterfly Valves	2-way	No	2"	UFLK1100	AM
				UFLKP004	PR
			2½"	UFLK1100	GM
				UFLKP004	PR
			3"	UFLK1102	2*GM
				UFLKP004	PR
			4"	UFLK1108	2*GM
				UFLKP008	PR
			5"	UFLKP014	PR
			6"	UFLKP014	PR
			8"	UFLK1138	SY4
			10"	UFLK1140	SY4
			12"	UFLK1142	SY6
			14"	UFLK1144	SY7
			16"	UFLK1144	SY8
		Yes	2"	UFLK1102	2*AF
				UFLKP004	PKR
			2½"	UFLK1102	2*AF
				UFLK1100	GK
				UFLKP004	PKR
			3"	UFLK1102	2*GK
				UFLKP004	PKR
			4"	UFLK1108	2*GK
				UFLKP008	PKR
			5"	UFLKP014	PKR
			6"	UFLKP014	PKR
	3-way	No	2"	UFLKP104	PR
			2½"	UFLKP104	PR
			3"	UFLKP104	PR
			4"	UFLKP108	PR
			5"	UFLK4136	SY4
			6"	UFLK4136	SY4
			8"	UFLK4138	SY5
			10"	UFLK4140	SY6
		Yes	2"	UFLKP104	PKR
			2½"	UFLKP104	PKR
			3"	UFLKP104	PKR
40/41 Series Butterfly Valves	2-way	No	2½"	UFLKP008	PR
			3"	UFLKP008	PR
			4"	UFLKP008	PR
			5"	UFLKP014	PR
			6"	UFLK1228	SY4
			8"	UFLK1230	SY4
			10"	UFLK1232	SY6
		Yes	2½"	UFLK1200	2*GK
				UFLKP008	PKR
			3"	UFLK1200	2*GK
				UFLKP008	PKR
			4"	UFLK1200	2*GK
				UFLKP008	PKR
			5"	UFLKP014	PKR
	3-way	No	2½"	UFLKP108	PR
			3"	UFLKP108	PR
			4"	UFLKP108	PR
		Yes	2½"	UFLKP108	PKR
			3"	UFLKP108	PKR
			4"	UFLKP108	PKR



C200 Round and Square Top Series Butterfly Valves

Valve Body Model	Valve Configuration	Fail-Safe	Size	Belimo Linkage	Belimo Actuator Series	
C200 Round Top Series Butterfly Valves	2-way	No	2"	UFLK3500	AM	
				UFLKP030	PR	
			2½"	UFLKP030	PR	
				3"	UFLKP030	PR
			4"	UFLKP031	PR	
				5"	UFLKP032	PR
			6"	UFLKP032	PR	
				8"	UFLK3546	SY4
		10"	UFLK3548	SY4		
			Yes	2"	UFLK3500	AF
		UFLKP030			PKR	
		2½"		UFLK3500	GK	
				UFLKP030	PKR	
		3"		UFLK3500	GK	
				UFLKP030	PKR	
		4"		UFLK3508	2*GK	
				UFLKP031	PKR	
	5"	UFLKP032	PKR			
		6"	UFLKP032	PKR		
			3-way	No	2"	UFLKP130
		2½"			UFLKP130	PR
		3"			UFLKP130	PR
	4"	UFLKP131			PR	
	5"	UFLKP132			PR	
	6"	UFLK6544			SY4	
	8"	UFLK6546			SY4	
	10"	UFLK6548		SY5		
	Yes	2"		UFLKP130	PKR	
		2½"		UFLKP130	PKR	
		3"	UFLKP130	PKR		
		4"	UFLKP131	PKR		
		5"	UFLKP132	PKR		
	C200 Square Top Series Butterfly Valves	2-way	No	2"	UFLK1300	AM
UFLKP004					PR	
2½"				UFLK1300	GM	
				UFLKP004	PR	
3"				UFLK1300	GM	
				UFLKP004	PR	
4"				UFLK1308	2*GM	
				UFLKP011	PR	
5"				UFLKP016	PR	
6"				UFLKP016	PR	
8"				UFLK1346	SY4	
10"				UFLK1348	SY4	
12"				UFLK1350	SY5	
14"				UFLK1350	SY5	
Yes			2"	UFLK1300	AF	
				UFLKP004	PKR	
			2½"	UFLK1300	GK	
				UFLKP004	PKR	
			3"	UFLK1300	GK	
				UFLKP004	PKR	
			4"	UFLK1308	2*GK	
				UFLKP011	PKR	
5"		UFLKP016	PKR			
		6"	UFLKP016	PKR		
3-way		No	2"	UFLKP104	PR	
			2½"	UFLKP104	PR	
			3"	UFLKP104	PR	
			4"	UFLKP111	PR	
			5"	UFLKP116	PR	
			6"	UFLK4346	SY4	
		Yes	8"	UFLK4348	SY4	
			2"	UFLKP104	PKR	
			2½"	UFLKP104	PKR	
	3"		UFLKP104	PKR		
	4"		UFLKP111	PKR		
5"	UFLKP116	PKR				



Valve Body Model	Valve Configuration	Fail-Safe	Size	Belimo Linkage	Belimo Actuator Series
C225 Square Top Series Butterfly Valves	2-way	No	2"	UFLKP004	PR
			2½"	UFLKP004	PR
			3"	UFLKP004	PR
			4"	UFLKP011	PR
			5"	UFLKP016	PR
		Yes	2"	UFLKP004	PKR
			2½"	UFLKP004	PKR
			3"	UFLKP004	PKR
			4"	UFLKP011	PKR
			5"	UFLKP016	PKR
	3-way	No	2"	UFLKP104	PR
			2½"	UFLKP104	PR
			3"	UFLKP104	PR
			4"	UFLKP111	PR
			5"	UFLKP116	PR
			6"	UFLK4444	SY4
		Yes	8"	UFLK4446	SY5
			2"	UFLK4400	GK
			2½"	UFLKP104	PKR
				UFLK4400	GK
				UFLKP104	PKR
			3"	UFLKP104	PKR
			4"	UFLKP111	PKR
			5"	UFLKP116	PKR
JOHNSON CONTROLS					
VF.. (H) Series Butterfly Valves	2-way	No	2"	UFLK2100	GM
			2½"	UFLK2100	GM
			3"	UFLKP007	PR
				UFLK2100	GM
			4"	UFLKP007	PR
				UFLK2108	2*GM
			5"	UFLKP009	PR
				UFLKP015	PR
		Yes	6"	UFLK2144	SY4
			8"	UFLK2158	SY4
			2"	UFLK2102	2*AF
				UFLK2100	GK
			2½"	UFLK2102	2*AF
				UFLK2100	GK
			3"	UFLKP007	PKR
				UFLK2102	2*AF
	3-way	No	4"	UFLK2100	GK
				UFLKP007	PKR
			5"	UFLK2108	2*GK
				UFLKP009	PKR
			6"	UFLK2102	2*GK
				UFLK2100	GK
		Yes	7"	UFLK2108	2*GK
			8"	UFLK2158	SY4
			9"	UFLK2158	SY4
			10"	UFLK2158	SY4
			2"	UFLK5102	2*GM
			3"	UFLK5102	2*GM
			4"	UFLKP109	PR
			5"	UFLK5136	SY4
6"	UFLK5136	SY4			
8"	UFLK5138	SY5			
2"	UFLK5102	2*AF			
2½"	UFLK5102	2*GK			
3"	UFLK5102	2*GK			
4"	UFLKP109	PKR			



360/362, AR1/AR2, Figure 222/221 Series Butterfly Valves

Valve Body Model	Valve Configuration	Fail-Safe	Size	Belimo Linkage	Belimo Actuator Series
360/362 Series Butterfly Valves, K-LOK	2-way	No	4"	UFLKP013	PR
			5"	UFLKP013	PR
			10"	UFLK2452	SY4
		Yes	4"	UFLKP013	PKR
			5"	UFLKP013	PKR
AR1/AR2 Series Butterfly Valves	2-way	No	2"	UFLK2300	GM
			2½"	UFLK2300	GM
			3"	UFLK2300	GM
			4"	UFLK2308	2*GM
				UFLKP009	PR
			5"	UFLKP013	PR
			6"	UFLK2356	SY4
			8"	UFLK2342	SY4
			10"	UFLK2344	SY5
			12"	UFLK2346	SY7
		Yes	2"	UFLK2300	GK
			2½"	UFLK2300	GK
			3"	UFLK2300	GK
			4"	UFLK2308	2*GK
				UFLKP009	PKR
			5"	UFLKP013	PKR
	3-way	No	4"	UFLKP109	PR
			5"	UFLK5338	SY4
			6"	UFLK5338	SY4
			8"	UFLK5340	SY5
		Yes	4"	UFLKP109	PKR
Figure 222/221 Series Butterfly Valves	2-way	No	2"	UFLK2200	GM
				UFLKP003	PR
			2½"	UFLK2200	GM
				UFLKP003	PR
			3"	UFLK2200	GM
				UFLKP003	PR
			4"	UFLK2208	2*GM
				UFLKP009	PR
			5"	UFLKP013	PR
			6"	UFLK2232	SY4
			8"	UFLK2234	SY4
			10"	UFLK2236	SY5
			12"	UFLK2238	SY7
		Yes	2"	UFLK2200	GK
				UFLKP003	PKR
			2½"	UFLK2200	GK
				UFLKP003	PKR
			3"	UFLK2200	GK
				UFLKP003	PKR
			4"	UFLK2208	2*GK
				UFLKP009	PKR
	3-way	No	2"	UFLKP103	PR
			2½"	UFLKP103	PR
			3"	UFLKP103	PR
			4"	UFLKP109	PR
			5"	UFLK5228	SY4
			6"	UFLK5228	SY4
			8"	UFLK5230	SY5
			10"	UFLK5232	SY7
		Yes	2"	UFLK5202	2*AF
				UFLKP103	PKR
			2½"	UFLK5202	2*AF
				UFLKP103	PKR
			3"	UFLK5202	2*GK
				UFLKP103	PKR
			4"	UFLKP109	PKR

CL, ML Series Butterfly Valves

LD1/WD1, LD(C)2/WD(C)2, LD(C)3 Series Butterfly Valves

Valve Body Model	Valve Configuration	Fail-Safe	Size	Belimo Linkage	Belimo Actuator Series	
CL Series Butterfly Valves	2-way	No	2"	UFLK2600	AM	
			2½"	UFLK2600	AM	
			3"	UFLK2600	GM	
			4"	UFLK2608	2*GM	
				UFLKP005	PR	
			5"	UFLK2608	2*GM	
				UFLKP005	PR	
			6"	UFLKP010	PR	
			8"	UFLK2634	SY4	
		10"	UFLK2636	SY4		
		12"	UFLK2636	SY5		
		Yes	2"	UFLK2600	AF	
			2½"	UFLK2600	AF	
			3"	UFLK2600	GK	
			4"	UFLK2608	2*GK	
				UFLKP005	PKR	
			5"	UFLK2608	2*GK	
	UFLKP005		PKR			
6"	UFLKP010		PKR			
ML Series Butterfly Valves	2-way	No	2"	UFLK2700	AM	
			2½"	UFLK2700	AM	
			3"	UFLK2700	GM	
			4"	UFLK2708	2*GM	
				UFLKP005	PR	
			5"	UFLK2708	2*GM	
				UFLKP005	PR	
			6"	UFLKP010	PR	
			8"	UFLK2740	SY4	
		10"	UFLK2742	SY4		
		12"	UFLK2742	SY5		
		Yes	2"	UFLK2700	AF	
			2½"	UFLK2700	AF	
			3"	UFLK2700	GK	
			4"	UFLK2708	2*GK	
				UFLKP005	PKR	
			5"	UFLK2708	2*GK	
	UFLKP005		PKR			
6"	UFLKP010		PKR			
NIBCO						
LD1/WD1 Series Butterfly Valves	2-way	No	14"	UFLK2960	SY7	
			16"	UFLK2968	SY8	
LD(C)2/WD(C)2, LD(C)3 Series Butterfly Valves	2-way	No	2"	UFLK2900	GM	
			2½"	UFLK2908	GM	
					UFLKP002	PR
			3"	UFLK2910	2*GM	
					UFLKP002	PR
			4"	UFLK2916	2*GM	
					UFLKP006	PR
			5"	UFLKP012	PR	
			6"	UFLKP012	PR	
			8"	UFLK2954	SY4	
			10"	UFLK2956	SY4	
			12"	UFLK2958	SY6	
		Yes	2"	UFLK2900	GK	
			2½"	UFLK2910	2*AF	
					UFLK2908	GK
					UFLKP002	PKR
			3"	UFLK2910	2*GK	
					UFLKP002	PKR
			4"	UFLK2916	2*GK	
		UFLKP006	PKR			
	5"	UFLKP012	PKR			
	6"	UFLKP012	PKR			
3-way	No	4"	UFLKP106	PR		
		5"	UFLK5948	SY4		
		6"	UFLK5948	SY4		
		8"	UFLK5950	SY6		
	Yes	4"	UFLKP106	PKR		



Masterseal, Vic300 Series Butterfly Valves

Valve Body Model	Valve Configuration	Fail-Safe	Size	Belimo Linkage	Belimo Actuator Series
Masterseal (New Style) Series Butterfly Valves	2-way	No	2"	UFLK8172	AM
				UFLKP001	PR
			2½"	UFLK8172	GM
				UFLKP001	PR
			3"	UFLK8172	GM
				UFLKP001	PR
			4"	UFLK8176	2*GM
				UFLKP008	PR
			5"	UFLKP013	PR
			6"	UFLKP013	PR
			8"	UFLK8188	SY4
			10"	UFLK8190	SY5
			12"	UFLK8190	SY6
		Yes	2"	UFLKP001	PKR
			2½"	UFLK8172	GK
				UFLKP001	PKR
			3"	UFLK8172	GK
				UFLKP001	PKR
			4"	UFLK8176	2*GK
				UFLKP008	PKR
			5"	UFLKP013	PKR
			6"	UFLKP013	PKR
	3-way	No	2"	UFLKP101	PR
			2½"	UFLKP101	PR
			3"	UFLKP101	PR
			4"	UFLKP108	PR
			5"	UFLKP113	PR
			6"	UFLK7412	SY4
			8"	UFLK7414	SY4
			10"	UFLK7416	SY6
			12"	UFLK7418	SY7
		Yes	2"	UFLKP101	PKR
			2½"	UFLKP101	PKR
			3"	UFLKP101	PKR
			4"	UFLKP108	PKR
			5"	UFLKP113	PKR
Vic300 (Old Style) Series Butterfly Valves	2-way	No	2½"	UFLK3308	AM
			3"	UFLK3308	GM
			4"	UFLK3316	2*GM
			8"	UFLK3352	SY4
			10"	UFLK3354	SY4
			12"	UFLK3356	SY4
		Yes	2½"	UFLK3308	AF
			3"	UFLK3308	GK
			4"	UFLK3316	2*GK
	3-way	No	2"	UFLK6300	GM
			2½"	UFLK6308	GM
			6"	UFLK6348	SY4
			8"	UFLK6350	SY4
			10"	UFLK6352	SY5
			12"	UFLK6354	SY6
		Yes	2"	UFLK6300	AF
				UFLK6300	GK
			2½"	UFLK6308	GK

Specialty Retrofit Solutions for Valve Manufacturers

Belimo offers specialty linkage solutions for the manufacturers in the chart below.
Please contact technical support for a quotation.

Valve Company	Butterfly Valve Series	Valve Configuration
Apollo	141/143 Series	2-way
		3-way
Belimo	HS, HSU, HD, HDU Series	2-way
		3-way
Challenger	CH100 Series	2-way
		3-way
Chemtrol	PVC Model C Series	2-way
		3-way
Dezurik	BRS Series	2-way
		3-way
Flowseal	1 L/W Series	2-way
		3-way
	3 L/W Series	2-way
		3-way
FNW	Figure 1000/2000 Series	2-way
		3-way
Gruvlok	Figure 7700 (Double D Shaft 2003 and Newer) Series	2-way
		3-way
	Figure 7700 (Sheared Pin Shaft Pre 2003) Series	2-way
		3-way
Hammond	61/62 Series	2-way
		3-way
Jamesbury	815 L/W Series	2-way
		3-way
	830 L/W Series	2-way
		3-way
Jenkins	22XXEXJ Series	2-way
		3-way
Keystone	K-LOK	3-way
Metraflex	200 WOG Series	2-way
		3-way
Mueller	65/66 Series	2-way
		3-way
PDC	27 Series	2-way
		3-way
Quartermaster	42/44 Series	2-way
		3-way
Watts	DBF Series (pre 2009)	2-way
		3-way

Considerations:

- Every retrofit solution is available in 2-way and 3-way configurations.
- Existing kits do not require completed retrofit form; only the make, model, and size of the competitor valve are required.
- Pricing and delivery vary with complexity.

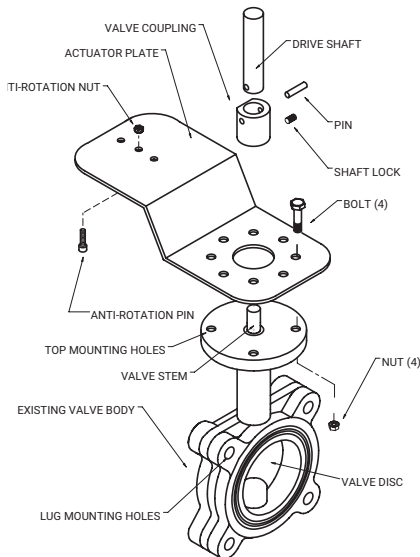
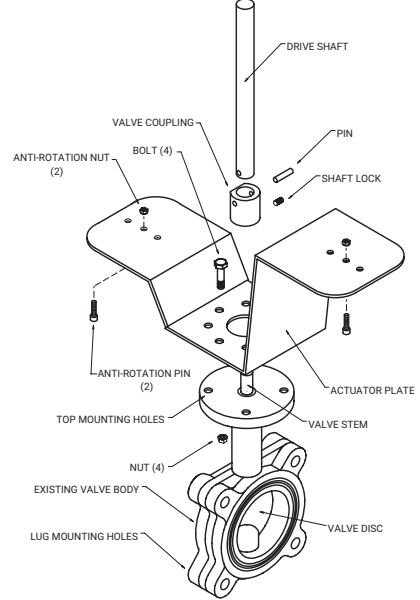
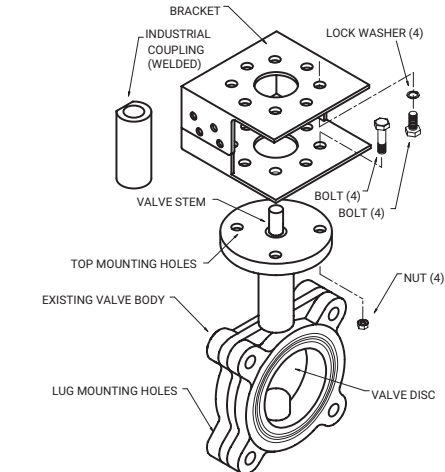
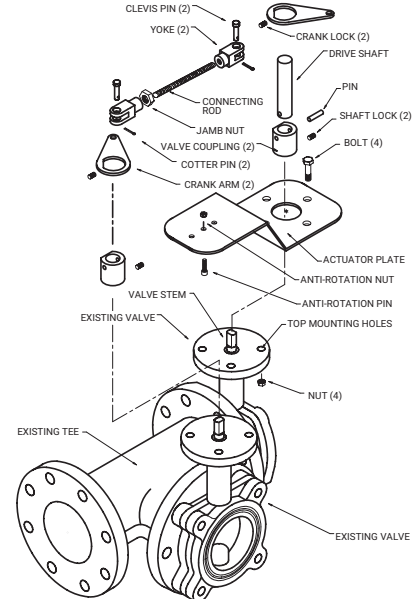
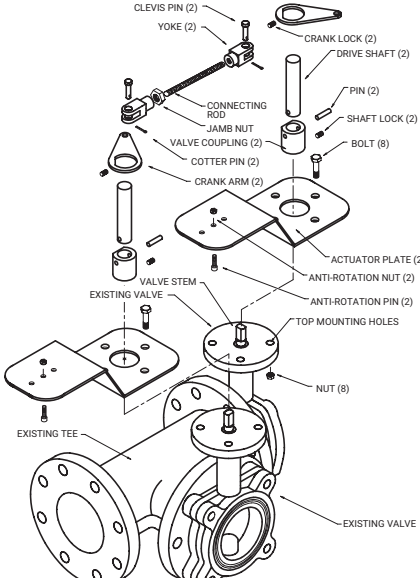
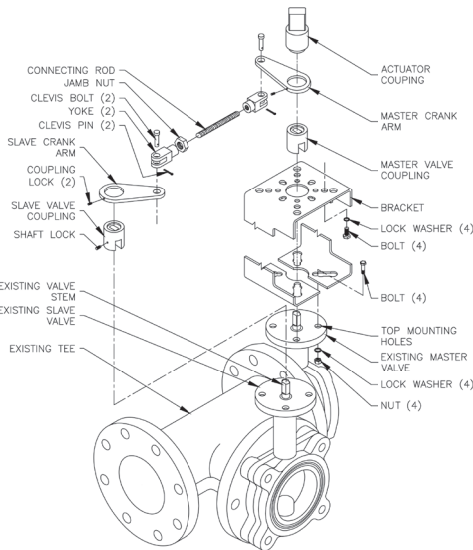
New smart retrofit forms for butterfly valves, globe valves, and ball valves can be found on www.belimo.com.

Legacy paper forms will no longer be accepted.



101 Custom Butterfly Valve Retrofit Solutions

Component Identification

2-way Single Actuator Generic – Retrofit Form Required  UFSP0000	2-way Dual Actuator Generic – Retrofit Form Required  UFSP0008	2-way SY / PR / PKR Actuator Generic – Retrofit Form Required  UFSP0020* PR, PKR, SY4...SY8 UFSP0022* SY9...SY12
3-way Single Actuator Generic – Retrofit Form Required  UFSP0002	3-way Dual Actuator Generic – Retrofit Form Required  UFSP0010	3-way SY / PR / PKR Actuator Generic – Retrofit Form Required  UFSP0024* PR, PKR, SY4...SY8 UFSP0026* SY9...SY12

NOTE: 3-way bracket configuration shown is only one of many possible arrangements. Custom kits are designed to your unique specification and are not returnable.

*Reference page 97 Keystone AR1/AR2 for approximate actuator sizing.



5-year warranty

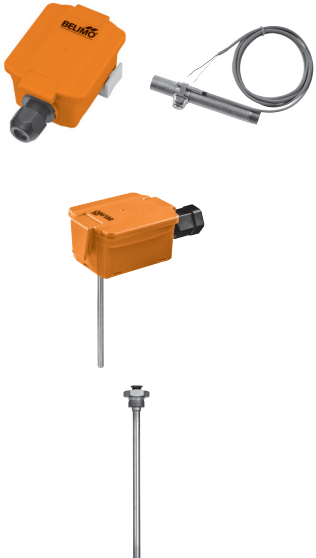
WEATHER SHIELDS		GM	2* GM	GR/ GKR	LF	NF	AF	2* AF	GK	2* GK	LV/ SV	EV/ RV	LVK/ SVK	AVK
	ZS-BFV-20** For GM, GK actuators on F6, F7, HD, HDU, SHP, and VIC series	•							•					
	ZS-BFV-30** For AF actuators on F6, F7, HD, HDU SHP, and VIC series						•							
	ZS-BFV-60** For dual GM, GK actuators on butterfly valves F6, HD, HDU (4...6"), SHP, and VIC series		•							•				
	ZS-BFV-70** For dual AF series on butterfly valves F6, HD, HDU (2½...3"), SHP and VIC series							•						
	ZS-BFV-90** For dual AF, single/dual GM, GK on F7 series (2...4"). No holes unless factory mounted	•	•					•	•	•				
	ZS-BFV-100** Dual GM/GK series for F7, HD, HDU, SHP (4...6"). Two required		•							•				
	ZS-BFV-110 GR, GKR series for F6, HD, HDU (4...6")			•										

**Cannot be used with direct mount actuators.

BATTERY BACKUP		LM/ LR	NM/ NR	AM	GM	AR	GR	EV	RV	PR/ JR	SY
	EXT-NSV-B03-120* Battery backup system for SY4...SY6 AC 120 V, on/off actuators										•
	EXT-NSV-B04-120* Battery backup system for SY4...SY6 AC 120 V, MFT actuators										•
	EXT-NSV-B13-24* Battery backup system for SY4...SY5 AC 24 V, on/off actuators										•
	EXT-NSV-B14-24* Battery backup system for SY4...SY5 AC 24 V, MFT actuators										•

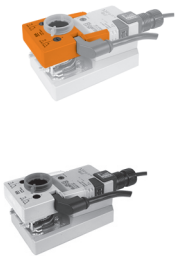
ZTH REPLACEMENT CABLES		AM	GM	AR	GR	PR/JR	GK	DK	SY
  	ZK1-GEN Cable for use with ZTH US to connect to new generation non fail-safe and electronic fail-safe actuators via diagnostic/programming socket	•	•						
	ZK2-GEN Cable for use with ZTH US to connect to actuators not equipped with diagnostic/programming socket	Available for all MFT Actuators Only							
	ZK6-GEN Cable for use with ZTH US to connect to SY actuator via RJII port								•

Butterfly Valves**JR, PR/PKR TEMPERATURE SENSORS**

	01ST-5L3 Contact Temperature Sensor, NTC10K2, cable 6.5 ft. [2 m]
	01ST-5B3 Contact Temperature Sensor, PT1000, cable 6.5 ft. [2 m]
	01HT-5L Contact Temperature Sensor, NTC10K2
	01HT-5B Contact Temperature Sensor, PT1000
	01DT-5LN Immersion Temperature Sensor, NTC10K2, probe length 6" [150 mm]
	01DT-5LP Immersion Temperature Sensor, NTC10K2, probe length 8" [200 mm]
	01DT-5BN Immersion Temperature Sensor, PT1000, probe length 6" [150 mm]
	01DT-5BP Immersion Temperature Sensor, PT1000, probe length 8" [200 mm]
	A-22P-A09 Thermowell (2 part) stainless steel, 6" [150 mm], ½" NPT
	A-22P-A11 Thermowell (2 part) stainless steel, 8" [200 mm], ½" NPT

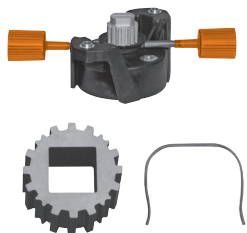
PROGRAMMING TOOLS

	Belimo Assistant (NFC) App Allows fast programming, commissioning, and troubleshooting even when the actuator is not powered. Available through Google Play and Apple App Store	<i>Available on NFC Labeled Actuators Only</i>
	PC-Tool Belimo MFT configuration software. Available in the download center at www.belimo.com	<i>Available for all MFT Actuators Only</i>
	ZTH US Handheld interface module that allows field programming. Includes ZK1-GEN, ZK2-GEN, and ZK6-GEN cables	<i>Available for all MFT Actuators Only</i>
	ZIP-BT-NFC Bluetooth® to NFC converter for temporary wireless operation of Belimo devices with NFC capabilities	<i>Available for NFC Labeled Actuators Only</i>

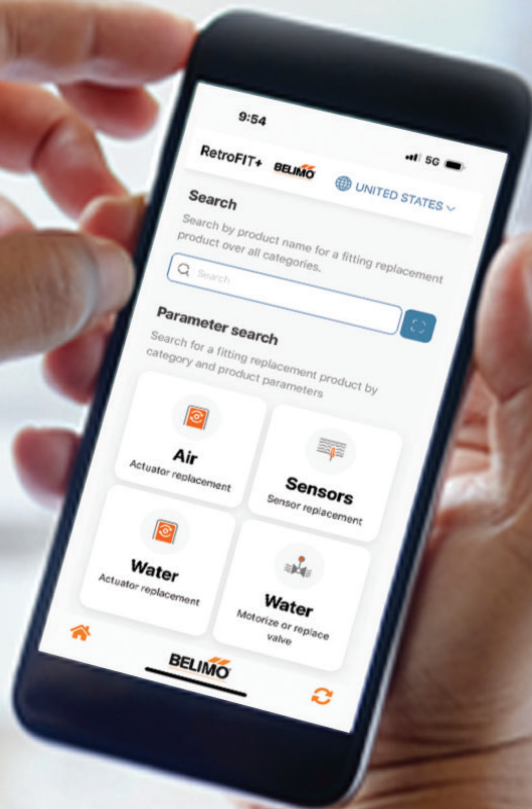
AUXILIARY SWITCHES & POTENTIOMETERS		VALVES	LR/LM	NR/NM	AR/AM	GR/GM	AK	GK/GKR	DK
	S1A Auxiliary switch 1x SPDT, 3A (0.5A inductive) @ AC 250 V	Available for All Valves	•	•	•	•	•	•	•
	S2A Auxiliary switch 2x SPDT, 3A (0.5A inductive) @ AC 250 V		•	•	•	•	•	•	•
	P140A GR Feedback potentiometer 140 Ω		•	•	•	•	•	•	•
	P1000A GR Feedback potentiometer 1000 Ω		•	•	•	•	•	•	•
	P10000A GR Feedback potentiometer 10000 Ω		•	•	•	•	•	•	•

ELECTRIC DISCONNECT		SY
	HOA-120V Local electric disconnect for SY4-SY12 110/230 V - 2 position	•
		•
	HOA-120VMFT Local electric disconnect for SY4-SY12 110/230 V - modulating	•
		•

HAND CRANK		JR	PR/PKR
	ZG-HND PR Replacement hand crank for PR and PKR actuators		•
	ZJR20 Replacement hand crank for JR actuators	•	

JR, PR/PKR RETROFIT LINKAGE		JR	PR / PKR
	IND-JR01 Valve linkage for 4...6" HDU series 2-way with indicator	•	
	IND-JR05 Valve linkage for 4" L series 2-way with indicator	•	
	IND-JR03 Valve linkage for 5...6" L series 2-way with indicator	•	
	IND-PR01 Valve linkage for 4...6" HDU/HD series 2-way with indicator		•
	IND-PR02 Valve linkage for 4...6" HDU/HD series 2-way without indicator		•
	IND-PR03 Valve linkage for 8...12" L series 2-way with indicator		•
	IND-PR04 Valve linkage for 8...12" L series 2-way without indicator		•

The Source for HVAC Replacement Solutions



Belimo RetroFIT+ App

Poorly functioning or inoperative HVAC systems can be transformed by finding the right replacement solution. The Belimo RetroFIT+ App enables you to locate the appropriate replacement product based on parameters such as manufacturer, model, voltage, and more. Providing you what you need, delivered on time.

Find the Belimo RetroFIT+ App for free on iTunes or Google Play.



Discover the advantages
www.belimo.com

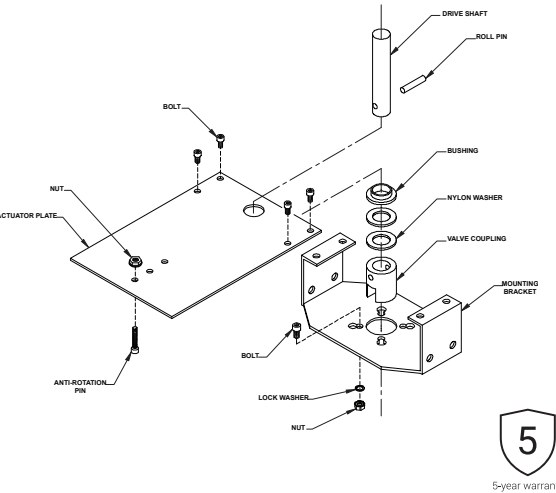


Ball Valve Retrofit Solutions

Belimo ball valve retrofit solutions are designed to easily attach to the valve mounting pad of competitor valves utilizing Belimo actuators. Ball valves can conveniently be restored to service without removing the valve, saving down time and costs.

107 **UBSP0004 Custom Retrofit Linkage for Ball Valves**

For use with Belimo Rotary Actuators



Technical Data	
Service	chilled or hot water and steam
Applicable valve size	½" [13], ¾" [19], 1" [25], 1¼" [32], 1½" [38], 2" [50]
Frame, plate, base	stainless steel
Shaft diameter	½" to ¾" round
Shaft	stainless steel
Coupling	stainless steel
Bearing	bronze oil-lite
Mounting position	360°
Media temp. range (water)	-22...298°F [-30...148°C]
Media temp. range (steam)	20...298°F [-7...148°C]
Weight	9 lbs

Application

The UBSP custom retrofit kit is designed to easily attach to the valve mounting pad on select competitor valves utilizing Belimo actuators. This kit will help to restore service without removal of the valve, saving down time. The UBSP retrofit kit is available in various configurations for use with both 2-way and 3-way valves utilizing single or dual actuation.

Operation

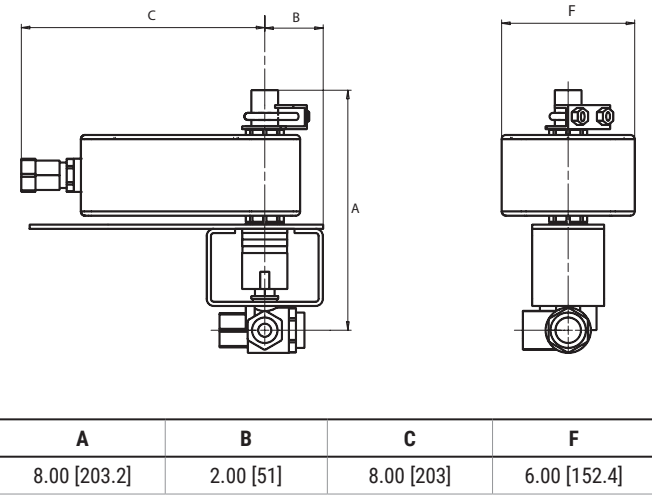
The UBSP custom kit and mounted actuator(s) are capable of rotating 95° in both CW and CCW directions. This allows the ball to fully open or close. When directional needs vary, the actuators can be flipped or directional switch turned to a new rotation. Refer to Primary / Secondary wiring for dual mounted actuators.

Default/Configuration

The actuator is sold separately from the linkage, allowing users to select an actuator with the desired control signal. The linkage utilizes standard airside or SY actuators which can be purchased at any time and mounted in the field.

Suitable Actuators			
Linkage	Spring Return	Electronic Fail-Safe	Non-Spring Return
UBSP0004	LF, NF, AF	GK	LM, NM, AM, GM

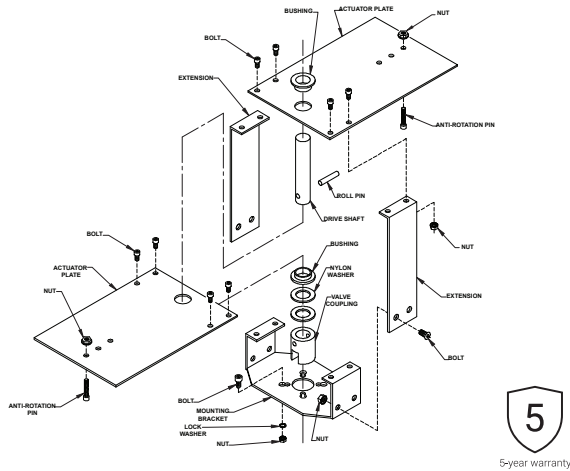
Dimensions (Inches [mm])



Application Notes

Before ordering, a completed retrofit form is required.

For use with Belimo Rotary Actuators

**Technical Data**

Service	chilled or hot water and steam
Applicable valve size	½" [13], ¾" [19], 1" [25], 1¼" [32], 1½" [38], 2" [50]
Frame, plate, base	stainless steel
Shaft diameter	½" to ¾" round
Shaft	stainless steel
Coupling	stainless steel
Bearing	bronze oil-lite
Mounting position	360°
Media temp. range (water)	-22...298°F [-30...148°C]
Media temp. range (steam)	20...298°F [-7...148°C]
Weight	18 lbs

Application

The UBSP custom retrofit kit is designed to easily attach to the valve mounting pad on select competitor valves utilizing Belimo actuators. This kit will help to restore service without removal of the valve, saving down time. The UBSP retrofit kit is available in various configurations for use with both 2-way and 3-way valves utilizing single or dual actuation.

Operation

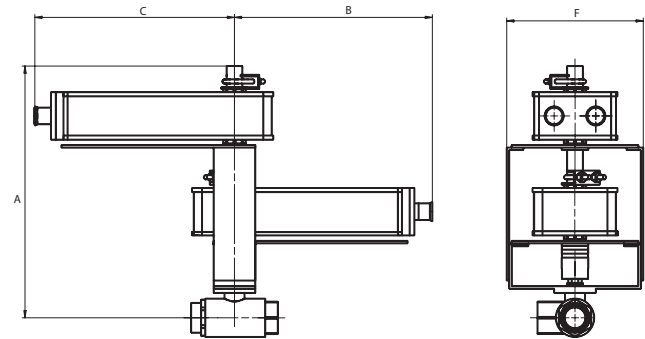
The UBSP custom kit and mounted actuator(s) are capable of rotating 95° in both CW and CCW directions. This allows the ball to fully open or close. When directional needs vary, the actuators can be flipped or directional switch turned to a new rotation. Refer to Primary / Secondary wiring for dual mounted actuators.

Default/Configuration

The actuator is sold separately from the linkage, allowing users to select an actuator with the desired control signal. The linkage utilizes standard airside or SY actuators which can be purchased at any time and mounted in the field.

Suitable Actuators

Linkage	Spring Return	Electronic Fail-Safe	Non-Spring Return
UBSP0006	2*AF	2*GK	2*GM

Dimensions (Inches [mm])

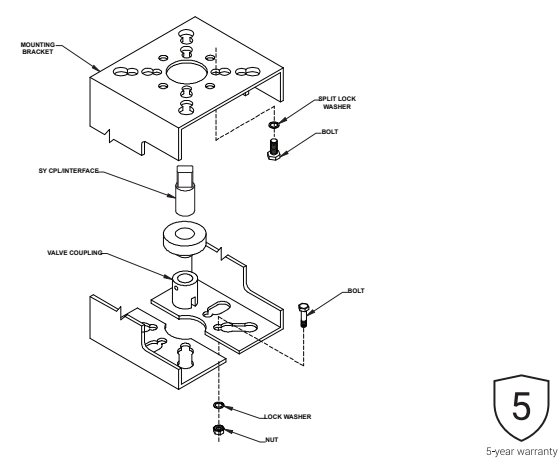
A	B	C	F
15.60 [396.24]	8.00 [203]	8.00 [203]	6.00 [152.4]

Application Notes

Before ordering, a completed retrofit form is required.

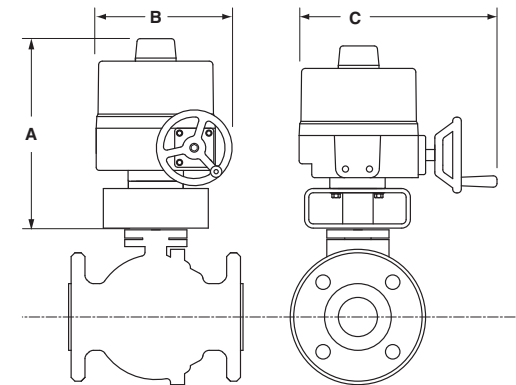
109 **UBSP0008 Custom Retrofit Linkage for Ball Valves**

For use with Belimo SY, PR, and PKR Actuators



Technical Data	
Service	chilled or hot water and steam
Applicable valve size	½" [13], ¾" [19], 1" [25], 1¼" [32], 1½" [38], 2" [50], 2½" [63.5], 3" [76.2]
Frame, plate, base	stainless steel
Shaft	steel
Coupling	steel
Mounting position	360°
Media temp. range (water)	-22...298°F [-30...148°C]
Media temp. range (steam)	20...298°F [-7...148°C]
Housing	NEMA 4X, IP66
Weight	12 lbs

Dimensions (Inches [mm])



A	B	C
16.63 [422]*	12.00 [305]	15.00 [381]

*Based on SY6

Application

The UBSP custom retrofit kit is designed to easily attach to the valve mounting pad on select competitor valves utilizing Belimo actuators. This kit will help to restore service without removal of the valve, saving down time. The UBSP retrofit kit is available in various configurations for use with both 2-way and 3-way valves utilizing single or dual actuation.

Operation

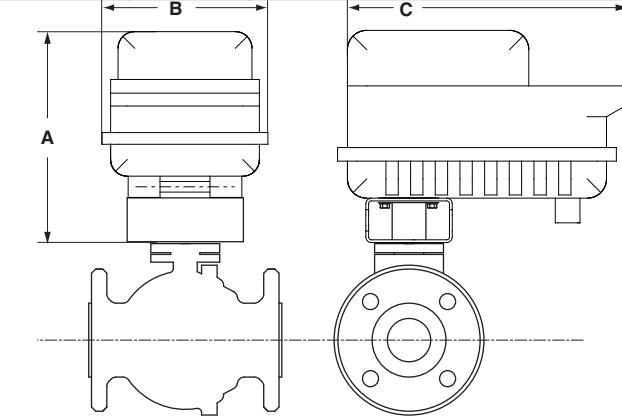
The UBSP custom kit and mounted actuator(s) are capable of rotating 95° in both CW and CCW directions. This allows the ball to fully open or close. When directional needs vary, the actuators can be flipped or directional switch turned to a new rotation. Refer to Primary / Secondary wiring for dual mounted actuators.

Default/Configuration

Actuators are sold separately and mounted in the field.

Suitable Actuators		
Linkage	Non-Spring Return	Electronic Fail-Safe
UBSP0008	SY4, SY5, SY6, PR	PKR

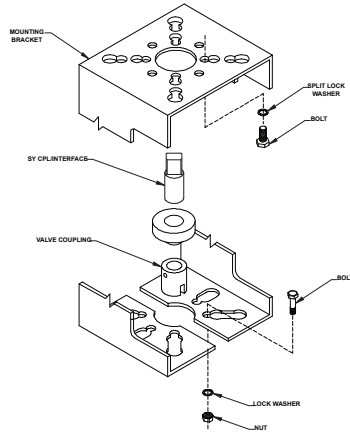
Dimensions (Inches [mm])



A	B	C
14.63 [372]	10.00 [254]	13.00 [330]

Application Notes

Before ordering, a completed retrofit form is required.



5-year warranty

Technical Data

Service	chilled or hot water and steam
Applicable valve size	3" [76.2], 4" [101.6], 5" [127], 6" [152.4]
Frame, plate, base	stainless steel
Shaft	steel
Coupling	steel
Mounting position	360°
Media temp. range (water)	-22...298°F [-30...148°C]
Media temp. range (steam)	20...298°F [-7...148°C]
Housing	NEMA 4X, IP66
Weight	20 lbs

Application

The UBSP custom retrofit kit is designed to easily attach to the valve mounting pad on select competitor valves utilizing Belimo actuators. This kit will help to restore service without removal of the valve, saving down time. The UBSP retrofit kit is available in various configurations for use with both 2-way and 3-way valves utilizing single or dual actuation.

Operation

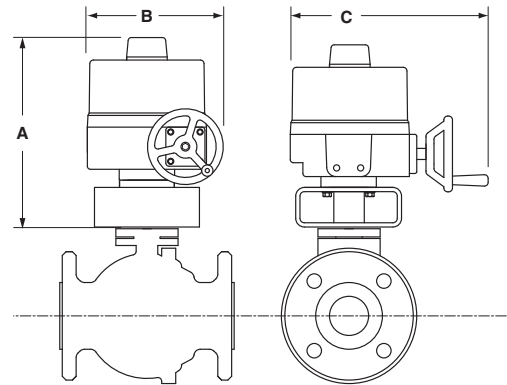
The UBSP custom kit and mounted actuator(s) are capable of rotating 95° in both CW and CCW directions. This allows the ball to fully open or close. When directional needs vary, the actuators can be flipped or directional switch turned to a new rotation. Refer to Primary / Secondary wiring for dual mounted actuators.

Default/Configuration

Actuators are sold separately and mounted in the field.

Suitable Actuators

Linkage	Non-Spring Return
UBSP0012	SY7, SY8, SY9

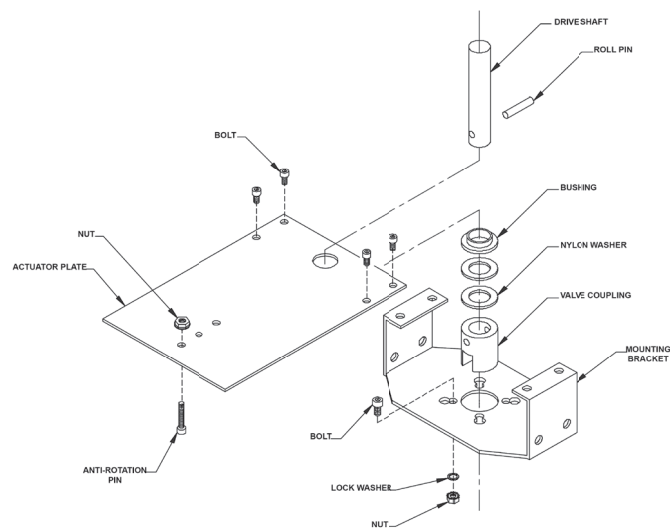
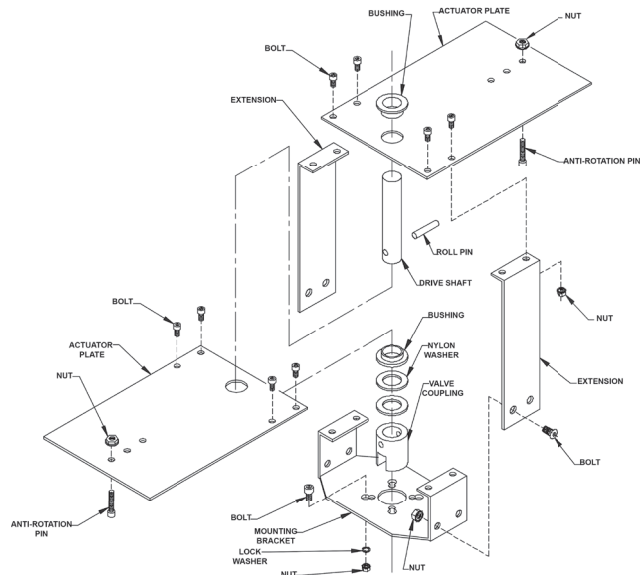
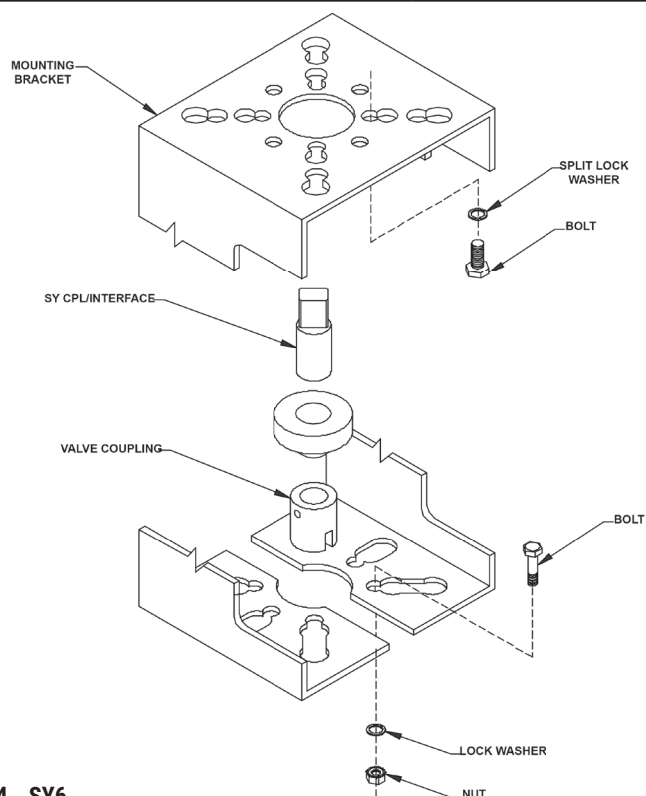
Dimensions (Inches [mm])

A	B	C
27 [685]*	14.00 [356]	21.00 [533]

*Based on SY12

Application Notes

Before ordering, a completed retrofit form is required.

Component Identification
2-way/3-way Single Actuator
Generic – Retrofit Form Required

UBSP0004
2-way/3-way Dual Actuator
Generic – Retrofit Form Required

UBSP0006
Industrial Electronic 2-way/3-way
Generic – Retrofit Form Required

UBSP0008 PR, PKR, SY4...SY6
UBSP0012 SY7...SY9

Custom kits are designed to your unique specification and are not returnable.

Smart retrofit forms for butterfly valves, globe valves, and ball valves can be found on www.belimo.com.

Legacy paper forms will no longer be accepted.



5-year warranty



Belimo RetroFIT+

Enhanced carbon reduction, comfort, and safety through field device retrofits

HVAC renovation projects have the potential to significantly improve occupant comfort and indoor air quality while delivering substantial energy savings. At Belimo, our decades of retrofit experience along with the reliability and performance of our products make us the ideal partner for customers ready to make simple adjustments to realize immediate results, upgrade with today's technology, or replace their entire HVAC system.

With both standard and custom offerings, we help you find the retrofit solution that's right for you.



Discover the advantages
www.belimo.com

BELIMO[®]

Exceptional service

At Belimo, we continually invest in new technologies that increase customer value by improving occupant comfort, energy efficiency, simplified installation, and maintenance-free operation. Our sales team is available to consult and provide insight and advice on how to achieve the best solution to help increase your system performance. Belimo will continue to focus on providing you with exceptional product availability, fast delivery times, and world-class customer service and technical support. We remain dedicated to continuously improve our standards and are committed to providing you with the highest value possible.

Whatever your HVAC application, our global network of support experts are on hand and ready to assist.



Global support



Tested quality



On-time delivery



Extensive service



Complete product range

