



5-year warranty



Technical data

Functional data	Valve Size	3" [80]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	0...250°F [-18...120°C]
	Body Pressure Rating	ANSI Class 125, standard class B
	Close-off pressure Δ ps	175 psi
	Flow characteristic	equal percentage
	Servicing	maintenance-free
	Flow Pattern	2-way
	Leakage rate	0% for A – AB
	Controllable flow range	75°
	Cv	110
	ANSI Class	125
	Body pressure rating note	standard class B
	Cv Flow Rating	A-port: as stated in chart B-port: 70% of A – AB Cv
Materials	Valve body	Cast iron - GG 25
	Stem seal	EPDM (lubricated)
	Seat	PTFE
	Pipe connection	pattern to mate with ANSI 125 flange
	O-ring	EPDM (lubricated)
	Ball	stainless steel
Suitable actuators	Non-Spring	ARB(X)

Safety notes

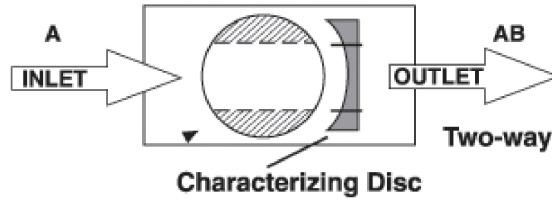


- **WARNING:** This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov

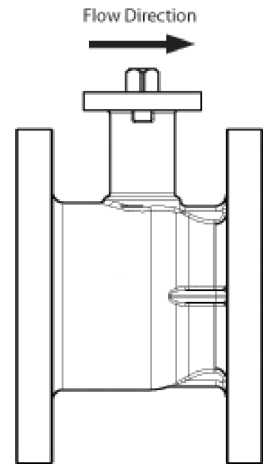
Product features

- 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

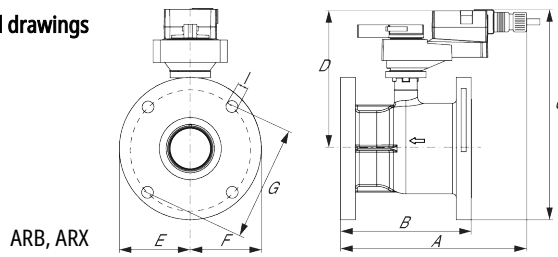


Upstream A
Downstream AB

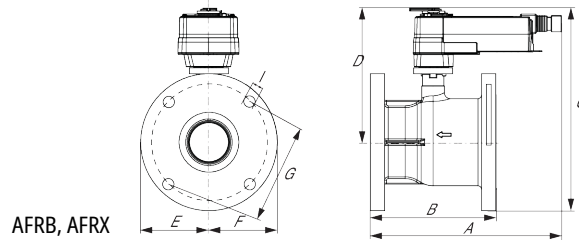


Dimensions

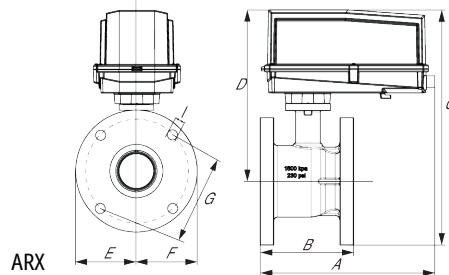
Dimensional drawings



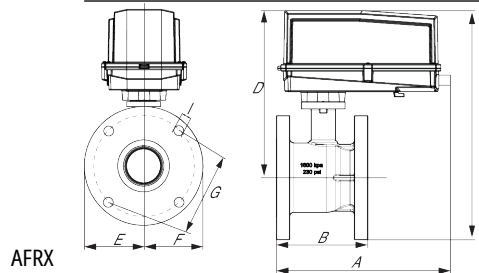
A	B	C	D	E	F	G	I	Number of Bolt Holes
9.6" [244]	6.6" [168]	12.2" [309]	7.8" [198]	3.9" [100]	3.9" [100]	6" [152]	0.7" [19]	4



A	B	C	D	E	F	G	I	Number of Bolt Holes
9.6" [244]	6.6" [168]	12.8" [325]	9.4" [239]	3.9" [100]	3.9" [100]	6" [152]	0.7" [19]	4

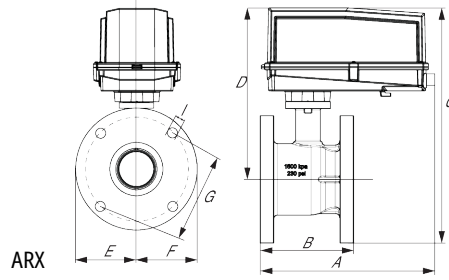


A	B	C	D	E	F	G	I	Number of Bolt Holes
13.3" [338]	6.6" [168]	15.0" [380]	10.5" [267]	3.9" [100]	3.9" [100]	6" [152]	0.7" [19]	4



A	B	C	D	E	F	G	I	Number of Bolt Holes
16.0" [406]	6.6" [168]	16.6" [422]	11.9" [302]	3.9" [100]	3.9" [100]	6" [152]	0.7" [19]	4

A	B	C	D	E	F	G	I	Number of Bolt Holes
16.0" [406]	6.6" [168]	16.6" [422]	11.9" [302]	3.9" [100]	3.9" [100]	6" [152]	0.7" [19]	4



A	B	C	D	E	F	G	I	Number of Bolt Holes
13.3" [338]	6.6" [168]	15.0" [380]	10.5" [267]	3.9" [100]	3.9" [100]	6" [152]	0.7" [19]	4



5-year warranty



Technical data

Electrical data	Nominal voltage	AC 100...240 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	3 W
	Power consumption in rest position	0.6 W
	Transformer sizing	7 VA (class 2 power source)
	Electrical Connection	18 GA appliance cable, 3ft [1m] 10ft [3m] and 16ft [5m], with 1/2" conduit connector, degree of protection NEMA 2 / IP54
	Overload Protection	electronic throughout 0...90° rotation
Functional data	Input Impedance	600 Ω
	Direction of motion motor	selectable with switch 0/1
	Manual override	external push button
	Angle of rotation	90°
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	default 90 s, variable 90 or 150 s
	Running time motor variable	90 or 150 s
	Noise level, motor	45 dB(A)
	Position indication	Mechanically, pluggable
Safety data	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2 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% r.H., non-condensing
	Servicing	maintenance-free
	Weight	Weight

Safety notes



- NEMA 4X, 316L stainless steel enclosure.
- Battery Back Up System for SY(7-10)-110
- ZS-300 without brackets.
- Terminal-strip cover for NEMA 2 rating (-T models).
- MFT95 resistor kit for 4 to 20 mA control applications.
- Battery Back Up System for SY(10-12)-220P

Electrical installation

✂ INSTALLATION NOTES

- (A)** 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.
- ◆ 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.

