Globe Valve Retrofit Solutions

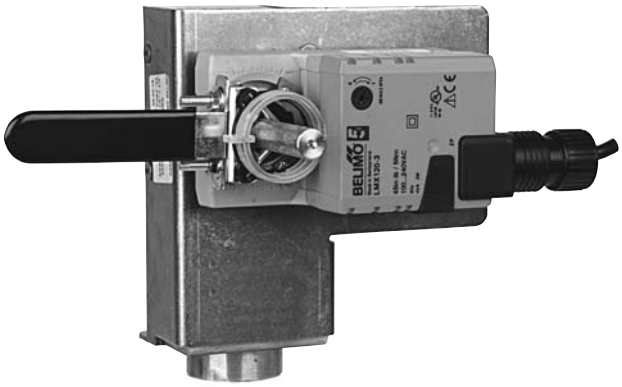
- Adaptive stroke of actuators utilizes full control signal for maximum resolution.
- Visual stroke indicators allow quick installation.
- Linkages can be mounted in any orientation except upside down.
- Travel ranges of up to 1.5” (38mm) of stroke.
- Steam rated for inlets up to 100 psi.

Applications

UGVL,UGLK, UGSL, and UGSP globe valve retrofit solutions are designed to easily attach to the valve bonnet and stem of competitor valves utilizing Belimo actuators. This kit will help to restore service without removal of the valve, saving down time and money.

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

For LM and LF Series Actuators



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

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.

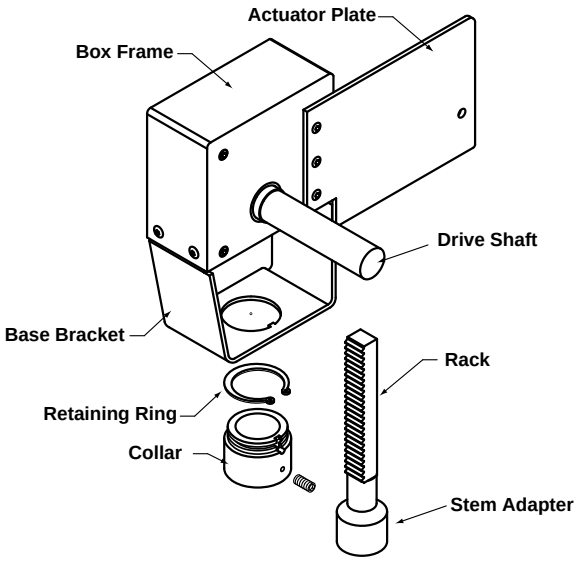
Suitable Actuators	Close-Off Ranges
LM Series	2-250 psi
LF Series	22-250 psi

Competitor Valves**

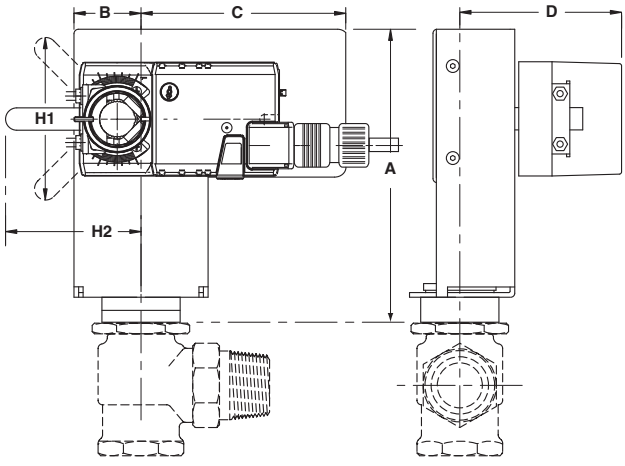
Honeywell
JCI
Siemens / Powers
Siebe / Invensys / TAC / Schneider

**Consult pages 92-134 of the Retrofit Technical Documentation and/or SelectPro for close-off pressures and a cross reference of each valve.

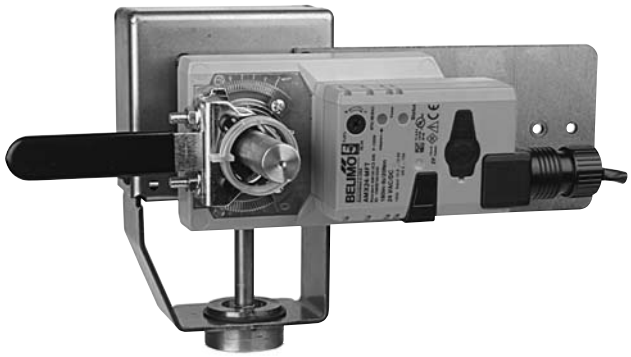
UGLK / UGSP Parts Breakdown



UGLK / UGSP



Dimensions (Inches [mm])			
A	6.5" [165]	D	4.0" [102]
B	1.5" [33]	H1	4.0" [102]
C	5.0" [127]	H2	3.5" [89]



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" to 1-½" 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 directional switch turned to a new rotation.

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

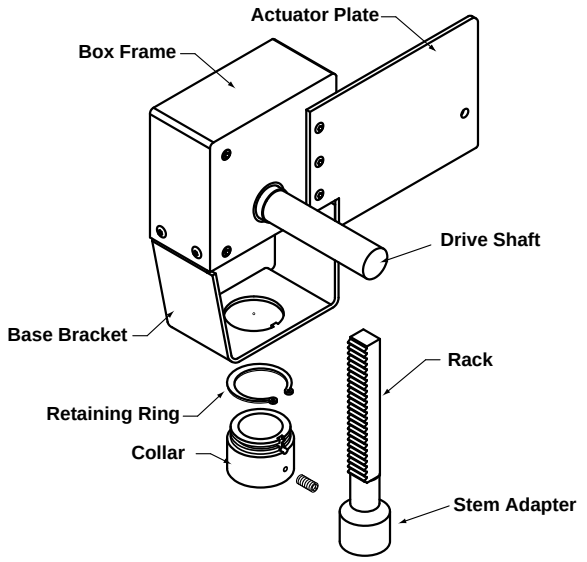
Suitable Actuators	Close-Off Ranges
GK Series	10-250 psi
AF Series	4-250 psi
NF Series	10-250 psi
GM Series	10-250 psi
AM Series	4-250 psi
NM Series	10-250 psi

Competitor Valves**

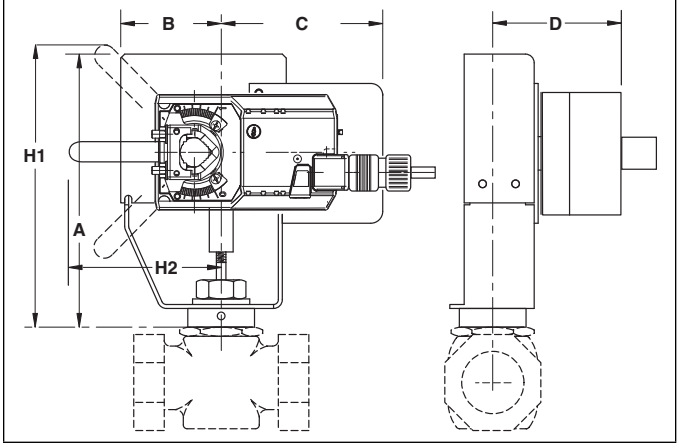
Honeywell
JCI
Siemens / Powers
Siebe / Invensys / TAC / Schneider
Warren Controls

**Consult pages 92-134 of the Retrofit Technical Documentation and/or SelectPro for close-off pressures and a cross reference of each valve.

UGLK / UGSP Parts Breakdown



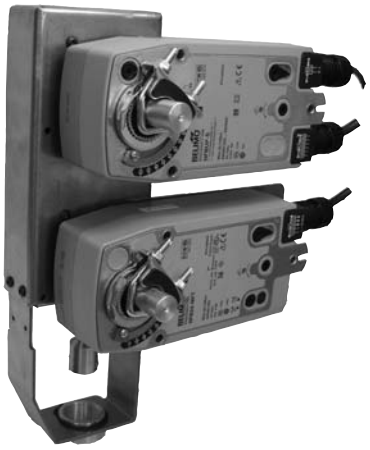
UGLK / UGSP



Dimensions (Inches [mm])			
A	9"-11" [178-356]	D	4.0" [102]
B	1.5" [33]	H1	4.0" [102]
C	5.0" [127]	H2	3.5" [89]

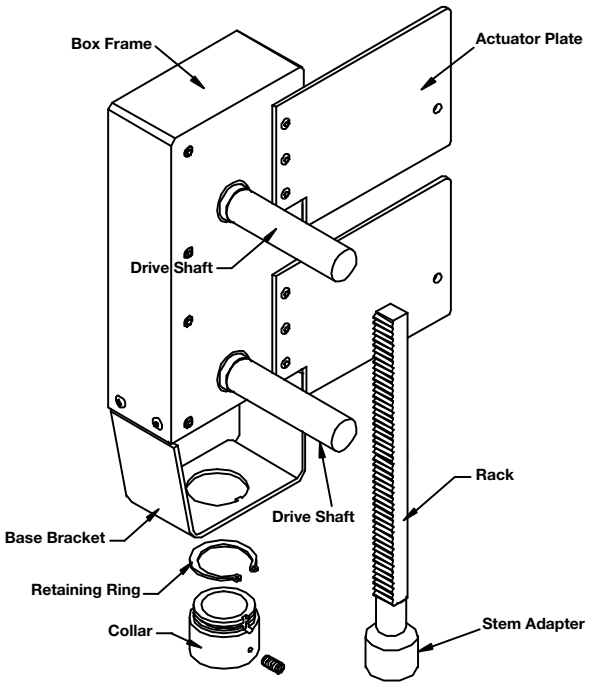
UGLK.../UGSP... Retrofit Linkage for Globe Valves

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	sinttered steel
Bearing	bronze
Stem adaptor	brass
Stroke max (gear teeth)	½" (12 teeth) ¾" (17 teeth) 1-1/8" (25 teeth) 1-½" (33 teeth)
Mounting position	360° mountable
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +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" to 1-½" 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 actuators can be flipped or directional switch turned to a new rotation. Refer to Master Slave wiring for dual mounted actuators.

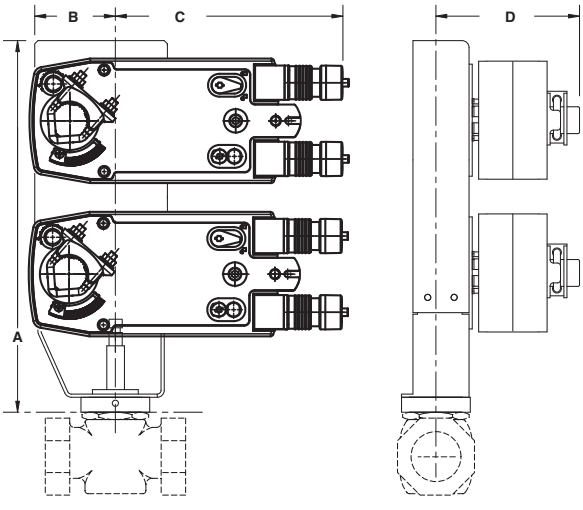
Suitable Actuators	Close-Off Ranges
2*AF Series	10-250 psi
2*GM Series	25-250 psi
2*GK Series	25-250 psi

Competitor Valves**

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

**Consult pages 92-134 of the Retrofit Technical Documentation and/or SelectPro for close-off pressures and a cross reference of each valve.

UGLK / UGSP



Dimensions (Inches [mm])			
A	13"-17" [483]	C	9" [229]
B	3" [76]	D	5" [127]

5 YEAR WARRANTY

Technical Data	
Service	chilled or hot water and steam
Applicable valve size	½" [13], ¾" [19], 1" [25], 1-¼" [32], 1-½" [38], 2" [50]
Stem	slotted, threaded
Frame, plate, base	aluminum, steel
Collar	aluminum, steel, (fits bonnets up to 1.7" dia.)
Stem adaptor	aluminum
Stroke	0.6" [15 mm] LVK, 0.75" [20 mm] SVK
Mounting position	360°
Media temp range (water)	20°F to 250°F [-7°C to +120°C]
Media temp range (steam)	32°F to 388°F [0°C to 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" to 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.

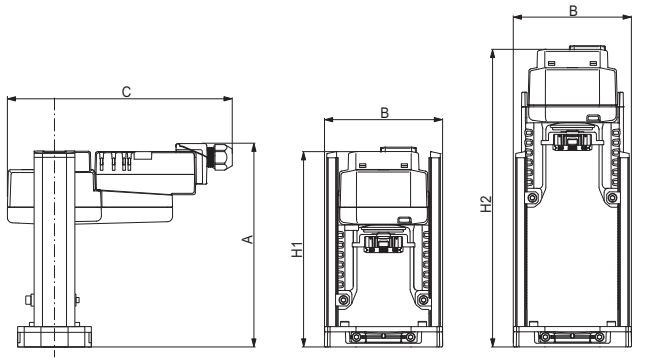
Operation

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

Suitable Actuators

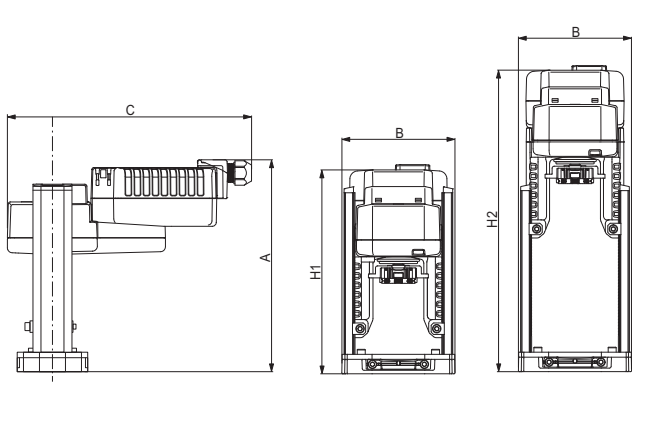
Linkage	Non-Spring Return	Electronic Fail-Safe
UGVL	LV, SV	LVK, SVK

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 pages 93-119 of the Retrofit Technical Documentation and/or SelectPro for close-off pressures and a cross reference of each valve.

SGVL Schneider Globe Valve Linkage

For use with LV and SV Series Actuators

5 YEAR WARRANTY

Technical Data	
Service	chilled or hot water and steam
Applicable valve size	½" [13], ¾" [19], 1" [25], 1-¼" [32], 1-½" [38], 2" [50]
Frame, plate, base	aluminum
Collar*	aluminum (fits VB7 ½" to 2"/VB9 ½" to 1-¼" 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°F to 250°F [-7°C to +120°C]
Media temp range (steam)	20°F to 250°F [-7°C to +120°C]
Housing material	aluminum die cast and plastic casing
Weight	0.5 lbs

*Will also fit post 1994 VB9 1-½" to 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" to 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.

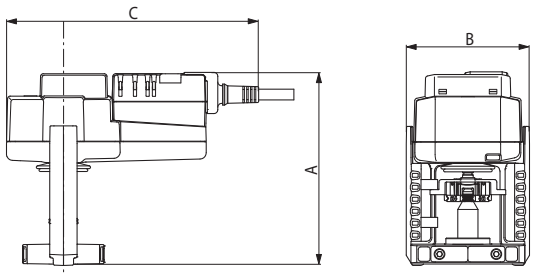
Operation

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

Suitable Actuators

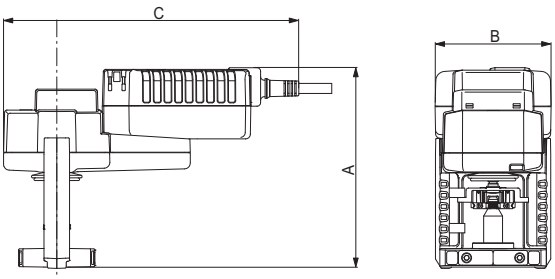
Linkage	Non-Spring Return	Electronic Fail-Safe
SGVL	LV, SV	LVK, SVK

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 pages 93-119 of the Retrofit Technical Documentation and/or SelectPro for close-off pressures and a cross reference of each valve.

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], 2-½" [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	1.25" [32 mm] AVK, 2" [50 mm] EV/RV
Mounting position	360°
Media temp range (water)	20°F to 250°F [-7°C to +120°C]
Media temp range (steam)	32°F to 388°F [0°C to 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 2-½" to 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.

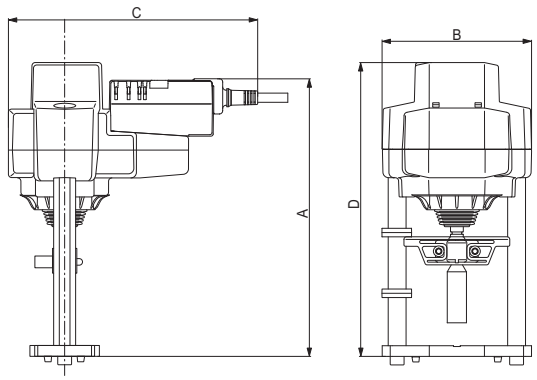
Operation

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

Suitable Actuators

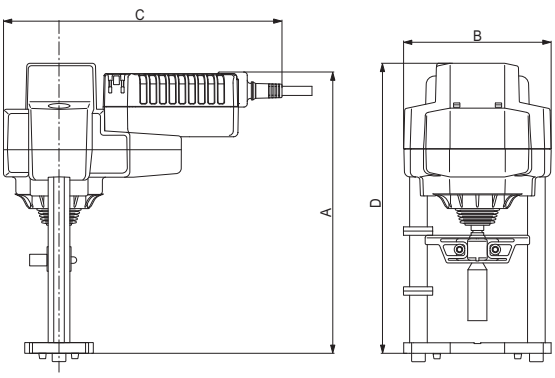
Linkage	Non-Spring Return	Electronic Fail-Safe
WGVL	EV, RV	AVK

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 pages 93-113 of the Retrofit Technical Documentation and/or SelectPro for close-off pressures and a cross reference of each valve.

LVX24-3

On/Off, Floating Point, Non-Spring Return Actuator, Linear, 24 V

Application

For on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 24 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The LV series provides 15 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

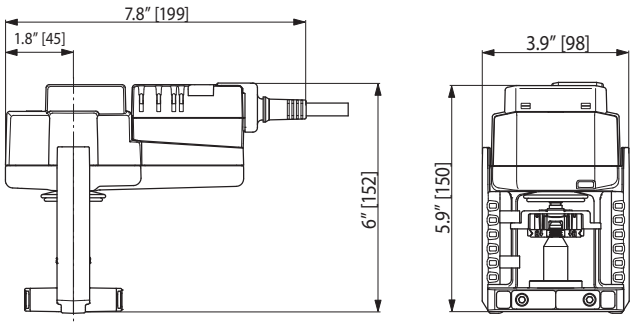
The LV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	2 W
Power consumption holding	0.5 W
Transformer sizing	5 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	0.6" [15 mm]
Linear force	112 lbf [500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<55dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	2.9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit.
Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

***CAUTION** Equipment Damage!*

△2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.

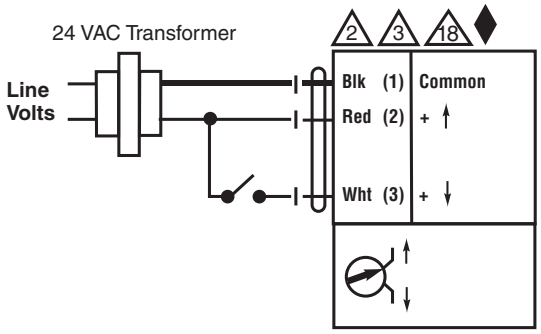
△3 Actuators may also be powered by 24 VDC.

△18 Actuators with plenum cable do not have numbers; use color codes instead.

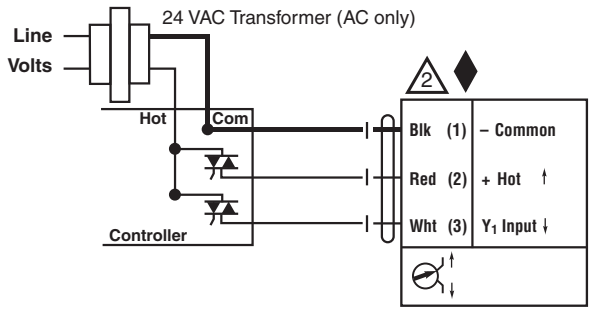
◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

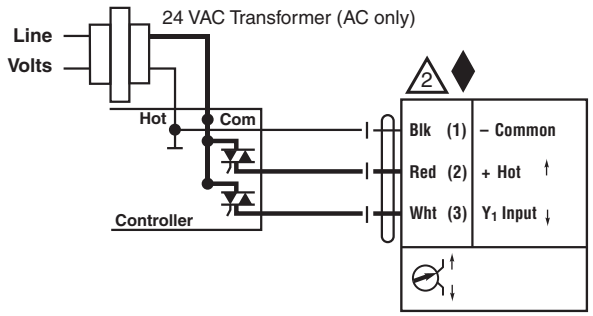
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



On/Off



Triac Sink



Triac Source

LVX120-3

On/Off, Floating Point, Non-Spring Return Actuator, Linear, 100 to 240 VAC

Application

For on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 120 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The LV series provides 15 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

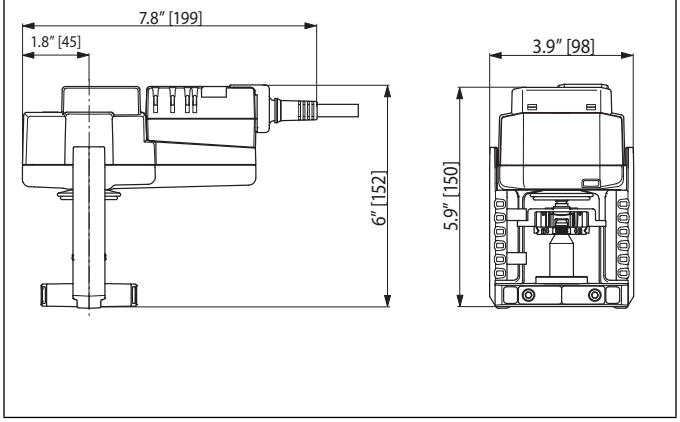
The LV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

Technical Data	
Power supply	100-240 VAC ± 20%, 50/60 Hz
Power consumption running	5.5 W
Power consumption holding	1 W
Transformer sizing	6 VA (class 2 power source)
Electrical connection	3 ft, 18 GA appliance rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	0.6" [15 mm]
Linear force	112 lbf [500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<65dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	2.9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 2.5 KV. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

Ⓐ Actuators with appliance cables are numbered.

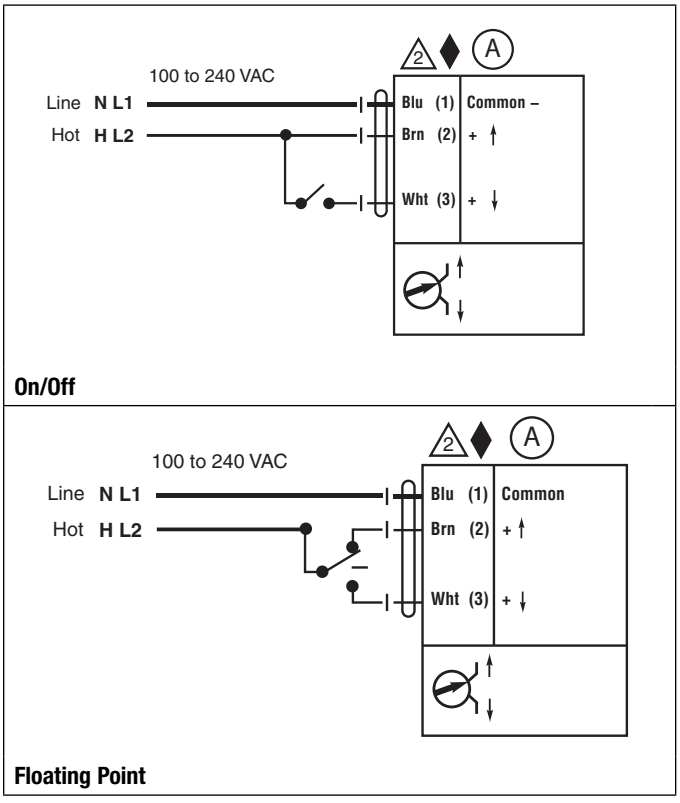
***CAUTION** Equipment Damage!*

△2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

⚠ During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



On/Off

Floating Point

LVB24-SR

Proportional, Non-Spring Return Actuator, Linear, 24 V, for 2 to 10 VDC or 4 to 20 mA

Application

For proportional modulation of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 2 to 10 VDC, or with the addition of a 500 resistor, a 4 to 20 mA control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The LV series provides 15 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The LV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

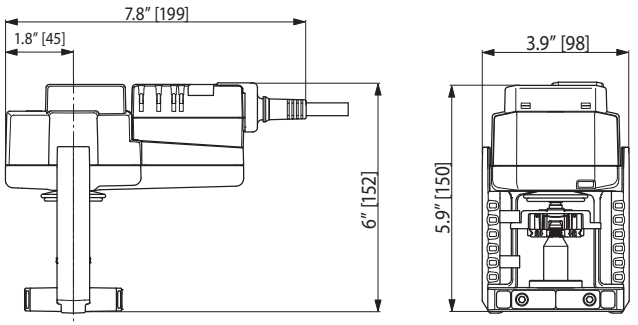
Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and –MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel.

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	2 W
Power consumption holding	0.5 W
Transformer sizing	5 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	2-10 VDC
Operating range Y	2 to 10 VDC, 4 to 20 mA (default)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA
Feeback output U	2 to 10 VDC
Stroke	0.6" [15 mm]
Linear force	112 lbf [500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<55dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	2.9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

△3 Actuators may also be powered by 24 VDC.

△5 Only connect common to neg. (-) leg of control circuits.

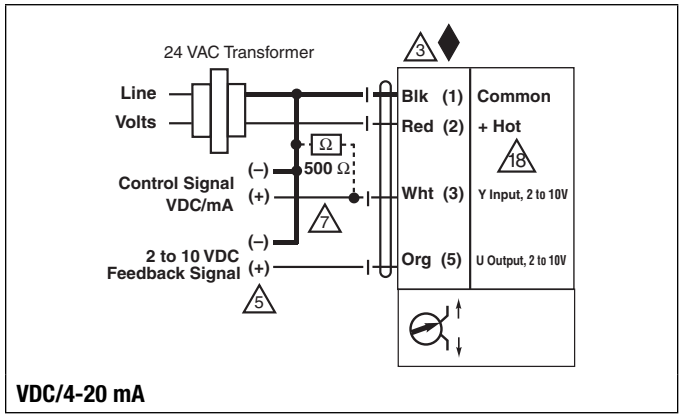
△7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC.

△18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

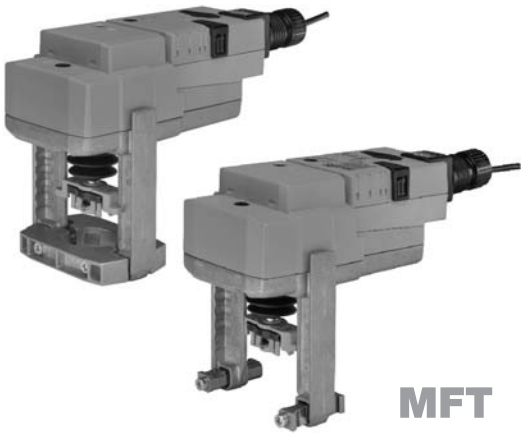
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



VDC/4-20 mA

LVX24-MFT

Proportional, Non-Spring Return Actuator, Linear, 24 V, Multi-Function Technology®



Application

For multiple control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to many controls types as desired by the customer and/or design control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The LV series provides 15 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The LV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

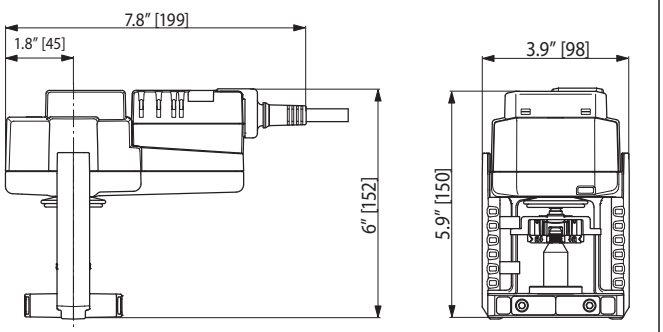
Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and –MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel. Along with the Adaption button on –MFT models will have a yellow Status light to confirm communication.

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	3 W
Power consumption holding	1.5 W
Transformer sizing	6 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	proportional/MFT
Operating range Y	2 to 10 VDC, 4 to 20 mA (default), variable (VDC, PWM, floating point, on/off)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA, 1500 Ω for PWM, floating point and on/off
Feeback output U	2 to 10 VDC, 0.5 mA max, VDC variable
Stroke	0.6" [15 mm]
Linear force	112 lbf [500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<45dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	2.9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

***CAUTION** Equipment Damage!*

2 Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.

3 Actuators may also be powered by 24 VDC.

7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC

8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

10 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.

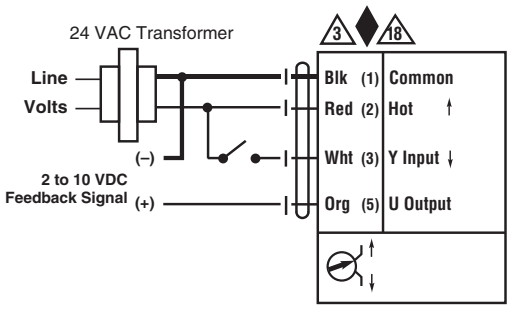
12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155)

18 Actuators with plenum cable do not have numbers; use color codes instead.

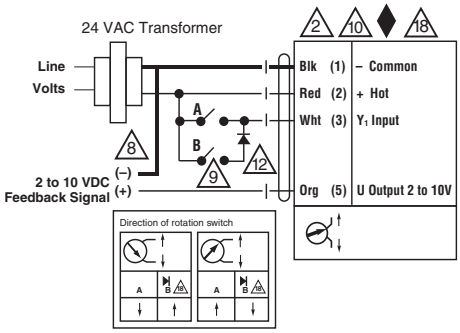
◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

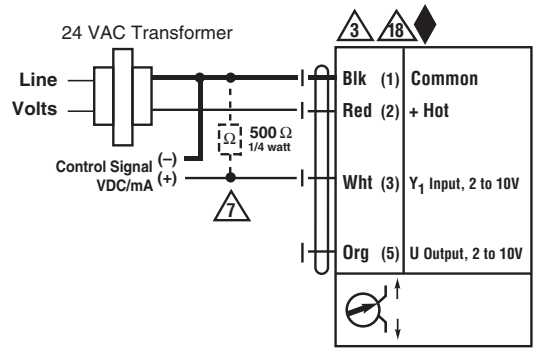
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



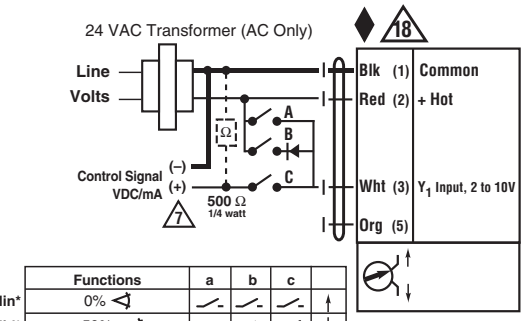
On/Off



Floating Point



VDC/4-20 mA



	Functions	a	b	c	
Min*	0%				
Mid*	50%				
Max*	100%				
Normal**	Control mode acc. to Y				

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override

SVX24-3

On/Off, Floating Point, Non-Spring Return Actuator, Linear, 24 V

Application

For on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 24 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The SV series provides 20 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

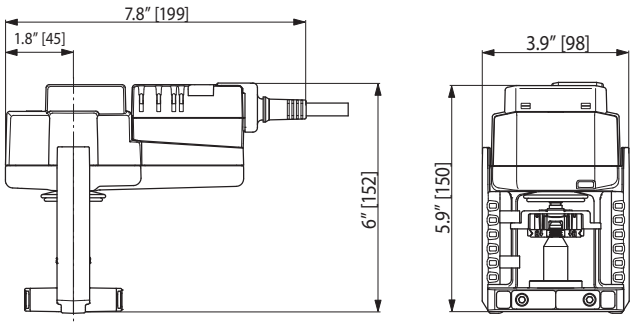
The SV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	2.5 W
Power consumption holding	0.5 W
Transformer sizing	5 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	0.75" [20 mm]
Linear force	337 lbf [1500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<45dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	2.9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

***CAUTION** Equipment Damage!*

2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.

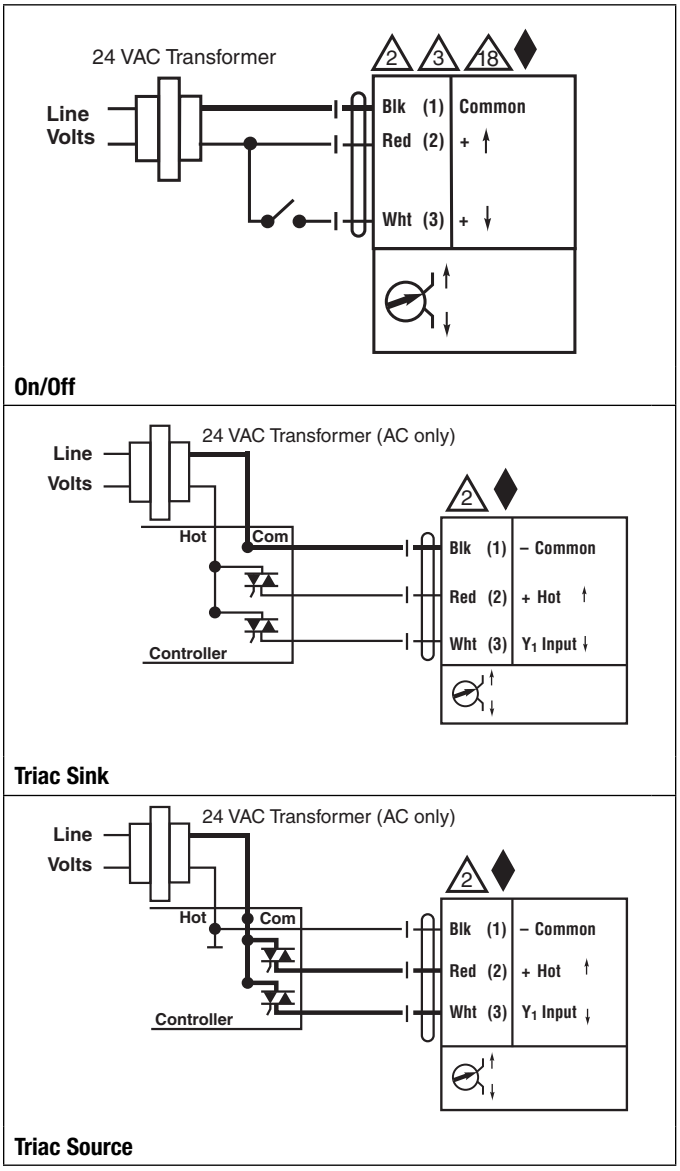
3 Actuators may also be powered by 24 VDC.

18 Actuators with plenum cable do not have numbers; use color codes instead.

Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



SVX120-3

On/Off, Floating Point, Non-Spring Return Actuator, Linear, 100 to 240 VAC

5 YEAR WARRANTY

CE LISTED 94 D5 TEMP.IND. & REG.EQUIP. c UL us

BRUSHLESS dc motor

Technical Data	
Power supply	100-240 VAC ± 20%, 50/60 Hz
Power consumption running	5.5 W
Power consumption holding	1 W
Transformer sizing	6 VA (class 2 power source)
Electrical connection	3 ft, 18 GA appliance rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	0.75" [20 mm]
Linear force	337 lbf [1500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<45dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	2.9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 2.5 KV. Type of action 1. Control Pollution Degree 3.

Application

For on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 120 volt signal being applied from an electronic controller or positioner.

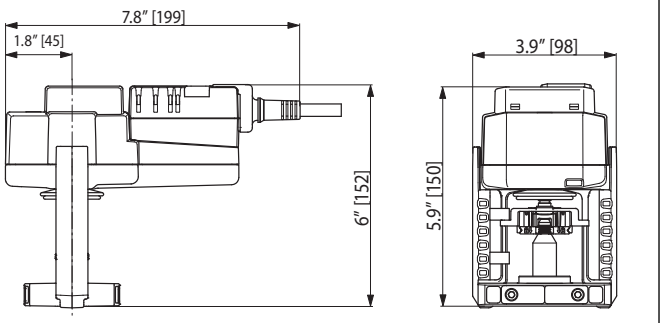
Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The SV series provides 20 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The SV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

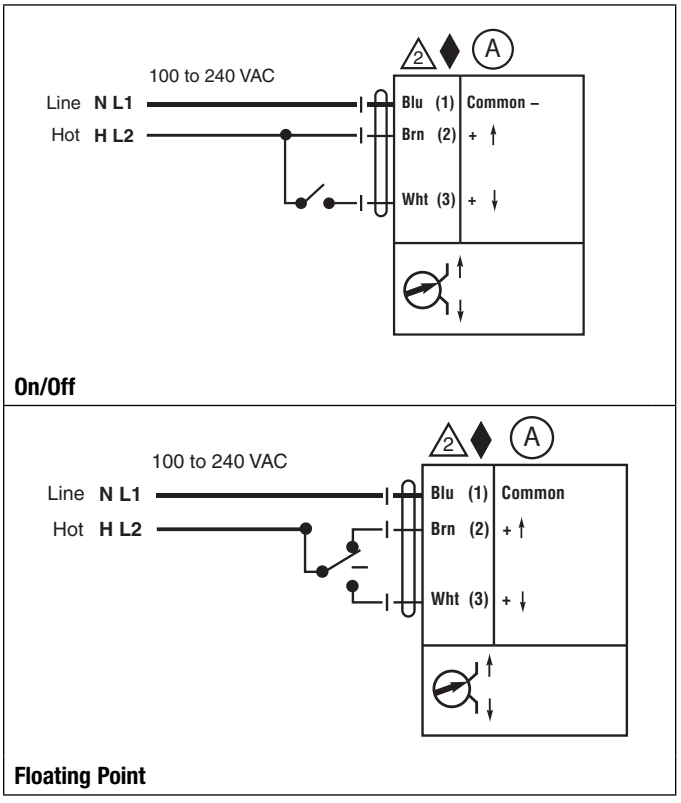
INSTALLATION NOTES

(A) Actuators with appliance cables are numbered.

△2 ***CAUTION** Equipment Damage!*
Actuators may be connected in parallel. Power consumption and input impedance must be observed.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

⚠ ***WARNING** Live Electrical Components!*
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



On/Off

Floating Point

SVB24-SR

Proportional, Non-Spring Return Actuator, Linear, 24 V, for 2 to 10 VDC or 4 to 20 mA

Application

For proportional modulation of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 2 to 10 VDC, or with the addition of a 500 Ω resistor, a 4 to 20 mA control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The SV series provides 20 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The SV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

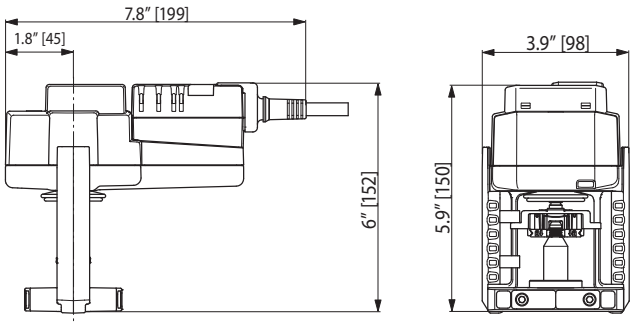
Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and –MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel.

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	4 W
Power consumption holding	2.5 W
Transformer sizing	6 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	2-10 VDC
Operating range Y	2 to 10 VDC, 4 to 20 mA (default)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA
Feeback output U	2 to 10 VDC
Stroke	0.75" [20 mm]
Linear force	337 lbf [1500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<45dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	2.9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

△3 Actuators may also be powered by 24 VDC.

△5 Only connect common to neg. (-) leg of control circuits.

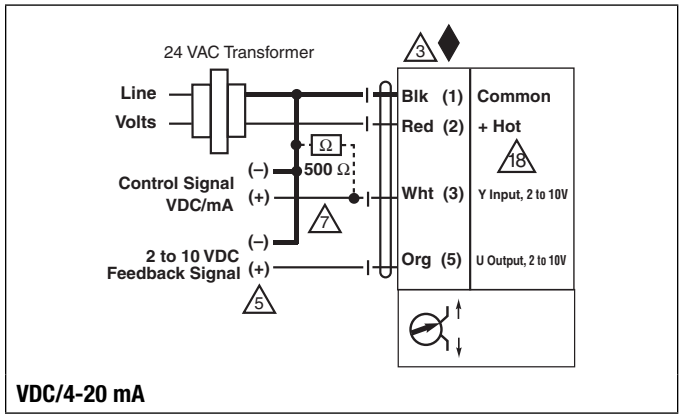
△7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC.

△18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

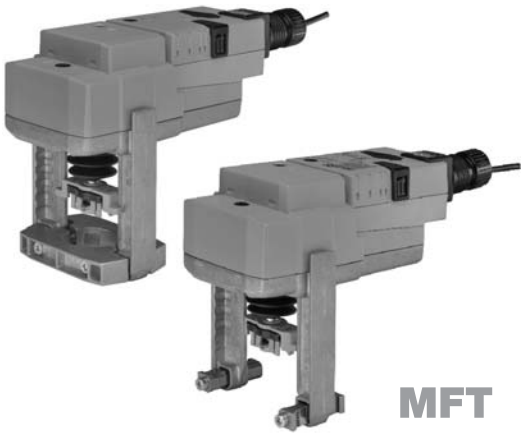
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



VDC/4-20 mA

SVX24-MFT

Proportional, Non-Spring Return Actuator, Linear, 24 V, Multi-Function Technology®



Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	4 W
Power consumption holding	2.5 W
Transformer sizing	6 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	proportional/MFT
Operating range Y	2 to 10 VDC, 4 to 20 mA (default), variable (VDC, PWM, floating point, on/off)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA, 1500 Ω for PWM, floating point and on/off
Feeback output U	2 to 10 VDC, 0.5 mA max, VDC variable
Stroke	0.75" [20 mm]
Linear force	337 lbf [1500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<45dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	2.9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Application

For multiple control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to many controls types as desired by the customer and/or design control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

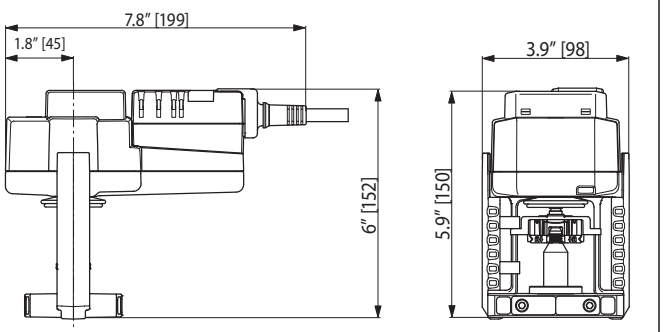
The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The SV series provides 20 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The SV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and –MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel. Along with the Adaption button on –MFT models will have a yellow Status light to confirm communication.

Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

***CAUTION** Equipment Damage!*

2 Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.

3 Actuators may also be powered by 24 VDC.

7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC

8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

10 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.

12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155)

18 Actuators with plenum cable do not have numbers; use color codes instead.

♦ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

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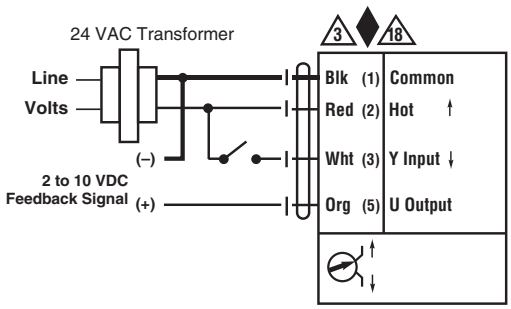
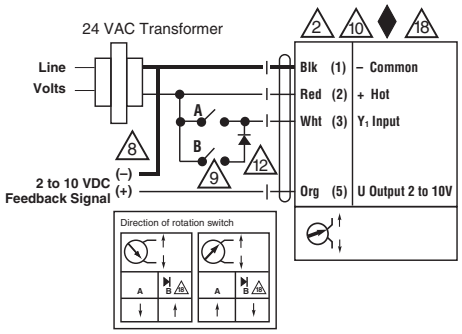
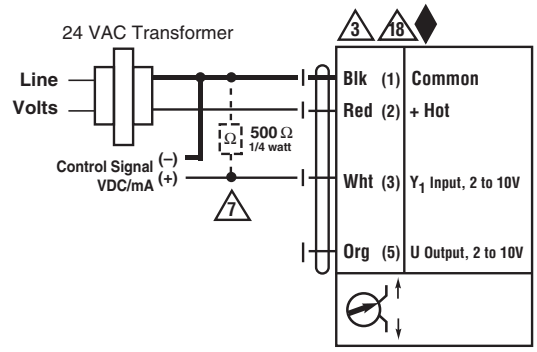


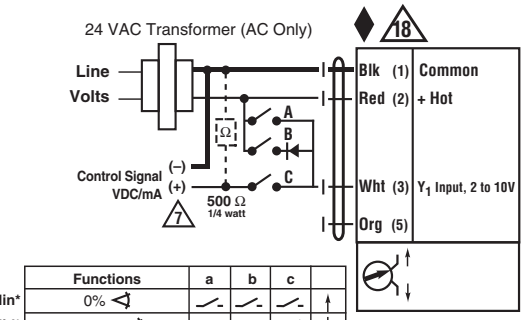
On/Off



Floating Point



VDC/4-20 mA



	Functions	a	b	c	
Min*	0%				
Mid*	50%				
Max*	100%				
Normal**	Control mode acc. to Y				

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override

EVB24-3

On/Off, Floating Point, Non-Spring Return Actuator, Linear, 24 V

Application

For on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 24 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The EV series provides 50 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

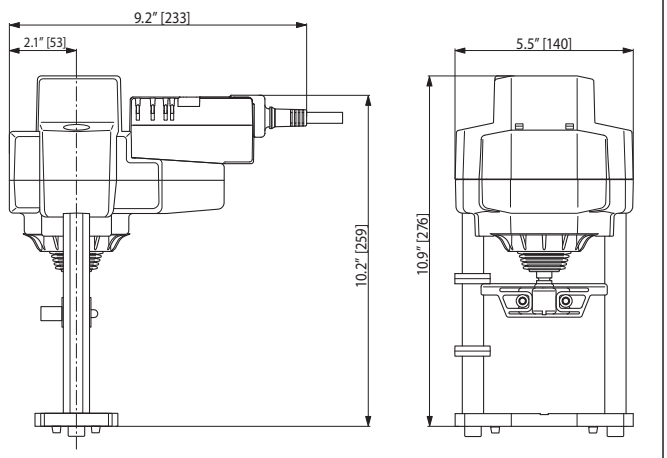
The EV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	6 W
Power consumption holding	3.5 W
Transformer sizing	7 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	2" [50 mm]
Linear force	562 lbf [2500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	5 mm hex crank (3/16" Allen), supplied
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<65dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves 2.5" to 6" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

***CAUTION** Equipment Damage!*

2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.

3 Actuators may also be powered by 24 VDC.

18 Actuators with plenum cable do not have numbers; use color codes instead.

Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

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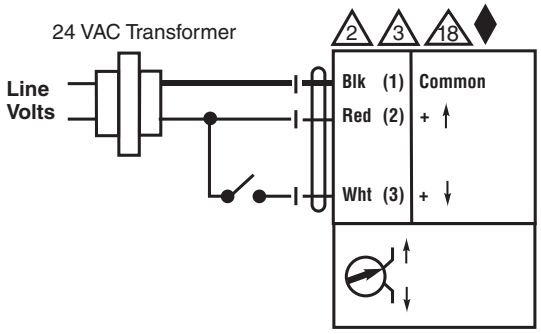
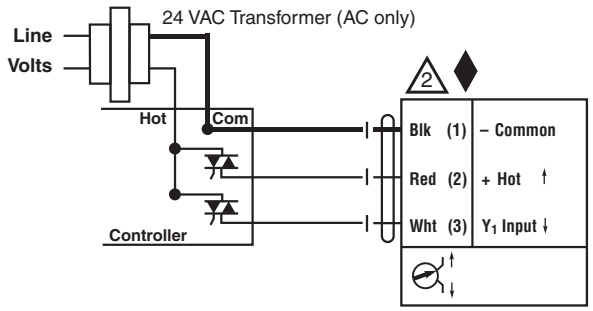
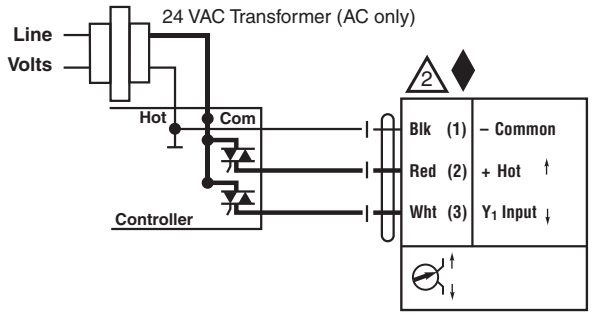


On/Off



Triac Sink



Triac Source

EVX120-3

On/Off, Floating Point, Non-Spring Return Actuator, Linear, 100 to 240 VAC

Application

For on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 120 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The EV series provides 50 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

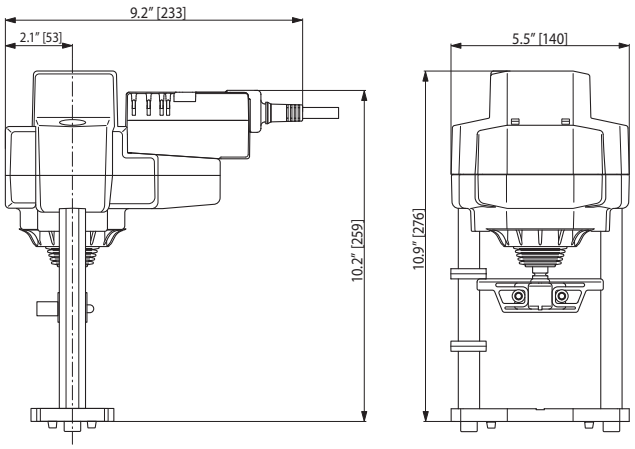
The EV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

Technical Data	
Power supply	100-240 VAC ± 20%, 50/60 Hz
Power consumption running	5 W
Power consumption holding	1 W
Transformer sizing	10 VA (class 2 power source)
Electrical connection	3 ft, 18 GA appliance rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	2" [50 mm]
Linear force	562 lbf [2500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	5 mm hex crank (3/16" Allen), supplied
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<65dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 2.5 KV. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves 2.5" to 6" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

(A) Actuators with appliance cables are numbered.

***CAUTION** Equipment Damage!*

△2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

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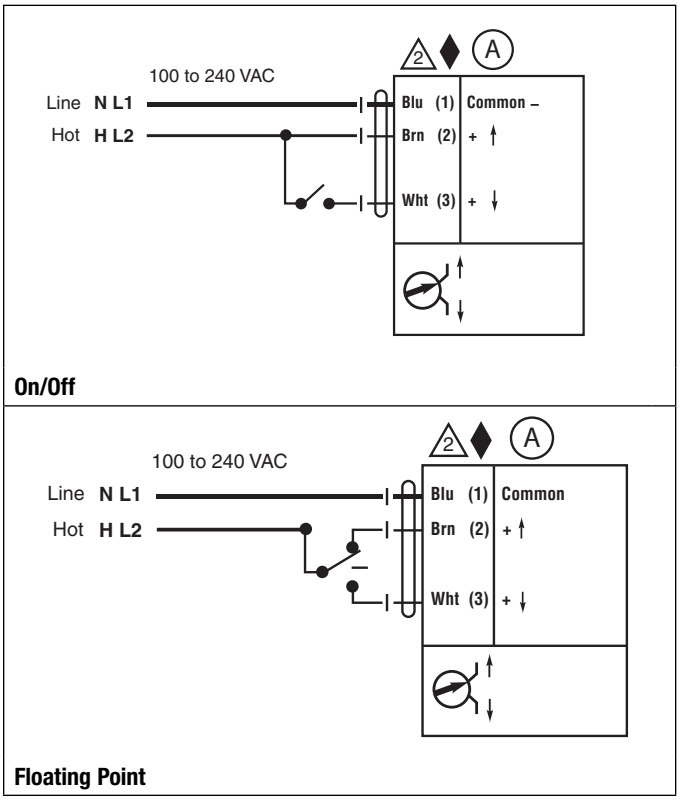

On/Off

Floating Point

EVB24-MFT

Proportional, Non-Spring Return Actuator, Linear, 24 V, Multi-Function Technology®

MFT

5 YEAR WARRANTY

CE LISTED 94 D5 TEMP.IND. & REG.EQUIP. c UL us

BRUSHLESS DC MOTOR

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	6 W
Power consumption holding	3.5 W
Transformer sizing	7 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	proportional/MFT
Operating range Y	2 to 10 VDC, 4 to 20 mA (default), variable (VDC, PWM, floating point, on/off)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA, 1500 Ω for PWM, floating point and on/off
Feeback output U	2 to 10 VDC, 0.5 mA max, VDC variable
Stroke	2" [50 mm]
Linear force	562 lbf [2500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	5 mm hex crank (3/16" Allen), supplied
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<65dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Application

For multiple control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to many controls types as desired by the customer and/or design control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The EV series provides 50 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The EV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

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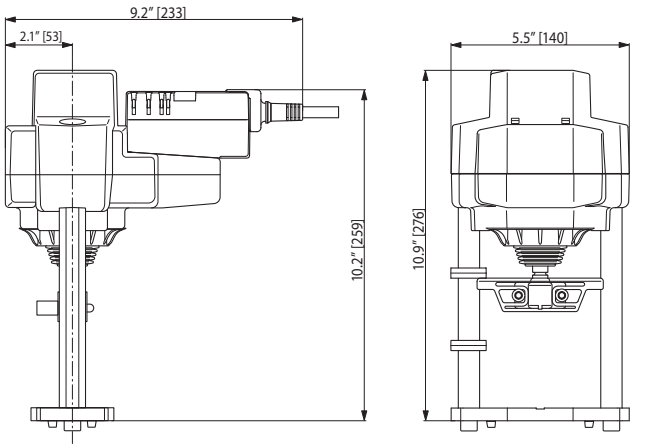
Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves 2.5" to 6" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

△2 ***CAUTION** Equipment Damage!*
Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.

△3 Actuators may also be powered by 24 VDC.

△7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC

△8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

△9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

△10 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.

△12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155)

△18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

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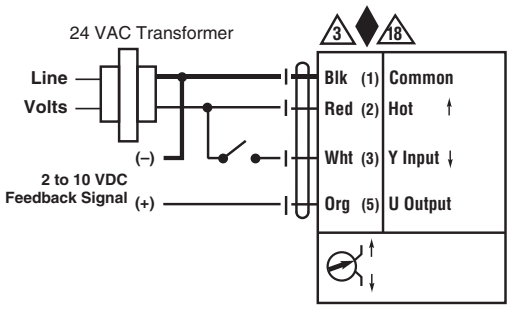
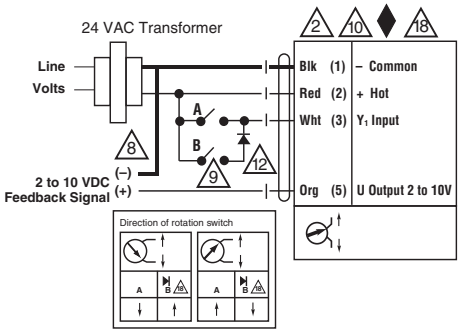
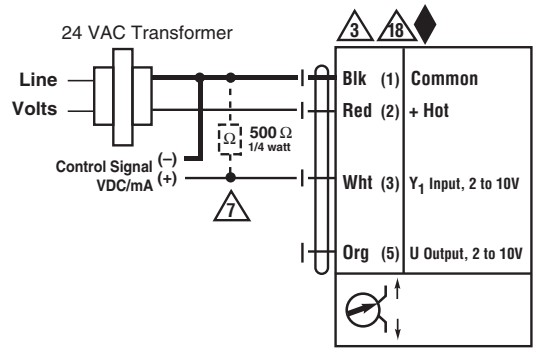


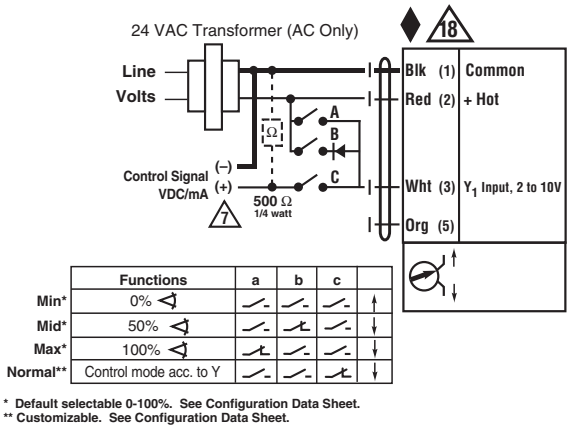
On/Off



Floating Point



VDC/4-20 mA



	Functions	a	b	c	
Min*	0% ◁				
Mid*	50% ◁				
Max*	100% ◁				
Normal**	Control mode acc. to Y				

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override

RVB24-3

On/Off, Floating Point, Non-Spring Return Actuator, Linear, 24 V

Application

For on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 24 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The RV series provides 50 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

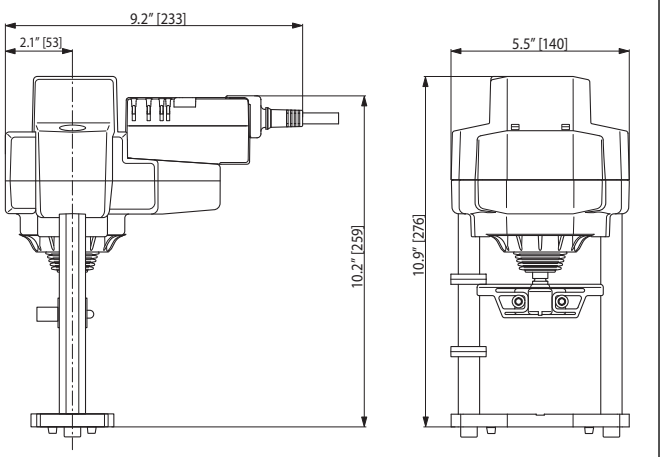
The RV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto he actuator body for signaling and switching functions.

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	6 W
Power consumption holding	3.5 W
Transformer sizing	10 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	2 to 10 VDC, 0.5 mA max
Stroke	2" [50 mm]
Linear force	1011 lbf [4500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	5 mm hex crank (3/16" Allen), supplied
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<65dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves 2.5" to 6" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

***CAUTION** Equipment Damage!*

△2 Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.

△3 Actuators may also be powered by 24 VDC.

△8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

△9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

△10 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.

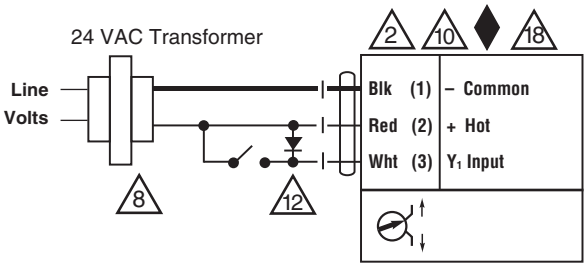
△12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155)

△18 Actuators with plenum cable do not have numbers; use color codes instead.

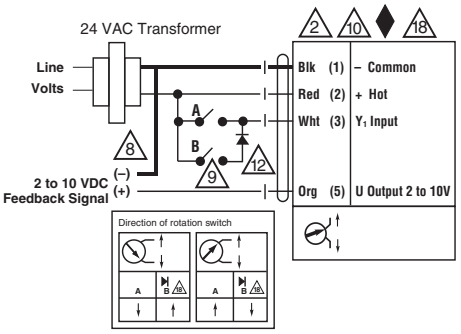
◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



On/Off



Floating Point

RVB24-MFT

Proportional, Non-Spring Return Actuator, Linear, 24 V, Multi-Function Technology®

MFT

5 YEAR WARRANTY

CE LISTED 94 D5 TEMP.IND. & REG.EQUIP. c UL us

BRUSHLESS DC MOTOR

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	6 W
Power consumption holding	3.5 W
Transformer sizing	10 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	proportional/MFT
Operating range Y	2 to 10 VDC, 4 to 20 mA (default), variable (VDC, floating point, on/off)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA, floating point and on/off
Feeback output U	2 to 10 VDC, 0.5 mA max, VDC variable
Stroke	2" [50 mm]
Linear force	1011 lbf [4500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	5 mm hex crank (3/16" Allen), supplied
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<65dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Application

For multiple control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to many controls types as desired by the customer and/or design control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

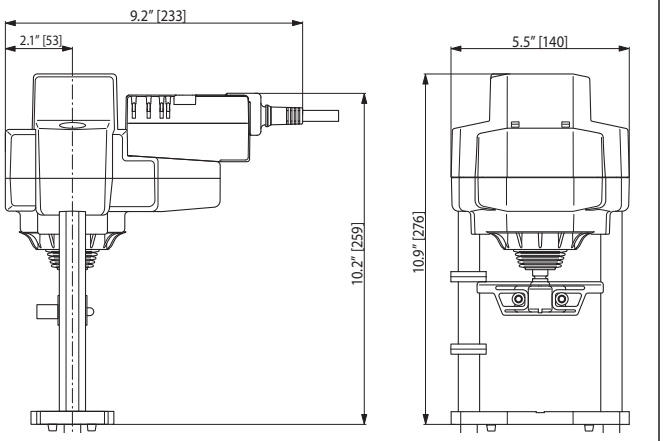
The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The RV series provides 50 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The RV… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and –MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel. Along with the Adaption button on –MFT models will have a yellow Status light to confirm communication.

Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves 2.5" to 6" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

△2 ***CAUTION** Equipment Damage!*
Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.

△3 Actuators may also be powered by 24 VDC.

△7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC

△8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

△9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

△10 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.

△12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155)

△18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*
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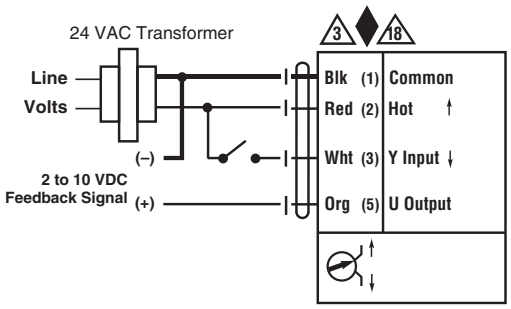
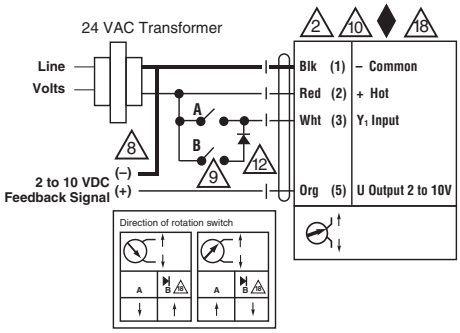
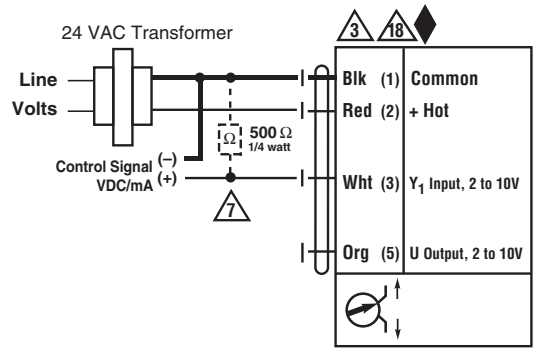


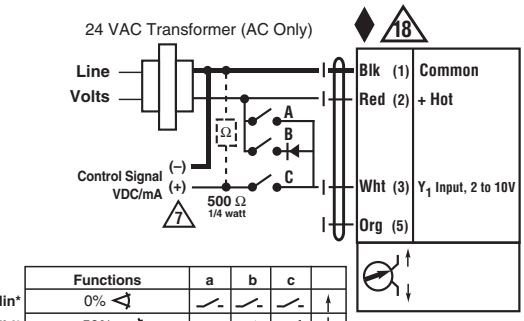
On/Off



Floating Point



VDC/4-20 mA



	Functions	a	b	c	
Min*	0%				
Mid*	50%				
Max*	100%				
Normal**	Control mode acc. to Y				

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override

LVKX24-3

On/Off, Floating Point, Electronic Fail-Safe Actuator, Linear, 24 V

Application

Fail-safe for on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 24 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The LV series provides 15 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The LVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

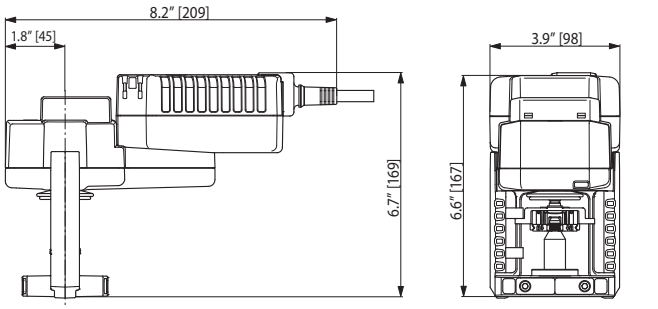
Fail-Safe Green LED Status Indicator Light Sequence:

- On: operation ok, no faults
- Blinking: fail-safe mechanism is active
- Off: fault is detected or not in operation / capacitors charging

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	8.5 W
Power consumption holding	2.5 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	0.6" [15 mm]
Linear force	112 lbf [500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<55dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	3.6 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

***CAUTION** Equipment Damage!*

2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.

3 Actuators may also be powered by 24 VDC.

8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

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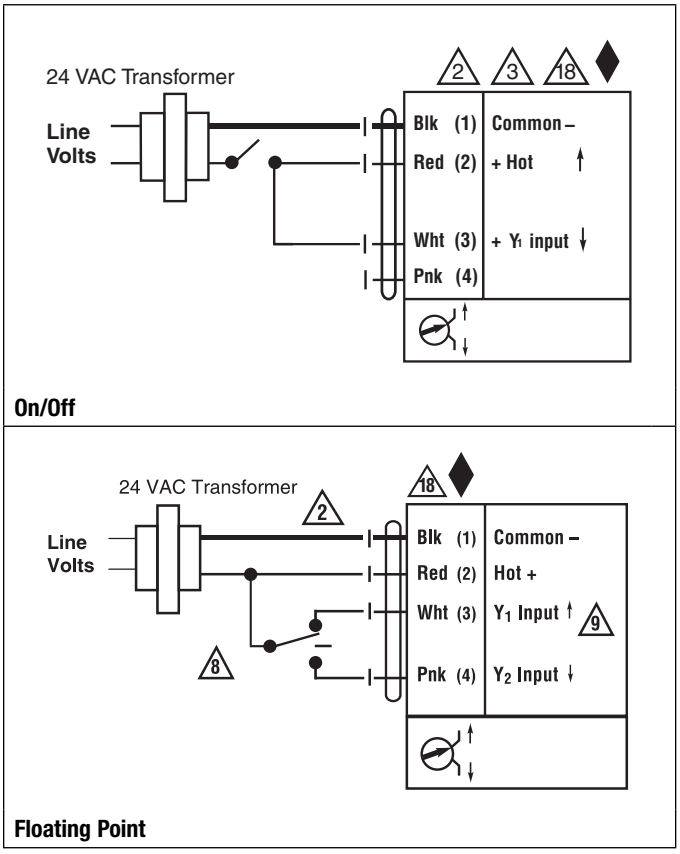


On/Off

Floating Point

LVKX120-3

On/Off, Floating Point, Electronic Fail-Safe Actuator, Linear, 120 V

Application

Fail-safe for on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 120 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The LV series provides 15 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The LVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

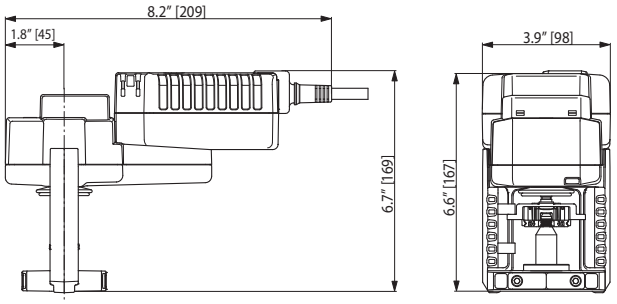
Fail-Safe Green LED Status Indicator Light Sequence:

- On: operation ok, no faults
- Blinking: fail-safe mechanism is active
- Off: fault is detected or not in operation / capacitors charging

Technical Data	
Power supply	100-240 VAC ± 20%, 50/60 Hz
Power consumption running	8.5 W
Power consumption holding	2.5 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA appliance rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	0.6" [15 mm]
Linear force	112 lbf [500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<55dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	3.6 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 2.5 KV. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

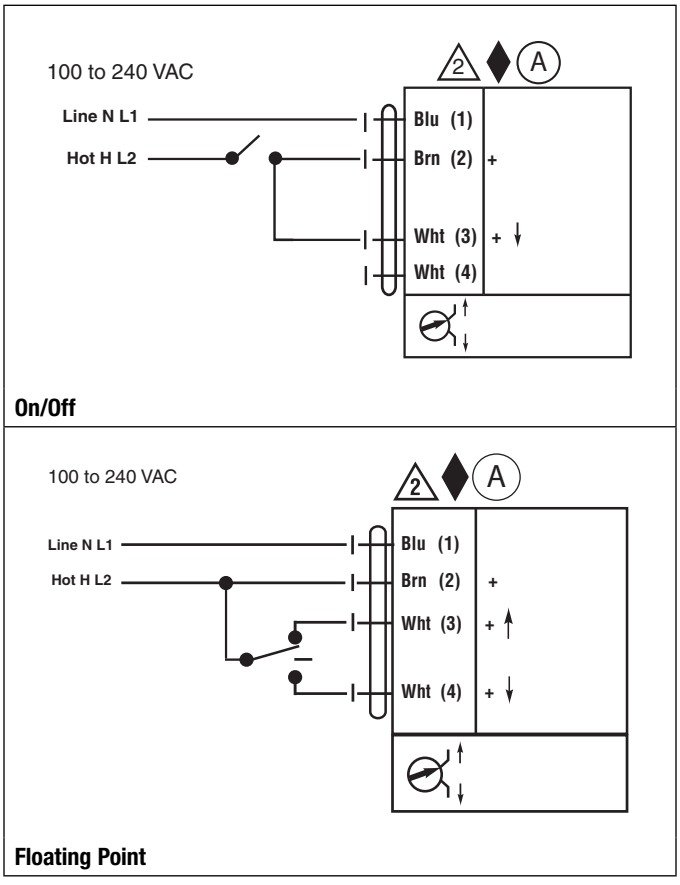
INSTALLATION NOTES

Ⓐ Actuators with appliance cables are numbered.

△2 ***CAUTION** Equipment Damage!*
Actuators may be connected in parallel. Power consumption and input impedance must be observed.

⧫ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

⚠ ***WARNING** Live Electrical Components!*
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



On/Off

Floating Point

LVKB24-SR

Proportional, Electronic Fail-Safe Actuator, Linear, 24 V, for 2 to 10 VDC or 4 to 20 mA

Application

For fail-safe, proportional modulation of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 2 to 10 VDC, or with the addition of a 500 Ω resistor, a 4 to 20 mA control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The LV series provides 15 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The LVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and –MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel.

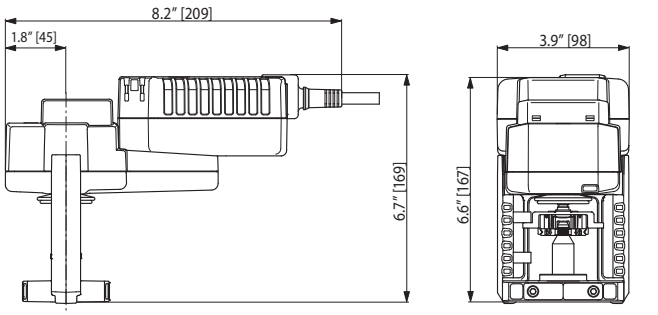
Fail-Safe Green LED Status Indicator Light Sequence:

- On: operation ok, no faults
- Blinking: fail-safe mechanism is active
- Off: fault is detected or not in operation / capacitors charging

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	8.5 W
Power consumption holding	2.5 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	2-10 VDC
Operating range Y	2 to 10 VDC, 4 to 20 mA (default)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA
Feeback output U	2 to 10 VDC
Stroke	0.6" [15 mm]
Linear force	112 lbf [500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<55dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	3.6 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

△3 Actuators may also be powered by 24 VDC.

△5 Only connect common to neg. (-) leg of control circuits.

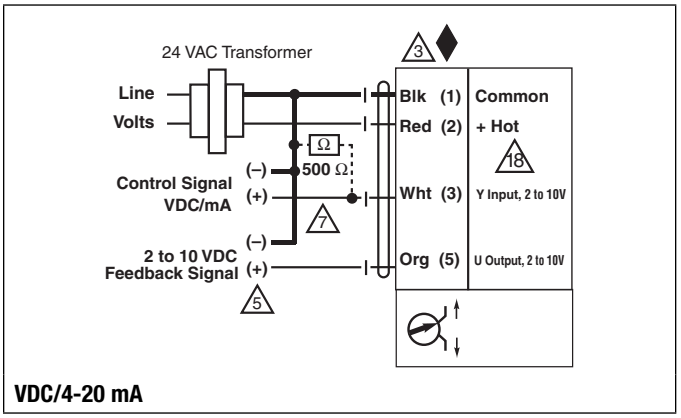
△7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC.

△18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

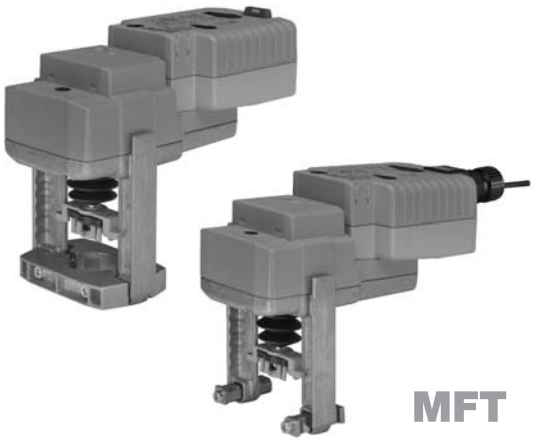
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



VDC/4-20 mA

LVKX24-MFT

Proportional, Electronic Fail-Safe Actuator, Linear, 24 V, Multi-Function Technology®



Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	8.5 W
Power consumption holding	2.5 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	proportional/MFT
Operating range Y	2 to 10 VDC, 4 to 20 mA (default), variable (VDC, PWM, floating point, on/off)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA, 1500 Ω for PWM, floating point and on/off
Feeback output U	2 to 10 VDC, 0.5 mA max, VDC variable
Stroke	0.6" [15 mm]
Linear force	112 lbf [500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<55dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	3.6 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Application

Fail-safe for multiple control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to many controls types as desired by the customer and/or design control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The LV series provides 15 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The LVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

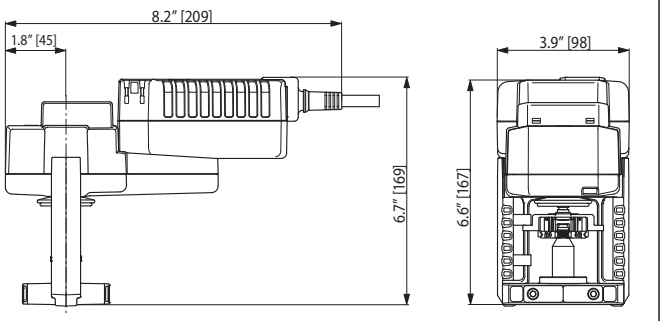
Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and –MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel. Along with the Adaption button on –MFT models will have a yellow Status light to confirm communication.

Fail-Safe LED Status Indicator Light Sequence:

- Yellow off / Green on: operation ok, no faults
- Yellow off / Green blinking: fail-safe mechanism is active
- Yellow on / Green off: fault is detected
- Yellow off / Green off: not in operation / capacitors charging
- Yellow on / Green on: adaption running
- Yellow blinking / Green on: communication with programming tool

Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

△2 ***CAUTION** Equipment Damage!*
Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.

△3 Actuators may also be powered by 24 VDC.

△7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC

△8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

△9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

△10 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.

△12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155)

△18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*
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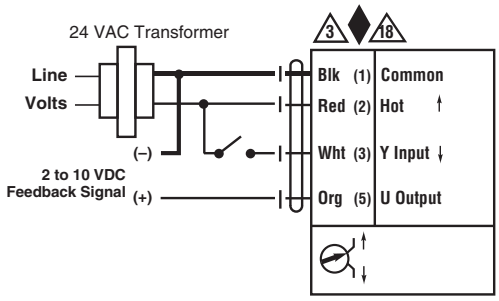
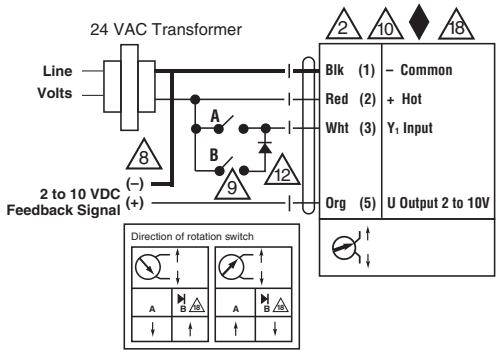
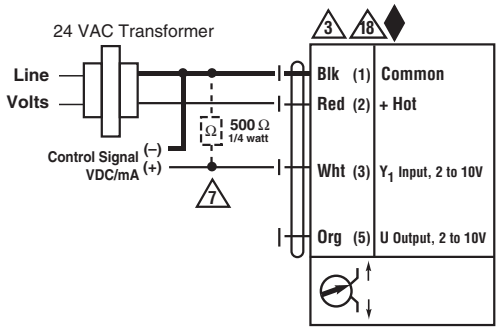


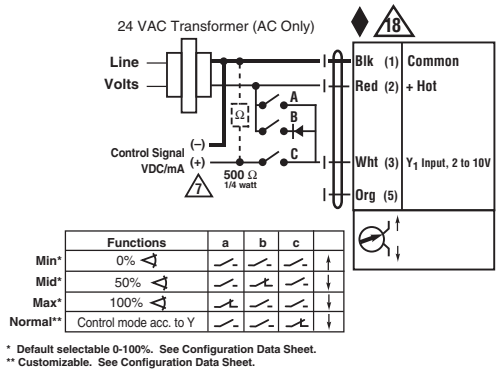
On/Off



Floating Point



VDC/4-20 mA



	Functions	a	b	c	
Min*	0%				
Mid*	50%				
Max*	100%				
Normal**	Control mode acc. to Y				

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override

SVKX24-3

On/Off, Floating Point, Electronic Fail-Safe Actuator, Linear, 24 V

Application

Fail-safe for on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 24 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The SVK series provides 20 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The SVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

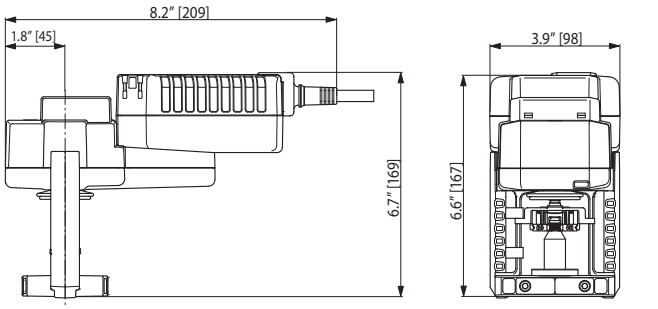
Fail-Safe Green LED Status Indicator Light Sequence:

- On: operation ok, no faults
- Blinking: fail-safe mechanism is active
- Off: fault is detected or not in operation / capacitors charging

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	8.5 W
Power consumption holding	2.5 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	0.75" [20 mm]
Linear force	337 lbf [1500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<45dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	3.6 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

***CAUTION** Equipment Damage!*

△2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.

△3 Actuators may also be powered by 24 VDC.

△8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

△9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

△18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

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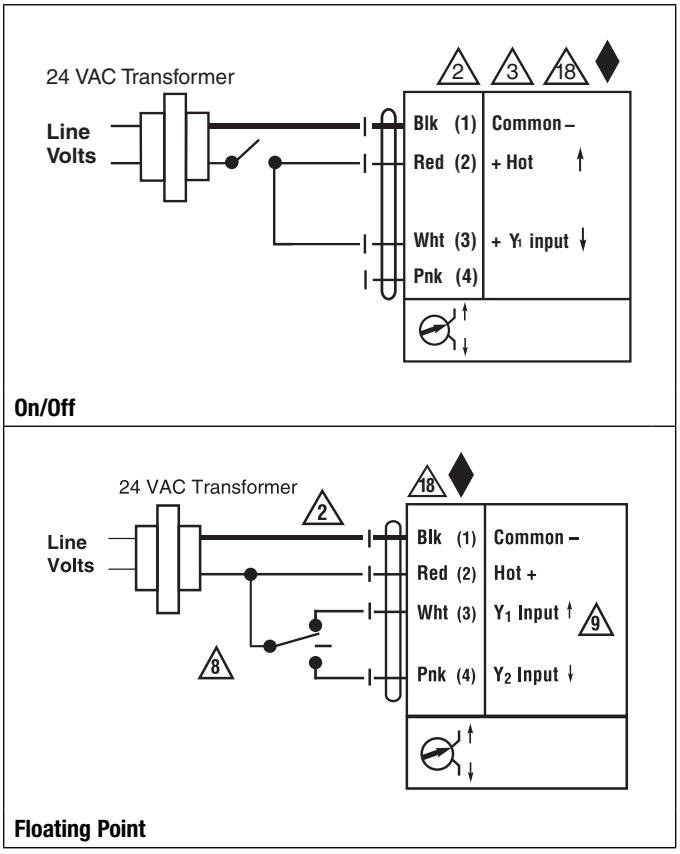


On/Off

Floating Point

SVKX120-3

On/Off, Floating Point, Electronic Fail-Safe Actuator, Linear, 120 V

Application

Fail-safe for on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 120 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The SVK series provides 20 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The SVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

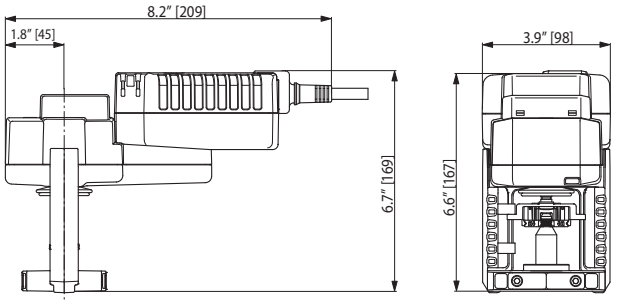
Fail-Safe Green LED Status Indicator Light Sequence:

- On: operation ok, no faults
- Blinking: fail-safe mechanism is active
- Off: fault is detected or not in operation / capacitors charging

Technical Data	
Power supply	100-240 VAC ± 20%, 50/60 Hz
Power consumption running	8.5 W
Power consumption holding	2.5 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA appliance rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	0.75" [20 mm]
Linear force	337 lbf [1500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<45dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	3.6 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 2.5 KV. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

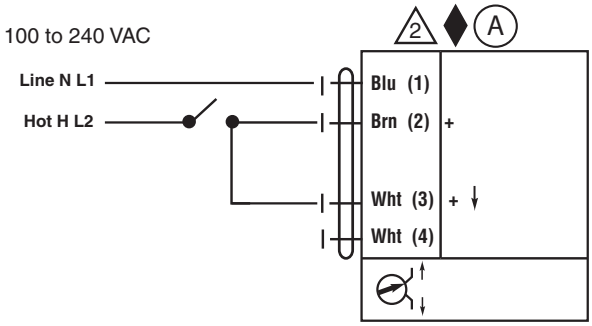
INSTALLATION NOTES

Ⓐ Actuators with appliance cables are numbered.

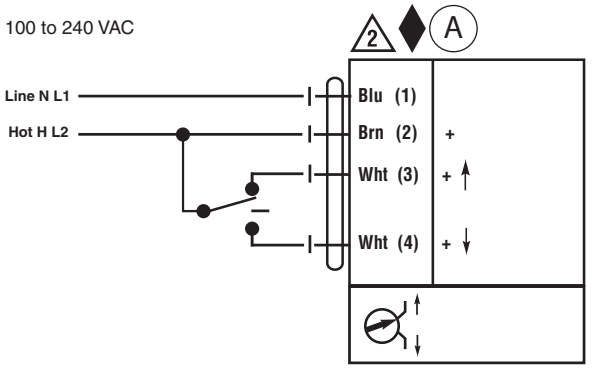
△2 ***CAUTION** Equipment Damage!*
Actuators may be connected in parallel. Power consumption and input impedance must be observed.

♦ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

⚠ ***WARNING** Live Electrical Components!*
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



On/Off



Floating Point

SVKB24-SR

Proportional, Electronic Fail-Safe Actuator, Linear, 24 V, for 2 to 10 VDC or 4 to 20 mA

Application

For fail-safe, proportional modulation of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 2 to 10 VDC, or with the addition of a 500 Ω resistor, a 4 to 20 mA control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The SVK series provides 20 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The SVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and –MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel.

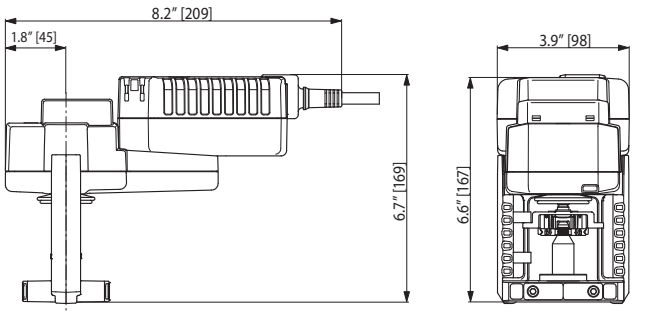
Fail-Safe Green LED Status Indicator Light Sequence:

- On: operation ok, no faults
- Blinking: fail-safe mechanism is active
- Off: fault is detected or not in operation / capacitors charging

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	8.5 W
Power consumption holding	2.5 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	2-10 VDC
Operating range Y	2 to 10 VDC, 4 to 20 mA (default)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA
Feeback output U	2 to 10 VDC
Stroke	0.75" [20 mm]
Linear force	337 lbf [1500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<45dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	3.6 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

△3 Actuators may also be powered by 24 VDC.

△5 Only connect common to neg. (-) leg of control circuits.

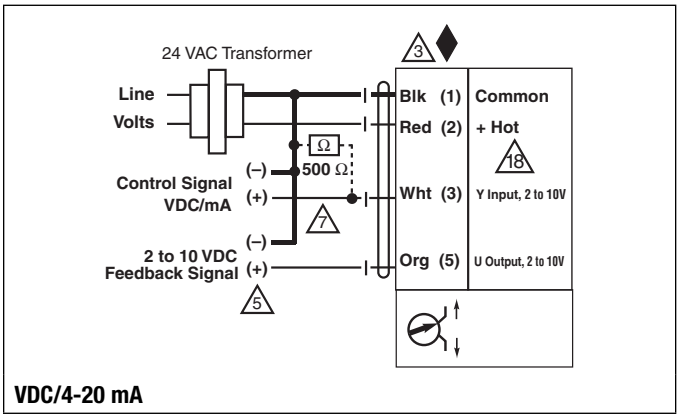
△7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC.

△18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

***WARNING** Live Electrical Components!*

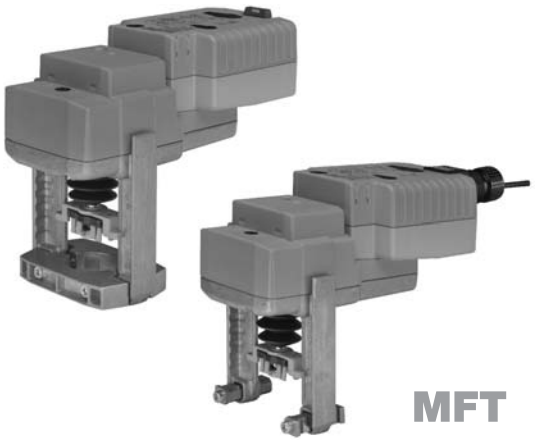
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



VDC/4-20 mA

SVKX24-MFT

Proportional, Electronic Fail-Safe Actuator, Linear, 24 V, Multi-Function Technology®



Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	8.5 W
Power consumption holding	2.5 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	proportional/MFT
Operating range Y	2 to 10 VDC, 4 to 20 mA (default), variable (VDC, PWM, floating point, on/off)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA, 1500 Ω for PWM, floating point and on/off
Feeback output U	2 to 10 VDC, 0.5 mA max, VDC variable
Stroke	0.75" [20 mm]
Linear force	337 lbf [1500 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	4 mm hex crank (shipped with actuator)
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<45dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	3.6 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Application

Fail-safe for multiple control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to many controls types as desired by the customer and/or design control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The SVK series provides 20 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The SVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

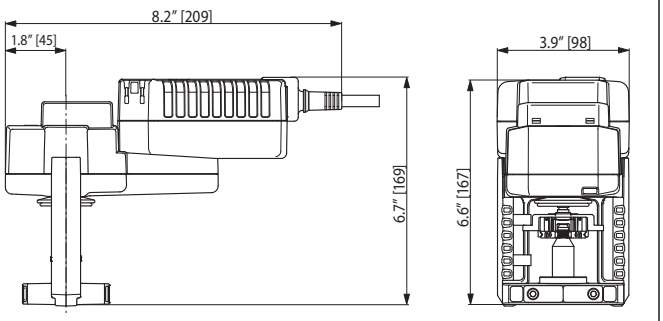
Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and –MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel. Along with the Adaption button on –MFT models will have a yellow Status light to confirm communication.

Fail-Safe LED Status Indicator Light Sequence:

- Yellow off / Green on: operation ok, no faults
- Yellow off / Green blinking: fail-safe mechanism is active
- Yellow on / Green off: fault is detected
- Yellow off / Green off: not in operation / capacitors charging
- Yellow on / Green on: adaption running
- Yellow blinking / Green on: communication with programming tool

Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves ½" to 2" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

△2 ***CAUTION** Equipment Damage!*
Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.

△3 Actuators may also be powered by 24 VDC.

△7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC

△8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

△9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

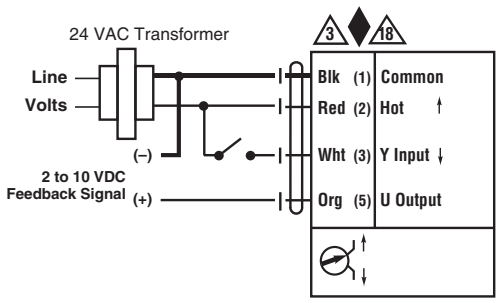
△10 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.

△12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155)

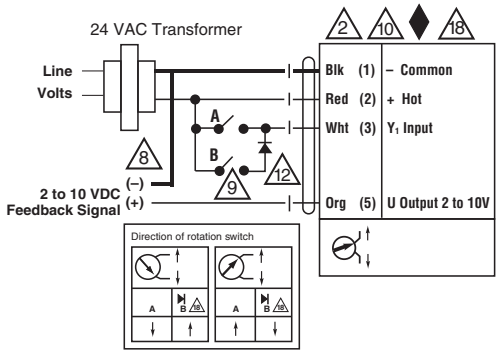
△18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

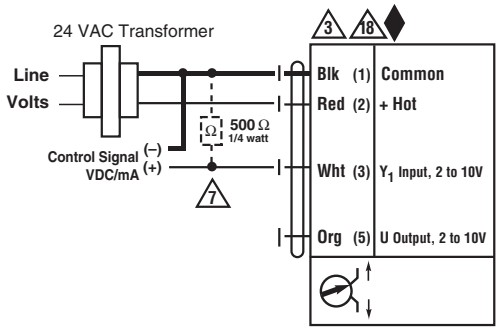
***WARNING** Live Electrical Components!*
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



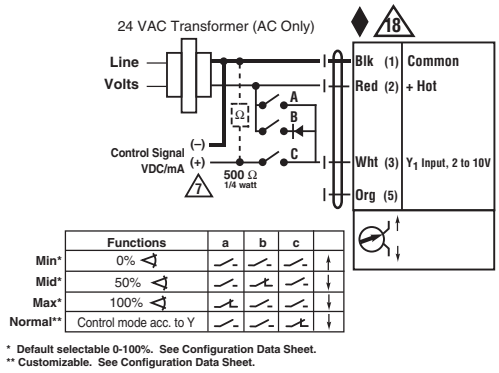
On/Off



Floating Point



VDC/4-20 mA



	Functions	a	b	c	
Min*	0%				
Mid*	50%				
Max*	100%				
Normal**	Control mode acc. to Y				

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override

AVKB24-3

On/Off, Floating Point, Electronic Fail-Safe Actuator, Linear, 24 V

Application

Fail-safe for on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 24 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The AVK series provides 32 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The AVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

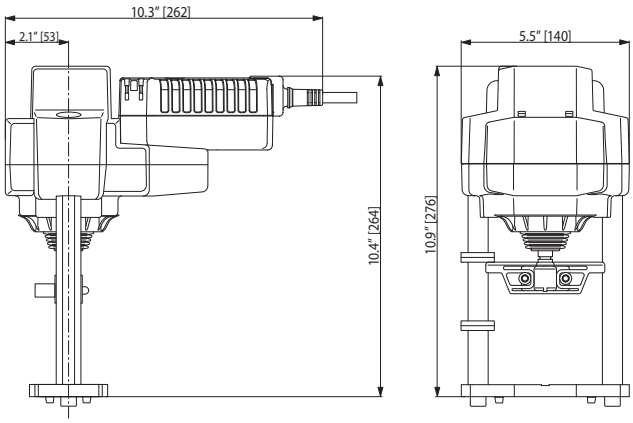
Fail-Safe Green LED Status Indicator Light Sequence:

- On: operation ok, no faults
- Blinking: fail-safe mechanism is active
- Off: fault is detected or not in operation / capacitors charging

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	12 W
Power consumption holding	3 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	1.25" [32 mm]
Linear force	450 lbf [2000 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	5 mm hex crank (3/16" Allen), supplied
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<60dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves 2.5" to 6" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

2 ***CAUTION** Equipment Damage!*
Actuators may be connected in parallel. Power consumption and input impedance must be observed.

3 Actuators may also be powered by 24 VDC.

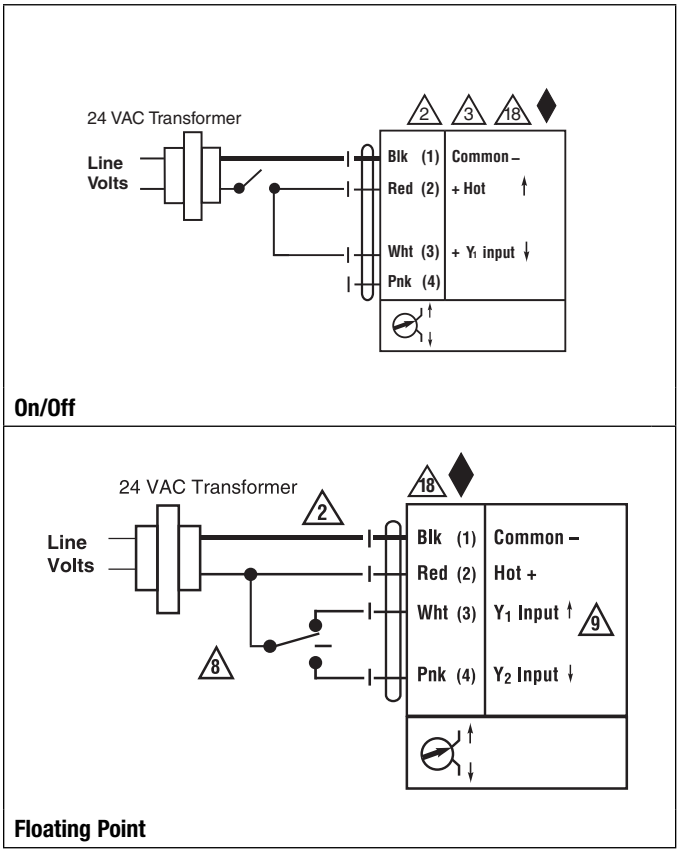
8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

18 Actuators with plenum cable do not have numbers; use color codes instead.

♦ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

⚠ ***WARNING** Live Electrical Components!*
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



On/Off

Floating Point

AVKX120-3

On/Off, Floating Point, Electronic Fail-Safe Actuator, Linear, 120 V

Application

Fail-safe for on/off and floating point control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to a 120 volt signal being applied from an electronic controller or positioner.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The AVK series provides 32 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The AVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

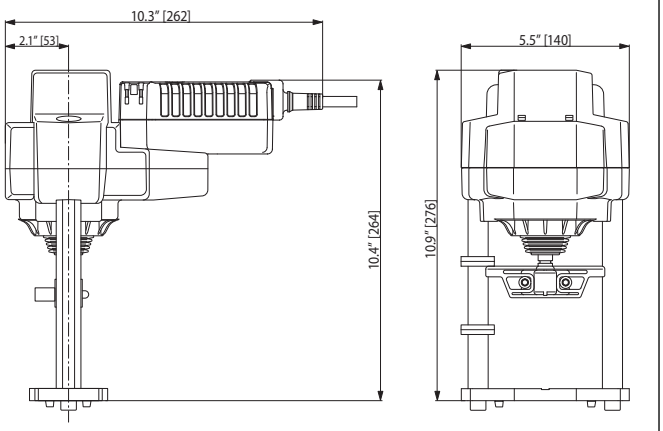
Fail-Safe Green LED Status Indicator Light Sequence:

- On: operation ok, no faults
- Blinking: fail-safe mechanism is active
- Off: fault is detected or not in operation / capacitors charging

Technical Data	
Power supply	100-240 VAC ± 20%, 50/60 Hz
Power consumption running	8.5 W
Power consumption holding	2.5 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA appliance rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	on/off, floating point
Operating range Y	on/off, floating point
Input impedance	100 kΩ (0.1 mA), 500 Ω, 1000 Ω (on/off)
Feeback output U	no feedback
Stroke	1.25" [32 mm]
Linear force	450 lbf [2000 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	5 mm hex crank (3/16" Allen), supplied
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<60dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 2.5 KV. Type of action 1. Control Pollution Degree 3.

Dimensions (Inches [mm])



Typical Specification

On/off, floating point control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves 2.5" to 6" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

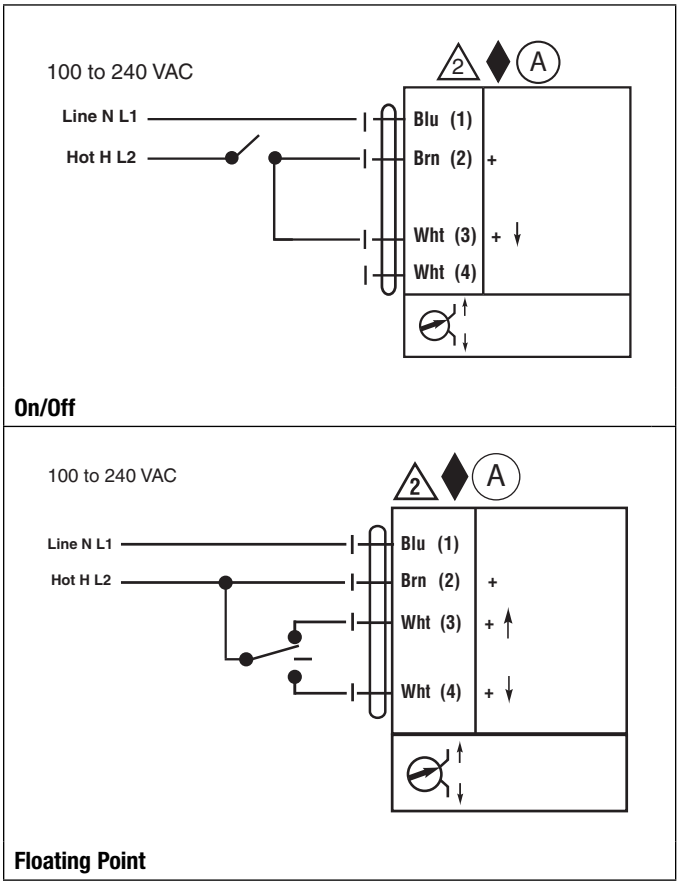
INSTALLATION NOTES

(A) Actuators with appliance cables are numbered.

△2 ***CAUTION*** *Equipment Damage!*
Actuators may be connected in parallel. Power consumption and input impedance must be observed.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

⚠ ***WARNING*** *Live Electrical Components!*
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



On/Off

Floating Point

AVKB24-MFT

Proportional, Electronic Fail-Safe Actuator, Linear, 24 V, Multi-Function Technology®

MFT

5 YEAR WARRANTY

CE LISTED 94 D5 TEMP.IND. & REG.EQUIP. c UL us

BRUSHLESS DC MOTOR

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz, 24 VDC ± 10%
Power consumption running	12 W
Power consumption holding	3 W
Transformer sizing	21 VA (class 2 power source)
Electrical connection	3 ft, 18 GA plenum rated cable with ½" conduit connector protected NEMA 2 (IP54)
Overload protection	electronic throughout full stroke
Electrical protection	actuators are double insulated
Control	proportional/MFT
Operating range Y	2 to 10 VDC, 4 to 20 mA (default), variable (VDC, PWM, floating point, on/off)
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA, 1500 Ω for PWM, floating point and on/off
Feeback output U	2 to 10 VDC, 0.5 mA max, VDC variable
Stroke	1.25" [32 mm]
Linear force	450 lbf [2000 N]
Direction of rotation	reversible with switch
Position indication	stroke indicator on bracket
Manual override	5 mm hex crank (3/16" Allen), supplied
Running time motor	90 seconds (default), variable (90 to 150 seconds)
Running time fail-safe	35 seconds
Humidity	5 to 95% RH non condensing
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	aluminum die cast and plastic casing
Bridge time	2 second delay before fail-safe activates
Initial charge	5 to 20 seconds
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level	<60dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	9 lbs

† Use flexible metal conduit. Push the Listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with Listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control Pollution Degree 3.

Application

Fail-safe for multiple control types of globe valves in HVAC steam and hydronic systems.

Actuator sizing will be dictated by the valve size and in accordance with the flow parameters and system specifications. The actuator is mounted directly onto the globe valve bonnet with the universal clamp and collar.

The actuator operates in response to many controls types as desired by the customer and/or design control input from an electronic controller or positioner. A 2 to 10 VDC feedback signal is provided for position indication.

Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The AVK series provides 32 mm of downward travel and a visual indicator indicates position of the actuator. When reaching the valve end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The AVK… series actuators use a sensorless brushless DC motor. The ASIC inside monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

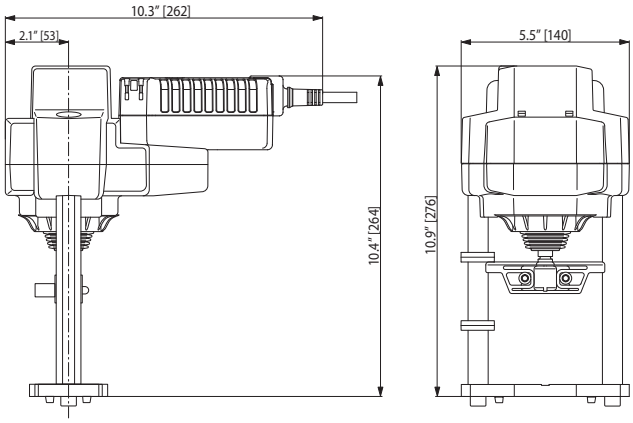
Add-on auxiliary switches are easily fastened directly onto the actuator body for signaling and switching functions.

-SR and –MFT models will have an illuminated green Adaption/Power button to reset and relearn the valve stroke as well as indicate the actuator is powered. This feature allows the actuator to rescale itself based on the actual travel. Along with the Adaption button on –MFT models will have a yellow Status light to confirm communication.

Fail-Safe LED Status Indicator Light Sequence:

- Yellow off / Green on: operation ok, no faults
- Yellow off / Green blinking: fail-safe mechanism is active
- Yellow on / Green off: fault is detected
- Yellow off / Green off: not in operation / capacitors charging
- Yellow on / Green on: adaption running
- Yellow blinking / Green on: communication with programming tool

Dimensions (Inches [mm])



Typical Specification

Proportional control globe valve actuators shall be electronic and direct coupled to the globe valve bonnet via an integrated linkage, which requires no secondary linkage and be capable of mounting to valves 2.5" to 6" in size. Actuators must provide control in response to a control input from an electronic controller or positioner. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Wiring Diagrams

INSTALLATION NOTES

△2 ***CAUTION** Equipment Damage!*
Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.

△3 Actuators may also be powered by 24 VDC.

△7 A 500 Ω resistor converts the 4-20 mA control signal to 2-10 VDC

△8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

△9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

△10 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Position feedback cannot be used with a triac sink controller. The actuator internal common reference is not compatible.

△12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155)

△18 Actuators with plenum cable do not have numbers; use color codes instead.

◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

⚠ ***WARNING** Live Electrical Components!*
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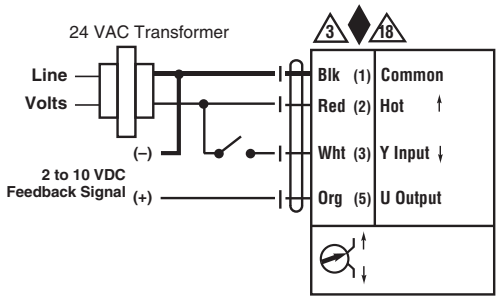
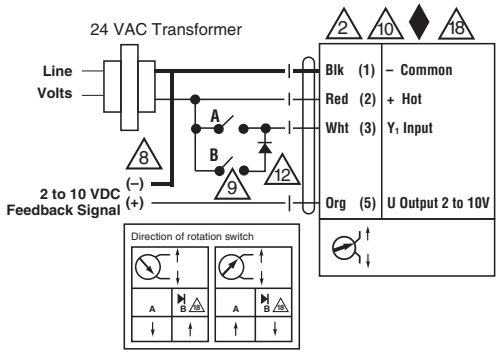
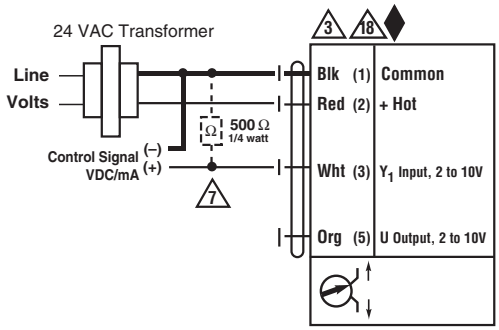


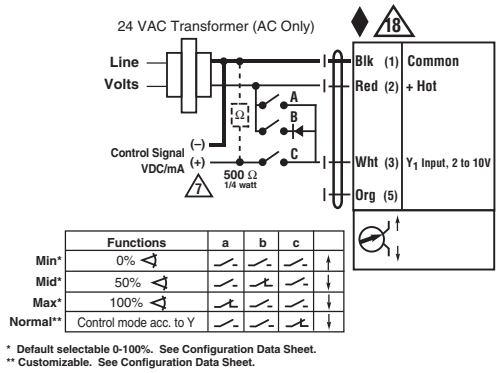
On/Off



Floating Point



VDC/4-20 mA



	Functions	a	b	c	
Min*	0%				
Mid*	50%				
Max*	100%				
Normal**	Control mode acc. to Y				

* Default selectable 0-100%. See Configuration Data Sheet.
** Customizable. See Configuration Data Sheet.

Override

UGSL1200 Short-Stroke Valve Retrofit Kit

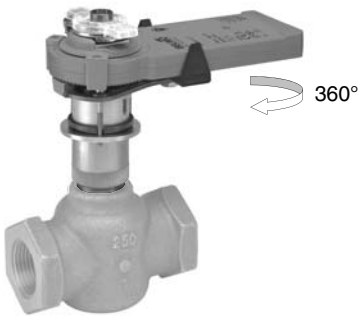
For CM and TF Series Actuators

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°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Servicing	chilled or hot water max steam inlet 15 psi
Weight	1.25 lbs [0.57 kg]

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.

The unique coupler design allows the UGSL1200 to be mounted on any ½" to 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

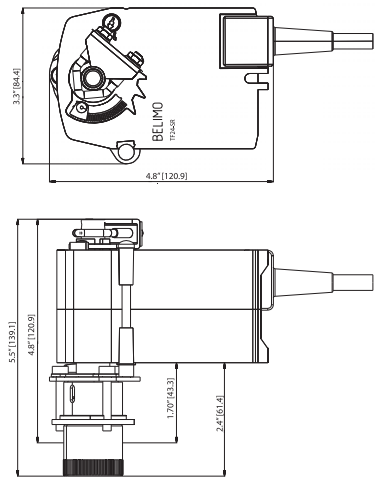
The UGSL1200 linkage provides 6 mm of downward stroke with 95° CW rotation on the actuator. This allows the valve to extend fully open or closed based on signal. The slot located on the housing provides indication when the maximum stroke has been reached. For troubleshooting when using a CM actuator, 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 1-½" normally closed valves.

***TFL series actuators required for on/off applications**

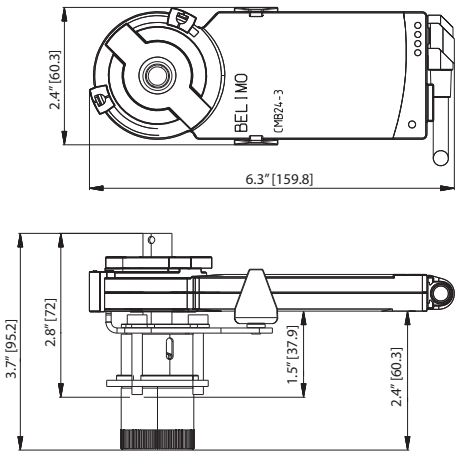
TF Dimensions (Inches [mm])

D315



CM Dimensions (Inches [mm])

D316



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 658 series, **1¼"** valve, needing **200 psi** close-off pressure and **Fail-Safe** actuation.

1 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 **UGLK1214, UGLK1350** and a **UGVL** series linkage available.

2 Use the selection guide and your close-off pressure requirement to select the correct actuator series for your application. Looking at the **UGLK1350** there are no fail-safe actuators that will achieve 200 psi close-off for 1¼" valve. Looking at the **UGLK1214** or **UGVL,** the **AF** or **SVK** Series actuator will provide over **200 psi close-off** for the **1¼" valve**.

3 Use the actuator listings to make your final actuator selection.

4 HOW TO ORDER: **Option One:**
Item 1 1pc UGLK1214
Item 2 1pc AFB24-MFT

Option Two:
Item 1 1pc UGVL + SVKX24-MFT

5 YEAR WARRANTY

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

Siemens\Landis\Powers

658 Series Valves
Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
658 Series	2-way	1¼"	NPT	-	No	78	LM	**UGLK1350**
						156	NM	**UGLK1350**
						236	SV	**UGVL**
						250	AM	**UGLK1214**
					Yes	61	LF	**UGLK1350**
						156	NF	**UGLK1214**
						236	SVK	**UGVL**
						250	AF	**UGLK1214**

Example: **Siemens Series #658, 2-Way, 1¼"** valve to be retrofitted.

Choose correct kit **UGLK1214** or **UGVL**.

2 Verify close-off is suitable for application. Looking at the **UGLK or UGVL**, the **AF and SVK** Series actuator will provide **200 psi close-off** for the **1¼" valve**.

3 Select actuator from Product Guide and Price List based on needed control type. Decide between **AFB24**, **AFB24-MFT**

or **SVKX24-3, SVKX24-MFT**.

Model	Spring Return Actuators: Control Input	Feedback	Power Supply	Running Time(s): (M)	Running Time(s): ♦♦	VA Rating	Auxiliary Switch
BASIC PRODUCTS							
AFB24	On/Off	-	24 VAC/DC	<75 seconds	20 secs	7.5	-
AFB24-S	On/Off	-	24 VAC/DC	<75 seconds	20 secs	7.5	Built-In
AFBUP	On/Off	-	24-240 VAC	<75 seconds	20 secs	8.5	-
AFBUP-S	On/Off	-	24-240 VAC	<75 seconds	20 secs	8.5	Built-In
AFB24-SR	2-10 VDC (4-20mA)	2-10 VDC	24 VAC/DC	95 seconds	<20 secs	8.5	-
AFB24-SR-S	2-10 VDC (4-20mA)	2-10 VDC	24 VAC/DC	95 seconds	<20 secs	8.5	Built-In
AFB24-PC	0-10 V Phasecut	2-10 VDC	24 VAC/DC	150 seconds	<20 secs	10	-
AFB24-MFT	2-10 VDC (4-20mA)	2-10 VDC	24 VAC/DC	150 seconds	<20 secs	10	-
AFB24-MFT-S	2-10 VDC (4-20mA)	2-10 VDC	24 VAC/DC	150 seconds	<20 secs	10	Built-In
AFB24-MFT95	0 to 135	2-10 VDC	24 VAC/DC	150 seconds	<20 secs	10	-

4 Complete Ordering Example Option One:
Item 1: **UGLK1214**
Item 2: **AFB24-MFT**

4 Complete Ordering Example Option Two:
Item 1: **UGVL + SVKX24-MFT**

ACTUATOR PART #		LVKX24-3	LVKB24-SR	LVKX24-MFT	SVKX24-3	SVKB24-SR	SVKX24-MFT
Control type		On/Off, Floating Point	Proportional	Proportional/MFT	On/Off, Floating Point	Proportional	Proportional/ MFT
Input signal / Feedback		-	2-10 VDC	Variable	-	2-10 VDC	Variable
Running time	Motor	150 seconds	150 seconds	Variable	150 seconds	150 seconds	Variable
	Fail-Safe	35 seconds	35 seconds	35 seconds	35 seconds	35 seconds	35 seconds
Actuator travel		24mm	24mm	24mm	24mm	24mm	24mm
Actuator noise level		<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)	<45 dB(A)
Valve Description							
GVL LINKAGES WITH ELECTRONIC FAIL-SAFE ACTUATORS							
UGVL	Universal Adjustable for ½" to 2"	$850.00	$895.00	$950.00	$955.00	$1,000.00	$1,050.00
SGVL	Schnieder VB7..., VB9...	$750.00	$795.00	$875.00	$825.00	$875.00	$925.00

Globe Valve Retrofit Actuators

Actuator Suggestion Guide

BELIMO

ROTARY ACTUATORS

SERIES	MODEL	Spring Return	Electronic Fail-Safe	Tandem Mounting Available	Control Input	Feedback Position	Power Supply	Standard Running Time
LF Series*	LF24 US	•			On/Off	-	24 VAC/DC	Consult Specifications
	LF24-MFT US	•			Variable with MFT	Variable VDC	24 VAC/DC	
NF Series*	NFBUP-X1	•			On/Off	-	24-240 VAC	
	NFX24-MFT	•			(24 VAC/DC) Variable with MFT	Variable VDC	24 VAC/DC	
AF Series*	AFBUP-X1	•		•	On/Off	-	24-240 VAC	
	AFX24-MFT-X1	•		•	Variable with MFT	Variable VDC	24 VAC/DC	
LM Series*	LMB24-3-X1				Floating Point, On/Off	-	24 VAC/DC	
	LMX24-MFT-X1				Variable with MFT	Variable VDC	24 VAC/DC	
NM Series*	NMB24-3-X1				Floating Point, On/Off	-	24 VAC/DC	
	NMX24-MFT-X1				Variable with MFT	Variable VDC	24 VAC/DC	
AM Series*	AMB24-3-X1				Floating Point, On/Off	-	24 VAC/DC	
	AMX24-MFT-X1				Variable with MFT	Variable VDC	24 VAC/DC	
GM Series*	GMB24-3-X1			•	Floating Point, On/Off	-	24 VAC/DC	
	GMX24-MFT-X1			•	Variable with MFT	Variable VDC	24 VAC/DC	
GK Series*	GKB24-3-X1		•		Floating Point, On/Off	-	24 VAC/DC	
	GKX24-MFT-X1		•	•	Variable with MFT	Variable VDC	24 VAC/DC	

*Please consult the Damper section 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.

LINEAR ACTUATORS**

SERIES	MODEL	Fail-Safe	Control Input	Feedback Position	Power Supply	Standard Running Time*	Force
LV Series	LVX24-3	No	Floating Pt., On/Off	N/A	24 VAC/DC	90 seconds	112 lbf
	LVX120-3	No	Floating Pt., On/Off	N/A	120-240 VAC	90 seconds	112 lbf
	LVBSR-SR	No	2-10 VDC	2-10 VDC	24 VAC/DC	90 seconds	112 lbf
	LVX24-MFT	No	Variable with MFT	Variable VDC	24 VAC/DC	90 seconds	112 lbf
LVK Series	LVKX24-3	Yes	Floating Pt., On/Off	N/A	24 VAC/DC	90 seconds	112 lbf
	LVKX120-3	Yes	Floating Pt., On/Off	N/A	120-240 VAC	90 seconds	112 lbf
	LVKBSR-SR	Yes	2-10 VDC	2-10 VDC	24 VAC/DC	90 seconds	112 lbf
	LVKX24-MFT	Yes	Variable with MFT	Variable VDC	24 VAC/DC	90 seconds	112 lbf
SV Series	SVX24-3	No	Floating Pt., On/Off	N/A	24 VAC/DC	90 seconds	337 lbf
	SVX120-3	No	Floating Pt., On/Off	N/A	120-240 VAC	90 seconds	337 lbf
	SVBSR-SR	No	2-10 VDC	2-10 VDC	24 VAC/DC	90 seconds	337 lbf
	SVX24-MFT	No	Variable with MFT	Variable VDC	24 VAC/DC	90 seconds	337 lbf
SVK Series	SVKX24-3	Yes	Floating Pt., On/Off	N/A	24 VAC/DC	90 seconds	337 lbf
	SVKX120-3	Yes	Floating Pt., On/Off	N/A	120-240 VAC	90 seconds	337 lbf
	SVKBSR-SR	Yes	2-10 VDC	2-10 VDC	24 VAC/DC	90 seconds	337 lbf
	SVKX24-MFT	Yes	Variable with MFT	Variable VDC	24 VAC/DC	90 seconds	337 lbf
AV Series	AVKB24-3	Yes	Floating Pt., On/Off	N/A	24 VAC/DC	90 seconds	450 lbf
	AVKB120-3	Yes	Floating Pt., On/Off	N/A	120-240 VAC	90 seconds	450 lbf
	AVKB24-MFT	Yes	Variable with MFT	Variable VDC	24 VAC/DC	90 seconds	450 lbf
EV Series	EVB24-3	No	Floating Pt., On/Off	N/A	24 VAC/DC	90 seconds	562 lbf
	EVB120-3	No	Floating Pt., On/Off	N/A	120-240 VAC	90 seconds	562 lbf
	EVB24-MFT	No	Variable with MFT	Variable VDC	24 VAC/DC	90 seconds	562 lbf
RV Series	RVB24-3	No	Floating Pt., On/Off	N/A	24 VAC/DC	90 seconds	562 lbf
	RVB24-MFT	No	Variable with MFT	Variable VDC	24 VAC/DC	90 seconds	562 lbf

* Other speeds available on request. ** Sold as an assembly with linkage.

MULTI-FUNCTION TECHNOLOGY

	PROGRAMMING CODE		Control Input	Running Time	Built-in Feedback
ROTARY ACTUATOR	P-10001	A01	2-10 VDC	150 seconds	2-10 VDC
	P-10002	A02	0.5-10 VDC	150 seconds	0.5-10 VDC
	P-10028	A28	0.5-10 VDC	150 seconds	0.5-10 VDC
	P-10063	A63	0.5-4.5 VDC	150 seconds	0.5-4.5 VDC
	P-10064	A64	5.5-10 VDC	150 seconds	5.5-10 VDC
	P-20002	W02	0.02-5.00 seconds PWM	150 seconds	2-10 VDC
	P-20003	W03	0.10-25.5 seconds PWM	150 seconds	2-10 VDC
	P-30001	F01	Floating Point	150 seconds	2-10 VDC
	P-40002	J02	On/Off	150 seconds	2-10 VDC
LINEAR ACTUATOR	G43		2-10 VDC	90 seconds	2-10 VDC
	G53		0.5-10 VDC	90 seconds	0.5-10 VDC
	W3M		0.02-5.00 seconds PWM	90 seconds	2-10 VDC
	G13		Floating Point	90 seconds	2-10 VDC
	G03		On/Off	90 seconds	2-10 VDC

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V5011 Series	2-way	½"	NPT	-	No	250	LV	UGVL
					Yes	250	LVK	UGVL
		¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1"	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼"	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½"	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2"	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
		2½"	NPT	-	No	59	SV	UGVL
					Yes	59	SVK	UGVL
		3"	NPT	-	No	41	SV	UGVL
					Yes	41	SVK	UGVL
V5011N Series	2-way	½"	NPT	-	No	250	LM	UGLK1806
							LV	UGVL
					Yes	250	LF	UGLK1806
							LVK	UGVL
							NF	UGLK1800
		¾"	NPT	-	No	153	LM	UGLK1806
						211	LV	UGVL
						250	NM	UGLK1806
					Yes	119	LF	UGLK1806
						211	LVK	UGVL
						250	NF	UGLK1800
		1"	NPT	-	No	92	LV	UGVL
						86	LM	UGLK1806
						173	NM	UGLK1806
						250	AM	UGLK1800
							SV	UGVL
					Yes	67	LF	UGLK1806
						92	LVK	UGVL
						173	NF	UGLK1800
						250	SVK	UGVL
						250	AF	UGLK1800
		1¼"	NPT	-	No	55	LM	UGLK1806
						110	NM	UGLK1806
						221	AM	UGLK1800
						236	SV	UGVL
					Yes	43	LF	UGLK1806
						110	NF	UGLK1800
						221	AF	UGLK1800
						236	SVK	UGVL
		1½"	NPT	-	No	38	LM	UGLK1806
						77	NM	UGLK1806
						153	AM	UGLK1800
						160	SV	UGVL
						250	GM	UGLK1800
					Yes	77	NF	UGLK1800
						30	LF	UGLK1806
						153	AF	UGLK1800
						160	SVK	UGVL
						250	GK	UGLK1800
					No	22	LM	UGLK1806
						43	NM	UGLK1806
						85	SV	UGVL
						86	AM	UGLK1800
						173	GM	UGLK1800

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

Honeywell

V5011N, V5013, V5013N Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V5011N Series	2-way	2”	NPT	-	Yes	17	LF	UGLK1806
						43	NF	UGLK1800
						85	SVK	UGVL
						86	AF	UGLK1800
						173	GK	UGLK1800
V5013 Series	3-way	½”	NPT	-	No	250	LV	UGVL
					Yes	250	LVK	UGVL
		¾”	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1”	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼”	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½”	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2”	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
		2½”	NPT	-	No	59	SV	UGVL
					Yes	59	SVK	UGVL
		3”	NPT	-	No	41	SV	UGVL
					Yes	41	SVK	UGVL
V5013N Series	3-way	½”	NPT	-	No	250	LM	UGLK1806
							LV	UGVL
					Yes	250	LF	UGLK1806
							LVK	UGVL
							NF	UGLK1800
		¾”	NPT	-	No	153	LM	UGLK1806
						211	LV	UGVL
						250	NM	UGLK1806
					Yes	119	LF	UGLK1806
						211	LVK	UGVL
						250	NF	UGLK1800
		1”	NPT	-	No	92	LV	UGVL
						86	LM	UGLK1806
						173	NM	UGLK1806
						250	AM	UGLK1800
							SV	UGVL
					Yes	67	LF	UGLK1806
						92	LVK	UGVL
						173	NF	UGLK1800
						250	SVK	UGVL
						250	AF	UGLK1800
		1¼”	NPT	-	No	55	LM	UGLK1806
						110	NM	UGLK1806
						221	AM	UGLK1800
						236	SV	UGVL
					Yes	43	LF	UGLK1806
						110	NF	UGLK1800
						221	AF	UGLK1800
						236	SVK	UGVL
		1½”	NPT	-	No	38	LM	UGLK1806
						77	NM	UGLK1806
						153	AM	UGLK1800
						160	SV	UGVL
						250	GM	UGLK1800
					Yes	77	NF	UGLK1800
						30	LF	UGLK1806
						153	AF	UGLK1800
						160	SVK	UGVL
						250	GK	UGLK1800
		2”	NPT	-	No	22	LM	UGLK1806
						43	NM	UGLK1806
						85	SV	UGVL
						86	AM	UGLK1800
						173	GM	UGLK1800

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V5013N Series	3-way	2"	NPT	-	Yes	17	LF	UGLK1806
						43	NF	UGLK1800
						85	SVK	UGVL
						86	AF	UGLK1800
						173	GK	UGLK1800
V5011F (1014, 1022, 1030, 1048, 1121, 1139)	2-way	½"	NPT	-	No	250	LM	UGLK1806
					Yes	250	LF	UGLK1806
							NF	UGLK1800
V5011G (1137, 1145, 1152, 1160, 1178, 1186)	2-way	½"	NPT	-	No	250	LM	UGLK1806
					Yes	250	LF	UGLK1806
							NF	UGLK1800
V5011H (1002, 1010)	2-way	½"	NPT	-	No	250	LM	UGLK1806
					Yes	250	LF	UGLK1806
							NF	UGLK1800
V5011J (1012, 1079)	2-way	½"	NPT	-	No	250	LM	UGLK1806
					Yes	250	LF	UGLK1806
							NF	UGLK1800
V5011F (1055, 1147)	2-way	¾"	NPT	-	No	153	LM	UGLK1806
						250	NM	UGLK1806
					Yes	119	LF	UGLK1806
						250	NF	UGLK1800
V5011 (H1028, G1194, J1023)	2-way	¾"	NPT	-	No	153	LM	UGLK1806
						250	NM	UGLK1806
					Yes	119	LF	UGLK1806
						250	NF	UGLK1800
V5011 (F1063, F1154, H1028, G1194)	2-way	1"	NPT	-	No	86	LM	UGLK1806
						173	NM	UGLK1806
						250	AM	UGLK1800
					Yes	67	LF	UGLK1806
						173	NF	UGLK1800
						250	AF	UGLK1800
V5011F (1071, 1162)	2-way	1¼"	NPT	-	No	55	LM	UGLK1806
						110	NM	UGLK1806
						221	AM	UGLK1800
					Yes	43	LF	UGLK1806
						110	NF	UGLK1800
						221	AF	UGLK1800
V5011 (H1044, G1210, J1049)	2-way	1¼"	NPT	-	No	55	LM	UGLK1806
						110	NM	UGLK1806
						221	AM	UGLK1800
					Yes	43	LF	UGLK1806
						110	NF	UGLK1800
						221	AF	UGLK1800
V5011 (F1089, F1178, G1228)	2-way	1½"	NPT	-	No	38	LM	UGLK1806
						77	NM	UGLK1806
						153	AM	UGLK1800
						250	GM	UGLK1800
					Yes	77	NF	UGLK1800
						30	LF	UGLK1806
						153	AF	UGLK1800
						250	GK	UGLK1800
V5011 (F1097, F1188, G1103)	2-way	2"	NPT	-	No	22	LM	UGLK1806
						43	NM	UGLK1806
						86	AM	UGLK1800
						173	GM	UGLK1800
V5011 (F1097, F1188, G1103)	2-way	2"	NPT	-	Yes	17	LF	UGLK1800
						43	NF	UGLK1806
						86	AF	UGLK1800
						173	GK	UGLK1800
V5013F (1004, 1012, 1079)	3-way	½"	NPT	-	No	250	LM	UGLK1806
					Yes	250	LF	UGLK1806
							NF	UGLK1800
V5013F (1020, 1087)	3-way	¾"	NPT	-	No	153	LM	UGLK1806
						250	NM	UGLK1806
					Yes	119	LF	UGLK1806
						250	NF	UGLK1800

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

Honeywell

V5013, V5045, V3350 Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V5013F (1038, 1095)	3-way	1"	NPT	-	No	86	LM	UGLK1806
						173	NM	UGLK1806
						250	AM	UGLK1800
					Yes	67	LF	UGLK1806
						173	NF	UGLK1800
						250	AF	UGLK1800
V5013F (1046, 1103)	3-way	1¼"	NPT	-	No	55	LM	UGLK1806
						110	NM	UGLK1806
						221	AM	UGLK1800
					Yes	43	LF	UGLK1806
						110	NF	UGLK1800
						221	AF	UGLK1800
V5013F (1053, 1111)	3-way	1½"	NPT	-	No	38	LM	UGLK1806
						77	NM	UGLK1806
						153	AM	UGLK1800
						250	GM	UGLK1800
					Yes	77	NF	UGLK1800
						30	LF	UGLK1806
						153	AF	UGLK1800
						250	GK	UGLK1800
V5013F (1061, 1129)	3-way	2"	NPT	-	No	22	LM	UGLK1806
						43	NM	UGLK1806
						86	AM	UGLK1800
						173	GM	UGLK1800
					Yes	17	LF	UGLK1800
						43	NF	UGLK1806
						86	AF	UGLK1800
						173	GK	UGLK1800
V5045	2-way	½"	NPT	-	No	250	AM	UGLK1804
					Yes	250	NF	UGLK1804
		¾"	NPT	-	Yes	250	NF	UGLK1804
		1"	NPT	-	No	250	AM	UGLK1804
					Yes	244	NF	UGLK1804
		1¼"	NPT	-	No	250	AM	UGLK1804
					Yes	156	NF	UGLK1804
		1½"	NPT	-	No	217	AM	UGLK1804
					Yes	217	AF	UGLK1804
		2"	NPT	-	No	122	AM	UGLK1804
					Yes	122	AF	UGLK1804
V3350 (A2009, A2017, B2007, C2013, D2003)	2-way	2½"	Flanged	-	No	55	AM	UGLK1800
						110	GM	UGLK1800
						196	2*GM	UGLK1870
					Yes	55	AF	UGLK1800
						110	2*AF	UGLK1870
							GK	UGLK1800
						196	2*GK	UGLK1870
V3350 (A3007, A3015, B3005, C3011, D3001)	2-way	3"	Flanged	-	No	38	AM	UGLK1800
						77	GM	UGLK1800
						136	2*GM	UGLK1870
					Yes	38	AF	UGLK1800
						77	2*AF	UGLK1870
							GK	UGLK1800
						136	2*GK	UGLK1870
V3350 (A4005, A4013, B4003, C4019, D4009)	2-way	4"	Flanged	-	No	11	AM	UGLK1802
						22	GM	UGLK1802
						40	2*GM	UGLK1872
					Yes	11	AF	UGLK1802
						22	2*AF	UGLK1872
							GK	UGLK1802
						40	2*GK	UGLK1872
V3350 (A5002, A5010, B5000, C5016, D5006)	2-way	5"	Flanged	-	No	14	GM	UGLK1802
						25	2*GM	UGLK1872
					Yes	7	AF	UGLK1802
						14	2*AF	UGLK1872
							GK	UGLK1802
						25	2*GK	UGLK1872

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V3350 (A6000, A6008, A6018, C6014, D6004)	2-way	6”	Flanged	-	No	10	GM	UGLK1802
						18	2*GM	UGLK1872
					Yes	10	2*AF	UGLK1872
							GK	UGLK1802
						18	2*GK	UGLK1872
V3351 (A2008, C2005, D2002)	2-way	2½”	Flanged	-	No	55	AM	UGLK1800
						110	GM	UGLK1800
						196	2*GM	UGLK1870
					Yes	55	AF	UGLK1800
						110	2*AF	UGLK1870
							GK	UGLK1800
						196	2*GK	UGLK1870
V3351 (A3006, C3002, C3003)	2-way	3”	Flanged	-	No	38	AM	UGLK1800
						77	GM	UGLK1800
						136	2*GM	UGLK1870
					Yes	38	AF	UGLK1800
						77	2*AF	UGLK1870
							GK	UGLK1800
						136	2*GK	UGLK1870
V3351 (A4004, C4000, C4001)	2-way	4”	Flanged	-	No	11	AM	UGLK1802
						22	GM	UGLK1802
						40	2*GM	UGLK1872
					Yes	11	AF	UGLK1802
						22	2*AF	UGLK1872
							GK	UGLK1802
						40	2*GK	UGLK1872
V3351 (A5001, C5008, D5005)	2-way	5”	Flanged	-	No	14	GM	UGLK1802
						25	2*GM	UGLK1872
					Yes	7	AF	UGLK1802
						14	2*AF	UGLK1872
							GK	UGLK1802
						25	2*GK	UGLK1872
V3351 (A6009, C6005, C6006)	2-way	6”	Flanged	-	No	10	GM	UGLK1802
						18	2*GM	UGLK1872
					Yes	10	2*AF	UGLK1872
							GK	UGLK1802
						18	2*GK	UGLK1872
V3360E2008, V3361E2007	3-way	2½”	Flanged	-	No	55	AM	UGLK1800
						110	GM	UGLK1800
						196	2*GM	UGLK1870
					Yes	55	AF	UGLK1800
						110	2*AF	UGLK1870
							GK	UGLK1800
						196	2*GK	UGLK1870
V3360E3006, V3361E3005	3-way	3”	Flanged	-	No	38	AM	UGLK1800
						77	GM	UGLK1800
						136	2*GM	UGLK1870
					Yes	38	AF	UGLK1800
						77	2*AF	UGLK1870
							GK	UGLK1800
						136	2*GK	UGLK1870
V3360E4004, V3361E4003	3-way	4”	Flanged	-	No	11	AM	UGLK1802
						22	GM	UGLK1802
						40	2*GM	UGLK1872
					Yes	11	AF	UGLK1802
						22	2*AF	UGLK1872
							GK	UGLK1802
						40	2*GK	UGLK1872
V3360E5001, V3361E5000	3-way	5”	Flanged	-	No	14	GM	UGLK1802
						25	2*GM	UGLK1872
					Yes	7	AF	UGLK1802
						14	2*AF	UGLK1872
							GK	UGLK1802
						25	2*GK	UGLK1872

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

Honeywell

V3360, V3450, V3451 Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V3360E6009, V3361E6008	3-way	6”	Flanged	-	No	10	GM	UGLK1802
						18	2*GM	UGLK1872
					Yes	10	2*AF	UGLK1872
							GK	UGLK1802
						18	2*GK	UGLK1872
V3450 (A2008, A2016, B2006, C2012, D2002)	2-way	2½”	Flanged	-	No	55	AM	UGLK1800
						110	GM	UGLK1800
						196	2*GM	UGLK1870
					Yes	55	AF	UGLK1800
						110	2*AF	UGLK1870
							GK	UGLK1800
						196	2*GK	UGLK1870
V3450 (A3006, A3014, B3004, C3010, D3000)	2-way	3”	Flanged	-	No	38	AM	UGLK1800
						77	GM	UGLK1800
						136	2*GM	UGLK1870
					Yes	38	AF	UGLK1800
						77	2*AF	UGLK1870
							GK	UGLK1800
						136	2*GK	UGLK1870
V3450 (A4004, A4012, B4002, C4018, D4008)	2-way	4”	Flanged	-	No	11	AM	UGLK1802
						22	GM	UGLK1802
						40	2*GM	UGLK1872
					Yes	11	AF	UGLK1802
						22	2*AF	UGLK1872
							GK	UGLK1802
						40	2*GK	UGLK1872
V3450 (A5001, A5019, B5009, C5015, D5005)	2-way	5”	Flanged	-	No	14	GM	UGLK1802
						25	2*GM	UGLK1872
					Yes	7	AF	UGLK1802
						14	2*AF	UGLK1872
							GK	UGLK1802
						25	2*GK	UGLK1872
V3450 (A6009, A6007, A6017, C6013, D6003)	2-way	6”	Flanged	-	No	10	GM	UGLK1802
						18	2*GM	UGLK1872
					Yes	10	2*AF	UGLK1872
							GK	UGLK1802
						18	2*GK	UGLK1872
V3451 (A2007, C2003, C2004)	2-way	2½”	Flanged	-	No	55	AM	UGLK1800
						110	GM	UGLK1800
						196	2*GM	UGLK1870
					Yes	55	AF	UGLK1800
						110	2*AF	UGLK1870
							GK	UGLK1800
						196	2*GK	UGLK1870
V3451 (A3005, C3001, C3002)	2-way	3”	Flanged	-	No	38	AM	UGLK1800
						77	GM	UGLK1800
						136	2*GM	UGLK1870
V3451 (A3005, C3001, C3002)	2-way	3”	Flanged	-	Yes	38	AF	UGLK1800
						77	2*AF	UGLK1870
							GK	UGLK1800
						136	2*GK	UGLK1870
V3451 (A4003, C4000, C4009)	2-way	4”	Flanged	-	No	11	AM	UGLK1802
						22	GM	UGLK1802
						40	2*GM	UGLK1872
					Yes	11	AF	UGLK1802
						22	2*AF	UGLK1872
							GK	UGLK1802
						40	2*GK	UGLK1872
V3451 (A5000, C5006, C5007)	2-way	5”	Flanged	-	No	14	GM	UGLK1802
						25	2*GM	UGLK1872
					Yes	7	AF	UGLK1802
						14	2*AF	UGLK1872
							GK	UGLK1802
						25	2*GK	UGLK1872

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V3451 (A6008, C6004, C6005)	2-way	6”	Flanged	-	No	10	GM	UGLK1802
						18	2*GM	UGLK1872
					Yes	10	2*AF	UGLK1872
							GK	UGLK1802
						18	2*GK	UGLK1872
V3460E2007, V3461E2006	3-way	2½”	Flanged	-	No	55	AM	UGLK1800
						110	GM	UGLK1800
						196	2*GM	UGLK1870
					Yes	55	AF	UGLK1800
						110	2*AF	UGLK1870
							GK	UGLK1800
						196	2*GK	UGLK1870
V3460E3005, V3461E3004	3-way	3”	Flanged	-	No	38	AM	UGLK1800
						77	GM	UGLK1800
						136	2*GM	UGLK1870
					Yes	38	AF	UGLK1800
						77	2*AF	UGLK1870
							GK	UGLK1800
						136	2*GK	UGLK1870
V3460E4003, V3461E4002	3-way	4”	Flanged	-	No	11	AM	UGLK1802
						22	GM	UGLK1802
						40	2*GM	UGLK1872
					Yes	11	AF	UGLK1802
						22	2*AF	UGLK1872
							GK	UGLK1802
						40	2*GK	UGLK1872
V3460E5000, V3461E5009	3-way	5”	Flanged	-	No	14	GM	UGLK1802
						25	2*GM	UGLK1872
					Yes	7	AF	UGLK1802
						14	2*AF	UGLK1872
							GK	UGLK1802
						25	2*GK	UGLK1872
V3460E6008, V3461E6007	3-way	6”	Flanged	-	No	10	GM	UGLK1802
						18	2*GM	UGLK1872
					Yes	10	2*AF	UGLK1872
							GK	UGLK1802
						18	2*GK	UGLK1872
V5011 (A1734, F1105, F1196, G1111)	2-way	2½”	Flanged/NPT	-	No	55	AM	UGLK1800
						110	GM	UGLK1800
						196	2*GM	UGLK1870
					Yes	55	AF	UGLK1800
						110	2*AF	UGLK1870
							GK	UGLK1800
						196	2*GK	UGLK1870
V5011 (A1767, F1113, F1204, G1129)	2-way	3”	Flanged/NPT	-	No	38	AM	UGLK1800
						77	GM	UGLK1800
						136	2*GM	UGLK1870
					Yes	38	AF	UGLK1800
						77	2*AF	UGLK1870
							GK	UGLK1800
						136	2*GK	UGLK1870
V5011 (A1858, B1013)	2-way	4”	Flanged	-	No	11	AM	UGLK1802
						22	GM	UGLK1802
						40	2*GM	UGLK1872
					Yes	11	AF	UGLK1802
						22	2*AF	UGLK1872
							GK	UGLK1802
						40	2*GK	UGLK1872
V5011 (A1882, B1047)	2-way	5”	Flanged	-	No	14	GM	UGLK1802
						25	2*GM	UGLK1872
					Yes	7	AF	UGLK1802
						14	2*AF	UGLK1872
							GK	UGLK1802
						25	2*GK	UGLK1872

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

Honeywell

V5011, V5013 Series Valves

Linkage/Actuator Selection Guide

Johnson Controls

V52… Series Valves

Linkage/Actuator Selection Guide

5 YEAR WARRANTY

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V5011 (A1916, B1078)	2-way	6”	Flanged	-	No	10	GM	UGLK1802
						18	2*GM	UGLK1872
					Yes	10	2*AF	UGLK1872
							GK	UGLK1802
						18	2*GK	UGLK1872
V5013 (B1003, C1001)	3-way	2½”	Flanged	-	No	55	AM	UGLK1800
						110	GM	UGLK1800
						196	2*GM	UGLK1870
					Yes	55	AF	UGLK1800
						110	2*AF	UGLK1870
							GK	UGLK1800
						196	2*GK	UGLK1870
V5013 (B1011, C1019)	3-way	3”	Flanged	-	No	38	AM	UGLK1800
						77	GM	UGLK1800
						136	2*GM	UGLK1870
					Yes	38	AF	UGLK1800
						77	2*AF	UGLK1870
							GK	UGLK1800
						136	2*GK	UGLK1870
V5013 (B1029, C1027)	3-way	4”	Flanged	-	No	11	AM	UGLK1802
						22	GM	UGLK1802
						40	2*GM	UGLK1872
					Yes	11	AF	UGLK1802
						22	2*AF	UGLK1872
							GK	UGLK1802
						40	2*GK	UGLK1872
V5013 (B1037, C1035)	3-way	5”	Flanged	-	No	14	GM	UGLK1802
						25	2*GM	UGLK1872
					Yes	7	AF	UGLK1802
						14	2*AF	UGLK1872
							GK	UGLK1802
						25	2*GK	UGLK1872
V5013 (B1045, C1043)	3-way	6”	Flanged	-	No	10	GM	UGLK1802
						18	2*GM	UGLK1872
					Yes	10	2*AF	UGLK1872
							GK	UGLK1802
						18	2*GK	UGLK1872
JOHNSON CONTROLS								
V-5252-12	2-way	3”	Flanged	PDTC	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
V-5252-13	2-way	3”	Flanged	PDTC	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
V-5252-35	2-way	3”	Flanged	PDTC	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
V-5252-14	2-way	4”	Flanged	PDTC	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476
					Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476

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

PDTO = Push down to open PDTC = Push down to close

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V-5252-36	2-way	4”	Flanged	PDTC	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476
					Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476
V-5252-17	2-way	5”	Flanged	PDTC	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
V-5252-18	2-way	5”	Flanged	PDTC	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
V-5252-38	2-way	5”	Flanged	PDTC	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
V-5252-19	2-way	6”	Flanged	PDTC	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
V-5252-39	2-way	6”	Flanged	PDTC	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
V-5462-8	2-way	3”	Flanged	PDTO	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
V-5462-9	2-way	3”	Flanged	PDTO	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
V-5462-35	2-way	3”	Flanged	PDTO	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
V-5462-11	2-way	4”	Flanged	PDTO	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476
					Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476
V-5462-12	2-way	4”	Flanged	PDTO	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476

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

PDTO = Push down to open PDTC = Push down to close

Johnson Controls

V-54…, V-58… Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V-5462-12	2-way	4”	Flanged	PDTO	Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476
V-5462-37	2-way	4”	Flanged	PDTO	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476
					Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476
V-5462-15	2-way	5”	Flanged	PDTO	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
V-5462-16	2-way	5”	Flanged	PDTO	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
V-5462-39	2-way	5”	Flanged	PDTO	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
V-5462-17	2-way	6”	Flanged	PDTO	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
V-5462-18	2-way	6”	Flanged	PDTO	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
V-5462-40	2-way	6”	Flanged	PDTO	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
V-5842-9	3-way	3”	Flanged	Mixing	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
V-5842-10	3-way	3”	Flanged	Mixing	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
V-5842-32	3-way	3”	Flanged	Mixing	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476

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

PDTO = Push down to open PDTC = Push down to close

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V-5842-13	3-way	5”	Flanged	Mixing	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
V-5842-14	3-way	5”	Flanged	Mixing	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
V-5842-35	3-way	5”	Flanged	Mixing	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
V-5842-15	3-way	6”	Flanged	Mixing	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
V-5842-16	3-way	6”	Flanged	Mixing	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
V-5842-36	3-way	6”	Flanged	Mixing	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
VB-3752-22	2-way	3”	Flanged	PDTC	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
VB-3752-25	2-way	4”	Flanged	PDTC	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476
					Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476
VB-3752-28	2-way	5”	Flanged	PDTC	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
VB-3752-31	2-way	6”	Flanged	PDTC	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
VB-3970-14	2-way	3”	Flanged	PDTO	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476

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

PDTO = Push down to open PDTC = Push down to close

Johnson Controls

VB-39…, VB-43…, VG22… Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VB-3970-17	2-way	4”	Flanged	PDTO	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476
					Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476
VB-3970-20	2-way	5”	Flanged	PDTO	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
VB-3970-23	2-way	6”	Flanged	PDTO	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
VB-4322-11	3-way	3”	Flanged	Mixing	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
VB-4322-13	3-way	4”	Flanged	Mixing	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476
					Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476
VB-4322-18	3-way	6”	Flanged	Mixing	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
VB-4322-19	3-way	5”	Flanged	Mixing	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
VG2231 UM	2-way	3”	Flanged	PDTC	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
VG2231 VM	2-way	4”	Flanged	PDTC	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476
					Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476
VG2231 WN	2-way	5”	Flanged	PDTC	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
VG2231 YN	2-way	6”	Flanged	PDTC	No	10	GM	UGLK1414
						18	2*GM	UGLK1480

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

PDTO = Push down to open PDTC = Push down to close

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VG2231 YN	2-way	6”	Flanged	PDTC	Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
VG2431 UM	2-way	3”	Flanged	PDTO	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
VG2431 VM	2-way	4”	Flanged	PDTO	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476
					Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476
VG2431 WN	2-way	5”	Flanged	PDTO	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
VG2431 YN	2-way	6”	Flanged	PDTO	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
VG2831 UM	3-way	3”	Flanged	Mixing	No	26	AM	UGLK1410
						52	GM	UGLK1410
						93	2*GM	UGLK1476
					Yes	26	AF	UGLK1410
						52	2*AF	UGLK1476
							GK	UGLK1410
						93	2*GK	UGLK1476
VG2831 VM	3-way	4”	Flanged	Mixing	No	15	AM	UGLK1410
						29	GM	UGLK1410
						52	2*GM	UGLK1476
					Yes	15	AF	UGLK1410
						29	2*AF	UGLK1476
							GK	UGLK1410
						52	2*GK	UGLK1476
VG2831 WN	3-way	5”	Flanged	Mixing	No	14	GM	UGLK1414
						25	2*GM	UGLK1480
					Yes	7	AF	UGLK1414
						14	2*AF	UGLK1480
							GK	UGLK1414
						25	2*GK	UGLK1480
VG2831 YN	3-way	6”	Flanged	Mixing	No	10	GM	UGLK1414
						18	2*GM	UGLK1480
					Yes	10	2*AF	UGLK1480
							GK	UGLK1414
						18	2*GK	UGLK1480
V-5210-4595	2-way	2½”	Flanged	PDTC	No	38	AM	UGLK1412
						75	GM	UGLK1412
						134	2*GM	UGLK1478
					Yes	38	AF	UGLK1412
						75	2*AF	UGLK1478
							GK	UGLK1412
						134	2*GK	UGLK1478
V-5210-4596	2-way	3”	Flanged	PDTC	No	26	AM	UGLK1412
						52	GM	UGLK1412
						93	2*GM	UGLK1478
					Yes	26	AF	UGLK1412
						52	2*AF	UGLK1478
							GK	UGLK1412
						93	2*GK	UGLK1478

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

PDTO = Push down to open PDTC = Push down to close

Johnson Controls

V-52… Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V-5210-4597	2-way	4”	Flanged	PDTC	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V-5252-4	2-way	2½”	Flanged	PDTC	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5252-5	2-way	2½”	Flanged	PDTC	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5252-6	2-way	2½”	Flanged	PDTC	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5252-7	2-way	2½”	Flanged	PDTC	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5252-8	2-way	2½”	Flanged	PDTC	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5252-32	2-way	2½”	Flanged	PDTC	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5252-33	2-way	2½”	Flanged	PDTC	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5252-9	2-way	3”	Flanged	PDTC	No	38	AM	UGLK1404
						77	GM	UGLK1404
						136	2*GM	UGLK1472
V-5252-9	2-way	3”	Flanged	PDTC	Yes	38	AF	UGLK1404
						77	2*AF	UGLK1472
							GK	UGLK1404
						136	2*GK	UGLK1472
V-5252-10	2-way	3”	Flanged	PDTC	No	38	AM	UGLK1404
						77	GM	UGLK1404
						136	2*GM	UGLK1472

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

PDTO = Push down to open PDTC = Push down to close

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V-5252-10	2-way	3”	Flanged	PDTC	Yes	38	AF	UGLK1404
						77	2*AF	UGLK1472
							GK	UGLK1404
						136	2*GK	UGLK1472
V-5252-11	2-way	3”	Flanged	PDTC	No	38	AM	UGLK1404
						77	GM	UGLK1404
						136	2*GM	UGLK1472
					Yes	38	AF	UGLK1404
						77	2*AF	UGLK1472
							GK	UGLK1404
						136	2*GK	UGLK1472
V-5252-34	2-way	3”	Flanged	PDTC	No	38	AM	UGLK1404
						77	GM	UGLK1404
						136	2*GM	UGLK1472
					Yes	38	AF	UGLK1404
						77	2*AF	UGLK1472
							GK	UGLK1404
						136	2*GK	UGLK1472
V-5252-15	2-way	4”	Flanged	PDTC	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V-5252-16	2-way	4”	Flanged	PDTC	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V-5252-37	2-way	4”	Flanged	PDTC	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V-5410-4595	2-way	2½”	Flanged	PDTO	No	38	AM	UGLK1412
						75	GM	UGLK1412
						134	2*GM	UGLK1478
					Yes	38	AF	UGLK1412
						75	2*AF	UGLK1478
							GK	UGLK1412
						134	2*GK	UGLK1478
V-5410-4596	2-way	3”	Flanged	PDTO	No	26	AM	UGLK1412
						52	GM	UGLK1412
						93	2*GM	UGLK1478
					Yes	26	AF	UGLK1412
						52	2*AF	UGLK1478
							GK	UGLK1412
						93	2*GK	UGLK1478
V-5410-4597	2-way	4”	Flanged	PDTO	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
V-5410-4597	2-way	4”	Flanged	PDTO	Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V-5462-6	2-way	2½”	Flanged	PDTO	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472

All close-off pressures listed are approximate and based on valve condition and application. PDTO = Push down to open PDTC = Push down to close

Johnson Controls

V-54…, V-58… Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V-5462-7	2-way	2½"	Flanged	PDTO	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5462-34	2-way	2½"	Flanged	PDTO	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5462-10	2-way	3"	Flanged	PDTC	No	26	AM	UGLK1412
						52	GM	UGLK1412
						93	2*GM	UGLK1478
					Yes	26	AF	UGLK1412
						52	2*AF	UGLK1478
							GK	UGLK1412
						93	2*GK	UGLK1478
V-5462-36	2-way	3"	Flanged	PDTC	No	26	AM	UGLK1412
						52	GM	UGLK1412
						93	2*GM	UGLK1478
					Yes	26	AF	UGLK1412
						52	2*AF	UGLK1478
							GK	UGLK1412
						93	2*GK	UGLK1478
V-5462-13	2-way	4"	Flanged	PDTO	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V-5462-14	2-way	4"	Flanged	PDTO	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V-5462-38	2-way	4"	Flanged	PDTO	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V-5842-7	3-way	2½"	Flanged	Mixing	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5842-8	3-way	2½"	Flanged	Mixing	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5842-31	3-way	2½"	Flanged	Mixing	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472

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

PDTO = Push down to open PDTC = Push down to close

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V-5842-31	3-way	2½"	Flanged	Mixing	Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
V-5842-17	3-way	3"	Flanged	Mixing	No	26	AM	UGLK1412
						52	GM	UGLK1412
						93	2*GM	UGLK1478
					Yes	26	AF	UGLK1412
						52	2*AF	UGLK1478
							GK	UGLK1412
						93	2*GK	UGLK1478
V-5842-18	3-way	3"	Flanged	Mixing	No	26	AM	UGLK1412
						52	GM	UGLK1412
						93	2*GM	UGLK1478
					Yes	26	AF	UGLK1412
						52	2*AF	UGLK1478
							GK	UGLK1412
						93	2*GK	UGLK1478
V-5842-33	3-way	3"	Flanged	Mixing	No	26	AM	UGLK1412
						52	GM	UGLK1412
						93	2*GM	UGLK1478
					Yes	26	AF	UGLK1412
						52	2*AF	UGLK1478
							GK	UGLK1412
						93	2*GK	UGLK1478
V-5842-11	3-way	4"	Flanged	Mixing	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V-5842-12	3-way	4"	Flanged	Mixing	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V-5842-34	3-way	4"	Flanged	Mixing	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
VB-3752-19	2-way	2½"	Flanged	PDTC	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
VB-3970-11	2-way	2½"	Flanged	PDTO	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
VB-4322-9	3-way	2½"	Flanged	Mixing	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472

All close-off pressures listed are approximate and based on valve condition and application. PDTO = Push down to open PDTC = Push down to close

Johnson Controls

VG2…, V(B)-37… Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VG2231 TM	2-way	2½"	Flanged	PDTC	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
VG2231 UN	2-way	3"	Flanged	PDTC	No	26	AM	UGLK1412
						52	GM	UGLK1412
						93	2*GM	UGLK1478
					Yes	26	AF	UGLK1412
						52	2*AF	UGLK1478
							GK	UGLK1412
						93	2*GK	UGLK1478
VG2231 VN	2-way	4"	Flanged	PDTC	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
VG2431 TM	2-way	2½"	Flanged	PDTO	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
VG2431 UN	2-way	3"	Flanged	PDTO	No	26	AM	UGLK1412
						52	GM	UGLK1412
						93	2*GM	UGLK1478
					Yes	26	AF	UGLK1412
						52	2*AF	UGLK1478
							GK	UGLK1412
						93	2*GK	UGLK1478
VG2431 VN	2-way	4"	Flanged	PDTO	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
VG2831 TM	3-way	2½"	Flanged	Mixing	No	55	AM	UGLK1404
						110	GM	UGLK1404
						196	2*GM	UGLK1472
					Yes	55	AF	UGLK1404
						110	2*AF	UGLK1472
							GK	UGLK1404
						196	2*GK	UGLK1472
VG2831 UN	3-way	3"	Flanged	Mixing	No	26	AM	UGLK1412
						52	GM	UGLK1412
						93	2*GM	UGLK1478
					Yes	26	AF	UGLK1412
						52	2*AF	UGLK1478
							GK	UGLK1412
						93	2*GK	UGLK1478
VG2831 VN	3-way	4"	Flanged	Mixing	No	15	AM	UGLK1412
						29	GM	UGLK1412
						52	2*GM	UGLK1478
					Yes	15	AF	UGLK1412
						29	2*AF	UGLK1478
							GK	UGLK1412
						52	2*GK	UGLK1478
V(B)-3754 Series, Bronze Trim	2-way	¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1"	NPT	-	No	92	LV	UGVL
						250	SV	UGVL

All close-off pressures listed are approximate and based on valve condition and application. PDTO = Push down to open PDTC = Push down to close

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V(B)-3754 Series, Bronze Trim	2-way	1"	NPT	-	Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼"	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½"	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2"	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
V(B)-3974 Series, Bronze Trim	2-way	¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1"	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼"	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½"	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2"	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
V(B)-4324 Series, Bronze Trim	3-way	¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1"	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼"	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½"	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2"	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
V(B)-5844 Series	2-way	¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1"	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼"	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½"	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2"	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
	3-way	¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1"	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼"	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½"	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2"	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
V-4332	3-way	¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1"	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼"	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½"	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL

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

Johnson Controls

V-43…, VG7000, V-37…, V-38…, V-39… Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V-4332	3-way	2”	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
VG7000 Series	2-way	½”	NPT	-	No	250	LV	UGVL
							NVG	UGVL
					Yes	250	LVK	UGVL
		¾”	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1”	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼”	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½”	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2”	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
	3-way	½”	NPT	-	No	250	LV	UGVL
							NVG	UGVL
					Yes	250	LVK	UGVL
		¾”	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1”	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼”	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½”	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2”	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
V-3754-(4, 1008, 1022, 1026)	2-way	¾”	NPT	PDTC	No	215	LM	UGLK1550
						250	NM	UGLK1550
					Yes	215	LF	UGLK1550
						250	NF	UGLK1400
V-3754-(5, 1010, 1023, 1027)	2-way	1”	NPT	PDTC	No	250	AM	UGLK1402
					Yes	173	NF	UGLK1402
						250	AF	UGLK1402
V-3754-8	2-way	1¼”	NPT	PDTC	No	221	AM	UGLK1402
					Yes	110	NF	UGLK1402
						221	AF	UGLK1402
V-3754-(6, 1028, 1029, 1030)	2-way	1½”	NPT	PDTC	No	153	AM	UGLK1402
						250	GM	UGLK1402
					Yes	77	NF	UGLK1402
						153	AF	UGLK1402
						209	2*AF	UGLK1478
						250	GK	UGLK1402
V-3754-7	2-way	2”	NPT	PDTC	No	86	AM	UGLK1406
						173	GM	UGLK1406
						250	2*GM	UGLK1474
					Yes	43	NF	UGLK1406
						86	AF	UGLK1406
						173	2*AF	UGLK1474
							GK	UGLK1406
						250	2*GK	UGLK1474
V-3766	2-way	½”	FLARE	PDTC	No	250	LM	UGLK1552
					Yes	250	LF	UGLK1552
V-3854-5	2-way	½”	NPT	PDTC	No	250	LM	UGLK1554
					Yes	250	LF	UGLK1554
V-3966	2-way	½”	FLARE	PDTO	No	250	LM	UGLK1552
					Yes	250	LF	UGLK1552
V-3974-(4, 1004, 1010)	2-way	¾”	NPT	PDTO	No	215	LM	UGLK1550
						250	NM	UGLK1550
					Yes	215	LF	UGLK1550
						250	NF	UGLK1400

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

PDTO = Push down to open PDTC = Push down to close

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V-3974-(5, 1005, 1011)	2-way	1"	NPT	PDTO	No	250	AM	UGLK1402
					Yes	173	NF	UGLK1402
						250	AF	UGLK1402
V-3974-(6, 1012, 1013)	2-way	1½"	NPT	PDTO	No	153	AM	UGLK1402
						250	GM	UGLK1402
					Yes	77	NF	UGLK1402
						153	AF	UGLK1402
						209	2*AF	UGLK1478
						250	GK	UGLK1402
V-3974-7	2-way	2"	NPT	PDTO	No	86	AM	UGLK1406
						173	GM	UGLK1406
						250	2*GM	UGLK1474
					Yes	43	NF	UGLK1406
						86	AF	UGLK1406
						173	2*AF	UGLK1474
							GK	UGLK1406
						250	2*GK	UGLK1474
V-4324-(4, 1005, 1006, 1013)	3-way	¾"	NPT	Mixing	No	215	LM	UGLK1550
						250	NM	UGLK1550
					Yes	215	LF	UGLK1550
						250	NF	UGLK1400
V-4324-(5, 1007, 1008, 1014)	3-way	1"	NPT	Mixing	No	250	AM	UGLK1402
					Yes	173	NF	UGLK1402
						250	AF	UGLK1402
V-4324-8	3-way	1¼"	NPT	Mixing	No	221	AM	UGLK1402
					Yes	110	NF	UGLK1402
						221	AF	UGLK1402
V-4324-(6,1015, 1016, 1017)	3-way	1½"	NPT	Mixing	No	153	AM	UGLK1402
						250	GM	UGLK1402
					Yes	77	NF	UGLK1402
						153	AF	UGLK1402
						209	2*AF	UGLK1478
						250	GK	UGLK1402
V-4324-7	3-way	2"	NPT	Mixing	No	86	AM	UGLK1406
						173	GM	UGLK1406
						250	2*GM	UGLK1474
					Yes	43	NF	UGLK1406
						86	AF	UGLK1406
						173	2*AF	UGLK1474
							GK	UGLK1406
						250	2*GK	UGLK1474
V-4332	3-way	½"	FLARE	PDTC	No	250	LM	UGLK1552
					Yes	250	LF	UGLK1552
V-5254-(1, 2, 3, 11)	2-way	1½"	NPT	PDTC	No	153	AM	UGLK1404
						250	2*GM	UGLK1472
							GM	UGLK1404
					Yes	77	NF	UGLK1404
						153	AF	UGLK1404
						250	2*GK	UGLK1472
							GK	UGLK1404
						307	2*AF	UGLK1472
V-5254-(4, 5, 6, 12)	2-way	2"	NPT	PDTC	No	86	AM	UGLK1406
						173	GM	UGLK1406
						250	2*GM	UGLK1474
V-5254-(4, 5, 6, 12)	2-way	2"	NPT	PDTC	Yes	43	NF	UGLK1406
						86	AF	UGLK1406
						173	2*AF	UGLK1474
							GK	UGLK1406
						250	2*GK	UGLK1474
V-5464-(1, 2, 11)	2-way	1½"	NPT	PDTO	No	153	AM	UGLK1404
						250	2*GM	UGLK1472
							GM	UGLK1404

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

PDTO = Push down to open PDTC = Push down to close

Johnson Controls

V-54…, V-58…, VG7… Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
V-5464-(1, 2, 11)	2-way	1½"	NPT	PDTO	Yes	77	NF	UGLK1404
						153	AF	UGLK1404
						250	2*GK	UGLK1472
							GK	UGLK1404
						307	2*AF	UGLK1472
V-5464-(3, 4, 12)	2-way	2"	NPT	PDTO	No	86	AM	UGLK1406
						173	GM	UGLK1406
						250	2*GM	UGLK1474
					Yes	43	NF	UGLK1406
						86	AF	UGLK1406
						173	2*AF	UGLK1474
							GK	UGLK1406
						250	2*GK	UGLK1474
V-5844-(1, 2, 3, 11)	3-way	1½"	NPT	Mixing	No	153	AM	UGLK1404
						250	2*GM	UGLK1472
							GM	UGLK1404
					Yes	77	NF	UGLK1404
						153	AF	UGLK1404
						250	2*GK	UGLK1472
							GK	UGLK1404
						307	2*AF	UGLK1472
V-5844-(4, 5, 6, 12)	3-way	2"	NPT	Mixing	No	86	AM	UGLK1406
						173	GM	UGLK1406
						250	2*GM	UGLK1474
					Yes	43	NF	UGLK1406
						86	AF	UGLK1406
						173	2*AF	UGLK1474
							GK	UGLK1406
						250	2*GK	UGLK1474
VG7XXX-(C, E, GT) *Threaded Stem Only	2-way	½"	NPT	-	No	250	LM	UGLK1416
					Yes	250	LF	UGLK1416
	3-way	½"	NPT	-	No	250	LM	UGLK1416
					Yes	250	LF	UGLK1416
VG7XXX-LT *Threaded Stem Only	2-way	¾"	NPT	-	No	217	LM	UGLK1416
						250	NM	UGLK1416
					Yes	169	LF	UGLK1416
	3-way	¾"	NPT	-	No	217	LM	UGLK1416
						250	NM	UGLK1416
					Yes	169	LF	UGLK1416
VG7XXX-NT *Threaded Stem Only	2-way	1"	NPT	-	No	122	LM	UGLK1418
						244	NM	UGLK1418
					Yes	95	LF	UGLK1418
	3-way	1"	NPT	-	No	122	LM	UGLK1418
						244	NM	UGLK1418
					Yes	95	LF	UGLK1418
VG7XXX-PT *Threaded Stem Only	2-way	1¼"	NPT	-	No	78	LM	UGLK1418
						156	NM	UGLK1418
					Yes	61	LF	UGLK1418
	3-way	1¼"	NPT	-	No	78	LM	UGLK1418
						156	NM	UGLK1418
					Yes	61	LF	UGLK1418
VG7XXX-RT *Threaded Stem Only	2-way	1½"	NPT	-	No	38	LM	UGLK1420
						77	NM	UGLK1420
						153	AM	UGLK1422
						250	GM	UGLK1422
					Yes	77	NF	UGLK1422
						30	LF	UGLK1420
						250	GK	UGLK1422
	3-way	1½"	NPT	-	No	38	LM	UGLK1420
						77	NM	UGLK1420
						153	AM	UGLK1422
						250	GM	UGLK1422
					Yes	77	NF	UGLK1422
						30	LF	UGLK1420
						153	AF	UGLK1422
						250	GK	UGLK1422

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

PDTO = Push down to open PDTC = Push down to close

Johnson Controls
VG7…, VTM Series Valves
Linkage/Actuator Selection Guide

Robertshaw
V6700, V6600, V6800 Series Valves
Linkage/Actuator Selection Guide

Siebe\Invensys\Barber Colman
Belimo USA G2 Series Valves
Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VG7XXX-ST *Threaded Stem Only	2-way	2"	NPT	-	No	22	LM	UGLK1420
						43	NM	UGLK1420
						86	AM	UGLK1422
						173	GM	UGLK1422
					Yes	17	LF	UGLK1420
						43	NF	UGLK1422
						86	AF	UGLK1422
						153	AF	UGLK1422
						173	GK	UGLK1422
	3-way	2"	NPT	-	No	22	LM	UGLK1420
						43	NM	UGLK1420
						86	AM	UGLK1422
						173	GM	UGLK1422
					Yes	17	LF	UGLK1420
						43	NF	UGLK1422
						86	AF	UGLK1422
						173	GK	UGLK1422
VTM-TN-(007, 019, 047)* Threaded Stem Only	2-way	½"	FLARE	-	No	250	LM	UGLK1550
					Yes	250	LF	UGLK1550
	3-way	½"	NPT	-	No	250	LM	UGLK1550
					Yes	250	LF	UGLK1550
ROBERTSHAW								
V6700	2-way	½"	NPT	-	No	250	LV	UGVL
					Yes	250	LVK	UGVL
		¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1"	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼"	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½"	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2"	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
V6600	3-way	½"	NPT	-	No	250	LV	UGVL
					Yes	250	LVK	UGVL
		¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
		1"	NPT	-	No	92	LV	UGVL
						250	SV	UGVL
					Yes	92	LVK	UGVL
						250	SVK	UGVL
		1¼"	NPT	-	No	236	SV	UGVL
					Yes	236	SVK	UGVL
		1½"	NPT	-	No	160	SV	UGVL
					Yes	160	SVK	UGVL
		2"	NPT	-	No	85	SV	UGVL
					Yes	85	SVK	UGVL
V6800	2-way	¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
SIEBE\INVENSYS\BARBER COLMAN								
Belimo USA G2 Series	2-way	½"	NPT	-	No	250	LV	SGVL
					Yes	250	LVK	SGVL
		¾"	NPT	-	No	211	LV	SGVL
					Yes	211	LVK	SGVL
		1"	NPT	-	No	250	SV	SGVL
					Yes	250	SVK	SGVL
		1¼"	NPT	-	No	236	SV	SGVL
					Yes	236	SVK	SGVL
		1½"	NPT	-	No	160	SV	SGVL
					Yes	160	SVK	SGVL
		2"	NPT	-	No	85	SV	SGVL
					Yes	85	SVK	SGVL

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

Siebe\Invensys\Barber Colman

Belimo USA G2…, G3…, VB7000, VB9000 Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
Belimo USA G2…S Series	2-way	½"	NPT	-	No	250	LV	SGVL
					Yes	250	LVK	SGVL
		¾"	NPT	-	No	211	LV	SGVL
					Yes	211	LVK	SGVL
		1"	NPT	-	No	92	LV	SGVL
						250	SV	SGVL
					Yes	92	LVK	SGVL
						250	SVK	SGVL
		1¼"	NPT	-	No	236	SV	SGVL
					Yes	236	SVK	SGVL
		1½"	NPT	-	No	160	SV	SGVL
					Yes	160	SVK	SGVL
		2"	NPT	-	No	85	SV	SGVL
					Yes	85	SVK	SGVL
Belimo USA G3 Series	3-way	½"	NPT	-	No	250	LV	SGVL
					Yes	250	LVK	SGVL
		¾"	NPT	-	No	211	LV	SGVL
					Yes	211	LVK	SGVL
		1"	NPT	-	No	92	LV	SGVL
						250	SV	SGVL
					Yes	92	LVK	SGVL
						250	SVK	SGVL
		1¼"	NPT	-	No	236	SV	SGVL
					Yes	236	SVK	SGVL
		1½"	NPT	-	No	160	SV	SGVL
					Yes	160	SVK	SGVL
		2"	NPT	-	No	85	SV	SGVL
					Yes	85	SVK	SGVL
VB7000 Series	2-way	½"	NPT	-	No	250	LV	SGVL
					Yes	250	LVK	SGVL
		¾"	NPT	-	No	211	LV	SGVL
					Yes	211	LVK	SGVL
		1"	NPT	-	No	92	LV	SGVL
						250	SV	SGVL
					Yes	92	LVK	SGVL
						250	SVK	SGVL
		1¼"	NPT	-	No	236	SV	SGVL
					Yes	236	SVK	SGVL
		1½"	NPT	-	No	160	SV	SGVL
					Yes	160	SVK	SGVL
		2"	NPT	-	No	85	SV	SGVL
					Yes	85	SVK	SGVL
	3-way	½"	NPT	-	No	250	LV	SGVL
					Yes	250	LVK	SGVL
		¾"	NPT	-	No	211	LV	SGVL
					Yes	211	LVK	SGVL
		1"	NPT	-	No	92	LV	SGVL
						250	SV	SGVL
					Yes	92	LVK	SGVL
						250	SVK	SGVL
		1¼"	NPT	-	No	236	SV	SGVL
					Yes	236	SVK	SGVL
		1½"	NPT	-	No	160	SV	SGVL
					Yes	160	SVK	SGVL
		2"	NPT	-	No	85	SV	SGVL
					Yes	85	SVK	SGVL
VB9000 Series	2-way	½"	NPT	-	No	250	LV	SGVL
					Yes	250	LVK	SGVL
		¾"	NPT	-	No	211	LV	SGVL
					Yes	211	LVK	SGVL
		1"	NPT	-	No	92	LV	SGVL
						250	SV	SGVL
					Yes	92	LVK	SGVL
						250	SVK	SGVL
		1¼"	NPT	-	No	236	SV	SGVL
					Yes	236	SVK	SGVL

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VB9000 Series	3-way	½"	NPT	-	No	250	LV	SGVL
					Yes	250	LVK	SGVL
		¾"	NPT	-	No	211	LV	SGVL
					Yes	211	LVK	SGVL
		1"	NPT	-	No	92	LV	SGVL
						250	SV	SGVL
					Yes	92	LVK	SGVL
						250	SVK	SGVL
		1¼"	NPT	-	No	236	SV	SGVL
					Yes	236	SVK	SGVL
Belimo USA G2 Series	2-way	1"	NPT	-	No	250	AM	UGLK1000
					Yes	250	AF	UGLK1000
		1¼"	NPT	-	No	250	AM	UGLK1000
					Yes	250	AF	UGLK1000
		1½"	NPT	-	No	217	AM	UGLK1000
					Yes	217	AF	UGLK1000
		2"	NPT	-	No	122	AM	UGLK1000
					Yes	122	AF	UGLK1000
Belimo USA G3 Series	3-way	1"	NPT	-	No	250	AM	UGLK1000
					Yes	250	AF	UGLK1000
		1¼"	NPT	-	No	250	AM	UGLK1000
					Yes	250	AF	UGLK1000
		1½"	NPT	-	No	217	AM	UGLK1000
					Yes	217	AF	UGLK1000
		2"	NPT	-	No	122	AM	UGLK1000
					Yes	122	AF	UGLK1000
Belimo USA G2 Series	2-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
		¾"	NPT	-	No	215	LM	UGLK1150
						250	NM	UGLK1150
					Yes	215	LF	UGLK1150
		1"	NPT	-	No	120	LM	UGLK1150
						244	NM	UGLK1150
					Yes	95	LF	UGLK1150
		1¼"	NPT	-	No	78	LM	UGLK1150
						156	NM	UGLK1150
					Yes	61	LF	UGLK1150
Belimo USA G3 Series	3-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
		¾"	NPT	-	No	215	LM	UGLK1150
						250	NM	UGLK1150
					Yes	215	LF	UGLK1150
		1"	NPT	-	No	120	LM	UGLK1150
						244	NM	UGLK1150
					Yes	95	LF	UGLK1150
		1¼"	NPT	-	No	78	LM	UGLK1150
						156	NM	UGLK1150
					Yes	61	LF	UGLK1150
VB304X-0-1-4	3-way	½"	NPT	Mixing	No	250	LM	UGLK1002
							NM	UGLK1002
					Yes	250	AF	UGLK1004
							LF	UGLK1002
VB304X-0-1-7	3-way	¾"	NPT	Mixing	No	153	LM	UGLK1002
						250	NM	UGLK1002
					Yes	119	LF	UGLK1002
VB304X-0-1-8	3-way	1"	NPT	Mixing	No	86	LM	UGLK1002
						173	NM	UGLK1002
						250	AM	UGLK1004
					Yes	67	LF	UGLK1002
						250	AF	UGLK1004
VB304X-0-1-9	3-way	1¼"	NPT	Mixing	No	55	LM	UGLK1002
						110	NM	UGLK1002
						221	AM	UGLK1004
					Yes	43	LF	UGLK1002
						221	AF	UGLK1004

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

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VB3…, VB7… Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VB304X-0-1-10	3-way	1½"	NPT	Mixing	No	38	LM	UGLK1002
						77	NM	UGLK1002
						153	AM	UGLK1004
						250	GM	UGLK1004
					Yes	30	LF	UGLK1002
						153	AF	UGLK1004
						250	GK	UGLK1004
VB304X-0-1-11	3-way	2"	NPT	Mixing	No	22	LM	UGLK1002
						43	NM	UGLK1002
						86	AM	UGLK1004
						173	GM	UGLK1004
					Yes	17	LF	UGLK1002
						86	AF	UGLK1004
						173	GK	UGLK1004
VB7XXX-0-4-1	2-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
	3-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
VB7XXX-0-4-2	2-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
	3-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
VB7XXX-0-4-3	2-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
	3-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
VB7XXX-0-4-4	2-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
	3-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
VB7XXX-0-4-5	2-way	¾"	NPT	-	No	215	LM	UGLK1150
						250	NM	UGLK1150
					Yes	215	LF	UGLK1150
	3-way	¾"	NPT	-	No	215	LM	UGLK1150
						250	NM	UGLK1150
					Yes	215	LF	UGLK1150
VB7XXX-0-4-6	2-way	¾"	NPT	-	No	215	LM	UGLK1150
						250	NM	UGLK1150
					Yes	215	LF	UGLK1150
	3-way	¾"	NPT	-	No	215	LM	UGLK1150
						250	NM	UGLK1150
					Yes	215	LF	UGLK1150
VB7XXX-0-4-7	2-way	1"	NPT	-	No	120	LM	UGLK1150
						244	NM	UGLK1150
						250	AM	UGLK1000
					Yes	95	LF	UGLK1150
						250	AF	UGLK1000
	3-way	1"	NPT	-	No	120	LM	UGLK1150
						244	NM	UGLK1150
						250	AM	UGLK1000
					Yes	95	LF	UGLK1150
						250	AF	UGLK1000
VB7XXX-0-4-8	2-way	1"	NPT	-	No	120	LM	UGLK1150
						244	NM	UGLK1150
						250	AM	UGLK1000
					Yes	95	LF	UGLK1150
						250	AF	UGLK1000
	3-way	1"	NPT	-	No	120	LM	UGLK1150
						244	NM	UGLK1150
						250	AM	UGLK1000
					Yes	95	LF	UGLK1150
						250	AF	UGLK1000
VB7XXX-0-4-9	2-way	1¼"	NPT	-	No	78	LM	UGLK1150
						156	NM	UGLK1150
						250	AM	UGLK1000
					Yes	61	LF	UGLK1150
						250	AF	UGLK1000

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VB7XXX-0-4-9	3-way	1¼"	NPT	-	No	78	LM	UGLK1150
						156	NM	UGLK1150
						250	AM	UGLK1000
					Yes	61	LF	UGLK1150
						250	AF	UGLK1000
VB7XXX-0-4-10	2-way	1½"	NPT	-	No	217	AM	UGLK1000
					Yes	217	AF	UGLK1000
	3-way	1½"	NPT	-	No	217	AM	UGLK1000
					Yes	217	AF	UGLK1000
VB7XXX-0-4-11	2-way	2"	NPT	-	No	122	AM	UGLK1000
					Yes	122	AF	UGLK1000
	3-way	2"	NPT	-	No	122	AM	UGLK1000
					Yes	122	AF	UGLK1000
VB804X-0-1-4	3-way	½"	NPT	Mixing	No	250	LM	UGLK1002
							NM	UGLK1002
					Yes	250	AF	UGLK1004
							LF	UGLK1002
VB804X-0-1-7	3-way	¾"	NPT	Mixing	No	153	LM	UGLK1002
						250	NM	UGLK1002
					Yes	119	LF	UGLK1002
VB804X-0-1-8	3-way	1"	NPT	Mixing	No	86	LM	UGLK1002
						173	NM	UGLK1002
						250	AM	UGLK1004
					Yes	67	LF	UGLK1002
						250	AF	UGLK1004
VB804X-0-1-9	3-way	1¼"	NPT	Mixing	No	55	LM	UGLK1002
						110	NM	UGLK1002
						221	AM	UGLK1004
					Yes	43	LF	UGLK1002
						221	AF	UGLK1004
VB804X-0-1-10	3-way	1½"	NPT	Mixing	No	38	LM	UGLK1002
						77	NM	UGLK1002
						153	AM	UGLK1004
						250	GM	UGLK1004
					Yes	30	LF	UGLK1002
						153	AF	UGLK1004
						250	GK	UGLK1004
VB804X-0-1-11	3-way	2"	NPT	Mixing	No	22	LM	UGLK1002
						43	NM	UGLK1002
						86	AM	UGLK1004
						173	GM	UGLK1004
					Yes	17	LF	UGLK1002
						86	AF	UGLK1004
						173	GK	UGLK1004
VB9XXX-0-4-1	2-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
	3-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
VB9XXX-0-4-2	2-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
	3-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
VB9XXX-0-4-3	2-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
	3-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
VB9XXX-0-4-4	2-way	½"	NPT	-	No	250	LM	UGLK1150
					Yes	250	LF	UGLK1150
	3-way	½"	NPT	-	No	130	LM	UGLK1150
					Yes	250	LF	UGLK1150
VB9XXX-0-4-5	2-way	¾"	NPT	-	No	215	LM	UGLK1150
						250	NM	UGLK1150
					Yes	215	LF	UGLK1150
	3-way	¾"	NPT	-	No	215	LM	UGLK1150
						250	NM	UGLK1150
					Yes	215	LF	UGLK1150

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

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VB9… Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VB9XXX-0-4-6	2-way	¾"	NPT	-	No	215	LM	UGLK1150
						250	NM	UGLK1150
					Yes	215	LF	UGLK1150
	3-way	¾"	NPT	-	No	215	LM	UGLK1150
						250	NM	UGLK1150
					Yes	215	LF	UGLK1150
VB9XXX-0-4-7	2-way	1"	NPT	-	No	120	LM	UGLK1150
						244	NM	UGLK1150
						250	AM	UGLK1000
					Yes	95	LF	UGLK1150
						250	AF	UGLK1000
	3-way	1"	NPT	-	No	120	LM	UGLK1150
						244	NM	UGLK1150
						250	AM	UGLK1000
					Yes	95	LF	UGLK1150
						250	AF	UGLK1000
VB9XXX-0-4-8	2-way	1"	NPT	-	No	120	LM	UGLK1150
						244	NM	UGLK1150
						250	AM	UGLK1000
					Yes	250	AF	UGLK1000
	3-way	1"	NPT	-	No	120	LM	UGLK1150
						244	NM	UGLK1150
						250	AM	UGLK1000
					Yes	95	LF	UGLK1150
						250	AF	UGLK1000
VB9XXX-0-4-9	2-way	1¼"	NPT	-	No	78	LM	UGLK1150
						156	NM	UGLK1150
						250	AM	UGLK1000
					Yes	61	LF	UGLK1150
						250	AF	UGLK1000
	3-way	1¼"	NPT	-	No	78	LM	UGLK1150
						156	NM	UGLK1150
						250	AM	UGLK1000
					Yes	61	LF	UGLK1150
						250	AF	UGLK1000
VB9XXX-0-4-10 (Pre '94)	2-way	1½"	NPT	-	No	104	AM	UGLK1008
						209	GM	UGLK1008
						250	2*GM	UGLK1064
					Yes	104	AF	UGLK1008
						209	2*AF	UGLK1064
							GK	UGLK1008
						250	2*GK	UGLK1064
	3-way	1½"	NPT	-	No	104	AM	UGLK1008
						209	GM	UGLK1008
						250	2*GM	UGLK1064
					Yes	104	AF	UGLK1008
						209	2*AF	UGLK1064
							GK	UGLK1008
						250	2*GK	UGLK1064
VB9XXX-0-4-10 (Post '94)	2-way	1½"	NPT	-	No	79	AM	UGLK1016
						158	GM	UGLK1016
						250	2*GM	UGLK1066
					Yes	79	AF	UGLK1016
						158	GK	UGLK1016
						209	2*AF	UGLK1066
						250	2*GK	UGLK1066
	3-way	1½"	NPT	-	No	79	AM	UGLK1016
						158	GM	UGLK1016
						250	2*GM	UGLK1066
					Yes	79	AF	UGLK1016
						158	GK	UGLK1016
						209	2*AF	UGLK1066
						250	2*GK	UGLK1066
VB9XXX-0-4-11 (Pre '94)	2-way	2"	NPT	-	No	59	AM	UGLK1008
						117	GM	UGLK1008
						209	2*GM	UGLK1064

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VB9XXX-0-4-11 (Pre '94)	2-way	2"	NPT	-	Yes	59	AF	UGLK1008
						117	2*AF	UGLK1064
							GK	UGLK1008
						209	2*GK	UGLK1064
	3-way	2"	NPT	-	No	59	AM	UGLK1008
						117	GM	UGLK1008
						209	2*GM	UGLK1064
					Yes	59	AF	UGLK1008
						117	2*AF	UGLK1064
							GK	UGLK1008
						209	2*GK	UGLK1064
VB9XXX-0-4-11 (Post '94)	2-way	2"	NPT	-	No	44	AM	UGLK1016
						89	GM	UGLK1016
						209	2*GM	UGLK1066
					Yes	44	AF	UGLK1016
						89	GK	UGLK1016
						117	2*AF	UGLK1066
						209	2*GK	UGLK1066
	3-way	2"	NPT	-	No	44	AM	UGLK1016
						89	GM	UGLK1016
						209	2*GM	UGLK1066
					Yes	44	AF	UGLK1016
						89	GK	UGLK1016
						117	2*AF	UGLK1066
						209	2*GK	UGLK1066
VB9XXX-0-4-12	2-way	2½"	NPT	-	No	38	AM	UGLK1010
						75	GM	UGLK1010
						134	2*GM	UGLK1070
					Yes	38	AF	UGLK1010
						75	2*AF	UGLK1070
							GK	UGLK1010
						134	2*GK	UGLK1070
	3-way	2½"	NPT	-	No	38	AM	UGLK1010
						75	GM	UGLK1010
						134	2*GM	UGLK1070
					Yes	38	AF	UGLK1010
						75	2*AF	UGLK1070
							GK	UGLK1010
						134	2*GK	UGLK1070
VB9XXX-0-4-13	2-way	3"	NPT	-	No	26	AM	UGLK1010
						52	GM	UGLK1010
						93	2*GM	UGLK1070
					Yes	26	AF	UGLK1010
						52	2*AF	UGLK1070
							GK	UGLK1010
						93	2*GK	UGLK1070
	3-way	3"	NPT	-	No	26	AM	UGLK1010
						52	GM	UGLK1010
						93	2*GM	UGLK1070
					Yes	26	AF	UGLK1010
						52	2*AF	UGLK1070
							GK	UGLK1010
						93	2*GK	UGLK1070
VB304X-0-2-12	3-way	2½"	Flanged	Mixing	No	38	AM	UGLK1006
						75	GM	UGLK1006
						134	2*GM	UGLK1072
					Yes	38	AF	UGLK1006
						75	2*AF	UGLK1072
							GK	UGLK1006
						134	2*GK	UGLK1072
VB304X-0-2-13	3-way	3"	Flanged	Mixing	No	26	AM	UGLK1006
						52	GM	UGLK1006
						93	2*GM	UGLK1072
					Yes	26	AF	UGLK1006
						52	2*AF	UGLK1072
							GK	UGLK1006
						93	2*GK	UGLK1072

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

Siebe\Invensys\Barber Colman

VB3…, VB8…, VB9… Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VB304X-0-2-14	3-way	4”	Flanged	Mixing	No	15	AM	UGLK1006
						29	GM	UGLK1006
						52	2*GM	UGLK1072
					Yes	15	AF	UGLK1006
						29	2*AF	UGLK1072
							GK	UGLK1006
						52	2*GK	UGLK1072
VB304X-0-2-15	3-way	5”	Flanged	Mixing	No	7	AM	UGLK1014
						14	GM	UGLK1014
						25	2*GM	UGLK1076
					Yes	7	AF	UGLK1014
						14	2*AF	UGLK1076
							GK	UGLK1014
						25	2*GK	UGLK1076
VB304X-0-2-16	3-way	6”	Flanged	Mixing	No	5	AM	UGLK1014
						10	GM	UGLK1014
						18	2*GM	UGLK1076
					Yes	5	AF	UGLK1014
						10	2*AF	UGLK1076
							GK	UGLK1014
						18	2*GK	UGLK1076
VB804X-0-2-12	3-way	2½”	Flanged	Mixing	No	38	AM	UGLK1006
						75	GM	UGLK1006
						134	2*GM	UGLK1072
					Yes	38	AF	UGLK1006
						75	2*AF	UGLK1072
							GK	UGLK1006
						134	2*GK	UGLK1072
VB804X-0-2-13	3-way	3”	Flanged	Mixing	No	26	AM	UGLK1006
						52	GM	UGLK1006
						93	2*GM	UGLK1072
					Yes	26	AF	UGLK1006
						52	2*AF	UGLK1072
							GK	UGLK1006
						93	2*GK	UGLK1072
VB804X-0-2-14	3-way	4”	Flanged	Mixing	No	15	AM	UGLK1006
						29	GM	UGLK1006
						52	2*GM	UGLK1072
					Yes	15	AF	UGLK1006
						29	2*AF	UGLK1072
							GK	UGLK1006
						52	2*GK	UGLK1072
VB804X-0-2-15	3-way	5”	Flanged	Mixing	No	7	AM	UGLK1014
						14	GM	UGLK1014
						25	2*GM	UGLK1076
					Yes	7	AF	UGLK1014
						14	2*AF	UGLK1076
							GK	UGLK1014
						25	2*GK	UGLK1076
VB804X-0-2-16	3-way	6”	Flanged	Mixing	No	5	AM	UGLK1014
						10	GM	UGLK1014
						18	2*GM	UGLK1076
					Yes	5	AF	UGLK1014
						10	2*AF	UGLK1076
							GK	UGLK1014
						18	2*GK	UGLK1076
VB9XXX-0-5-12	2-way	2½”	Flanged	-	No	38	AM	UGLK1010
						75	GM	UGLK1010
						134	2*GM	UGLK1070
					Yes	38	AF	UGLK1010
						75	2*AF	UGLK1070
							GK	UGLK1010
						134	2*GK	UGLK1070
	3-way	2½”	Flanged	-	No	38	AM	UGLK1010
						75	GM	UGLK1010
						134	2*GM	UGLK1070

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VB9XXX-0-5-12	3-way	2½"	Flanged	-	Yes	38	AF	UGLK1010
						75	2*AF	UGLK1070
							GK	UGLK1010
						134	2*GK	UGLK1070
VB9XXX-0-5-13	2-way	3"	Flanged	-	No	26	AM	UGLK1010
						52	GM	UGLK1010
						93	2*GM	UGLK1070
					Yes	26	AF	UGLK1010
						52	2*AF	UGLK1070
							GK	UGLK1010
						93	2*GK	UGLK1070
	3-way	3"	Flanged	-	No	26	AM	UGLK1010
						52	GM	UGLK1010
						93	2*GM	UGLK1070
					Yes	26	AF	UGLK1010
						52	2*AF	UGLK1070
							GK	UGLK1010
						93	2*GK	UGLK1070
VB9XXX-0-5-14	2-way	4"	Flanged	-	No	11	AM	UGLK1012
						22	GM	UGLK1012
						40	2*GM	UGLK1074
					Yes	11	AF	UGLK1012
						22	2*AF	UGLK1074
							GK	UGLK1012
						40	2*GK	UGLK1074
	3-way	4"	Flanged	-	No	11	AM	UGLK1012
						22	GM	UGLK1012
						40	2*GM	UGLK1074
					Yes	11	AF	UGLK1012
						22	2*AF	UGLK1074
							GK	UGLK1012
						40	2*GK	UGLK1074
SIEMENS/LANDIS/POWERS								
591 Series	2-way	½"	NPT	-	No	250	AM	UGLK1200
							LV	UGVL
					Yes	250	LVK	UGVL
							NF	UGLK1200
		¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
						250	NF	UGLK1200
		1"	NPT	-	No	92	LV	UGVL
						250	AM	UGLK1200
							SV	UGVL
					Yes	92	LVK	UGVL
						244	NF	UGLK1200
						250	SVK	UGVL
						250	AF	UGLK1200
		1¼"	NPT	-	No	236	SV	UGVL
						250	AM	UGLK1200
					Yes	156	NF	UGLK1200
						236	SVK	UGVL
						250	AF	UGLK1200
		1½"	NPT	-	No	104	AM	UGLK1202
						209	GM	UGLK1202
					Yes	52	NF	UGLK1202
						104	AF	UGLK1202
						209	GK	UGLK1202
		2"	NPT	-	No	59	AM	UGLK1202
						117	GM	UGLK1202
					Yes	29	NF	UGLK1202
						59	AF	UGLK1202
						117	GK	UGLK1202

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

Siemens\Landis\Powers

591 Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
591 Series	2-way	2½"	Flanged	-	No	55	AM	UGLK1204
						110	GM	UGLK1204
						196	2*GM	UGLK1270
					Yes	55	AF	UGLK1204
						110	2*AF	UGLK1270
							GK	UGLK1204
						196	2*GK	UGLK1270
		3"	Flanged	-	No	38	AM	UGLK1204
						77	GM	UGLK1204
						136	2*GM	UGLK1270
					Yes	38	AF	UGLK1204
						77	2*AF	UGLK1270
							GK	UGLK1204
						136	2*GK	UGLK1270
		4"	Flanged	-	No	11	AM	UGLK1206
						22	GM	UGLK1206
						40	2*GM	UGLK1274
					Yes	11	AF	UGLK1206
						22	2*AF	UGLK1274
							GK	UGLK1206
						40	2*GK	UGLK1274
		5"	Flanged	-	No	14	GM	UGLK1206
						25	2*GM	UGLK1274
					Yes	14	2*AF	UGLK1274
							GK	UGLK1206
						25	2*GK	UGLK1274
		6"	Flanged	-	No	18	2*GM	UGLK1274
					Yes	10	2*AF	UGLK1274
						18	2*GK	UGLK1274
	3-way	½"	NPT	-	No	250	AM	UGLK1200
							LV	UGVL
					Yes	250	LVK	UGVL
							NF	UGLK1200
		¾"	NPT	-	No	211	LV	UGVL
					Yes	211	LVK	UGVL
						250	NF	UGLK1200
		1"	NPT	-	No	92	LV	UGVL
						250	AM	UGLK1200
							SV	UGVL
					Yes	92	LVK	UGVL
						244	NF	UGLK1200
						250	SVK	UGVL
						250	AF	UGLK1200
		1¼"	NPT	-	No	236	SV	UGVL
						250	AM	UGLK1200
					Yes	156	NF	UGLK1200
						236	SVK	UGVL
						250	AF	UGLK1200
		1½"	NPT	-	No	217	AM	UGLK1200
						250	GM	UGLK1200
					Yes	109	NF	UGLK1200
						217	AF	UGLK1200
						250	GK	UGLK1200
		2"	NPT	-	No	85	SV	UGVL
						122	AM	UGLK1200
						244	GM	UGLK1200
					Yes	61	NF	UGLK1200
						85	SVK	UGVL
						122	AF	UGLK1200
						244	GK	UGLK1200
		2½"	Flanged	-	No	55	AM	UGLK1204
						110	GM	UGLK1204
						196	2*GM	UGLK1270

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
591 Series	3-way	2½"	Flanged	-	Yes	55	AF	UGLK1204
						110	2*AF	UGLK1270
							GK	UGLK1204
						196	2*GK	UGLK1270
		3"	Flanged	-	No	38	AM	UGLK1204
						77	GM	UGLK1204
						136	2*GM	UGLK1270
					Yes	38	AF	UGLK1204
						77	2*AF	UGLK1270
							GK	UGLK1204
						136	2*GK	UGLK1270
		4"	Flanged	-	No	11	AM	UGLK1206
						22	GM	UGLK1206
						40	2*GM	UGLK1274
					Yes	11	AF	UGLK1206
						22	2*AF	UGLK1274
							GK	UGLK1206
						40	2*GK	UGLK1274
		5"	Flanged	-	No	14	GM	UGLK1206
						25	2*GM	UGLK1274
					Yes	14	2*AF	UGLK1274
							GK	UGLK1206
						25	2*GK	UGLK1274
		6"	Flanged	-	No	18	2*GM	UGLK1274
					Yes	10	2*AF	UGLK1274
						18	2*GK	UGLK1274
599 Flowrite	2-way	½"	NPT	-	No	250	AM	UGLK1208
							LV	UGVL
					Yes	250	LVK	UGVL
							NF	UGLK1208
		¾"	NPT	-	No	211	LV	UGVL
						250	AM	UGLK1208
					Yes	211	LVK	UGVL
						250	NF	UGLK1208
		1"	NPT	-	No	92	LV	UGVL
						250	AM	UGLK1208
							SV	UGVL
					Yes	92	LVK	UGVL
						173	NF	UGLK1208
						250	SVK	UGVL
						250	AF	UGLK1208
		1¼"	NPT	-	No	221	AM	UGLK1208
						236	SV	UGVL
					Yes	110	NF	UGLK1208
						221	AF	UGLK1208
						236	SVK	UGVL
		1½"	NPT	-	No	153	AM	UGLK1208
						250	GM	UGLK1208
					Yes	77	NF	UGLK1208
						153	AF	UGLK1208
						250	GK	UGLK1208
		2"	NPT	-	No	85	SV	UGVL
						86	AM	UGLK1208
						173	GM	UGLK1208
					Yes	43	NF	UGLK1208
						85	SVK	UGVL
						86	AF	UGLK1208
						173	GK	UGLK1208
		2½"	Flanged	-	No	55	AM	UGLK1210
						110	GM	UGLK1210
						196	2*GM	UGLK1272
					Yes	55	AF	UGLK1210
						110	2*AF	UGLK1272
							GK	UGLK1210
						196	2*GK	UGLK1272

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

Siemens\Landis\Powers

599 Flowrite Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
599 Flowrite	2-way	3”	Flanged	-	No	38	AM	UGLK1210
						77	GM	UGLK1210
						136	2*GM	UGLK1272
					Yes	38	AF	UGLK1210
						77	2*AF	UGLK1272
							GK	UGLK1210
						136	2*GK	UGLK1272
		4”	Flanged	-	No	11	AM	UGLK1212
						22	GM	UGLK1212
						40	2*GM	UGLK1276
					Yes	11	AF	UGLK1212
						22	2*AF	UGLK1276
							GK	UGLK1212
						40	2*GK	UGLK1276
		5”	Flanged	-	No	14	GM	UGLK1212
						25	2*GM	UGLK1276
					Yes	14	2*AF	UGLK1276
							GK	UGLK1212
						25	2*GK	UGLK1276
599 Flowrite	3-way	½”	NPT	-	No	250	AM	UGLK1208
							LV	UGVL
					Yes	250	LVK	UGVL
							NF	UGLK1208
		¾”	NPT	-	No	211	LV	UGVL
						250	AM	UGLK1208
					Yes	211	LVK	UGVL
						250	NF	UGLK1208
		1”	NPT	-	No	92	LV	UGVL
						250	AM	UGLK1208
							SV	UGVL
					Yes	92	LVK	UGVL
						173	NF	UGLK1208
						250	SVK	UGVL
						250	AF	UGLK1208
		1¼”	NPT	-	No	221	AM	UGLK1208
						236	SV	UGVL
					Yes	110	NF	UGLK1208
						221	AF	UGLK1208
						236	SVK	UGVL
		1½”	NPT	-	No	153	AM	UGLK1208
						250	GM	UGLK1208
					Yes	77	NF	UGLK1208
						153	AF	UGLK1208
						250	GK	UGLK1208
		2”	NPT	-	No	85	SV	UGVL
						86	AM	UGLK1208
						173	GM	UGLK1208
					Yes	43	NF	UGLK1208
						85	SVK	UGVL
						86	AF	UGLK1208
						173	GK	UGLK1208
		2½”	Flanged	-	No	55	AM	UGLK1210
						110	GM	UGLK1210
						196	2*GM	UGLK1272
					Yes	55	AF	UGLK1210
						110	2*AF	UGLK1272
							GK	UGLK1210
						196	2*GK	UGLK1272
		3”	Flanged	-	No	38	AM	UGLK1210
						77	GM	UGLK1210
						136	2*GM	UGLK1272
					Yes	38	AF	UGLK1210
						77	2*AF	UGLK1272
							GK	UGLK1210
						136	2*GK	UGLK1272

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
599 Flowrite	3-way	4"	Flanged	-	No	11	AM	UGLK1212
						22	GM	UGLK1212
						40	2*GM	UGLK1276
					Yes	11	AF	UGLK1212
						22	2*AF	UGLK1276
							GK	UGLK1212
						40	2*GK	UGLK1276
		5"	Flanged	-	No	14	GM	UGLK1212
						25	2*GM	UGLK1276
					Yes	14	2*AF	UGLK1276
							GK	UGLK1212
						25	2*GK	UGLK1276
656 Series	2-way	½"	NPT	-	No	250	AM	UGLK1214
							LM	UGLK1350
					Yes	250	LF	UGLK1350
							NF	UGLK1214
		¾"	NPT	-	No	215	LM	UGLK1350
						250	NM	UGLK1350
					Yes	215	LF	UGLK1350
						250	NF	UGLK1214
	3-way	½"	NPT	-	No	250	AM	UGLK1214
							LM	UGLK1350
					Yes	250	LF	UGLK1350
							NF	UGLK1214
		¾"	NPT	-	No	215	LM	UGLK1350
						250	NM	UGLK1350
					Yes	215	LF	UGLK1350
						250	NF	UGLK1214
658 Series	2-way	½"	NPT	-	No	250	AM	UGLK1214
							LM	UGLK1350
							LV	UGVL
					Yes	250	LF	UGLK1350
							LVK	UGVL
							NF	UGLK1214
		¾"	NPT	-	No	211	LV	UGVL
						215	LM	UGLK1350
						250	NM	UGLK1350
					Yes	211	LVK	UGVL
						215	LF	UGLK1350
						250	NF	UGLK1214
		1"	NPT	-	No	92	LV	UGVL
						120	LM	UGLK1350
						244	NM	UGLK1350
						250	AM	UGLK1214
							SV	UGVL
					Yes	92	LVK	UGVL
						95	LF	UGLK1350
						244	NF	UGLK1214
						250	SVK	UGVL
						250	AF	UGLK1214
		1¼"	NPT	-	No	78	LM	UGLK1350
						156	NM	UGLK1350
						236	SV	UGVL
						250	AM	UGLK1214
					Yes	61	LF	UGLK1350
						156	NF	UGLK1214
						236	SVK	UGVL
						250	AF	UGLK1214
	3-way	½"	NPT	-	No	250	AM	UGLK1214
							LM	UGLK1350
							LV	UGVL
					Yes	250	LF	UGLK1350
							LVK	UGVL
							NF	UGLK1214
		¾"	NPT	-	No	211	LV	UGVL
						215	LM	UGLK1350
						250	NM	UGLK1350

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

Siemens\Landis\Powers

658, 599 Powermite Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
658 Series	3-way	¾"	NPT	-	Yes	211	LVK	UGVL
						215	LF	UGLK1350
						250	NF	UGLK1214
		1"	NPT	-	No	92	LV	UGVL
						120	LM	UGLK1350
						244	NM	UGLK1350
						250	AM	UGLK1214
							SV	UGVL
					Yes	92	LVK	UGVL
						95	LF	UGLK1350
						244	NF	UGLK1214
						250	SVK	UGVL
						250	AF	UGLK1214
		1¼"	NPT	-	No	78	LM	UGLK1350
						156	NM	UGLK1350
						236	SV	UGVL
						250	AM	UGLK1214
					Yes	61	LF	UGLK1350
						156	NF	UGLK1214
						236	SVK	UGVL
						250	AF	UGLK1214
599-01100 MZ (Cv <.4)	2-way	½"	NPT	-	No	70	CM	UGSL1200
					Yes	70	TF	UGSL1200
599-01102 MZ (Cv <.63)	2-way	½"	NPT	-	No	70	CM	UGSL1200
					Yes	70	TF	UGSL1200
599-01104 MZ (Cv <1)	2-way	½"	NPT	-	No	70	CM	UGSL1200
					Yes	70	TF	UGSL1200
599-01106 MZ (Cv <1.6)	2-way	½"	NPT	-	No	70	CM	UGSL1200
					Yes	70	TF	UGSL1200
599-01108 MZ (Cv <2.5)	2-way	½"	NPT	-	No	40	CM	UGSL1200
					Yes	40	TF	UGSL1200
599-01110 MZ (Cv <4)	2-way	½"	NPT	-	No	40	CM	UGSL1200
					Yes	40	TF	UGSL1200
599-01115 MZ (Cv <.4)	2-way	½"	NPT	-	No	60	CM	UGSL1200
					Yes	60	TF	UGSL1200
599-01117 MZ (Cv <.63)	2-way	½"	NPT	-	No	60	CM	UGSL1200
					Yes	60	TF	UGSL1200
599-01119 MZ (Cv <1)	2-way	½"	NPT	-	No	60	CM	UGSL1200
					Yes	60	TF	UGSL1200
599-01121 MZ (Cv <1.6)	2-way	½"	NPT	-	No	60	CM	UGSL1200
					Yes	60	TF	UGSL1200
599-01123 MZ (Cv <2.5)	2-way	½"	NPT	-	No	35	CM	UGSL1200
					Yes	35	TF	UGSL1200
599-01126 MZ (Cv <4)	2-way	½"	NPT	-	No	35	CM	UGSL1200
					Yes	35	TF	UGSL1200
599-01132 MZ (Cv <.4)	3-way	½"	NPT	-	No	70	CM	UGSL1200
					Yes	70	TF	UGSL1200
599-01133 MZ (Cv <.63)	3-way	½"	NPT	-	No	70	CM	UGSL1200
					Yes	70	TF	UGSL1200
599-01134 MZ (Cv <1)	3-way	½"	NPT	-	No	70	CM	UGSL1200
					Yes	70	TF	UGSL1200
599-01135 MZ (Cv <1.6)	3-way	½"	NPT	-	No	70	CM	UGSL1200
					Yes	70	TF	UGSL1200
599-01136 MZ (Cv <2.5)	3-way	½"	NPT	-	No	40	CM	UGSL1200
					Yes	40	TF	UGSL1200
599-01137 MZ (Cv <4)	3-way	½"	NPT	-	No	40	CM	UGSL1200
					Yes	40	TF	UGSL1200
599-02000 MT (Cv <.4)	2-way	½"	NPT	-	No	95	CM	UGSL1200
					Yes	95	TF	UGSL1200
599-02002 MT (Cv <.63)	2-way	½"	NPT	-	No	95	CM	UGSL1200
					Yes	95	TF	UGSL1200
599-02004 MT (Cv <1)	2-way	½"	NPT	-	No	95	CM	UGSL1200
					Yes	95	TF	UGSL1200
599-02006 MT (Cv <1.6)	2-way	½"	NPT	-	No	95	CM	UGSL1200
					Yes	95	TF	UGSL1200

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
599-02008 MT (Cv <2.5)	2-way	½"	NPT	-	No	50	CM	UGSL1200
					Yes	50	TF	UGSL1200
599-02010 MT (Cv <4)	2-way	½"	NPT	-	No	50	CM	UGSL1200
					Yes	50	TF	UGSL1200
599-02030 MT (Cv <.4)	2-way	½"	NPT	-	No	120	CM	UGSL1200
					Yes	120	TF	UGSL1200
599-02032 MT (Cv <.63)	2-way	½"	NPT	-	No	120	CM	UGSL1200
					Yes	120	TF	UGSL1200
599-02034 MT (Cv <1)	2-way	½"	NPT	-	No	120	CM	UGSL1200
					Yes	120	TF	UGSL1200
599-02036 MT (Cv <1.6)	2-way	½"	NPT	-	No	120	CM	UGSL1200
					Yes	120	TF	UGSL1200
599-02038 MT (Cv <2.5)	2-way	½"	NPT	-	No	65	CM	UGSL1200
					Yes	65	TF	UGSL1200
599-02041 MT (Cv <4)	2-way	½"	NPT	-	No	65	CM	UGSL1200
					Yes	65	TF	UGSL1200
599-02064 MT (Cv <.4)	3-way	½"	NPT	-	No	95	CM	UGSL1200
					Yes	95	TF	UGSL1200
599-02065 MT (Cv <.63)	3-way	½"	NPT	-	No	95	CM	UGSL1200
					Yes	95	TF	UGSL1200
599-02066 MT (Cv <1)	3-way	½"	NPT	-	No	95	CM	UGSL1200
					Yes	95	TF	UGSL1200
599-02067 MT (Cv <1.6)	3-way	½"	NPT	-	No	95	CM	UGSL1200
					Yes	95	TF	UGSL1200
599-02068 MT (Cv <2.5)	3-way	½"	NPT	-	No	50	CM	UGSL1200
					Yes	50	TF	UGSL1200
599-02069 MT (Cv <4)	3-way	½"	NPT	-	No	50	CM	UGSL1200
					Yes	50	TF	UGSL1200
599-02070 MT (Cv <6.3)	3-way	¾"	NPT	-	No	40	CM	UGSL1200
					Yes	40	TF	UGSL1200
599-01129 MZ (Cv <6.3)	2-way	¾"	NPT	-	No	30	CM	UGSL1200
					Yes	30	TF	UGSL1200
599-01138 MZ (Cv <6.3)	3-way	¾"	NPT	-	No	10	CM	UGSL1200
					Yes	10	TF	UGSL1200
599-02012 MT (Cv <6.3)	2-way	¾"	NPT	-	No	40	CM	UGSL1200
					Yes	40	TF	UGSL1200
599-01112 MZ (Cv <6.3)	2-way	¾"	NPT	-	No	30	CM	UGSL1200
					Yes	30	TF	UGSL1200
599-02044 MT (Cv <6.3)	2-way	¾"	NPT	-	No	55	CM	UGSL1200
					Yes	55	TF	UGSL1200
599-01131 MZ (Cv <10)	2-way	1"	NPT	-	No	30	CM	UGSL1200
					Yes	30	TF	UGSL1200
599-01114 MZ (Cv <10)	2-way	1"	NPT	-	No	30	CM	UGSL1200
					Yes	30	TF	UGSL1200
599-01139 MZ (Cv <10)	3-way	1"	NPT	-	No	10	CM	UGSL1200
					Yes	10	TF	UGSL1200
599-02071 MT (Cv <10)	3-way	1"	NPT	-	No	40	CM	UGSL1200
					Yes	40	TF	UGSL1200
599-02046 MT (Cv <10)	2-way	1"	NPT	-	No	55	CM	UGSL1200
					Yes	55	TF	UGSL1200
599-02014 MT (Cv <10)	2-way	1"	NPT	-	No	40	CM	UGSL1200
					Yes	40	TF	UGSL1200
599 MZ (Cv 16)	2-way	1¼"	NPT	-	No	20	CM	UGSL1200
					Yes	20	TF	UGSL1200
	3-way	1¼"	NPT	-	No	10	CM	UGSL1200
					Yes	10	TF	UGSL1200
599-02084 MT (Cv <10)	2-way	1¼"	NPT	-	No	20	CM	UGSL1200
					Yes	20	TF	UGSL1200
599-02085 MT (Cv <10)	2-way	1¼"	NPT	-	No	21	CM	UGSL1200
					Yes	20	TF	UGSL1200
599-02086 MT (Cv <16)	3-way	1¼"	NPT	-	No	10	CM	UGSL1200
					Yes	10	TF	UGSL1200
599 MZ (Cv 25)	2-way	1½"	NPT	-	No	10	CM	UGSL1200
					Yes	10	TF	UGSL1200

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

Warren Controls

Type 20, Type 22, Type 23, Type 30, Type 32, 100 Series Valves

Linkage/Actuator Selection Guide

5 YEAR WARRANTY

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
Type 20	2-way	2½"	Flanged	-	No	94	EV	WGVL
						185	RV	WGVL
					Yes	71	AVK	WGVL
		3"	Flanged	-	No	63	EV	WGVL
						126	RV	WGVL
					Yes	47	AVK	WGVL
		4"	Flanged	-	No	68	RV	WGVL
		5"	Flanged	-	No	42	RV	WGVL
Type 22	2-way	2½"	Flanged	-	No	94	EV	WGVL
						185	RV	WGVL
					Yes	71	AVK	WGVL
		3"	Flanged	-	No	63	EV	WGVL
						126	RV	WGVL
					Yes	47	AVK	WGVL
		4"	Flanged	-	No	68	RV	WGVL
		5"	Flanged	-	No	42	RV	WGVL
Type 23	2-way	2½"	Flanged	-	No	228	EV	WGVL
					Yes	228	AVK	WGVL
		3"	Flanged	-	No	157	EV	WGVL
					Yes	157	AVK	WGVL
		4"	Flanged	-	No	340	EV	WGVL
					Yes	340	AVK	WGVL
		5"	Flanged	-	No	232	EV	WGVL
					Yes	232	AVK	WGVL
Type 30	3-way	2½"	Flanged	-	No	94	EV	WGVL
						185	RV	WGVL
					Yes	71	AVK	WGVL
		3"	Flanged	-	No	63	EV	WGVL
						126	RV	WGVL
					Yes	47	AVK	WGVL
		4"	Flanged	-	No	68	RV	WGVL
		5"	Flanged	-	No	42	RV	WGVL
Type 32	3-way	2½"	Flanged	-	No	94	EV	WGVL
						185	RV	WGVL
					Yes	71	AVK	WGVL
		3"	Flanged	-	No	63	EV	WGVL
						126	RV	WGVL
					Yes	47	AVK	WGVL
		4"	Flanged	-	No	68	RV	WGVL
		5"	Flanged	-	No	42	RV	WGVL
100 SGL SEAT	2-way	2½"	Flanged	-	No	28	AM	UGLK2202
						57	GM	UGLK2202
						101	2*GM	UGLK2272
					Yes	14	NF	UGLK2202
						28	AF	UGLK2202
						57	2*AF	UGLK2272
							GK	UGLK2202
						101	2*GK	UGLK2272
		3"	Flanged	-	No	40	GM	UGLK2202
						20	AM	UGLK2202
						70	2*GM	UGLK2272
					Yes	40	2*AF	UGLK2272
							GK	UGLK2202
						10	NF	UGLK2202
						20	AF	UGLK2202
						70	2*GK	UGLK2272
		4"	Flanged	-	No	11	AM	UGLK2202
						22	GM	UGLK2202
						40	2*GM	UGLK2272
					Yes	11	AF	UGLK2202
						22	2*AF	UGLK2272
							GK	UGLK2202
						40	2*GK	UGLK2272
		5"	Flanged	-	No	14	GM	UGLK2202
						25	2*GM	UGLK2272

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
100 SGL SEAT	2-way	5”	Flanged	-	Yes	7	AF	UGLK2202
						14	2*AF	UGLK2272
							GK	UGLK2202
						25	2*GK	UGLK2272
		6”	Flanged	-	No	10	GM	UGLK2202
						18	2*GM	UGLK2272
					Yes	5	AF	UGLK2202
						10	2*AF	UGLK2272
							GK	UGLK2202
						18	2*GK	UGLK2272
1800 3W DIV	3-way	2½”	Flanged	Diverting	No	28	AM	UGLK2202
						57	GM	UGLK2202
						101	2*GM	UGLK2272
					Yes	14	NF	UGLK2202
						28	AF	UGLK2202
						57	2*AF	UGLK2272
							GK	UGLK2202
						101	2*GK	UGLK2272
		3”	Flanged	Diverting	No	40	GM	UGLK2202
						20	AM	UGLK2202
						70	2*GM	UGLK2272
					Yes	40	2*AF	UGLK2272
							GK	UGLK2202
						10	NF	UGLK2202
						20	AF	UGLK2202
						70	2*GK	UGLK2272
		4”	Flanged	Diverting	No	11	AM	UGLK2202
						22	GM	UGLK2202
						40	2*GM	UGLK2272
					Yes	11	AF	UGLK2202
						22	2*AF	UGLK2272
							GK	UGLK2202
						40	2*GK	UGLK2272
		5”	Flanged	Diverting	No	14	GM	UGLK2202
						25	2*GM	UGLK2272
					Yes	7	AF	UGLK2202
						14	2*AF	UGLK2272
							GK	UGLK2202
						25	2*GK	UGLK2272
		6”	Flanged	Diverting	No	10	GM	UGLK2202
						18	2*GM	UGLK2272
					Yes	5	AF	UGLK2202
						10	2*AF	UGLK2272
							GK	UGLK2202
						18	2*GK	UGLK2272
1800 3W MIX	3-way	2½”	Flanged	Mixing	No	28	AM	UGLK2202
						57	GM	UGLK2202
						101	2*GM	UGLK2272
					Yes	14	NF	UGLK2202
						28	AF	UGLK2202
						57	2*AF	UGLK2272
							GK	UGLK2202
						101	2*GK	UGLK2272
		3”	Flanged	Mixing	No	40	GM	UGLK2202
						20	AM	UGLK2202
						70	2*GM	UGLK2272
					Yes	40	2*AF	UGLK2272
							GK	UGLK2202
						10	NF	UGLK2202
						20	AF	UGLK2202
						70	2*GK	UGLK2272
		4”	Flanged	Mixing	No	11	AM	UGLK2202
						22	GM	UGLK2202
						40	2*GM	UGLK2272

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

Warren Controls

1800 M, 1800 BAL, Type 20 Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
1800 3W MIX	3-way	4”	Flanged	Mixing	Yes	11	AF	UGLK2202
						22	2*AF	UGLK2272
							GK	UGLK2202
						40	2*GK	UGLK2272
		5”	Flanged	Mixing	No	14	GM	UGLK2202
						25	2*GM	UGLK2272
					Yes	7	AF	UGLK2202
						14	2*AF	UGLK2272
							GK	UGLK2202
						25	2*GK	UGLK2272
		6”	Flanged	Mixing	No	10	GM	UGLK2202
						18	2*GM	UGLK2272
					Yes	5	AF	UGLK2202
						10	2*AF	UGLK2272
							GK	UGLK2202
						18	2*GK	UGLK2272
1800 BAL	2-way	2½”	Flanged	-	No	28	AM	UGLK2202
						57	GM	UGLK2202
						101	2*GM	UGLK2272
					Yes	14	NF	UGLK2202
						28	AF	UGLK2202
						57	2*AF	UGLK2272
							GK	UGLK2202
						101	2*GK	UGLK2272
		3”	Flanged	-	No	40	GM	UGLK2202
						20	AM	UGLK2202
						70	2*GM	UGLK2272
					Yes	40	2*AF	UGLK2272
							GK	UGLK2202
						10	NF	UGLK2202
						20	AF	UGLK2202
						70	2*GK	UGLK2272
		4”	Flanged	-	No	11	AM	UGLK2202
						22	GM	UGLK2202
						40	2*GM	UGLK2272
					Yes	11	AF	UGLK2202
						22	2*AF	UGLK2272
							GK	UGLK2202
						40	2*GK	UGLK2272
		5”	Flanged	-	No	14	GM	UGLK2202
						25	2*GM	UGLK2272
					Yes	7	AF	UGLK2202
						14	2*AF	UGLK2272
							GK	UGLK2202
						25	2*GK	UGLK2272
		6”	Flanged	-	No	10	GM	UGLK2202
						18	2*GM	UGLK2272
					Yes	5	AF	UGLK2202
						10	2*AF	UGLK2272
							GK	UGLK2202
						18	2*GK	UGLK2272
Type 20	2-way	2½”	Flanged	-	No	55	AM	UGLK2200
						110	GM	UGLK2200
						196	2*GM	UGLK2270
					Yes	28	NF	UGLK2200
						55	AF	UGLK2200
						110	2*AF	UGLK2270
							GK	UGLK2200
						196	2*GK	UGLK2270
		3”	Flanged	-	No	38	AM	UGLK2200
						77	GM	UGLK2200
						136	2*GM	UGLK2270
					Yes	19	NF	UGLK2200
						38	AF	UGLK2200
						77	2*AF	UGLK2270
							GK	UGLK2200
						136	2*GK	UGLK2270

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
Type 20	2-way	4”	Flanged	-	No	11	AM	UGLK2202
						22	GM	UGLK2202
						40	2*GM	UGLK2272
					Yes	11	AF	UGLK2202
						22	2*AF	UGLK2272
							GK	UGLK2202
						40	2*GK	UGLK2272
		5”	Flanged	-	No	14	GM	UGLK2202
						25	2*GM	UGLK2272
					Yes	7	AF	UGLK2202
						14	2*AF	UGLK2272
							GK	UGLK2202
						25	2*GK	UGLK2272
		6”	Flanged	-	No	10	GM	UGLK2202
						18	2*GM	UGLK2272
					Yes	5	AF	UGLK2202
						10	2*AF	UGLK2272
							GK	UGLK2202
						18	2*GK	UGLK2272
Type 22	2-way	2½”	Flanged	-	No	55	AM	UGLK2200
						110	GM	UGLK2200
						196	2*GM	UGLK2270
					Yes	28	NF	UGLK2200
						55	AF	UGLK2200
						110	2*AF	UGLK2270
							GK	UGLK2200
						196	2*GK	UGLK2270
		3”	Flanged	-	No	38	AM	UGLK2200
						77	GM	UGLK2200
						136	2*GM	UGLK2270
					Yes	19	NF	UGLK2200
						38	AF	UGLK2200
						77	2*AF	UGLK2270
							GK	UGLK2200
						136	2*GK	UGLK2270
		4”	Flanged	-	No	22	AM	UGLK2200
						43	GM	UGLK2200
						77	2*GM	UGLK2270
					Yes	11	NF	UGLK2200
						22	AF	UGLK2200
						43	2*AF	UGLK2270
							GK	UGLK2200
						77	2*GK	UGLK2270
		5”	Flanged	-	No	14	GM	UGLK2202
						25	2*GM	UGLK2272
					Yes	7	AF	UGLK2202
						14	2*AF	UGLK2272
							GK	UGLK2202
						25	2*GK	UGLK2272
		6”	Flanged	-	No	10	GM	UGLK2202
						18	2*GM	UGLK2272
					Yes	5	AF	UGLK2202
						10	2*AF	UGLK2272
							GK	UGLK2202
						18	2*GK	UGLK2272
Type 30	3-way	2½”	Flanged	-	No	55	AM	UGLK2200
						110	GM	UGLK2200
						196	2*GM	UGLK2270
					Yes	28	NF	UGLK2200
						55	AF	UGLK2200
						110	2*AF	UGLK2270
							GK	UGLK2200
						196	2*GK	UGLK2270
		3”	Flanged	-	No	38	AM	UGLK2200
						77	GM	UGLK2200
						136	2*GM	UGLK2270

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

Warren Controls

Type 30, Type 32, Type 20 Series Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
Type 30	3-way	3”	Flanged	-	Yes	19	NF	UGLK2200
						38	AF	UGLK2200
						77	2*AF	UGLK2270
							GK	UGLK2200
						136	2*GK	UGLK2270
		4”	Flanged	-	No	11	AM	UGLK2202
						22	GM	UGLK2202
						40	2*GM	UGLK2272
					Yes	11	AF	UGLK2202
						22	2*AF	UGLK2272
							GK	UGLK2202
						40	2*GK	UGLK2272
		5”	Flanged	-	No	14	GM	UGLK2202
						25	2*GM	UGLK2272
					Yes	7	AF	UGLK2202
						14	2*AF	UGLK2272
							GK	UGLK2202
						25	2*GK	UGLK2272
		6”	Flanged	-	No	10	GM	UGLK2202
						18	2*GM	UGLK2272
					Yes	5	AF	UGLK2202
						10	2*AF	UGLK2272
							GK	UGLK2202
						18	2*GK	UGLK2272
Type 32	3-way	2½”	Flanged	-	No	55	AM	UGLK2200
						110	GM	UGLK2200
						196	2*GM	UGLK2270
					Yes	28	NF	UGLK2200
						55	AF	UGLK2200
						110	2*AF	UGLK2270
							GK	UGLK2200
						196	2*GK	UGLK2270
		3”	Flanged	-	No	38	AM	UGLK2200
						77	GM	UGLK2200
						136	2*GM	UGLK2270
					Yes	19	NF	UGLK2200
						38	AF	UGLK2200
						77	2*AF	UGLK2270
							GK	UGLK2200
						136	2*GK	UGLK2270
		4”	Flanged	-	No	11	AM	UGLK2202
						22	GM	UGLK2202
						40	2*GM	UGLK2272
					Yes	11	AF	UGLK2202
						22	2*AF	UGLK2272
							GK	UGLK2202
						40	2*GK	UGLK2272
		5”	Flanged	-	No	14	GM	UGLK2202
						25	2*GM	UGLK2272
					Yes	7	AF	UGLK2202
						14	2*AF	UGLK2272
							GK	UGLK2202
						25	2*GK	UGLK2272
		6”	Flanged	-	No	10	GM	UGLK2202
						18	2*GM	UGLK2272
					Yes	5	AF	UGLK2202
						10	2*AF	UGLK2272
							GK	UGLK2202
						18	2*GK	UGLK2272
Type 20	2-way	½”	NPT	-	No	250	AM	UGLK2200
					Yes	250	NF	UGLK2200
		¾”	NPT	-	No	250	AM	UGLK2200
					Yes	250	NF	UGLK2200
		1”	NPT	-	No	250	AM	UGLK2200
					Yes	173	NF	UGLK2200
						250	AF	UGLK2200

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

Valve Body Model	Valve Configuration	Size	Body Type	Flow	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
Type 20	2-way	1¼"	NPT	-	No	221	AM	UGLK2200
					Yes	110	NF	UGLK2200
						221	AF	UGLK2200
		1½"	NPT	-	No	153	AM	UGLK2200
						250	GM	UGLK2200
					Yes	77	NF	UGLK2200
						153	AF	UGLK2200
						250	GK	UGLK2200
		2"	NPT	-	No	86	AM	UGLK2200
						173	GM	UGLK2200
					Yes	43	NF	UGLK2200
						86	AF	UGLK2200
						173	GK	UGLK2200
Type 30	3-way	½"	NPT	-	No	250	AM	UGLK2200
					Yes	250	NF	UGLK2200
		¾"	NPT	-	No	250	AM	UGLK2200
					Yes	250	NF	UGLK2200
		1"	NPT	-	No	250	AM	UGLK2200
					Yes	173	NF	UGLK2200
						250	AF	UGLK2200
		1¼"	NPT	-	No	221	AM	UGLK2200
					Yes	110	NF	UGLK2200
						221	AF	UGLK2200
		1½"	NPT	-	No	153	AM	UGLK2200
						250	GM	UGLK2200
					Yes	77	NF	UGLK2200
						153	AF	UGLK2200
						250	GK	UGLK2200
		2"	NPT	-	No	86	AM	UGLK2200
						173	GM	UGLK2200
					Yes	43	NF	UGLK2200
						86	AF	UGLK2200
						173	GK	UGLK2200

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

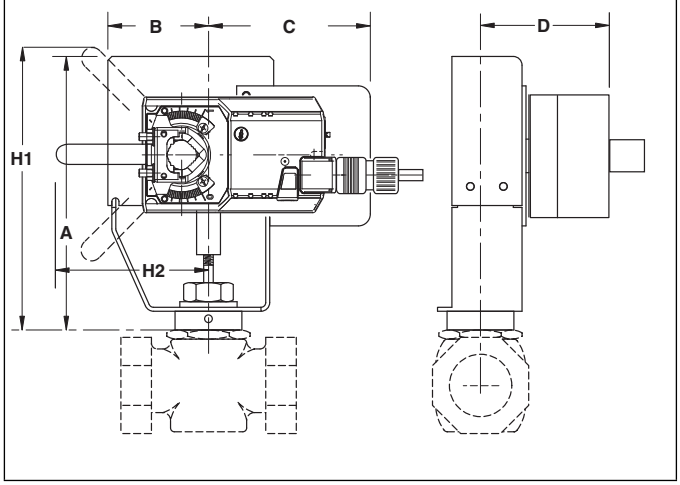
Globe valves which cannot be matched to one of the Belimo UGLK part numbers, for quotation only, use p/n UGSP0000 for valves requiring single actuation, and UGSP0002 for valves requiring dual actuation. These part numbers do not have Bill of Materials (BOM) associated with them, and therefore cannot 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. Our engineering department will then determine the correct UGSP linkage number for production. UGSP0000 and UGSP0002 will **NOT** be stated on final paperwork but will be replaced with the correct UGSP part number.

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

The single actuated globe retrofit linkage depicts the MINIMUM and MAXIMUM dimensional data for use in determining the 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.

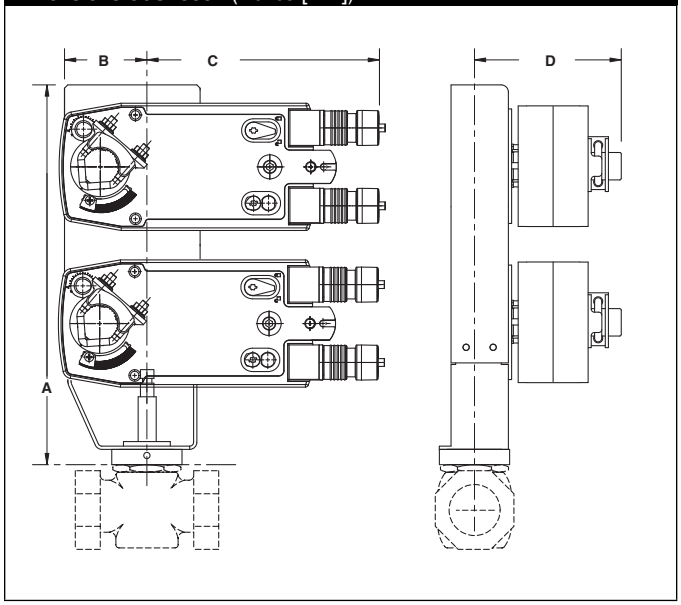
Dimensions UGSP0000 (Inches [mm])



A	B	C	D	H1	H2
7.50 [190] min 14.00 [356] max	3.00 [76]	9.00 [229]	5.00 [127]	9.50 [242]	9.50 [242]

The dual MINIMUM and MAXIMUM actuated globe retrofit linkage depicts the MAXIMUM dimensional data for use in determining the space required to mount the linkage. These dimensions do NOT include VALVE dimensions which will affect combined height requirements.

Dimensions UGSP0002 (Inches [mm])



A	B	C	D
9.50 [241] min 19.00 [483] max	3.00 [76]	9.00 [229]	5.00 [127]

Instructions for Completing this Form

Dimensions A, B & C relate to the existing valve stem. **Dim A** is the stem diameter where it is NOT threaded (Style A), or grooved (Style B). **Dim B** refers to the length of the threaded region on the valve stem or top region of the grooved stem. **Dim C** is the actual thread specification for the threaded style stem (1/4-28, 5/16-24, 3/8-24, 7/16-20 & 1/2-20 are typical). Dim C for the grooved style is the measurement of the stem groove height. This information is used to design a stem adapter which will connect the valve stem to the new linkage drive rack. It is important to specify the correct thread pattern, as incorrect data will prevent the stem adapter from attaching to your valve. If you cannot determine the correct thread spec, you can send a nut from the valve stem and we will match the correct specification. In some cases where older valves are concerned, some valve stems must be trimmed in the field to allow attachment of the linkage system. In these cases, a stem adapter is designed to "bite" into the smooth surface of the valve stem itself.

Dimensions D1, D2 & D3 are used to determine the height of the linkage assembly required to clear the valves' full stroke. A minimum of **two** dimensions are required to manufacture the correct linkage system for your valve. These dimensions also provide the information necessary to determine valve stroke. The **maximum stroke** from Belimo globe valve retrofit systems is 1.500".

Dimension E refers to the valve bonnet diameter (regardless if threads are present or not). Over time, impurities will react to the bonnet threads and corrode them to the point where they no longer meet the original thread specification. Because of this, we manufacture **slip fit** collars designed to **slide over** the bonnet threads, and locking setscrews are provided which "bite" into the original threads. All retrofit systems are designed to work with the raw valve body and do not account for previous actuation components which **must** be removed from the valve body before attaching the new linkage system.

Dimension F refers to the thread specification on threaded bonnets, and refers to the minor diameter on slip on bonnets (Landis type). This information helps us determine the length of the locking devices required to hold the collar onto the bonnet.

Dimensions G & H are used to determine working height of the bonnet region of your globe valve, while **Dim I** is used in calculating the minimum ID of the collar that will fit over the packing nut. Additionally, information about the environment and process in which this linkage system will be utilized should be provided.

All the requested information contained on this form is required to guarantee the complete, perfect fit of your retrofit system. Keep in mind that retrofit kits are designed with close-tolerance components which afford the most efficient linkage systems. Measurements rounded to the nearest 1/8 or 1/16 inch will not perform as well as a kit designed around careful measurements using proper equipment. Our designs are typically +.005" tolerance.

Required Tools - calipers, thread gauge and retrofit form

DISCLAIMER:

We will do our best to provide a linkage system designed around your specifications and measurements however, we cannot be held responsible for linkages which do not fit as a result of incorrect data given to Belimo. We will re-work components which do not fit properly for a nominal fee.

To reduce the possibility of incorrect linkage solutions, we respectfully request that you fill out the retrofit form completely and forward that information with your order. This will serve as a double check between your valve and the actuator/linkage package designed for your application.

Actuation, weather shields and linkages cannot be pre-assembled at the Belimo factory prior to your receipt. The linkages are designed to be attached onto the valve body first, then optional weather shields, and finally actuation products.

Close-off pressures are calculated using actuator torque, valve stroke, and valve area. Other factors may affect the rated close-off pressures, including flow rates, system maintenance schedules, chemicals used in the shot feeder process, vicinity to pumps, condition of valve stem seals, and assembly of linkage material in the field.

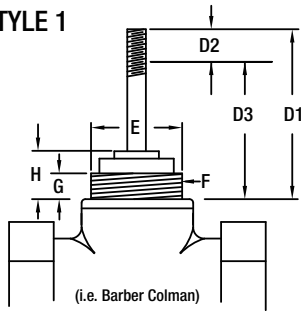
Valves that are being considered for retrofit of actuation should be analyzed for their life expectancy before the retrofit has taken place. Valves that leak through stem seals or casings will continue to leak with the new linkage system in place, maybe even more so. Rebuilding the packing on these valves may be more costly than replacing the valves themselves. In some instances, older valve stem heights will require field modifications to the valve in order to utilize the retrofit kit. Belimo takes no responsibility for the operation of these valves after they have been modified.

Custom Globe Valve Retrofit Form

UGSP Series Globe Valve Retrofit System

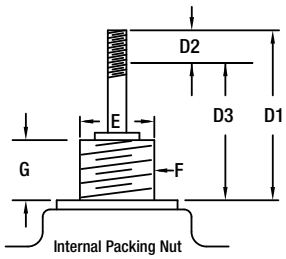
BELIMO

VALVE STYLE 1

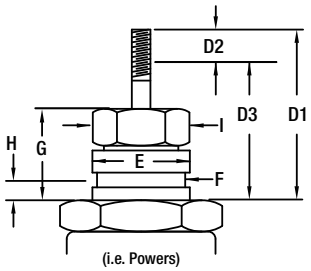


NOTE:
Nut "F" rotates on
valve bonnet!!

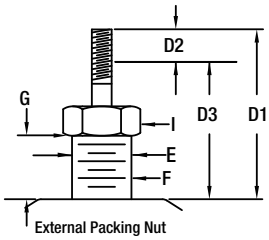
VALVE STYLE 2



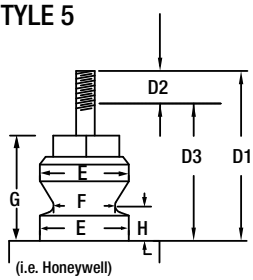
VALVE STYLE 3



VALVE STYLE 4



VALVE STYLE 5

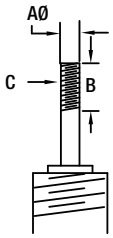


VALVE STYLE DIMENSIONS

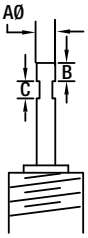
VALVE STYLE:		
DIM D1*: Stem up, length to base mount surface		
DIM D2: Stem stroke, stem up vs. stem down (D1-D3)		max. 1.500"
DIM D3: Stem down, length to base mount surface		
DIM E: Bonnet major diameter		
DIM F: Thread spec or bonnet minor diameter		
DIM G: Bonnet mount height		
DIM H: Bonnet minor diameter height		
DIM I: External packaging nut, across points		

*MAXIMUM LENGTH LINKAGE FRAME WILL ACCOMODATE UP TO 6.500" D1 MEASUREMENT VALVE STEMS LONGER THAN THIS NEED TO BE CUT.

STEM STYLE A



STEM STYLE B



STEM STYLE A or B: ☐

STEM DIAMETER DIM A: ☐

THREAD LENGTH DIM B: ☐

TO STEM GROOVE DIM B: ☐

THREADS PER INCH DIM C: ☐

STEM GROOVE HEIGHT DIM C: ☐

ACTUATOR

EXISTING ACTUATOR MODEL: _____ CONTROL TYPE: ☐ ON/OFF ☐ FLOATING POINT ☐ VDC Range:_____ ☐ PWM Range:_____

FAIL SAFE: ☐ YES ☐ NO

FAIL POSITION: ☐ NO ☐ NC ☐ INDOOR ☐ OUTDOOR

VOLTAGE _____

COMPANY: _____

JOB NAME: _____

PO#: _____

PHONE: _____

EMAIL: _____

VALVE MANUFACTURE: _____

VALVE SERIES: _____

VALVE MODEL: _____

VALVE TAG/LOCATION: _____

QUANTITY: _____

2 WAY/3 WAY: _____

VALVE SIZE: _____

MEDIA TEMP: _____

MEDIA TYPE: _____

SYSTEM PRESSURE: _____

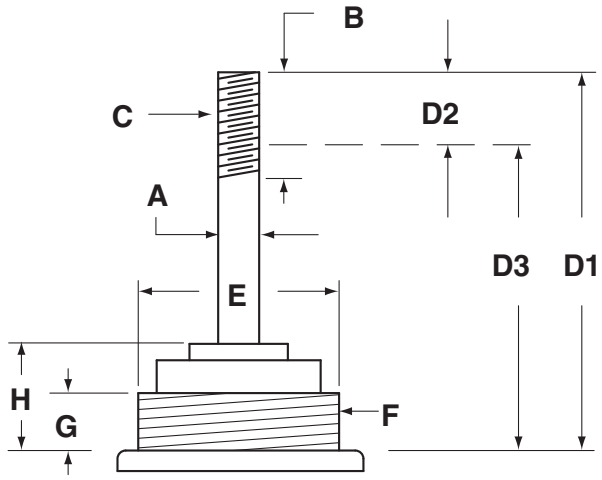
NOTE: THIS INFORMATION WILL BE UTILIZED IN THE FABRICATION OF A CUSTOM LINKAGE SYSTEM FOR YOUR VALVE REQUIREMENT; THEREFORE, IT IS ESSENTIAL THAT THE ABOVE DIMENSIONS BE FURNISHED WITH READINGS TAKEN TO THE NEAREST .001". ANY ERRONEOUS DIMENSIONS FURNISHED WHICH RESULT IN IMPROPER FIT OF THIS LINKAGE SYSTEM ARE NOT THE RESPONSIBILITY OF BELIMO AIRCONTROLS. ANY REWORK REQUIRED WILL RESULT IN AN EXTRA CHARGE.

CUSTOM KITS ARE DESIGNED TO YOUR UNIQUE SPECIFICATIONS AND ARE **NOT RETURNABLE.**

COMPANY CONTACT/DIMENSIONS PROVIDED BY: _____ DATE: _____

SUBMIT

Dimensions Needed



Identification & Measurement of Existing Valves

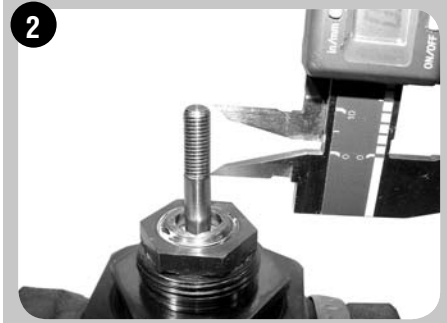
The valve should be stripped down to its basic form, as shown. Remove all other linkage components in order to obtain correct dimensional data for the retrofit kit. Note that the bonnet nut is permanently attached to the valve body, and that it also spins freely.

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

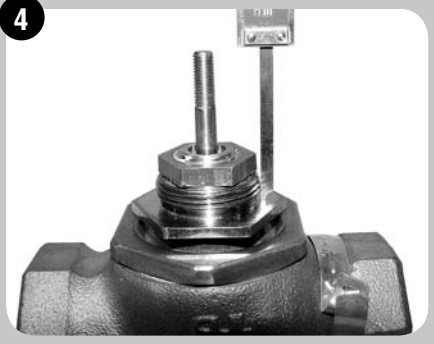


Measure the LENGTH of the threaded area of the valve stem, and record this information for Dimension B on the retrofit form.

3

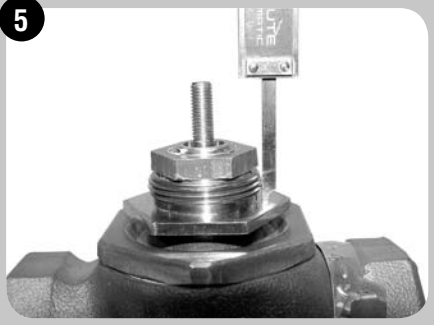
Using the WIDE area of the calipers, measure the MAJOR Diameter of the stem threads. Record this information for Dimension C on the retrofit form. Count how many threads per inch. Typical thread specs are 1/4-28, 3/8-24 & 1/2-20. If available, you should use a thread gage to determine the correct thread 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 gage used to measure the STEM UP distance to the bonnet base.

5

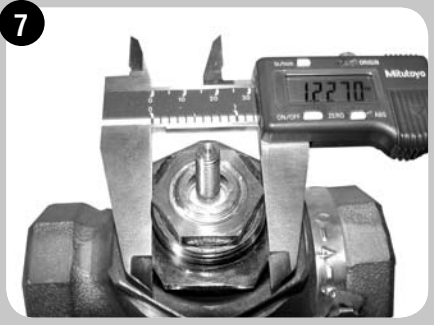


Dimension D3 on the retrofit form is measured as shown, with the depth gage used to measure the STEM DN distance to the bonnet base.

6

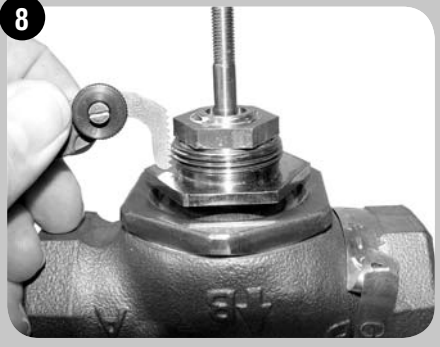
Dimension D2 on the retrofit form is the measured distance between the STEM UP and STEM DN heights, which gives the full travel of the valve. Only TWO of the three dimensions D1, D2 & D3 are needed.

7



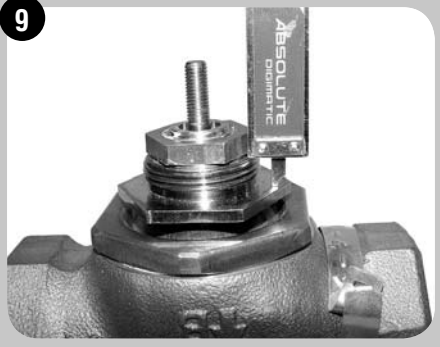
Dimension E is measured across the MAJOR diameter of the bonnet threads. Use the calipers as shown to determine the correct dimension and record accordingly on the retrofit form.

8



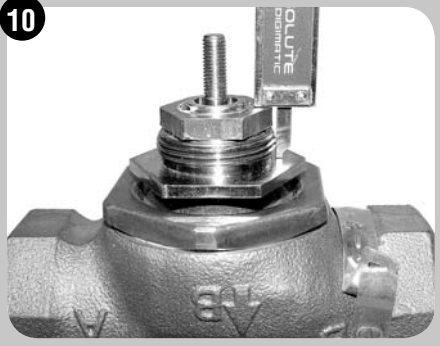
Dimension F is measured using a thread gage or by counting the number of threads per inch.

9



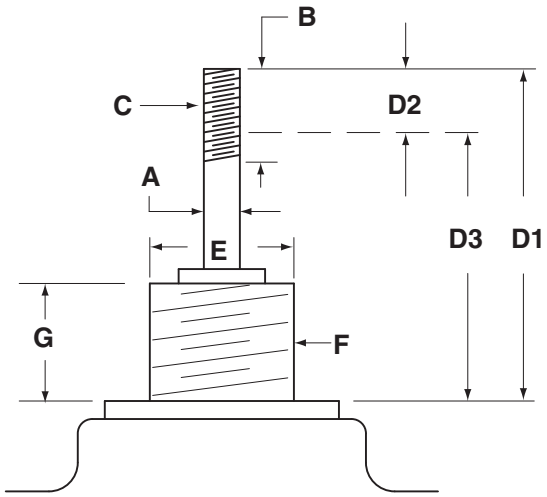
Measure Dimension G using the caliper depth gage, and record on the retrofit form.

10



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

Dimensions Needed



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.

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

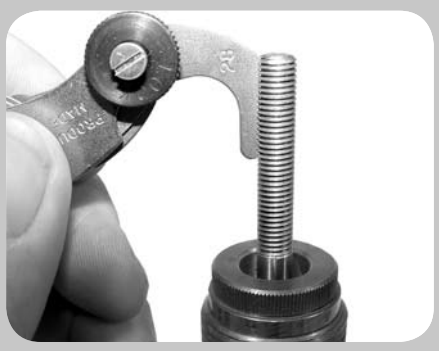
Dimension A on the retrofit form is measured as shown, with the end of the calipers laying PERPENDICULAR to the center line of the valve stem. Record this reading to three decimal places.

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 gage 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 gage used to measure the STEM UP distance to the bonnet base.

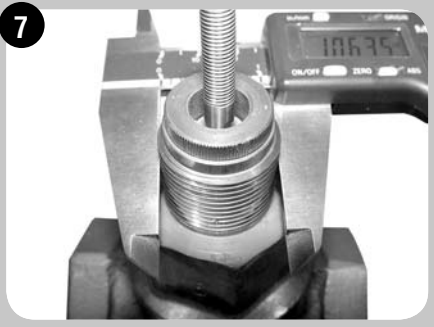
5

Dimension D3 on the retrofit form is measured as shown, with the depth gage 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.

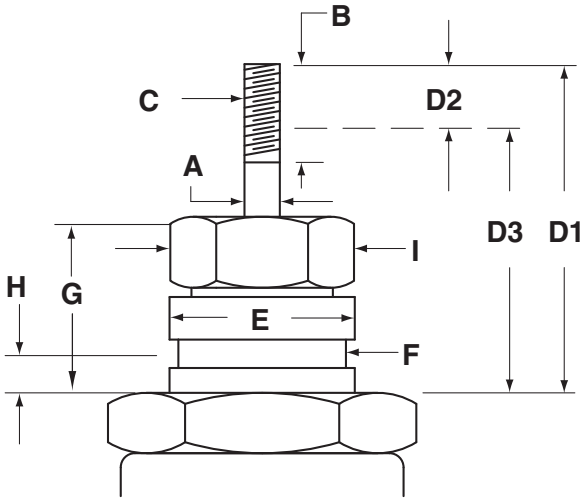
8

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

9

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

Dimensions Needed



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 that the diameter of the bonnet. There is a groove in the bonnet used to secure the retrofit collar to the valve.

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

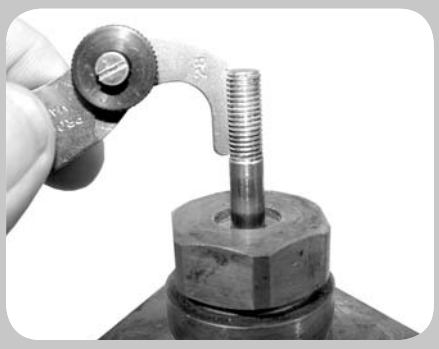
Dimension A on the retrofit form is measured as shown, with the end of the calipers laying PERPENDICULAR to the center line of the valve stem. Record this reading to three decimal places.

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 gage 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.



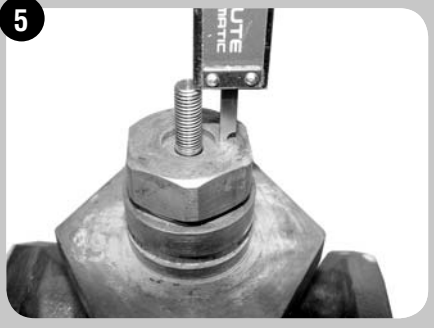
UGSP Series Globe Valve Retrofit Solution

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 gage 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 gage used to measure the STEM DN distance to the bonnet base.

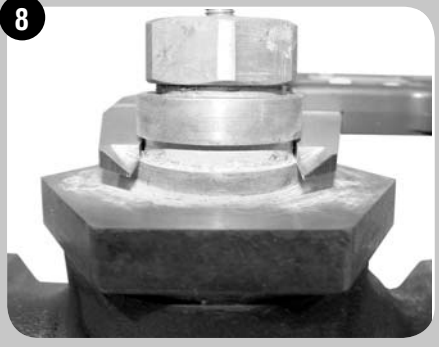
6

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

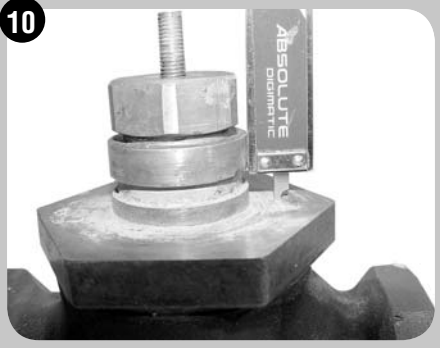


DImension F is measured using calipers across the MINOR diameter of the bonnet. This may be a square or a round groove. Measure the SMALLEST dimension of this groove.

9

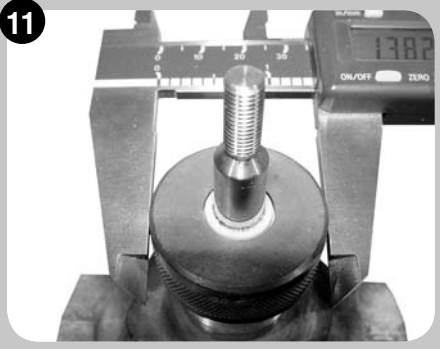
Measure Dimension G using the caliper depth gage, and record on the retrofit form.

10



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

11

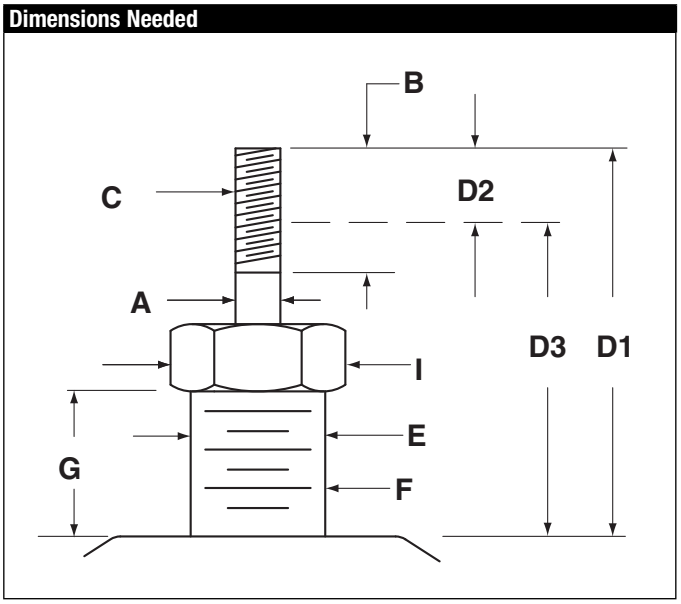


Dimension I is measured on the outside diameter of the external packing nut.

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 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 gage 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.

UGSP Series Globe Valve Retrofit Solution

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 gage 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 gage 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

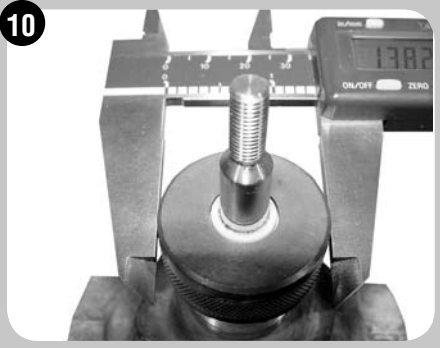
Dimension E is measured across the MAJOR diameter of the bonnet. Use the calipers as shown to determine the correct dimension and record accordingly on the retrofit form. Do NOT measure the diameter of the packing nut for this dimension.

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

9

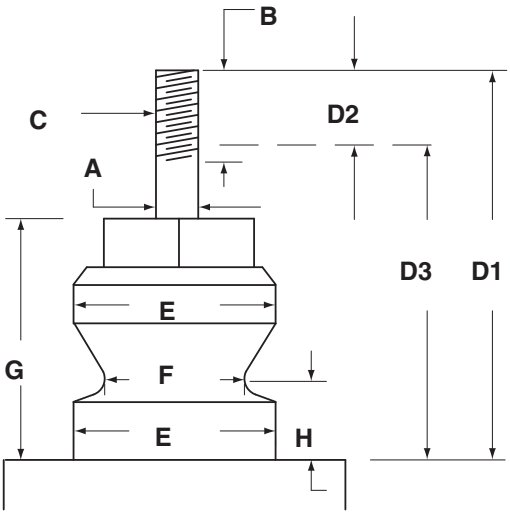
Measure Dimension G using the caliper depth gage to measure the distance between the bottom on the packing nut and the valve collar seating surface.

10



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

Dimensions Needed



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 that the diameter of the bonnet. There is a groove in the bonnet used to secure the retrofit collar to the valve.

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 gage 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.

UGSP Series Globe Valve Retrofit Solution

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 gage used to measure the STEM UP distance to the bonnet base.

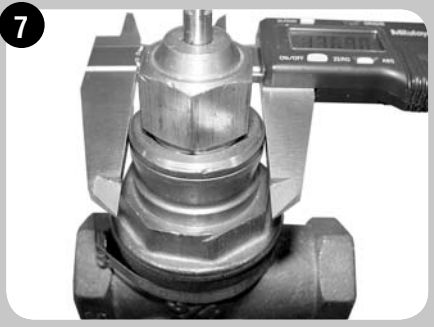
5

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

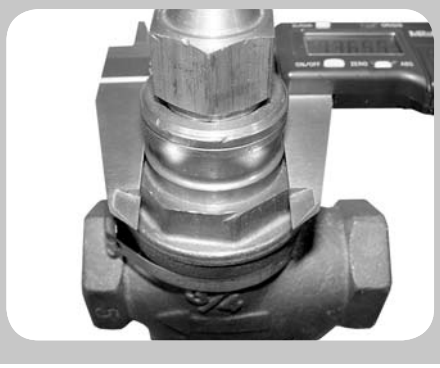
6

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.



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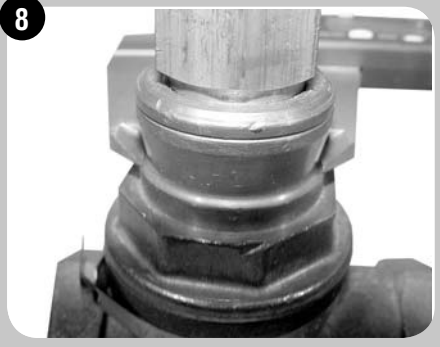


DImension F is measured using calipers across the MINOR diameter of the bonnet. This may be a square or a round groove. Measure the SMALLEST dimension of this groove.

9

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

10

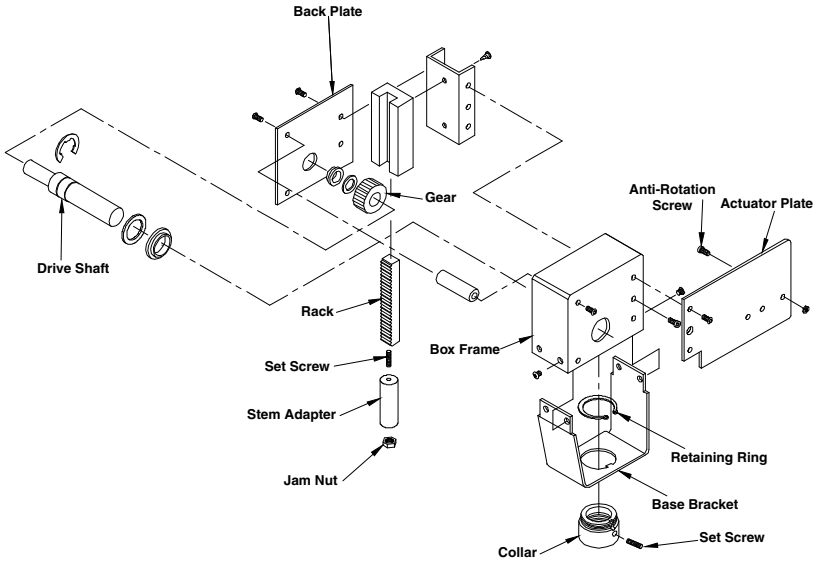
Measure Dimension H using the caliper depth gage, and record on the retrofit form.

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-JC15	1.070”	Ring, no setscrews		•			
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		•	•	•	•

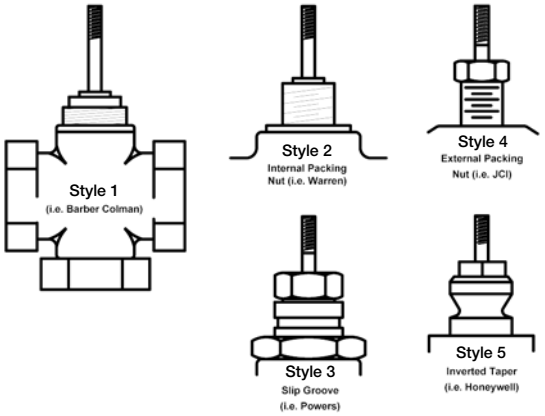
* Must reuse clip and set screws.

UGLK Stem Adapters			Most Commonly Used Valve Style				
Part Number	Inside Diameter	Description	Style 1	Style 2	Style 3	Style 4	Style 5
UGLK-STM-1800	¼”- 28 Stem Thd.	Stem adapter for ¼”- 28 valve stems	•	•	•	•	•
UGLK-STM-1801	3/8”- 24 Stem Thd.	Stem adapter for 3/8”- 24 valve stems	•	•	•	•	•
UGLK-STM-1802	½”- 20 Stem Thd.	Stem adapter for ½”- 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	½” OD Grooved	Landis 4-6” -599 Series			•		
UGLK-STM-UNIV	Custom	Must be machined	•	•	•	•	•

UGLK Stem Adapters



UGLK Collars



Valve Accessories

Globe Valves

		Non-Spring Return				Spring Return		
Auxiliary Switches & Potentiometers		**LMB LMX**	**NMB NMX**	**AMB AMX**	**GMB GMX**	**LF**	**NF**	**AF**
	S1A Auxiliary switch - 1x SPDT, 3A (0.5A Inductive) @ 250 VAC	•	•	•	•			
	**S2A** Auxiliary switch - 1x SPDT, 3A (0.5A Inductive) @ 250 VAC	•	•	•	•			
	P140A GR Feedback potentiometer 140 Ω	•	•	•	•			
	P500A GR Feedback potentiometer 500 Ω	•	•	•	•			
	P1000A GR Feedback potentiometer 1000 Ω	•	•	•	•			
	P2800A GR Feedback potentiometer 2800 Ω	•	•	•	•			
	P5000A GR Feedback potentiometer 5000 Ω	•	•	•	•			
	P10000A GR Feedback potentiometer 10000 Ω	•	•	•	•			
Battery Backup								
	NSV24 US Battery backup module	•	•	•	•	•	•	•
	**NSV-BAT US** 12VDC 1.2 AH battery (2 required)	•	•	•	•	•	•	•

Note: Each NSV-24 US requires 2 NSV-BAT.

Butterfly Valve Retrofit Solutions

- Full range of kits for 2-way and 3-way valve assemblies.
- Visual stroke indicators allow quick installation.
- Linkages can be mounted in any orientation except upside down.
- NEMA 2 and NEMA 4 options available.

Applications

UFLK and UFSP butterfly retrofit solutions are designed to easily attach to the valve mounting pad of competitor valves utilizing Belimo actuators. This kit will help to restore service without removal of the valve, saving down time and money.

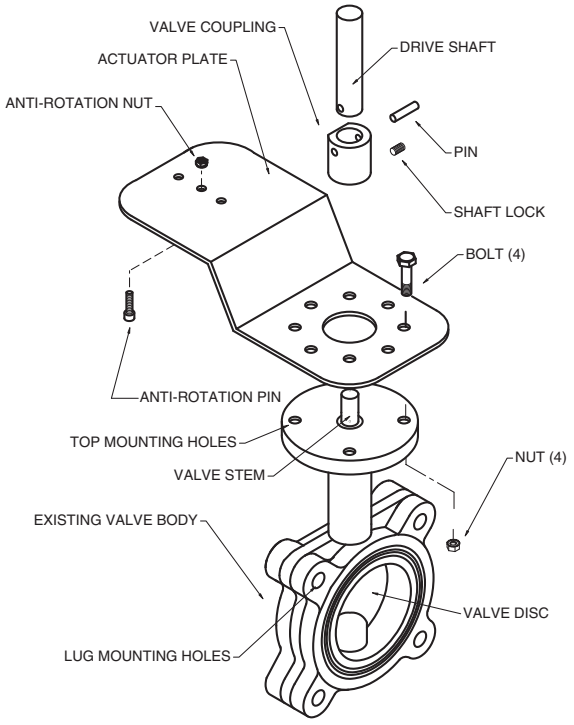
UFLK.../UFSP... Retrofit Linkage for Butterfly Valves

For 2-Way AF and GM Series Actuators

2 YEAR WARRANTY

Technical Data	UFLK... / UFSP
Materials:	
Plate	stainless steel
Coupling	stainless steel
Shafts	stainless steel
Mounting position	360° mountable
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +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 Master/Slave wiring for dual mounted actuators.

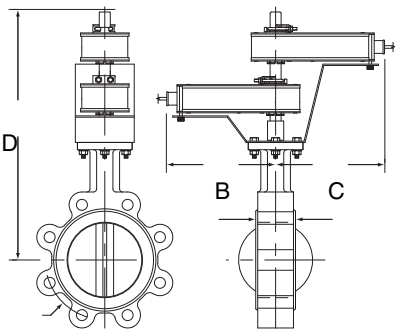
Suitable Actuators	Close-Off Ranges
AF Series	50-200 psi
GM Series	50-300 psi
GK Series	50-300 psi
2*AF Series	50-300 psi
2*GM Series	50-740 psi
2*GK Series	50-740 psi

Competitor Valves**

Bray	Victaulic	Nibco
PDC	Keystone	Flowseal
Centerline	JCI	Milwaukee

**Consult pages 158-178 of the Retrofit Technical Documentation and/or SelectPro for close-off pressures a 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)

2 YEAR WARRANTY

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 Master/Slave wiring for dual mounted actuators.

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°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Servicing	chilled or hot water
Weight	7 lbs [3.2 kg]

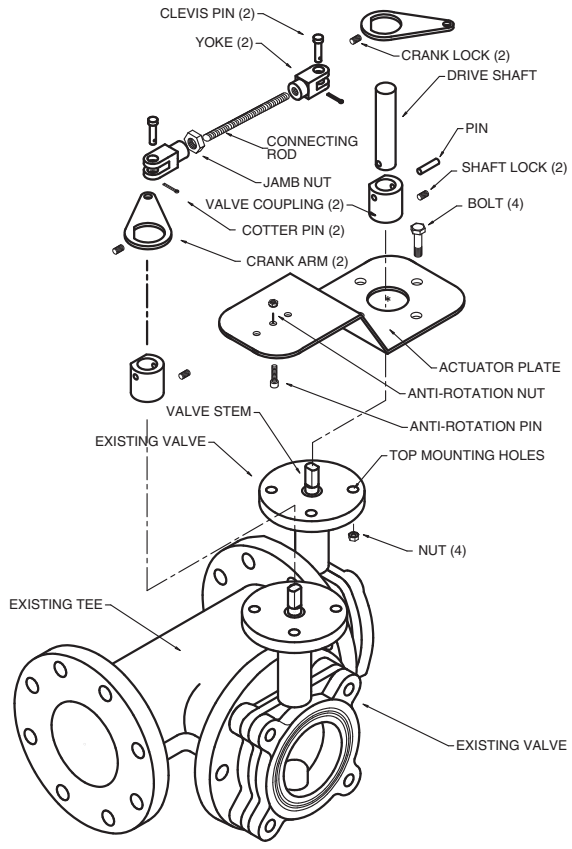
Suitable Actuators	Close-Off Ranges
AF Series	50-200 psi
GM Series	50-300 psi
GK Series	50-300 psi
2*AF Series	50-300 psi
2*GM Series	50-740 psi
2*GK Series	50-740 psi

Competitor Valves**

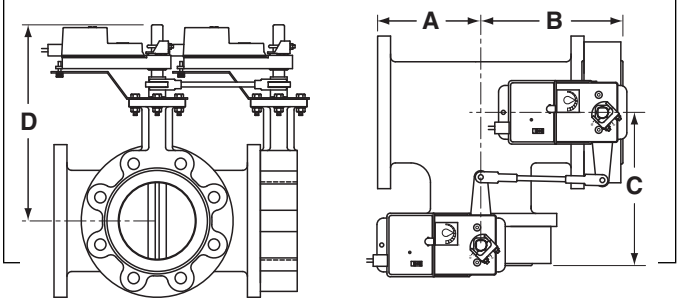
Bray	Victaulic	Nibco
PDC	Keystone	Flowseal
Centerline	JCI	Milwaukee

**Consult pages 158-178 of the Retrofit Technical Documentation and/or SelectPro for close-off pressures a cross reference of each valve.

UFLK / UFSP Parts Breakdown- Single Shown



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)

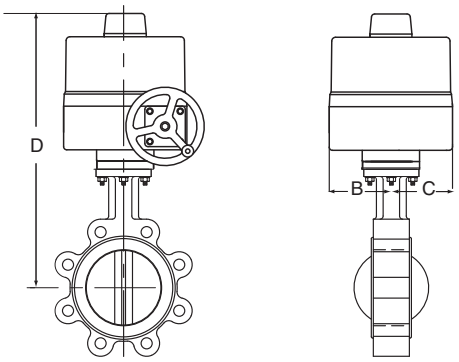
UFLK.../UFSP... Retrofit Linkage for Butterfly Valves

For 2-Way SY Industrial Series Actuators

2 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°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Servicing	chilled or hot water
Weight	7 lbs [3.2 kg]

UFLK / UFSP



Maximum Dimensions (Inches)

Size	B	C	D(Max)	Actuator
2"	6.15	6.15	15.5	SY1...
2"	6.15	6.15	20.25	SY2...
2½"	6.76	6.76	16	SY1...
2½"	6.76	6.76	20.75	SY2...
3"	7.28	7.28	21	SY2...
4"	8.55	8.55	21.75	SY2...
5"	9.64	9.64	22.25	SY2...
5"	9.64	9.64	22.25	SY3...
6"	10.19	10.19	22.75	SY2...
6"	10.19	10.19	22.75	SY3...
8"	11.37	11.37	24.25	SY3...
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...

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.

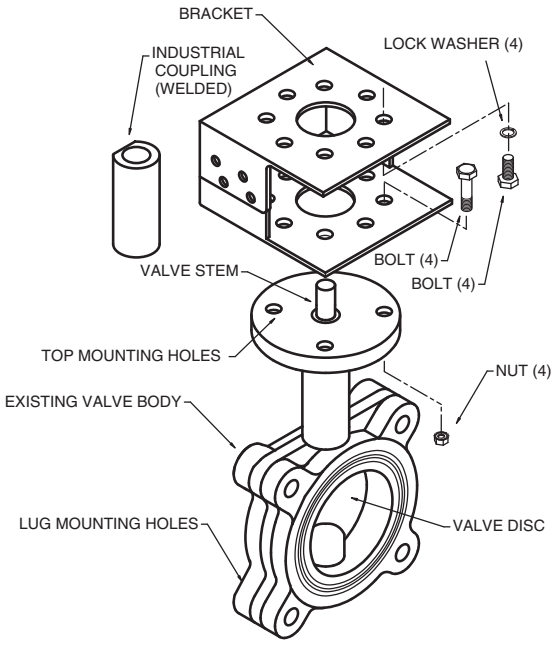
Suitable Actuators	Close-Off Ranges
SY1 Series	50-300 psi
SY2 Series	50-740 psi
SY3-SY4 Series	50-780 psi
SY5 Series	150-300 psi
SY6-SY12 Series	150-780 psi

Competitor Valves**

Bray	Victaulic	Nibco
PDC	Keystone	Flowseal
Centerline	JCI	Milwaukee

**Consult pages 158-178 of the Retrofit Technical Documentation and/or SelectPro for close-off pressures a cross reference of each valve.

UFLK / UFSP Parts Breakdown



2 YEAR WARRANTY

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.

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°F to +122°F [-30°C to +50°C]
Storage temperature	-40°F to +176°F [-40°C to +80°C]
Servicing	chilled or hot water
Weight	12.6 lbs [5.73 kg]

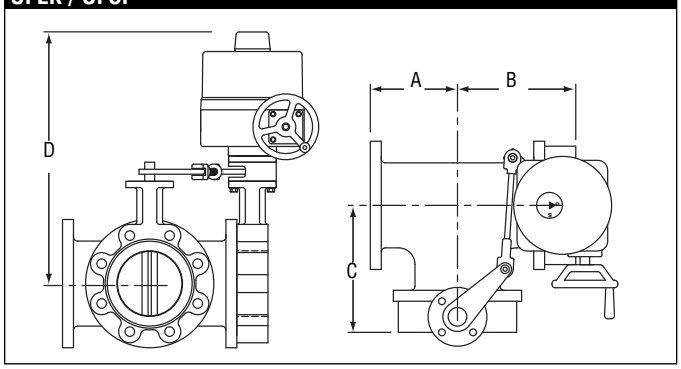
Suitable Actuators	Close-Off Ranges
SY1 Series	50-285 psi
SY2 Series	50-200 psi
SY3-SY4 Series	50-780 psi
SY5 Series	150-300 psi
SY6-SY12 Series	150-780 psi

Competitor Valves**

Bray	Victaulic	Nibco
PDC	Keystone	Flowseal
Centerline	JCI	Milwaukee

**Consult pages 158-178 of the Retrofit Technical Documentation and/or SelectPro for close-off pressures a cross reference of each valve.

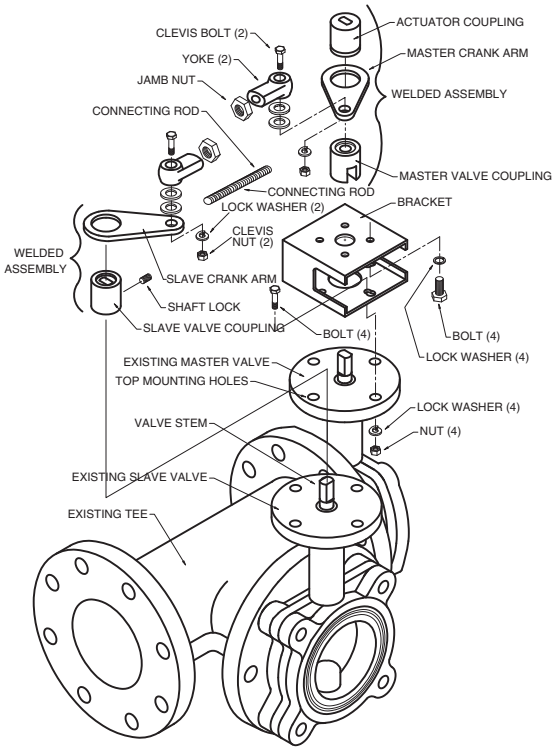
UFLK / UFSP



Maximum Dimensions (Inches)

Size	A	B	C	D(Max)	Actuator
2"	4.15	6.15	6.15	15.5	SY1...
2"	4.15	6.15	6.15	20.25	SY2...
2½"	4.76	6.76	6.76	16	SY1...
2½"	4.76	6.76	6.76	20.75	SY2...
3"	5.28	7.28	7.28	21	SY2...
4"	6.55	8.55	8.55	21.75	SY2...
5"	7.64	9.64	9.64	22.25	SY2...
5"	7.64	9.64	9.64	22.25	SY3...
6"	8.19	10.19	10.19	22.75	SY2...
6"	8.19	10.19	10.19	22.75	SY3...
8"	9.37	11.37	11.37	24.25	SY3...
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...

UFLK / UFSP Parts Breakdown



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-Spring Return** Belimo actuator.

1. Identify the **Valve Manufacturer, Valve Series** and **Valve Size.**

2. Determine the type of actuator you require: Belimo Spring Return, Non-Spring or SY Series Industrial. Belimo Spring and Non-Spring actuators are typically only available on smaller sizes.

   Look at the solution using the Non-Spring Return Belimo Actuator. Looking at the **UFLK3500,** the **GM** Series actuator will provide a **200 psi close-off** for the **2½" valve** with **Non-Spring Return** actuation**.**

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 UFLK3500**
   Item 2 1pc GMB24-MFT-X1

2 YEAR WARRANTY

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-spring return** Belimo actuation.

Choose correct linkage **UFLK3500**.

Centerline

C200 Round Top Series Butterfly Valves
Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Failsafe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
C200 Round Top Series Butterfly Valves	2-way	2"	No	200	AM	UFLK3500
					SY1	UFLK3538
					SY2	UFLK3540
			Yes	200	AF	UFLK3500
		2½"	No	200	GM	UFLK3500
					SY1	UFLK3538
					SY2	UFLK3540
			Yes	200	2*AF	UFLK3502
					GK	UFLK3500
		3"	No	200	GM	UFLK3500
					SY1	UFLK3538
					SY2	UFLK3540
			Yes	200	2*AF	UFLK3502
					GK	UFLK3500

2. Verify close-off is suitable for application. Looking at the **UFLK3500**, the **GM** Series actuator will provide **200 psi close-off** for the **2½" valve**.

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

♦ Variable with MFT
‡ Prices do not reflect additional programming code surcharge.
NOTE: 10' and 16' cables are available with a $28.00 and $48.00 adder except for the PC and MFT95 version, which are only available with a 3' cable.

3. Select actuator from the Product Guide and Price List based on needed control type. Decide between **GMB24-3-X1** and **GMB24-MFT-X1**.

4. Complete Ordering Example:
   Item 1: **UFLK3500**
   Item 2: **GMB24-MFT-X1**

SY Series Actuators

					CONTROL TYPE			
SERIES	MODEL	Run Time(s) 90°@60Hz	Power Supply	Duty Cycle	Proportional	3 Point	On/Off	Feedback
SY1	SY1-110	12 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY1-24	15 seconds	24 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY1-220	12 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY1-110P	12 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY1-24P	15 seconds	24 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY1-220P	12 seconds	230 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
SY2	SY2-110	15 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY2-24	15 seconds	24 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY2-220	15 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY2-120MFT	15 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY2-24MFT	15 seconds	24 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY2-230MFT	15 seconds	230 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
SY3	SY3-110	22 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY3-24	22 seconds	24 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY3-220	22 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY3-24MFT	22 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY3-120MFT	22 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY3-230MFT	22 seconds	230 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
SY4	SY4-110	16 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY4-24	16 seconds	24 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY4-220	16 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY4-24MFT	16 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY4-120MFT	16 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY4-230MFT	16 seconds	230 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
SY5	SY5-110	22 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY5-24	22 seconds	24 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY5-220	22 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY5-24MFT	22 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY5-120MFT	22 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY5-230MFT	22 seconds	230 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
SY6	SY6-110	28 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY6-220	28 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY6-120MFT	28 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY6-230MFT	28 seconds	230 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
SY7	SY7-110	46 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY7-220	46 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY7-120MFT	46 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY7-230MFT	46 seconds	230 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
SY8	SY8-110	46 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY8-220	46 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY8-120MFT	46 seconds	120 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
	SY8-230MFT	46 seconds	230 VAC ±10%, 50/60 Hz	75%	•			2-10 VDC/4-20 mA
SY9	SY9-110	58 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY9-220	58 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY9-120MFT	58 seconds	120 VAC ±10%, 50/60 Hz	50%	•			2-10 VDC/4-20 mA
	SY9-230MFT	58 seconds	230 VAC ±10%, 50/60 Hz	50%	•			2-10 VDC/4-20 mA
SY10	SY10-110	58 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY10-220	58 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY10-120MFT	58 seconds	120 VAC ±10%, 50/60 Hz	50%	•			2-10 VDC/4-20 mA
	SY10-230MFT	58 seconds	230 VAC ±10%, 50/60 Hz	50%	•			2-10 VDC/4-20 mA
SY11	SY11-110	58 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY11-220	58 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY11-120MFT	58 seconds	120 VAC ±10%, 50/60 Hz	50%	•			2-10 VDC/4-20 mA
	SY11-230MFT	58 seconds	230 VAC ±10%, 50/60 Hz	50%	•			2-10 VDC/4-20 mA
SY12	SY12-110	58 seconds	120 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY12-220	58 seconds	230 VAC ±10%, 50/60 Hz	30%		•	•	none, opt 1k
	SY12-120MFT	58 seconds	120 VAC ±10%, 50/60 Hz	50%	•			2-10 VDC/4-20 mA
	SY12-230MFT	58 seconds	230 VAC ±10%, 50/60 Hz	50%	•			2-10 VDC/4-20 mA

Proportional actuators will accept 0-10 VDC, 2-10 VDC (default), or 4-20 mA control signals as standard.
All SY actuators are non-spring return, but can be used with NSV-SY back up systems for fail-safe applications.
These products carry a two year warranty when sold as part of an assembly or with a UFLK retrofit kit.

ROTARY ACTUATORS

SERIES	MODEL	Spring Return	Electronic Fail-Safe	Tandem Mounting Available	Control Input	Feedback Position	Power Supply
AF Series*	AFBUP-X1	•		•	On/Off	-	24-240 VAC
	AFX24-MFT-X1	•		•	Variable with MFT	Variable VDC	24 VAC/DC
AM Series*	AMB24-3-X1				Floating Point, On/Off	-	24 VAC/DC
	AMX24-MFT-X1				Variable with MFT	Variable VDC	24 VAC/DC
GM Series*	GMB24-3-X1				Floating Point, On/Off	-	24 VAC/DC
	GMX24-MFT-X1			•	Variable with MFT	Variable VDC	24 VAC/DC
GK Series*	GKB24-3-X1		•		Floating Point, On/Off	-	24 VAC/DC
	GKX24-MFT-X1		•	•	Variable with MFT	Variable VDC	24 VAC/DC

***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

	P-CODE		Control Input	Running Time	Built-in Feedback
ROTARY ACTUATOR CODES	P-10001	A01	2-10 VDC	150 seconds	2-10 VDC
	P-10002	A02	0-10 VDC	150 seconds	0-10 VDC
	P-10028	A28	0-10 VDC	150 seconds	0-10 VDC
	P-10063	A63	0.5-4.5 VDC	150 seconds	0.5-4.5 VDC
	P-10064	A64	5.5-10 VDC	150 seconds	5.5-10 VDC
	P-20002	W02	0.02-5.00 seconds PWM	150 seconds	2-10 VDC
	P-20003	W03	0.10-25.5 seconds PWM	150 seconds	2-10 VDC
	P-30001	F01	Floating Point	150 seconds	2-10 VDC
	P-40002	J02	On/Off	150 seconds	2-10 VDC

SY MULTI-FUNCTION TECHNOLOGY

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

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

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
HS Series Butterfly Valves	2-way	2”	No	200	AM	UFLK3900
					SY2	UFLK3918
			Yes	200	AF	UFLK3930
		2½”	No	200	AM	UFLK3900
					SY2	UFLK3918
			Yes	200	2*AF	UFLK3936
		3”	No	200	GM	UFLK3900
					SY2	UFLK3918
			Yes	200	2*AF	UFLK3936
					GK	UFLK3900
		4”	No	200	2*GM	UFLK3908
					SY2	UFLK3920
			Yes	200	2*GK	UFLK3908
		5”	No	200	SY2	UFLK3922
		6”	No	200	SY3	UFLK3922
		8”	No	200	SY4	UFLK3970
		10”	No	200	SY4	UFLK3970
		12”	No	200	SY4	UFLK3928
		14”	No	150	SY5	UFLK3928
		16”	No	150	SY6	UFLK3976
		18”	No	150	SY8	UFLK3978
		20”	No	150	SY8	UFLK3978
						UFLK3980
		24”	No	150	SY11	UFLK3982
	3-way	2”	No	200	AM	UFLK6900
					SY2	UFLK6910
			Yes	200	AF	UFLK6950
		2½”	No	200	2*GM	UFLK6902
					SY2	UFLK6910
			Yes	200	2*AF	UFLK6952
		3”	No	200	2*GM	UFLK6902
					SY2	UFLK6910
			Yes	200	2*GK	UFLK6902
		4”	No	200	SY2	UFLK6912
		5”	No	200	SY3	UFLK6914
		6”	No	200	SY3	UFLK6914
		8”	No	200	SY4	UFLK6920
		10”	No	200	SY4	UFLK6920
		12”	No	200	SY5	UFLK6922
		14”	No	150	SY6	UFLK7018
		16”	No	150	SY7	UFLK7020
		18”	No	150	SY8	UFLK7022
		20”	No	150	SY9	UFLK7024
		24”	No	150	SY12	UFLK7026
HSU Series Butterfly Valves	2-way	2”	No	50	AM	UFLK3900
					SY1	UFLK3912
					SY2	UFLK3918
			Yes	50	AF	UFLK3930
		2½”	No	50	AM	UFLK3900
					SY1	UFLK3912
					SY2	UFLK3918
			Yes	50	AF	UFLK3930
		3”	No	50	AM	UFLK3900
					SY1	UFLK3912
					SY2	UFLK3918
			Yes	50	2*AF	UFLK3936
		4”	No	50	GM	UFLK3905
					SY2	UFLK3920
			Yes	50	2*AF	UFLK3938
					GK	UFLK3905
		5”	No	50	GM	UFLK3905
					SY2	UFLK3922
			Yes	50	GK	UFLK3905
		6”	No	50	2*GM	UFLK3910
					SY2	UFLK3922

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

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
HSU Series Butterfly Valves	2-way	6”	Yes	50	2*GK	UFLK3910
		8”	No	50	SY3	UFLK3924
		10”	No	50	SY3	UFLK3926
		12”	No	50	SY4	UFLK3928
	3-way	2”	No	50	GM	UFLK6900
					SY1	UFLK6908
					SY2	UFLK6910
			Yes	50	AF	UFLK6950
					GK	UFLK6900
		2½”	No	50	GM	UFLK6900
					SY1	UFLK6908
					SY2	UFLK6910
			Yes	50	2*AF	UFLK6952
					GK	UFLK6900
		3”	No	50	GM	UFLK6900
					SY2	UFLK6910
			Yes	50	2*AF	UFLK6952
					GK	UFLK6900
		4”	No	50	2*GM	UFLK6904
					SY2	UFLK6912
			Yes	50	2*GK	UFLK6904
		5”	No	50	2*GM	UFLK6906
					SY2	UFLK6914
			Yes	50	2*GK	UFLK6906
		6”	No	50	2*GM	UFLK6906
					SY2	UFLK6914
			Yes	50	2*GK	UFLK6906
		8”	No	50	SY3	UFLK6919
		10”	No	50	SY4	UFLK6920
		12”	No	50	SY4	UFLK6922
BRAY						
30/31 Series Butterfly Valves	2-way	2”	No	175	AM	UFLK1100
					SY1	UFLK1130
					SY2	UFLK1132
			Yes	175	2*AF	UFLK1102
		2½”	No	175	GM	UFLK1100
					SY1	UFLK1130
					SY2	UFLK1132
			Yes	175	2*AF	UFLK1102
					GK	UFLK1100
		3”	No	175	2*GM	UFLK1102
					SY2	UFLK1132
			Yes	175	2*GK	UFLK1102
		4”	No	175	2*GM	UFLK1108
					SY2	UFLK1134
			Yes	175	2*GK	UFLK1108
		5”	No	175	SY3	UFLK1136
		6”	No	175	SY3	UFLK1136
		8”	No	175	SY4	UFLK1138
		10”	No	175	SY4	UFLK1140
		12”	No	175	SY6	UFLK1142
		14”	No	175	SY7	UFLK1144
		16”	No	175	SY8	UFLK1144
		18”	No	175	SY9	UFLK1146
		20”	No	175	SY10	UFLK1146
	3-way	2”	No	200	SY1	UFLK4130
					SY2	UFLK4132
			Yes	200	2*AF	UFLK4102
		2½”	No	200	2*GM	UFLK4102
					SY2	UFLK4132
			Yes	200	2*GK	UFLK4102
		3”	No	200	2*GM	UFLK4102
					SY2	UFLK4132
			Yes	200	2*GK	UFLK4102
		4”	No	200	SY3	UFLK4134
		5”	No	200	SY4	UFLK4136

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

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
30/31 Series Butterfly Valves	3-way	6”	No	200	SY4	UFLK4136
		8”	No	200	SY5	UFLK4138
		10”	No	200	SY6	UFLK4140
		12”	No	200	SY7	UFLK4142
		14”	No	150	SY8	UFLK4144
		16”	No	150	SY9	UFLK4146
		18”	No	150	SY11	UFLK4148
		20”	No	150	SY12	UFLK4148
40/41 Series Butterfly Valves	2-way	2½”	No	285	2*GM	UFLK1200
					SY2	UFLK1224
			Yes	285	2*GK	UFLK1200
		3”	No	285	2*GM	UFLK1200
					SY2	UFLK1224
			Yes	285	2*GK	UFLK1200
		4”	No	285	2*GM	UFLK1200
					SY2	UFLK1224
			Yes	285	2*GK	UFLK1200
		5”	No	285	SY3	UFLK1226
		6”	No	285	SY4	UFLK1228
		8”	No	285	SY4	UFLK1230
		10”	No	285	SY6	UFLK1232
		12”	No	285	SY7	UFLK1234
		14”	No	285	SY8	UFLK1236
		16”	No	285	SY9	UFLK1238
		18”	No	285	SY11	UFLK1240
		20”	No	285	SY12	UFLK1242
	3-way	2½”	No	285	2*GM	UFLK4200
					SY2	UFLK4222
			Yes	285	2*GK	UFLK4200
		3”	No	285	2*GM	UFLK4200
					SY2	UFLK4222
			Yes	285	2*GK	UFLK4200
		4”	No	285	SY3	UFLK4222
		5”	No	285	SY4	UFLK4224
		6”	No	285	SY4	UFLK4224
		8”	No	285	SY5	UFLK4226
		10”	No	285	SY7	UFLK4228
		12”	No	285	SY8	UFLK4230
		14”	No	285	SY10	UFLK4232
		16”	No	285	SY12	UFLK4234
CENTERLINE						
C200 Round Top Series Butterfly Valves	2-way	2”	No	200	AM	UFLK3500
					SY1	UFLK3538
					SY2	UFLK3540
			Yes	200	AF	UFLK3500
		2½”	No	200	GM	UFLK3500
					SY1	UFLK3538
					SY2	UFLK3540
			Yes	200	2*AF	UFLK3502
					GK	UFLK3500
		3”	No	200	GM	UFLK3500
					SY1	UFLK3538
					SY2	UFLK3540
			Yes	200	2*AF	UFLK3502
					GK	UFLK3500
		4”	No	200	2*GM	UFLK3508
					SY2	UFLK3542
			Yes	200	2*GK	UFLK3508
		5”	No	200	SY2	UFLK3544
		6”	No	200	SY3	UFLK3544
		8”	No	200	SY4	UFLK3546
		10”	No	200	SY4	UFLK3548
		12”	No	200	SY5	UFLK3550
		14”	No	150	SY5	UFLK3550
		16”	No	150	SY7	UFLK3552
		18”	No	150	SY8	UFLK3554

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

Centerline

C200 Round Top, C200 Square Top Series Butterfly Valves

Linkage/Actuator Selection Guide

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
C200 Round Top Series Butterfly Valves	2-way	20”	No	150	SY8	UFLK3556
		24”	No	150	SY10	UFLK3558
	3-way	2”	No	200	AM	UFLK6500
					SY1	UFLK6536
					SY2	UFLK6538
			Yes	200	2*AF	UFLK6502
		2½”	No	200	GM	UFLK6500
					SY1	UFLK6536
					SY2	UFLK6538
			Yes	200	2*AF	UFLK6502
					GK	UFLK6500
		3”	No	200	2*GM	UFLK6502
					SY1	UFLK6536
					SY2	UFLK6538
			Yes	200	2*GK	UFLK6502
		4”	No	200	2*GM	UFLK6508
					SY2	UFLK6540
			Yes	200	2*GK	UFLK6508
		5”	No	200	SY3	UFLK6542
		6”	No	200	SY4	UFLK6544
		8”	No	200	SY4	UFLK6546
		10”	No	200	SY5	UFLK6548
		12”	No	200	SY7	UFLK6550
		14”	No	150	SY7	UFLK6550
		16”	No	150	SY8	UFLK6552
		18”	No	150	SY9	UFLK6554
		20”	No	150	SY10	UFLK6556
C200 Square Top Series Butterfly Valves	2-way	2”	No	200	AM	UFLK1300
					SY1	UFLK1338
					SY2	UFLK1340
			Yes	200	AF	UFLK1300
		2½”	No	200	GM	UFLK1300
					SY1	UFLK1338
					SY2	UFLK1340
			Yes	200	2*AF	UFLK1302
					GK	UFLK1300
		3”	No	200	GM	UFLK1300
					SY1	UFLK1338
					SY2	UFLK1340
			Yes	200	2*AF	UFLK1302
					GK	UFLK1300
		4”	No	200	2*GM	UFLK1308
					SY2	UFLK1342
			Yes	200	2*GK	UFLK1308
		5”	No	200	SY2	UFLK1344
		6”	No	200	SY3	UFLK1344
		8”	No	200	SY4	UFLK1346
		10”	No	200	SY4	UFLK1348
		12”	No	200	SY5	UFLK1350
		14”	No	150	SY5	UFLK1350
		16”	No	150	SY7	UFLK1352
		18”	No	150	SY8	UFLK1354
		20”	No	150	SY8	UFLK1356
		24”	No	150	SY10	UFLK1358
	3-way	2”	No	200	AM	UFLK4300
					SY1	UFLK4338
					SY2	UFLK4340
			Yes	200	2*AF	UFLK4302
		2½”	No	200	GM	UFLK4300
					SY2	UFLK4340
			Yes	200	2*AF	UFLK4302
					GK	UFLK4300
		3”	No	200	2*GM	UFLK4302
					SY2	UFLK4340
			Yes	200	2*GK	UFLK4302

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

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
C200 Square Top Series Butterfly Valves	3-way	4”	No	200	2*GM	UFLK4308
					SY2	UFLK4342
			Yes	200	2*GK	UFLK4308
		5”	No	200	SY3	UFLK4344
		6”	No	200	SY4	UFLK4346
		8”	No	200	SY4	UFLK4348
		10”	No	200	SY5	UFLK4350
		12”	No	200	SY7	UFLK4352
		14”	No	150	SY7	UFLK4352
		16”	No	150	SY8	UFLK4354
		18”	No	150	SY9	UFLK4356
		20”	No	150	SY10	UFLK4358
C225 Square Top Series Butterfly Valves	2-way	2”	No	285	GM	UFLK1400
					SY1	UFLK1436
					SY2	UFLK1438
			Yes	285	2*AF	UFLK1402
					GK	UFLK1400
		2½”	No	285	GM	UFLK1400
					SY1	UFLK1436
					SY2	UFLK1438
			Yes	285	2*AF	UFLK1402
					GK	UFLK1400
		3”	No	285	GM	UFLK1400
					SY1	UFLK1436
					SY2	UFLK1438
			Yes	285	2*AF	UFLK1402
					GK	UFLK1400
		4”	No	285	2*GM	UFLK1408
					SY2	UFLK1440
			Yes	285	2*GK	UFLK1408
		5”	No	285	SY2	UFLK1442
		6”	No	285	SY4	UFLK1444
		8”	No	285	SY4	UFLK1446
		10”	No	285	SY5	UFLK1448
		12”	No	285	SY6	UFLK1450
		14”	No	285	SY7	UFLK1452
		16”	No	285	SY9	UFLK1454
		18”	No	285	SY10	UFLK1456
		20”	No	285	SY10	UFLK1458
	3-way	2”	No	285	GM	UFLK4400
					SY1	UFLK4436
					SY2	UFLK4438
			Yes	285	GK	UFLK4400
		2½”	No	285	GM	UFLK4400
					SY2	UFLK4438
			Yes	285	GK	UFLK4400
		3”	No	285	2*GM	UFLK4402
					SY2	UFLK4438
			Yes	285	2*GK	UFLK4402
		4”	No	285	SY3	UFLK4440
		5”	No	285	SY3	UFLK4442
		6”	No	285	SY4	UFLK4444
		8”	No	285	SY5	UFLK4446
		10”	No	285	SY7	UFLK4448
		12”	No	285	SY8	UFLK4450
		14”	No	285	SY8	UFLK4452
		16”	No	285	SY12	UFLK4454
FLOWSEAL						
1L/W Series Butterfly Valves	2-way	2”	No	285	GM	UFLK1700
					SY1	UFLK1734
					SY2	UFLK1736
			Yes	285	2*AF	UFLK1702
					GK	UFLK1700
		2½”	No	285	2*GM	UFLK1702
					SY2	UFLK1736
			Yes	285	2*GK	UFLK1702

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

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
1L/W Series Butterfly Valves	2-way	3”	No	285	2*GM	UFLK1708
					GM	UFLK1709
					SY2	UFLK1738
			Yes	285	2*GK	UFLK1708
					GK	UFLK1709
		4”	No	285	2*GM	UFLK1708
					GM	UFLK1709
					SY2	UFLK1738
			Yes	285	2*GK	UFLK1708
					GK	UFLK1709
		5”	No	285	SY3	UFLK1740
		6”	No	285	SY3	UFLK1740
		8”	No	285	SY4	UFLK1742
		10”	No	285	SY4	UFLK1744
		12”	No	285	SY6	UFLK1746
		14”	No	285	SY6	UFLK1746
		16”	No	285	SY7	UFLK1748
		18”	No	285	SY9	UFLK1750
		20”	No	285	SY9	UFLK1752
	3-way	2”	No	285	GM	UFLK4700
					SY2	UFLK4734
			Yes	285	2*AF	UFLK4702
					GK	UFLK4700
		2½”	No	285	2*GM	UFLK4702
					SY2	UFLK4734
			Yes	285	2*GK	UFLK4702
		3”	No	285	2*GM	UFLK4708
					SY2	UFLK4736
			Yes	285	2*GK	UFLK4708
		4”	No	285	SY3	UFLK4736
		5”	No	285	SY4	UFLK4738
		6”	No	285	SY4	UFLK4738
		8”	No	285	SY4	UFLK4740
		10”	No	285	SY6	UFLK4742
		12”	No	285	SY7	UFLK4744
		14”	No	285	SY8	UFLK4744
		16”	No	285	SY9	UFLK4746
		18”	No	285	SY11	UFLK4748
		20”	No	285	SY12	UFLK4750
3L/W Series Butterfly Valves	2-way	2”	No	780	SY3	UFLK1828
		2½”	No	780	SY3	UFLK1828
		3”	No	780	SY3	UFLK1830
		4”	No	780	SY4	UFLK1832
		5”	No	780	SY4	UFLK1834
		6”	No	780	SY4	UFLK1836
		8”	No	780	SY7	UFLK1838
		10”	No	780	SY7	UFLK1840
		12”	No	780	SY9	UFLK1842
		14”	No	780	SY9	UFLK1844
	3-way	2”	No	780	SY3	UFLK4828
		2½”	No	780	SY3	UFLK4828
		3”	No	780	SY3	UFLK4844
		4”	No	780	SY4	UFLK4830
		5”	No	780	SY4	UFLK4832
		6”	No	780	SY4	UFLK4834
		8”	No	780	SY8	UFLK4836
		10”	No	780	SY8	UFLK4838
		12”	No	780	SY12	UFLK4840
		14”	No	780	SY12	UFLK4842
JOHNSON CONTROLS						
VF.. (H) Series Butterfly Valves	2-way	2”	No	175	GM	UFLK2100
					SY1	UFLK2136
					SY2	UFLK2138
			Yes	175	2*AF	UFLK2102
					GK	UFLK2100

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

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
VF.. (H) Series Butterfly Valves	2-way	2½"	No	175	GM	UFLK2100
					SY1	UFLK2136
					SY2	UFLK2138
			Yes	175	2*AF	UFLK2102
					GK	UFLK2100
		3"	No	175	GM	UFLK2100
					SY1	UFLK2136
					SY2	UFLK2138
			Yes	175	2*AF	UFLK2102
					GK	UFLK2100
		4"	No	175	2*GM	UFLK2108
					SY2	UFLK2140
			Yes	175	2*GK	UFLK2108
		5"	No	175	SY3	UFLK2142
		6"	No	175	SY4	UFLK2144
		8"	No	175	SY4	UFLK2158
		10"	No	175	SY5	UFLK2146
		12"	No	175	SY7	UFLK2148
		14"	No	150	SY7	UFLK2156
		16"	No	150	SY9	UFLK2150
		18"	No	150	SY10	UFLK2152
		20"	No	150	SY10	UFLK2154
	3-way	2"	No	175	GM	UFLK5100
					SY1	UFLK5130
					SY2	UFLK5132
			Yes	175	2*AF	UFLK5102
					GK	UFLK5100
		2½"	No	175	2*GM	UFLK5102
					SY2	UFLK5132
			Yes	175	2*GK	UFLK5102
		3"	No	175	2*GM	UFLK5102
					SY2	UFLK5132
			Yes	175	2*GK	UFLK5102
		4"	No	175	SY3	UFLK5134
		5"	No	175	SY4	UFLK5136
		6"	No	175	SY4	UFLK5136
		8"	No	175	SY5	UFLK5138
		10"	No	175	SY6	UFLK5140
		12"	No	175	SY7	UFLK5142
		14"	No	150	SY8	UFLK5144
		16"	No	150	SY9	UFLK5146
		18"	No	150	SY11	UFLK5148
		20"	No	150	SY12	UFLK5150
KEYSTONE						
360/362 Series Butterfly Valves, K-LOK	2-way	2½"	No	285	GM	UFLK2400
					SY1	UFLK2440
					SY2	UFLK2442
			Yes	285	2*AF	UFLK2402
					GK	UFLK2400
		3"	No	285	2*GM	UFLK2408
					SY2	UFLK2444
			Yes	285	2*GK	UFLK2408
		4"	No	285	2*GM	UFLK2414
					SY2	UFLK2446
			Yes	285	2*GK	UFLK2414
		5"	No	285	SY2	UFLK2446
		6"	No	285	SY3	UFLK2448
		8"	No	285	SY3	UFLK2450
		10"	No	285	SY4	UFLK2452
		12"	No	285	SY4	UFLK2454
		14"	No	285	SY6	UFLK2456
		16"	No	285	SY6	UFLK2458
		18"	No	285	SY7	UFLK2460
		20"	No	285	SY9	UFLK2462
		24"	No	285	SY9	UFLK2464

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

Keystone

360/362, 370/372, AR1/AR2 Series Butterfly Valves

Linkage/Actuator Selection Guide

2 YEAR WARRANTY

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
360/362 Series Butterfly Valves, K-LOK	3-way	2½"	No	285	GM	UFLK5400
					SY2	UFLK5440
			Yes	285	2*AF	UFLK5402
					GK	UFLK5400
		3"	No	285	2*GM	UFLK5408
					SY2	UFLK5442
			Yes	285	2*GK	UFLK5408
		4"	No	285	2*GM	UFLK5414
					SY2	UFLK5444
			Yes	285	2*GK	UFLK5414
		5"	No	285	SY3	UFLK5444
		6"	No	285	SY4	UFLK5446
		8"	No	285	SY4	UFLK5448
		10"	No	285	SY4	UFLK5450
		12"	No	285	SY6	UFLK5452
		14"	No	285	SY7	UFLK5454
		16"	No	285	SY8	UFLK5456
		18"	No	285	SY9	UFLK5458
		20"	No	285	SY11	UFLK5460
		24"	No	285	SY12	UFLK5462
370/372 Series Butterfly Valves, K-LOK	2-way	2½"	No	600	SY3	UFLK2526
		3"	No	600	SY3	UFLK2528
		4"	No	600	SY4	UFLK2530
		5"	No	600	SY4	UFLK2530
		6"	No	600	SY4	UFLK2532
		8"	No	600	SY7	UFLK2534
		10"	No	600	SY7	UFLK2536
		12"	No	600	SY9	UFLK2538
		14"	No	600	SY9	UFLK2540
	3-way	2½"	No	600	SY4	UFLK5526
		3"	No	600	SY4	UFLK5528
		4"	No	600	SY4	UFLK5530
		5"	No	600	SY4	UFLK5530
		6"	No	600	SY4	UFLK5532
		8"	No	600	SY8	UFLK5534
		10"	No	600	SY8	UFLK5536
		12"	No	600	SY12	UFLK5538
		14"	No	600	SY12	UFLK5540
AR1/AR2 Series Butterfly Valves	2-way	2"	No	175	GM	UFLK2300
					SY1	UFLK2334
					SY2	UFLK2336
			Yes	175	2*AF	UFLK2302
					GK	UFLK2300
		2½"	No	175	GM	UFLK2300
					SY1	UFLK2334
					SY2	UFLK2336
			Yes	175	2*AF	UFLK2302
					GK	UFLK2300
		3"	No	175	GM	UFLK2300
					SY1	UFLK2334
					SY2	UFLK2336
			Yes	175	2*AF	UFLK2302
					GK	UFLK2300
		4"	No	175	2*GM	UFLK2308
					SY2	UFLK2338
			Yes	175	2*GK	UFLK2308
		5"	No	175	SY3	UFLK2340
		6"	No	175	SY4	UFLK2356
		8"	No	175	SY4	UFLK2342
		10"	No	175	SY5	UFLK2344
		12"	No	175	SY7	UFLK2346
		14"	No	150	SY7	UFLK2348
		16"	No	150	SY9	UFLK2350
		18"	No	150	SY10	UFLK2352
		20"	No	150	SY11	UFLK2352
		24"	No	150	SY12	UFLK2354

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

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
AR1/AR2 Series Butterfly Valves	3-way	2”	No	175	GM	UFLK5300
					SY1	UFLK5332
					SY2	UFLK5334
			Yes	175	2*AF	UFLK5302
					GK	UFLK5300
		2½”	No	175	GM	UFLK5300
					SY2	UFLK5334
			Yes	175	2*AF	UFLK5302
					GK	UFLK5300
		3”	No	175	2*GM	UFLK5302
					SY2	UFLK5334
			Yes	175	2*GK	UFLK5302
		4”	No	175	SY3	UFLK5336
		5”	No	175	SY4	UFLK5338
		6”	No	175	SY4	UFLK5338
		8”	No	175	SY5	UFLK5340
		10”	No	175	SY7	UFLK5342
		12”	No	175	SY8	UFLK5344
		14”	No	150	SY9	UFLK5346
		16”	No	150	SY10	UFLK5348
		18”	No	150	SY12	UFLK5350
Figure 222 Series Butterfly Valves	2-way	2”	No	200	GM	UFLK2200
					SY1	UFLK2224
					SY2	UFLK2226
			Yes	200	2*AF	UFLK2202
					GK	UFLK2200
		2½”	No	200	GM	UFLK2200
					SY1	UFLK2224
					SY2	UFLK2226
			Yes	200	2*AF	UFLK2202
					GK	UFLK2200
		3”	No	200	GM	UFLK2200
					SY1	UFLK2224
					SY2	UFLK2226
			Yes	200	2*AF	UFLK2202
					GK	UFLK2200
		4”	No	200	2*GM	UFLK2208
					SY2	UFLK2228
			Yes	200	2*GK	UFLK2208
		5”	No	200	SY3	UFLK2230
		6”	No	200	SY4	UFLK2232
		8”	No	200	SY4	UFLK2234
		10”	No	200	SY5	UFLK2236
		12”	No	200	SY7	UFLK2238
	3-way	2”	No	200	GM	UFLK5200
					SY2	UFLK5224
			Yes	200	2*AF	UFLK5202
					GK	UFLK5200
		2½”	No	200	GM	UFLK5200
					SY2	UFLK5224
			Yes	200	2*AF	UFLK5202
					GK	UFLK5200
		3”	No	200	2*GM	UFLK5202
					SY2	UFLK5224
			Yes	200	2*GK	UFLK5202
		4”	No	200	SY3	UFLK5226
		5”	No	200	SY4	UFLK5228
		6”	No	200	SY4	UFLK5228
		8”	No	200	SY5	UFLK5230
		10”	No	200	SY7	UFLK5232
		12”	No	200	SY8	UFLK5234
MILWAUKEE						
CL Series Butterfly Valves	2-way	2”	No	150	AM	UFLK2600
					SY1	UFLK2624
					SY2	UFLK2628
			Yes	150	AF	UFLK2600

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

Milwaukee

CL, ML Series Butterfly Valves

Linkage/Actuator Selection Guide

2 YEAR WARRANTY

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
CL Series Butterfly Valves	2-way	2½”	No	150	AM	UFLK2600
					SY1	UFLK2624
					SY2	UFLK2628
			Yes	150	AF	UFLK2600
		3”	No	150	GM	UFLK2600
					SY1	UFLK2624
					SY2	UFLK2628
			Yes	150	2*AF	UFLK2602
					GK	UFLK2600
		4”	No	150	2*GM	UFLK2608
					SY2	UFLK2630
			Yes	150	2*GK	UFLK2608
		5”	No	150	2*GM	UFLK2608
					SY2	UFLK2630
			Yes	150	2*GK	UFLK2608
		6”	No	150	SY3	UFLK2632
		8”	No	150	SY4	UFLK2634
		10”	No	150	SY4	UFLK2636
		12”	No	150	SY5	UFLK2636
	3-way	2”	No	150	AM	UFLK5600
					SY1	UFLK5622
					SY2	UFLK5624
			Yes	150	2*AF	UFLK5602
		2½”	No	150	GM	UFLK5600
					SY1	UFLK5622
					SY2	UFLK5624
			Yes	150	2*AF	UFLK5602
					GK	UFLK5600
		3”	No	150	GM	UFLK5600
					SY2	UFLK5624
			Yes	150	2*AF	UFLK5602
					GK	UFLK5600
		4”	No	150	2*GM	UFLK5608
					SY2	UFLK5626
			Yes	150	2*GK	UFLK5608
		5”	No	150	SY3	UFLK5626
		6”	No	150	SY4	UFLK5628
		8”	No	150	SY4	UFLK5630
		10”	No	150	SY6	UFLK5632
		12”	No	150	SY7	UFLK5634
ML Series Butterfly Valves	2-way	2”	No	150	AM	UFLK2700
					SY1	UFLK2732
					SY2	UFLK2734
			Yes	150	AF	UFLK2700
		2½”	No	150	AM	UFLK2700
					SY1	UFLK2732
					SY2	UFLK2734
			Yes	150	AF	UFLK2700
		3”	No	150	GM	UFLK2700
					SY1	UFLK2732
					SY2	UFLK2734
			Yes	150	2*AF	UFLK2702
					GK	UFLK2700
		4”	No	150	2*GM	UFLK2708
					SY2	UFLK2736
			Yes	150	2*GK	UFLK2708
		5”	No	150	2*GM	UFLK2708
					SY2	UFLK2736
			Yes	150	2*GK	UFLK2708
		6”	No	150	SY3	UFLK2738
		8”	No	150	SY4	UFLK2740
		10”	No	150	SY4	UFLK2742
		12”	No	150	SY5	UFLK2742
		14”	No	150	SY7	UFLK2744
		16”	No	150	SY7	UFLK2744
		18”	No	150	SY8	UFLK2746

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

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
ML Series Butterfly Valves	2-way	20”	No	150	SY9	UFLK2748
		24”	No	150	SY10	UFLK2750
	3-way	2”	No	150	AM	UFLK5700
					SY1	UFLK5732
					SY2	UFLK5734
			Yes	150	2*AF	UFLK5702
		2½”	No	150	AM	UFLK5700
					SY1	UFLK5732
					SY2	UFLK5734
			Yes	150	2*AF	UFLK5702
		3”	No	150	GM	UFLK5700
					SY2	UFLK5734
			Yes	150	2*AF	UFLK5702
					GK	UFLK5700
		4”	No	150	2*GM	UFLK5708
					SY2	UFLK5736
			Yes	150	2*GK	UFLK5708
		5”	No	150	SY3	UFLK5736
		6”	No	150	SY4	UFLK5738
		8”	No	150	SY4	UFLK5740
		10”	No	150	SY6	UFLK5742
		12”	No	150	SY7	UFLK5744
		14”	No	150	SY8	UFLK5746
		16”	No	150	SY9	UFLK5748
		18”	No	150	SY10	UFLK5750
		20”	No	150	SY11	UFLK5750
NIBCO						
LD1/WD1 Series Butterfly Valves	2-way	14”	No	150	SY7	UFLK2960
		16”	No	150	SY8	UFLK2968
		18”	No	150	SY8	UFLK2962
		20”	No	150	SY9	UFLK2964
		24”	No	150	SY11	UFLK2966
	3-way	14”	No	150	SY8	UFLK5956
		16”	No	150	SY9	UFLK5958
		18”	No	150	SY10	UFLK5960
		20”	No	150	SY12	UFLK5962
LD2/WD2, LD3 Series Butterfly Valves	2-way	2”	No	150	GM	UFLK2900
					SY1	UFLK2942
					SY2	UFLK2946
			Yes	150	2*AF	UFLK2902
					GK	UFLK2900
		2½”	No	150	GM	UFLK2908
					SY1	UFLK2944
					SY2	UFLK2948
			Yes	150	2*AF	UFLK2910
					GK	UFLK2908
		3”	No	150	2*GM	UFLK2910
					SY2	UFLK2948
			Yes	150	2*GK	UFLK2910
		4”	No	150	2*GM	UFLK2916
					SY2	UFLK2950
			Yes	150	2*GK	UFLK2916
		5”	No	150	SY3	UFLK2952
		6”	No	150	SY3	UFLK2952
		8”	No	150	SY4	UFLK2954
		10”	No	150	SY4	UFLK2956
		12”	No	150	SY6	UFLK2958
	3-way	2”	No	150	GM	UFLK5900
					SY2	UFLK5942
			Yes	150	2*AF	UFLK5902
					GK	UFLK5900
		2½”	No	150	2*GM	UFLK5910
					SY2	UFLK5944
			Yes	150	2*GK	UFLK5910

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

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
LD2/WD2, LD3 Series Butterfly Valves	3-way	3”	No	150	2*GM	UFLK5910
					SY2	UFLK5944
			Yes	150	2*GK	UFLK5910
		4”	No	150	SY3	UFLK5946
		5”	No	150	SY4	UFLK5948
		6”	No	150	SY4	UFLK5948
		8”	No	150	SY6	UFLK5950
		10”	No	150	SY6	UFLK5952
		12”	No	150	SY8	UFLK5954
PDC						
27 Series Butterfly Valves (Double D Shaft Type)	2-way	2”	No	150	GM	UFLK3100
					SY1	UFLK3122
					SY2	UFLK3124
			Yes	150	2*AF	UFLK3102
					GK	UFLK3100
		2½”	No	150	2*GM	UFLK3102
					SY2	UFLK3124
			Yes	150	2*GK	UFLK3102
		3”	No	150	2*GM	UFLK3102
					SY2	UFLK3124
			Yes	150	2*GK	UFLK3102
		4”	No	150	2*GM	UFLK3108
					SY2	UFLK3126
			Yes	150	2*GK	UFLK3108
		5”	No	150	SY3	UFLK3128
		6”	No	150	SY3	UFLK3130
		8”	No	150	SY4	UFLK3132
		10”	No	150	SY4	UFLK3132
		12”	No	150	SY6	UFLK3132
	3-way	2”	No	150	GM	UFLK6100
					SY2	UFLK6122
			Yes	150	2*AF	UFLK6102
					GK	UFLK6100
		2½”	No	150	2*GM	UFLK6102
					SY2	UFLK6122
			Yes	150	2*GK	UFLK6102
		3”	No	150	2*GM	UFLK6102
					SY2	UFLK6122
			Yes	150	2*GK	UFLK6102
		4”	No	150	SY3	UFLK6124
		5”	No	150	SY4	UFLK6126
		6”	No	150	SY4	UFLK6128
		8”	No	150	SY4	UFLK6130
		10”	No	150	SY6	UFLK6132
		12”	No	150	SY7	UFLK6134
VICTAULIC						
Masterseal (New Style) Series Butterfly Valves	2-way	2”	No	200	AM	UFLK8172
					SY1	UFLK8178
					SY2	UFLK8180
			Yes	200	2*AF	UFLK8174
		2½”	No	200	GM	UFLK8172
					SY1	UFLK8178
					SY2	UFLK8180
			Yes	200	2*AF	UFLK8174
					GK	UFLK8172
		3”	No	200	GM	UFLK8172
					SY2	UFLK8180
			Yes	200	GK	UFLK8172
		4”	No	200	2*GM	UFLK8176
					SY2	UFLK8182
			Yes	200	2*GK	UFLK8176
		5”	No	200	SY3	UFLK8184
		6”	No	200	SY3	UFLK8184
		8”	No	200	SY4	UFLK8188
		10”	No	200	SY5	UFLK8190
		12”	No	200	SY6	UFLK8190

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

Valve Body Model	Valve Configuration	Size	Fail-Safe	Close-Off psi	Belimo Actuator Series	Belimo Linkage
Masterseal (New Style) Series Butterfly Valves	3-way	2”	No	200	GM	UFLK7400
					SY1	UFLK7404
					SY2	UFLK7406
			Yes	200	2*AF	UFLK7402
					GK	UFLK7400
		2½”	No	200	2*GM	UFLK7402
					SY2	UFLK7406
			Yes	200	2*GK	UFLK7402
		3”	No	200	SY2	UFLK7406
		4”	No	200	SY2	UFLK7408
		5”	No	200	SY3	UFLK7410
		8”	No	200	SY4	UFLK7414
		12”	No	200	SY7	UFLK7418
Vic300 (Old Style) Series Butterfly Valves	2-way	2”	No	300	AM	UFLK3300
					SY1	UFLK3338
					SY2	UFLK3342
			Yes	300	AF	UFLK3300
		2½”	No	300	AM	UFLK3308
					SY1	UFLK3340
					SY2	UFLK3344
			Yes	300	AF	UFLK3308
		3”	No	300	GM	UFLK3308
					SY1	UFLK3340
					SY2	UFLK3344
			Yes	300	2*AF	UFLK3310
					GK	UFLK3308
		4”	No	300	2*GM	UFLK3316
					SY2	UFLK3346
			Yes	300	2*GK	UFLK3316
		5”	No	300	SY2	UFLK3348
		6”	No	300	SY3	UFLK3350
		8”	No	300	SY4	UFLK3352
		10”	No	300	SY4	UFLK3354
		12”	No	300	SY4	UFLK3356
	3-way	2”	No	300	GM	UFLK6300
					SY1	UFLK6336
					SY2	UFLK6340
			Yes	300	AF	UFLK6300
					GK	UFLK6300
		2½”	No	300	GM	UFLK6308
					SY1	UFLK6338
					SY2	UFLK6342
			Yes	300	2*AF	UFLK6310
					GK	UFLK6308
		3”	No	300	SY2	UFLK6342
		4”	No	300	SY3	UFLK6344
		5”	No	300	SY3	UFLK6346
		6”	No	300	SY4	UFLK6348
		8”	No	300	SY4	UFLK6350
		10”	No	300	SY5	UFLK6352
		12”	No	300	SY6	UFLK6354

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

Specialty 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	Valve Series	Valve Configuration
Apollo®	141/143 Series Butterfly Valves	2-way
		3-way
Challenger®	CH100 Series Butterfly Valves	2-way
		3-way
Chemtrol®	PVC Model C Series Butterfly Valves	2-way
		3-way
Dezurik®	BRS Series Butterfly Valves	2-way
		3-way
FNW®	Figure 1000/2000 Series Butterfly Valves	2-way
		3-way
Gruvlok®	Figure 7700 (Double D Shaft 2003 and Newer) Series Butterfly Valves	2-way
		3-way
	Figure 7700 (Sheared Pin Shaft Pre 2003) Series Butterfly Valves	2-way
		3-way
Hammond®	61/62 Series Butterfly Valves	2-way
		3-way
Jamesbury®	815 L/W Series Butterfly Valves	2-way
		3-way
	830 L/W Series Butterfly Valves	2-way
		3-way
Jenkins®	22XXEXJ Series Butterfly Valves	2-way
		3-way
Metraflex®	200 WOG Series Butterfly Valves	2-way
		3-way
Mueller®	65/66 Series Butterfly Valves	2-way
		3-way
Quartermaster®	42/44 Series Butterfly Valves	2-way
		3-way
Watts®	DBF Series Butterfly Valves (Pre 2009)	2-way
		3-way

Considerations:

- The kits above do not require a completed retrofit form. Only the make and model of the competitor valve is needed.
- Each linkage order is custom made and will take additional time to ship than a stock kit.
- Prices may vary with complexity of kit and material availability.
- Every retrofit solution is available in 2-way and 3-way configurations for both SY and damper style actuators.

Instructions for Completing this Form

Please keep in mind that all dimensions should be taken with ALL original actuation and hardware components removed from the valve body.

Examples of dimensions A & B **(Dim A and Dim B)** relate to the TOP mounting holes on the butterfly valve body. These holes are usually arranged on the body in either an "X" pattern (**MOUNT STYLE 1**), or a cross pattern (**MOUNT STYLE 2**). This information is entered on the UFSP Series Butterfly Valve Retrofit Form in the **MOUNT STYLE** section. The length of the valve stem sticking out of the top of the valve body is recorded under **Dim C**. The TOP mounting holes are usually drilled through the top flange, but sometimes are threaded. Enter this information on the form next to the mount style information previously recorded.

Next is the valve stem data. The five styles of valve stems cover 98% of the butterfly valves ever produced. Examine the valve being retrofitted to establish which shaft style matches the diagrams above. Use caution when recording these dimensions. Careless use of calipers will result in a sloppy and possibly dysfunctional linkage system. **Dim D** refers to the valve stem diameter and should be measured at several points up and down as well as around the stem itself. **Dim E** refers to the length of the drive surface available, whether it be a key, flatted surface, or the distance a drive hole is from the top of the stem. There are two types of keys (Keyway-Shaft Style 4 and Woodruff Key-Shaft Style 5). Please select the key size as noted in the column "For Shaft Style 4 & 5". **Dim F** refers to the width of the drive surface. This is the most critical dimension for correct linkage operation. Please measure accordingly.

In addition, we require information about the environment and process in which this linkage system will be utilized.

The form must be completed in its entirety to guarantee the complete, perfect fit of your retrofit system. Keep in mind that retrofit kits are designed with close-tolerance components which afford the most efficient linkage system for the facility. Measurements rounded to the nearest ⅛ or 1/16 inch will not perform as well (sometimes not at all) as a kit designed around careful measurements using proper equipment. Our designs are typically +.005" tolerance.

Required tools - calipers and retrofit form.

DISCLAIMER:

We will do our best to provide a linkage system designed around your specifications and measurements however, we cannot be held responsible for linkages which do not fit as a result of incorrect data given to Belimo. We will re-work components which do not fit properly for a nominal fee.

To reduce the possibility of incorrect linkage solutions, we respectfully request that you fill out the retrofit form completely and forward that information with your order. This will serve as a double check between your valve and the actuator/linkage package designed for your application.

Actuation, weather shields and linkages cannot be pre-assembled at the Belimo factory prior to your receipt. The linkages are designed to be attached onto the valve body first, then optional weather shields, and finally actuation products.

Close-off pressures are calculated using actuator torque, valve stroke, and valve area. Other factors may affect the rated close-off pressures, including flow rates, system maintenance schedules, chemicals used in the shot feeder process, vicinity to pumps, condition of valve stem seals, and assembly of linkage material in the field.

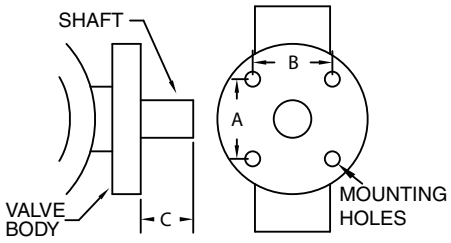
Valves that are being considered for retrofit of actuation should be analyzed for their life expectancy before the retrofit has taken place. Valves that leak through stem seals or casings will continue to leak with the new linkage system in place, maybe even more so. Rebuilding the packing on these valves may be more costly than replacing the valves themselves. In some instances, older valve stem heights will require field modifications to the valve in order to utilize the retrofit kit. Belimo takes no responsibility for the operation of these valves after they have been modified.

Custom Butterfly Valve Retrofit Solution Form

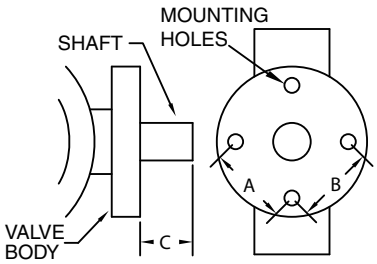
UFSP Series

BELIMO

MOUNT STYLE 1



MOUNT STYLE 2



MOUNT STYLE DIMENSIONS

MOUNT STYLE

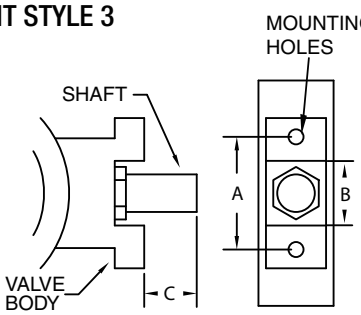
DIM A:

DIM B:

DIM C:

DIM. A & B MEASURED FROM CENTER OF HOLE

MOUNT STYLE 3



MOUNT STYLE 4

SKETCH YOUR MOUNT STYLE
USING MOUNT STYLE EXAMPLES.

MOUNTING HOLES:

DRILLED

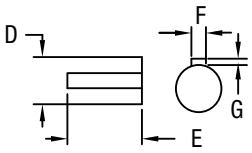
DIA Ø: Ex: 0.437"

THREAD

TAPPED

SPEC. Ex: 1/2-20

SHAFT STYLE 4



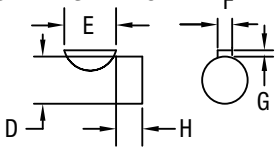
KEYWAY

KEY SIZE

- .125" ☐
- .1875" ☐
- .250" ☐
- .3125" ☐
- .375" ☐
- .4375" ☐
- .500" ☐

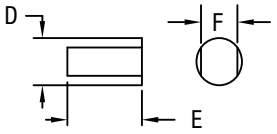
CHECK ONE

SHAFT STYLE 5



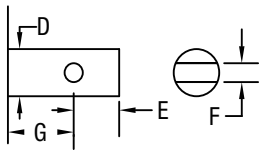
WOODRUFF KEY

SHAFT STYLE 6



DOUBLE D

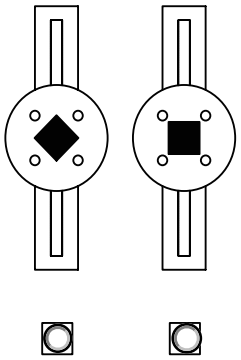
SHAFT STYLE 8



PINNED

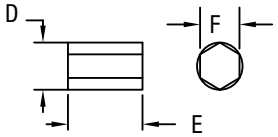
SHAFT STYLE 9

VALVE CLOSED



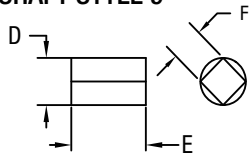
CHECK ONE

SHAFT STYLE 7



HEX

SHAFT STYLE 9



SQUARE

SHAFT STYLE ☐ DIM D: DIM E: DIM F: DIM G: DIM H:

ACTUATOR

EXISTING ACTUATOR MODEL: _____ CONTROL TYPE: ☐ ON/OFF ☐ FLOATING POINT ☐ VDC Range:_____ ☐ PWM Range:_____

FAIL SAFE: ☐ YES ☐ NO

FAIL POSITION: ☐ NO ☐ NC ☐ INDOOR ☐ OUTDOOR

VOLTAGE_____

COMPANY: _____ VALVE MANUFACTURE: _____ 2 WAY/3 WAY: _____

JOB NAME: _____ VALVE SERIES: _____ VALVE SIZE: _____

PO#: _____ VALVE MODEL: _____ MEDIA TEMP: _____

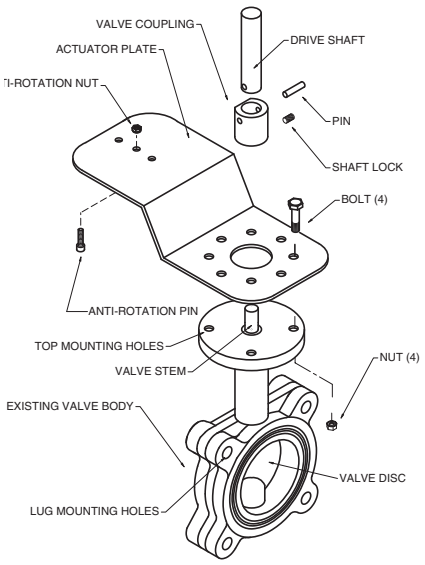
PHONE: _____ VALVE TAG/LOCATION: _____ MEDIA TYPE: _____

EMAIL: _____ QUANTITY: _____ SYSTEM PRESSURE: _____

NOTE: THIS INFORMATION WILL BE UTILIZED IN THE FABRICATION OF A CUSTOM LINKAGE SYSTEM FOR YOUR VALVE REQUIREMENT; THEREFORE, IT IS ESSENTIAL THAT THE ABOVE DIMENSIONS BE FURNISHED WITH READINGS TAKEN TO THE NEAREST .001". ANY ERRONEOUS DIMENSIONS FURNISHED WHICH RESULT IN IMPROPER FIT OF THIS LINKAGE SYSTEM ARE NOT THE RESPONSIBILITY OF BELIMO AIRCONTROLS. ANY REWORK REQUIRED WILL RESULT IN AN EXTRA CHARGE.

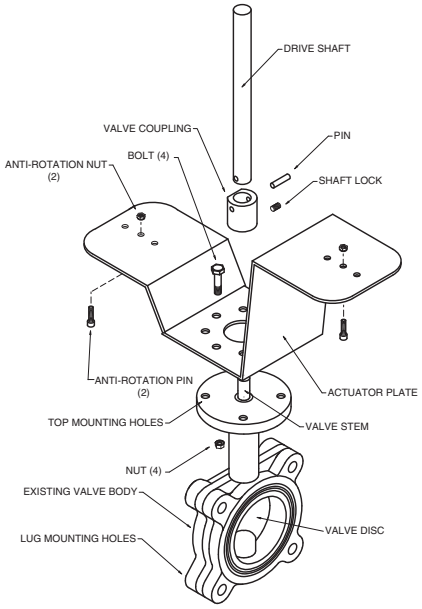
SUBMIT

2-way Single Actuator
Generic – Retrofit Form Required



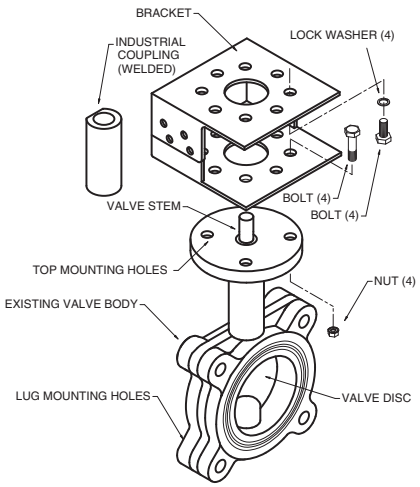
UFSP0000

2-way Dual Actuator
Generic – Retrofit Form Required



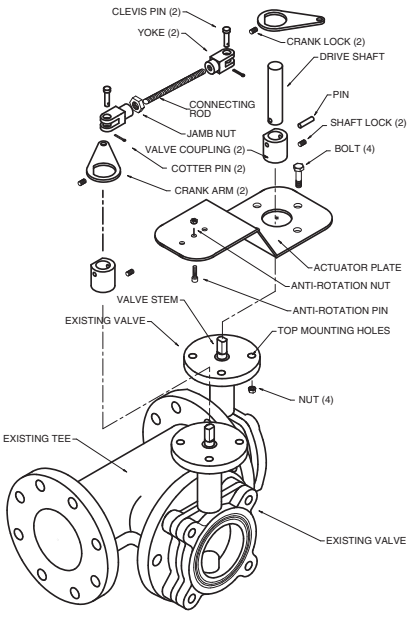
UFSP0008

2-way SY Actuator
Generic – Retrofit Form Required



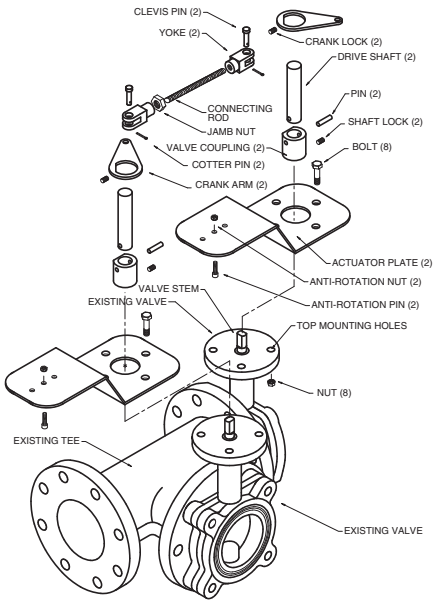
UFSP0020 SY1 - SY8
UFSP0022 SY9 - SY12

3-way Single Actuator
Generic – Retrofit Form Required



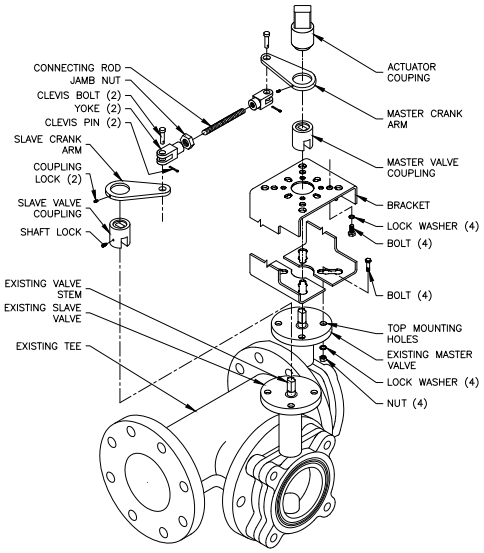
UFSP0002

3-way Dual Actuator
Generic – Retrofit Form Required



UFSP0010

3-way SY Actuator
Generic – Retrofit Form Required



UFSP0024 SY1 - 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.

BELIMO

2 YEAR WARRANTY

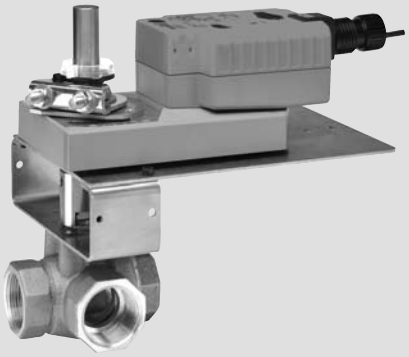
ELECTRIC DISCONNECT		
	HOA-120V	Local electric disconnect SY2-SY12; 2 position - 110/230V
	HOA-120VMFT	Local electric disconnect SY2-SY12; proportional - 110/230V
	HOA-24V	Local electric disconnect SY2-SY12; 2 position - 24V
	HOA-24VMFT	Local electric disconnect SY2-SY12; proportional - 24V
POTENTIOMETERS		
	SY-1000-FB01	1000 Ω feedback potentiometer. SY2-12, 2 position
	SY-1000-FB02	1000 Ω feedback potentiometer. SY2-12, proportional
BATTERY BACKUP		
	EXT-NSV-B01-120	Battery backup system for Belimo SY1 - SY3 120 VAC, on/off actuators
	EXT-NSV-B02-120	Battery backup system for Belimo SY1 - SY3 120 VAC, MFT actuators
	EXT-NSV-B03-120	Battery backup system for Belimo SY4 - SY6 120 VAC, on/off actuators
	EXT-NSV-B04-120	Battery backup system for Belimo SY4 - SY6 120 VAC, MFT actuators
	EXT-NSV-B05-120	Battery backup system for Belimo SY7 - SY12 120 VAC, on/off actuators
	EXT-NSV-B06-120	Battery backup system for Belimo SY7 - SY12 120 VAC, MFT actuators
	EXT-NSV-B11-24	Battery backup system for Belimo SY1 24 VAC, on/off actuators
	EXT-NSV-B12-24	Battery backup system for Belimo SY1 24V MFT actuators
	EXT-NSV-B13-24	Battery backup system for Belimo SY2 - SY5 24 VAC, on/off actuators
	EXT-NSV-B14-24	Battery backup system for Belimo SY2 - SY5 24 VAC, MFT actuators
	EXT-NSV-B21-230	Battery backup system for Belimo SY1 - SY3 230 VAC, on/off actuators
	EXT-NSV-B22-230	Battery backup system for Belimo SY1 - SY3 230 VAC, MFT actuators
	EXT-NSV-B23-230	Battery backup system for Belimo SY4 - SY6 230 VAC, on/off actuators
	EXT-NSV-B24-230	Battery backup system for Belimo SY4 - SY6 230 VAC, MFT actuators
	EXT-NSV-B25-230	Battery backup system for Belimo SY7 - SY12 230 VAC, on/off actuators
	EXT-NSV-B26-230	Battery backup system for Belimo SY7 - SY12 230 VAC, MFT actuators
HANDWHEELS		
	ZG-SY23	SY2-3 handwheel (replacement only)
	ZG-SY46	SY4-6 handwheel (replacement only)
	ZG-SY78	SY7-8 handwheel (replacement only)
	ZG-SY912	SY9-12 handwheel (replacement only)

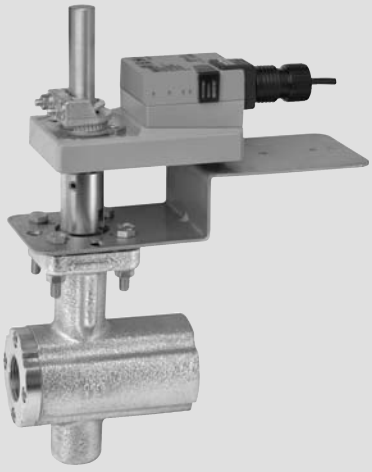
Ball Valve Retrofit Solutions

- Full range of kits for 2-way and 3-way valve assemblies.
- Visual stroke indicators allow quick installation.
- Linkages can be mounted in any orientation except upside down.
- NEMA 2 and NEMA 4 options available.

Applications

UBSP Ball Valve Retrofit Solutions are designed to easily attach to the valve mounting pad of competitor valves utilizing Belimo actuators. This kit will help to restore service without removal of the valve, saving down time and money.





BELIMO

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Instructions for Completing this Form

Ball valves with-out a mounting flange are typically not designed for installing actuation, therefore the valve design may not support modulation outside of manual usage. Belimo does not recommend retrofitting these types of ball valves.

All dimensions should be taken with ALL original actuation and hardware components removed from the valve body.

An example using **Mounting Style 3:** Dimensions A & B (**Dim A and Dim B**) relate to the TOP mounting holes on the ball valve body. These holes are usually arranged on the body in a "X" pattern (**MOUNT STYLE 3**). This information is entered on the UBSP Series Ball Valve Retrofit Form in the **MOUNT STYLE** section. The length of the valve stem sticking out of the top of the valve body is recorded under **Dim D and E**. The TOP mounting holes are usually drilled through the top flange, but sometimes are threaded. Enter this information on the form next to the mount style information previously recorded.

MOUNT STYLE 3: Dimensions A & B (**Dim A and Dim B**) relate to the TOP mounting holes on the ball valve body. These holes are usually arranged on the body in a "X" pattern (**MOUNT STYLE 3**). This information is entered on the UBSP Series Ball Valve Retrofit Form in the **MOUNT STYLE** section. The length of the valve stem sticking out of the top of the valve body is recorded under **Dim D and E**. The TOP mounting holes are usually drilled through the top flange, but sometimes are threaded. Enter this information on the form next to the mount style information previously recorded.

STEM STYLE: Examine the valve being retrofitted to establish which stem style matches the diagrams above. Use caution when recording these dimensions. **Dim H** refers to the valve stem diameter and should be measured at several points up and down as well as around the stem itself. **Dim E** refers to the length of the drive surface available, whether it is a key or flatted surface. **Dim F** refers to the width of the drive surface or the distance across the flats. This is the most critical dimension for correct linkage operation. Please measure accordingly. Lastly please specify the desired actuator orientation in reference to the valve body using the ports as reference, i.e. over the "A" port etc. We have also includes an ISO-5211 standard dimension chart for reference. If the valve is labeled please specify its "F" number so that we may confirm the dimensions per the ISO spec.

In addition, we require information about the environment and process in which this linkage system will be utilized. As well as the frequency of use the current actuator runs. This will help to ensure the longevity of the new linkage and actuator. Having the prior actuator spec and model will help.

The form must be completed in its entirety to guarantee the complete, perfect fit of your retrofit system. Keep in mind that retrofit kits are designed with close-tolerance components which afford the most efficient linkage systems. Measurements rounded to the nearest 1/8 or 1/16 inch will not perform as well (sometimes not at all) as a kit designed around careful measurements using proper equipment. Our designs are typically +.005" tolerance.

Required tools - calipers and retrofit form.

DISCLAIMER:

We will do our best to provide a linkage system designed around your specifications and measurements however, we cannot be held responsible for linkages which do not fit as a result of incorrect data given to Belimo. We will re-work components which do not fit properly for a nominal fee.

To reduce the possibility of incorrect linkage solutions, we respectfully request that you fill out the retrofit form completely and forward that information with your order. This will serve as a double check between your valve and the actuator/linkage package designed for your application.

Actuation, weather shields and linkages cannot be pre-assembled at the Belimo factory prior to your receipt. The linkages are designed to be attached onto the valve body first, then optional weather shields, and finally actuation products.

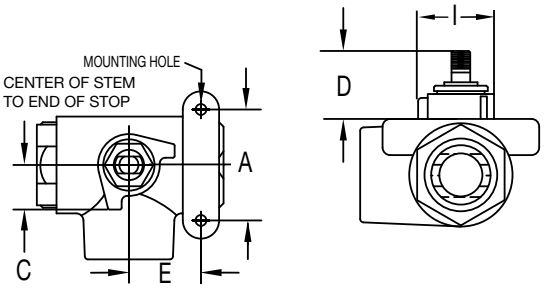
Close-off pressures are calculated using actuator torque, valve stroke, and valve area. Other factors may affect the rated close-off pressures, including flow rates, system maintenance schedules, chemicals used in the shot feeder process, vicinity to pumps, condition of valve stem seals, and assembly of linkage material in the field.

Valves that are being considered for retrofit of actuation should be analyzed for their life expectancy before the retrofit has taken place. Valves that leak through stem seals or casings will continue to leak with the new linkage system in place, maybe even more so. Rebuilding the packing on these valves may be more costly than replacing the valves themselves. In some instances, older valve stem heights will require field modifications to the valve in order to utilize the retrofit kit. Belimo takes no responsibility for the operation of these valves after they have been modified.

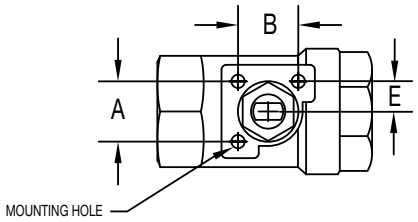
Custom Ball Valve Retrofit Solution Form

BELIMO

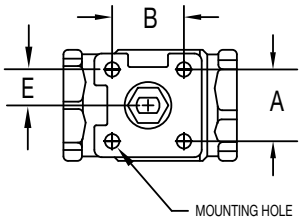
MOUNT STYLE 1



MOUNT STYLE 2



MOUNT STYLE 3



MOUNT STYLE 4

SKETCH YOUR MOUNT STYLE USING EXAMPLES ABOVE

MOUNT STYLE DIMENSIONS

MOUNT STYLE ☐

DIM A: _____

DIM B: _____

DIM C: _____

DIM D: _____

DIM E: _____

MOUNTING HOLES:

DRILLED

DIA Ø: _____

TAPPED

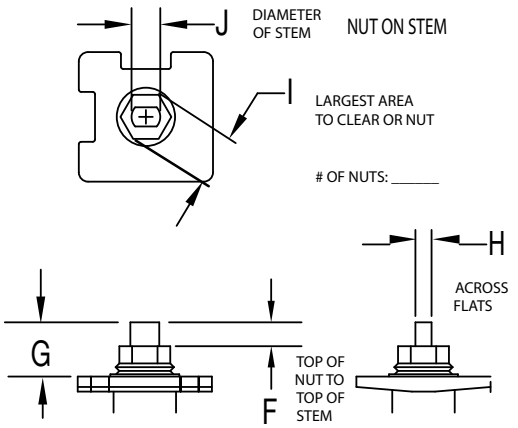
THREAD SPEC. _____

DIM. A & B MEASURED FROM CENTER OF HOLE

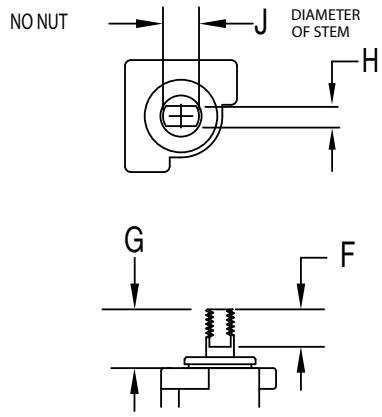
ISO STANDARD

ISO	BOLT SQUARE	BOLT SIZE Ø	CHECK ONE
F03	1.002	M5	☐
F04	1.169	M5	☐
F05	1.392	M6	☐
F07	1.949	M8	☐
F10	2.840	M10	☐
F12	3.480	M12	☐
F14	3.879	M16	☐
F16	4.593	M20	☐
F25	7.071	M16	☐

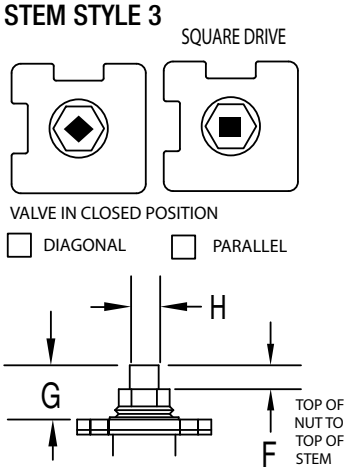
STEM STYLE 1



STEM STYLE 2



STEM STYLE 3



STEM STYLE ☐

DIM F: _____ DIM G: _____ DIM H: _____ DIM I: _____ DIM J: _____

ACTUATOR

EXISTING ACTUATOR MODEL: _____ CONTROL TYPE: ☐ ON/OFF ☐ FLOATING POINT ☐ VDC ☐ PWM

FAIL SAFE: ☐ YES ☐ NO Range:_____ Range:_____

FAIL POSITION: ☐ NO ☐ NC ☐ INDOOR ☐ OUTDOOR

FREQUENCY OF OPERATION (*specify how often*): DAILY_____ WEEKLY_____ MONTHLY_____

VOLTAGE: _____

ACTUATOR ORIENTATION:

COMPANY: _____

JOB NAME: _____

PO#: _____

PHONE: _____

EMAIL: _____

VALVE MANUFACTURE: _____

VALVE SERIES: _____

VALVE MODEL: _____

VALVE TAG/LOCATION: _____

QUANTITY: _____

2 WAY/3 WAY: _____

VALVE SIZE: _____

MEDIA TEMP: _____

MEDIA TYPE: _____

SYSTEM PRESSURE: _____

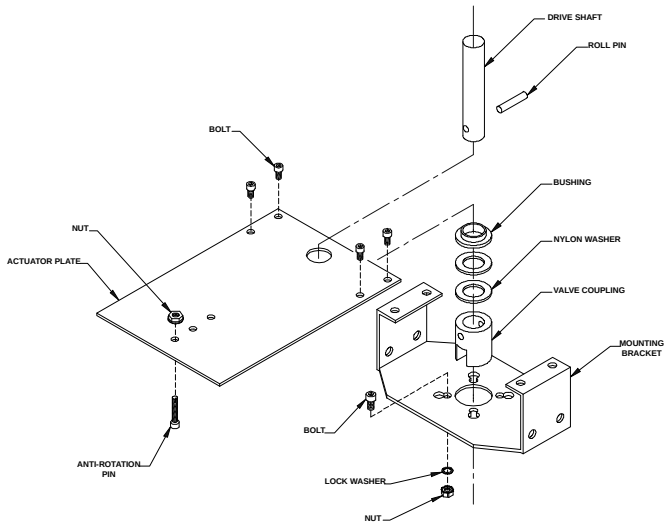
NOTE: THIS INFORMATION WILL BE UTILIZED IN THE FABRICATION OF A CUSTOM LINKAGE SYSTEM FOR YOUR VALVE REQUIREMENT; THEREFORE, IT IS ESSENTIAL THAT THE ABOVE DIMENSIONS BE FURNISHED WITH READINGS TAKEN TO THE NEAREST .001". ANY ERRONEOUS DIMENSIONS FURNISHED WHICH RESULT IN IMPROPER FIT OF THIS LINKAGE SYSTEM ARE NOT THE RESPONSIBILITY OF BELIMO AIRCONTROLS. ANY REWORK REQUIRED WILL RESULT IN AN EXTRA CHARGE.

CUSTOM KITS ARE DESIGNED TO YOUR UNIQUE SPECIFICATIONS AND ARE **NOT RETURNABLE.**

COMPANY CONTACT/DIMENSIONS PROVIDED BY: _____ DATE: _____

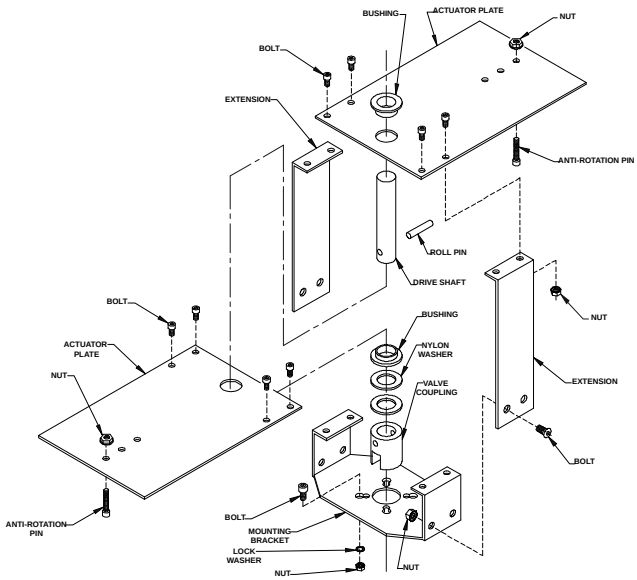
SUBMIT

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



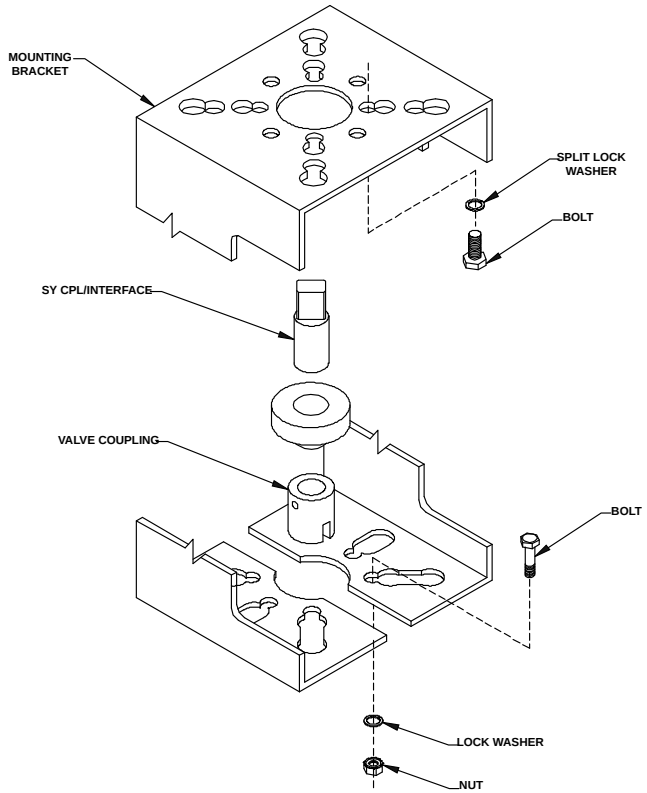
UBSP0004

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



UBSP0006

Industrial Electric 2-way/3-way
Generic – Retrofit Form Required

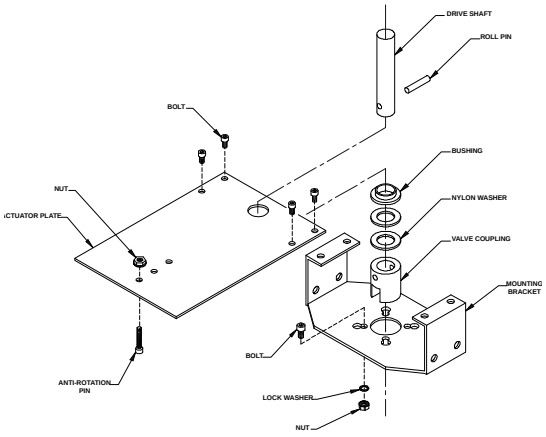


UBSP0008 **SY1-SY6**
UBSP0012 **SY7-SY9**

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

UBSP0004 Custom Retrofit Linkage for Ball Valves

For Use with Belimo Rotary Actuators



2 YEAR WARRANTY

Technical Data	
Service	chilled or hot water and steam
Applicable valve size	½" [13], ¾" [19], 1" [25], 1-¼" [32], 1-½" [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°F to +298°F [-30°C to +148°C]
Media temp. range (steam)	20°F to 298°F [-7°C to +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 Master Slave wiring for dual mounted actuators.

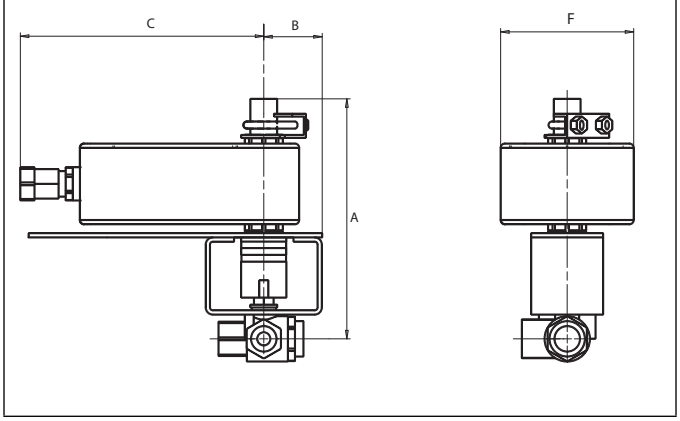
Default/Configuration

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])



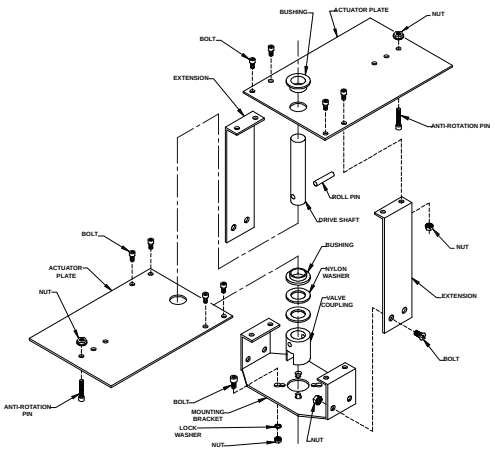
A	B	C	F
8.00 [203.2]	2.00 [51]	8.00 [203]	6.00 [152.4]

Application Notes

Custom retrofit kits require a filled out retrofit form during or before ordering.

UBSP0006 Custom Retrofit Linkage for Ball Valves

For Use with Belimo Rotary Actuators



2 YEAR WARRANTY

Technical Data

Service	chilled or hot water and steam
Applicable valve size	½" [13], ¾" [19], 1" [25], 1-¼" [32], 1-½" [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°F to +298°F [-30°C to +148°C]
Media temp. range (steam)	20°F to 298°F [-7°C to +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 Master Slave wiring for dual mounted actuators.

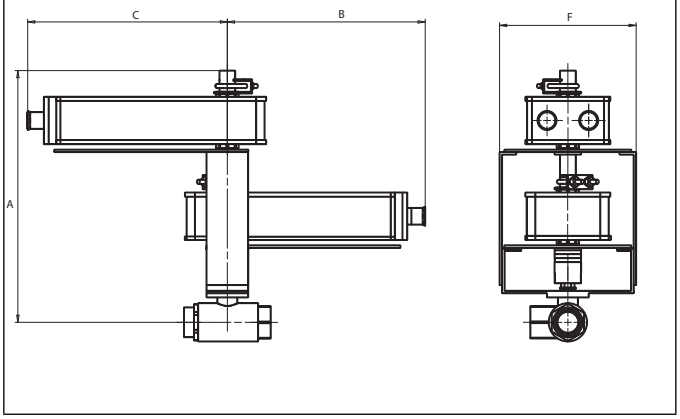
Default/Configuration

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])



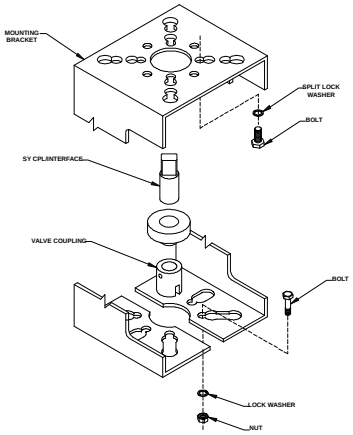
A	B	C	F
15.60 [396.24]	8.00 [203]	8.00 [203]	6.00 [152.4]

Application Notes

Custom retrofit kits require a filled out retrofit form during or before ordering.

UBSP0008 Custom Retrofit Linkage for Ball Valves

For Use with Belimo SY Actuators



2 YEAR WARRANTY

Technical Data	
Service	chilled or hot water and steam
Applicable valve size	½" [13], ¾" [19], 1" [25], 1-¼" [32], 1-½" [38], 2" [50], 2-½" [63.5], 3" [76.2]
Frame, plate, base	stainless steel
Shaft	steel
Coupling	steel
Mounting position	360°
Media temp. range (water)	-22°F to +298°F [-30°C to +148°C]
Media temp. range (steam)	20°F to 298°F [-7°C to +148°C]
Housing	NEMA 4X, IP66
Weight	12 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 Master Slave wiring for dual mounted actuators.

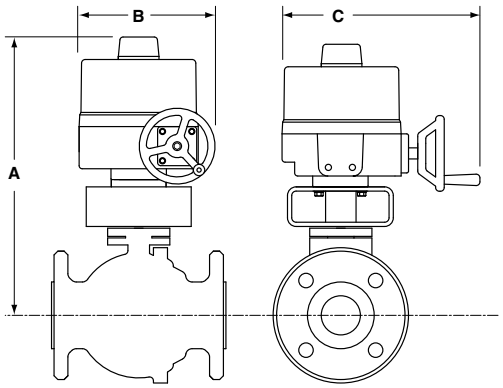
Default/Configuration

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	Non-Spring Return
UBSP0008	SY1, SY2, SY3, SY4, SY5, SY6

Dimensions (Inches [mm])



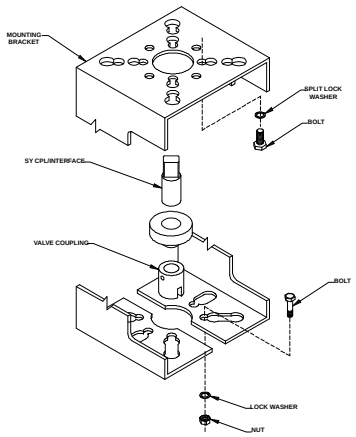
A	B	C
16.63 [422.4]	12.00 [305]	15.00 [381]

Application Notes

Custom retrofit kits require a filled out retrofit form during or before ordering.

UBSP0012 Custom Retrofit Linkage for Ball Valves

For Use with Belimo SY Actuators



2 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°F to +298°F [-30°C to +148°C]
Media temp. range (steam)	20°F to 298°F [-7°C to +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 Master Slave wiring for dual mounted actuators.

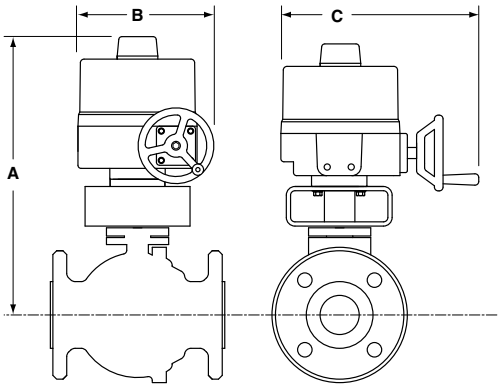
Default/Configuration

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	Non-Spring Return
UBSP0012	SY7, SY8, SY9, SY10, SY11, SY12

Dimensions (Inches [mm])



A	B	C
19.7 [499]	14.00 [356]	21.00 [533]

Application Notes

Custom retrofit kits require a filled out retrofit form during or before ordering.