



5-year warranty



Type overview

Type	DN
B250	50

Technical data

<b>Functional data</b>	Valve size [mm]	2" [50]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	0...250°F [-18...120°C]
	Body Pressure Rating	400 psi
	Close-off pressure Δps	200 psi
	Flow characteristic	equal percentage
	Servicing	maintenance-free
	Flow Pattern	2-way
	Leakage rate	0% for A – AB
	Controllable flow range	75°
	Cv	57
	No Characterized Disc	TRUE
	Cv Flow Rating	A-port: as stated in chart B-port: 70% of A – AB Cv
<b>Materials</b>	Valve body	Nickel-plated brass body
	Spindle	stainless steel
	Spindle seal	EPDM (lubricated)
	Seat	PTFE
	Characterized disc	No Disc (full flow)
	Pipe connection	NPT female ends
	O-ring	EPDM (lubricated)
	Ball	stainless steel
<b>Suitable actuators</b>	Non-Spring	ARB(X)
	Spring	AFRB(X)

Safety notes

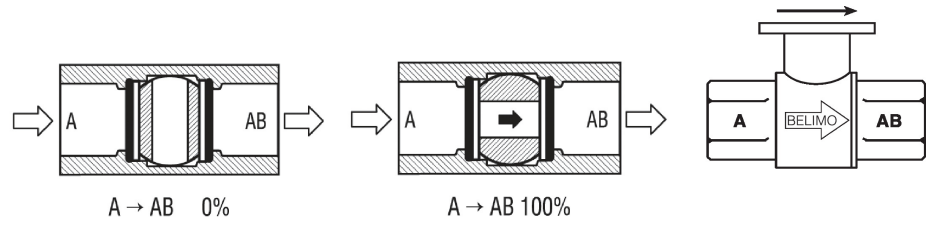


- WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

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

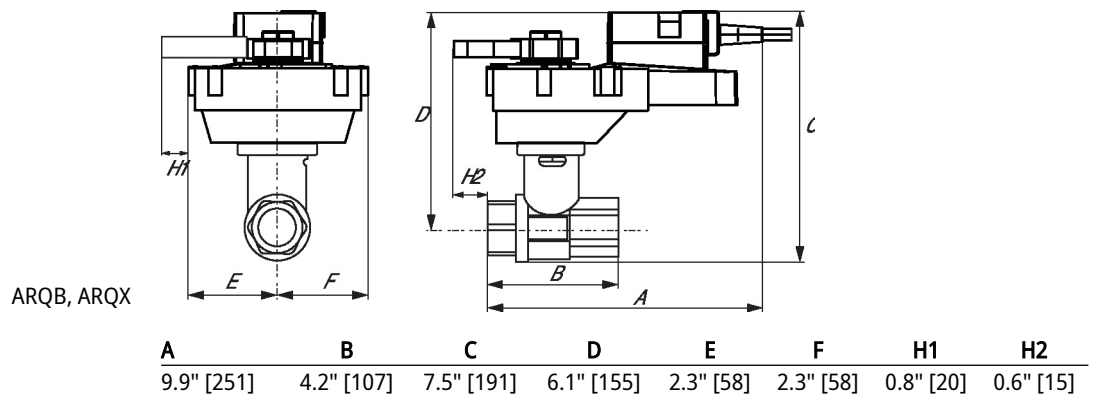
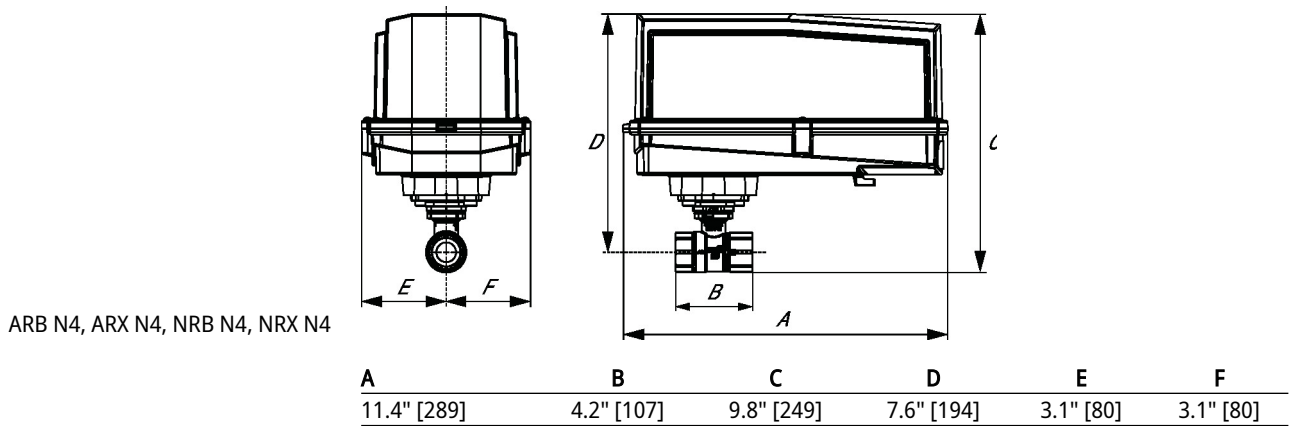
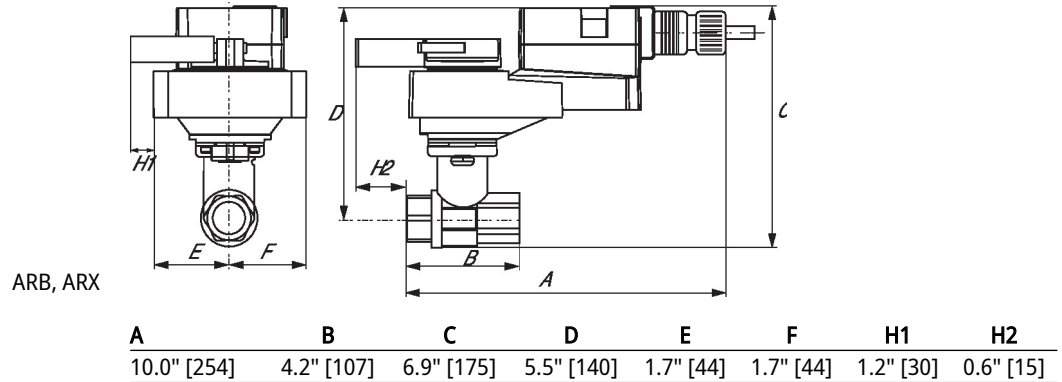


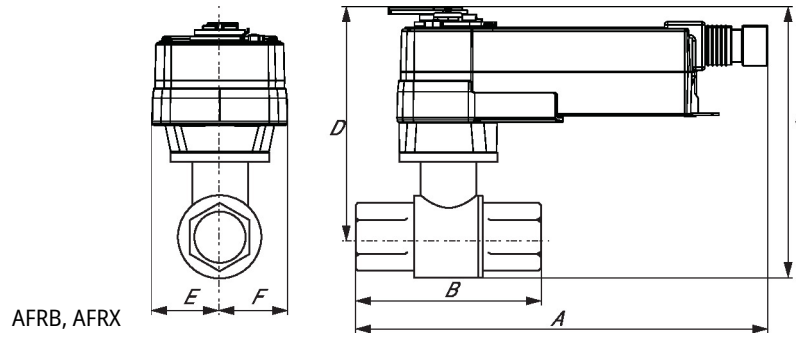
Two-way valves should be installed with the disc upstream.

## Dimensions

Type  
B250

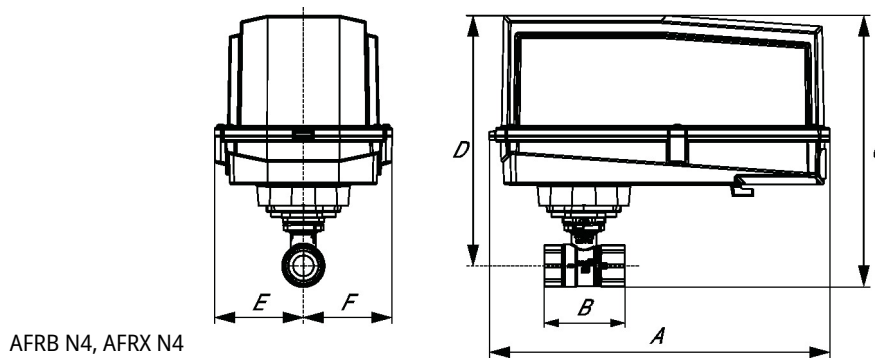
DN  
50





AFRB, AFRX

A	B	C	D	E	F
10.8" [275]	4.2" [107]	9.5" [241]	8.1" [206]	2.0" [51]	2.0" [51]



AFRB N4, AFRX N4

A	B	C	D	E	F
13.0" [330]	4.2" [107]	10.3" [262]	9.3" [235]	3.4" [86]	3.4" [86]



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Technical data


<b>Electrical data</b>	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	5 W
	Power consumption in rest position	2.5 W
	Transformer sizing	7.5 VA (class 2 power source)
	Electrical Connection	18 GA appliance or plenum cables, 3 ft [1 m], 10 ft [3 m] or 16ft [5 m], with or without 1/2" conduit connector
	Overload Protection	electronic throughout 0...95° rotation
<b>Functional data</b>	Direction of motion motor	selectable by ccw/cw mounting
	Direction of motion fail-safe	reversible with cw/ccw mounting
	Manual override	5 mm hex crank (3/16" Allen), supplied
	Angle of rotation	90°
	Running Time (Motor)	75 s / 90°
	Running time fail-safe	<20 s @ 20°C
	Noise level, motor	45 dB(A)
	Noise level, fail-safe	62 dB(A)
Position indication	Mechanical	
<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>Materials</b>	Housing material

**Footnotes** †Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3

Electrical installation

 **INSTALLATION NOTES**

 Actuators with appliance cables are numbered.

 Provide overload protection and disconnect as required.

- Actuators may also be powered by DC 24 V.
- Actuators may be powered in parallel. Power consumption must be observed.
- Parallel wiring required for piggy-back applications.
- 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

