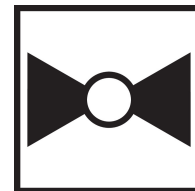




5-year warranty



## Technical data

<b>Functional data</b>	Valve Size	6" [150]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	0...250°F [-18...120°C]
	Body Pressure Rating	ANSI Class 250, raised-face
	Close-off pressure Δps	310 psi
	Flow characteristic	equal percentage
	Servicing	maintenance-free
	Maximum differential pressure (water)	50 psi [345 kPa]
	Flow Pattern	2-way
	Leakage rate	0% for A – AB
	Controllable flow range	75°
	Cv	400
	Body pressure rating note	raised-face
	Cv Flow Rating	A-port: as stated in chart B-port: 70% of A – AB Cv
<b>Materials</b>	Valve body	Cast iron - GG 25
	Stem	stainless steel
	Stem seal	EPDM (lubricated)
	Seat	PTFE
	Pipe connection	250 lb flanged
	O-ring	EPDM (lubricated)
	Ball	stainless steel
<b>Suitable actuators</b>	Non-Spring	GRB(X)
	Electronic fail-safe	GKRB(X)

## Safety notes

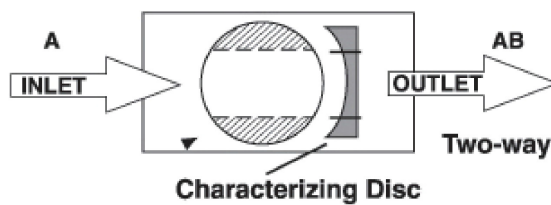


- WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

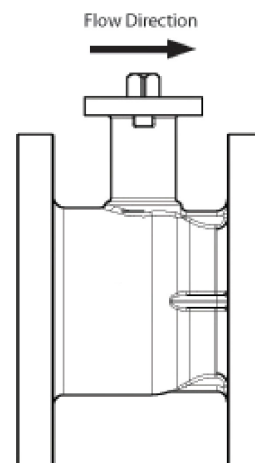
## Product features

- Application** This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV box re-heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.

## Flow/Mounting details

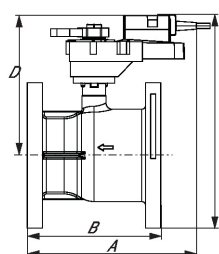
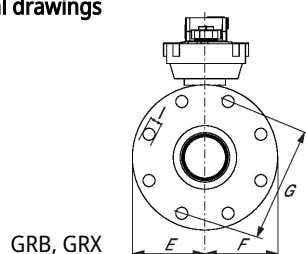


Upstream A  
Downstream AB

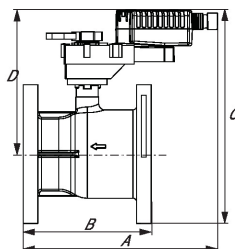
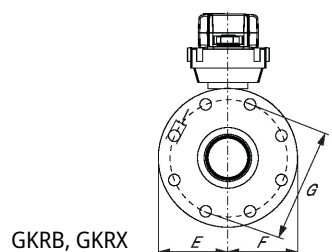


## Dimensions

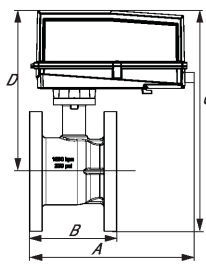
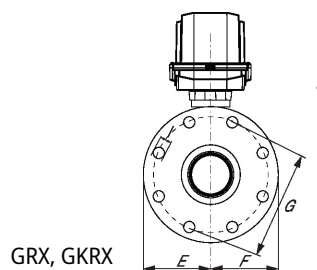
## Dimensional drawings



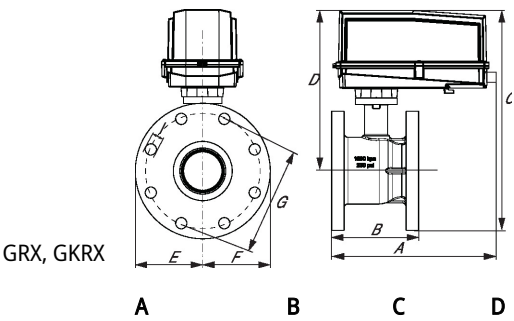
A	B	C	D	E	F	G	I	Number of Bolt Holes
15.3" [388]	12.4" [315]	15.4" [391]	9.5" [241]	6.3" [160]	6.3" [160]	10.6" [270]	0.9" [22]	12



A	B	C	D	E	F	G	I	Number of Bolt Holes
15.3" [388]	12.4" [315]	15.8" [401]	9.8" [248]	6.3" [160]	6.3" [160]	10.6" [270]	0.9" [22]	12



A	B	C	D	E	F	G	I	Number of Bolt Holes
19.0" [483]	12.4" [315]	18.5" [470]	9.5" [241]	6.3" [160]	6.3" [160]	10.6" [270]	0.9" [22]	12



A	B	C	D	E	F	G	I	Number of Bolt Holes
19.0" [483]	12.4" [315]	18.5" [470]	9.5" [241]	6.3" [160]	6.3" [160]	10.6" [270]	0.9" [22]	12



5-year warranty



## Technical data

<b>Electrical data</b>	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	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...95° rotation
<b>Functional data</b>	Input Impedance	600 Ω
	Direction of motion motor	selectable with switch 0/1
	Manual override	external push button
	Angle of rotation	90°, adjustable with mechanical stop
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	150 s, constant, independent of load
	Running time motor note	constant, independent of load
	Noise level, motor	45 dB(A)
	Position indication	Mechanically, 30...65 mm stroke
<b>Safety data</b>	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Enclosure	UL Enclosure Type 2
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU; Listed to UL 2043 - suitable for use in air plenums per Section 300.22(c) of the NEC and Section 602.2 of the IMC
	Quality Standard	ISO 9001
	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Ambient humidity	max. 95% RH, non-condensing
	Servicing	maintenance-free
<b>Weight</b>	Weight	3.4 lb [1.6 kg]
<b>Materials</b>	Housing material	UL94-5VA

## Accessories

Electrical accessories	Description	Type
	Battery, 12 V, 1.2 Ah (two required)	NSV-BAT
	Battery backup system, for non-spring return models	NSV24 US
	Feedback potentiometer 10 kΩ add-on, grey	P10000A GR
	Feedback potentiometer 1 kΩ add-on, grey	P1000A GR
	Feedback potentiometer 140 Ω add-on, grey	P140A GR
	Feedback potentiometer 2.8 kΩ add-on, grey	P2800A GR
	Feedback potentiometer 5 kΩ add-on, grey	P5000A GR
	Feedback potentiometer 500 Ω add-on, grey	P500A GR
	Auxiliary switch 1 x SPDT add-on	S1A
	Auxiliary switch 2 x SPDT add-on	S2A

## Electrical installation

### ⚡ INSTALLATION NOTES

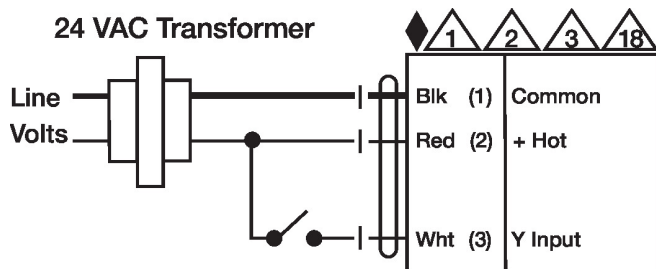
- Ⓐ Actuators with appliance cables are numbered.
- 1 Provide overload protection and disconnect as required.
- 2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- 3 Actuators may also be powered by DC 24 V.
- 6 Actuators Hot wire must be connected to the control board common. Only connect common to neg. (-) leg of control circuits. Terminal models (-T) have no-feedback.
- 18 Actuators with plenum cable do not have numbers; use color codes instead.
- ◆ Meets cULus requirements without the need of an electrical ground connection.

### ⚠ Warning! Live electrical components!

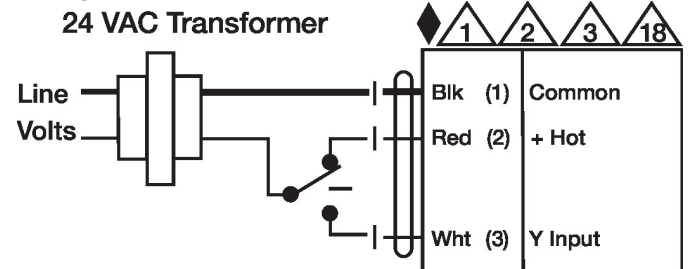
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow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

### Wiring diagrams

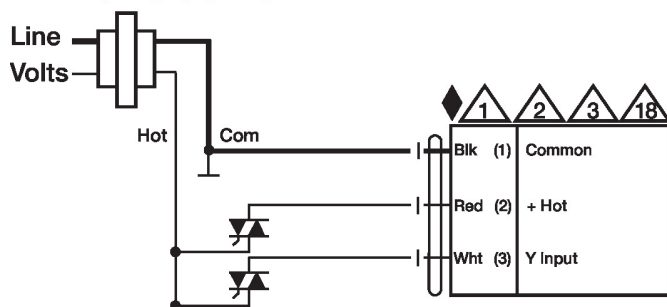
#### On/Off



#### Floating Point



#### 24 VAC Transformer



#### Floating Point - Triac Sink

