

F780HDU, 3", 3-Way Butterfly Valve

Resilient Seat, 304 Stainless Steel Disc



Technical Data

Media	chilled, hot water, up to 60% glycol
Flow characteristic	modified linear
Controllable flow range	90° rotation
Valve Size [mm]	3" [80]
Pipe connection	for use with ANSI class 125/150 flanges
Housing	Ductile cast iron ASTM A536
Body finish	epoxy powder coating (blue RAL 5002)
Stem	416 stainless steel
Seat	EPDM
Bearing	RPTFE
Disc	304 stainless steel
Body Pressure Rating	232 psi CWP
ANSI Class	Consistent with 125
Number of Bolt Holes	4
Lug threads	5/8-11 UNC
Close-off pressure Δps	50 psi
Rangeability Sv	10:1 (for 30° to 70° range)
Maximum Velocity	12 FPS
Cv	302
Weight	50.71 lb [23 kg]
Media Temp Range (water)	-22...250°F [-30...120°C]
Leakage rate	0%
Maintenance	maintenance-free

Application

These valves are designed to meet the needs of HVAC and commercial applications requiring bubble tight shut-off for liquids. Typical applications include chiller isolation, cooling tower isolation, change-over systems, large air handler coil control, bypass and process control applications. The large Cv values provide for an economical control valve solution for larger flow applications.

Jobsite Note

Valve assembly should be stored in a weather protected area prior to installation. Reference the butterfly valve installation instruction for additional information.

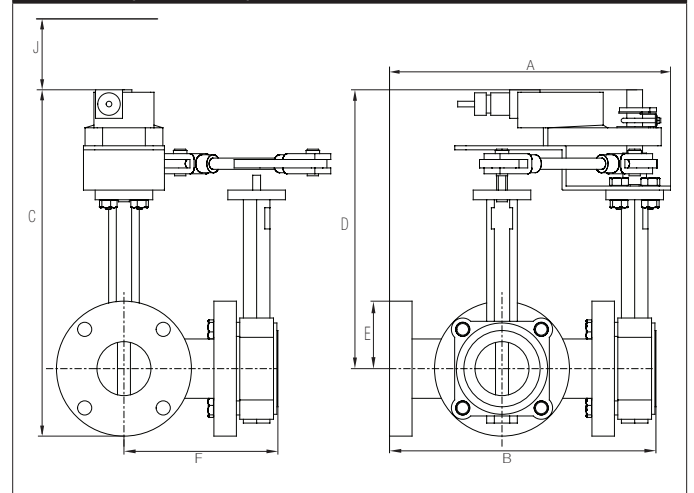
Flow/Cv

Cv 10°	Cv 20°	Cv 30°	Cv 40°	Cv 50°	Cv 60°	Cv 70°	Cv 80°	Cv 90°
0.2	9	18	39	70	116	183	275	302

Suitable Actuators

	Non-Spring
F780HDU	GMB(X)

Dimensions (Inches [mm])



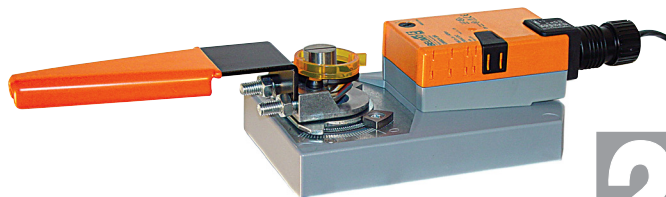
A	B	C	D	E	F	J
13.8"	12.9"	14.8"	11.5"	3.3" [85]	7.4" [187]	3.9" [100]
[350]	[327]	[375]	[292]			

Safety Notes

⚠ WARNING: For Belimo Products sold in California, these Products do or may contain chemicals which are known to the State of California to cause cancer and or birth defects or other reproductive harms. For more information see www.p65warnings.ca.gov.

GMB24-3-X1

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



Technical Data	
Power Supply	24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%
Power consumption in operation	4 W
Power consumption in rest position	2 W
Transformer sizing	6 VA (class 2 power source)
Electrical Connection	18 GA plenum cable, 3 ft [1 m], with 1/2" conduit connector, degree of protection NEMA 2 / IP54
Overload Protection	electronic throughout 0° to 95° rotation
Input Impedance	600 Ω
Angle of rotation	Max. 95°, adjustable with mechanical stop
Torque motor	360 in-lb [40 Nm]
Direction of rotation motor	reversible with built-in switch
Position indication	Mechanically, 30...65 mm stroke
Manual override	external push button
Running Time (Motor)	150 s, constant, independent of load
Ambient humidity	max. 95% r.H., non-condensing
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Degree of Protection	IP54, NEMA 2, UL Enclosure Type 2
Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level, motor	45 dB(A)
Maintenance	maintenance-free
Quality Standard	ISO 9001
Weight	4.0 lb [1.8 kg]

†Rated Impulse Voltage 800V, Type action 1, Control Pollution Degree 3.

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Wiring Diagrams
INSTALLATION NOTES

- Actuators with appliance cables are numbered.
- Provide overload protection and disconnect as required.
- Actuators may also be powered by 24 VDC.
- Actuators Hot wire must be connected to the control board common. Only connect common to neg. (-) leg of control circuits. Terminal models (-T) have no-feedback.
- Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.
- Meets cULus 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.

