BELIMO

Technical data sheet B250

2-way, Characterized Control Valve, Stainless Steel Ball and Stem



Picture may differ from product

5-year warranty

Type overview

Type	DN	Cv	Body Pressure Rating
B250	2" [50]	57	400 psi

Technical data

Functional data	Valve size [mm]	2" [50]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	0...250°F [-18...120°C]
	Close-off pressure	Δps 200 psi
	Flow characteristic	equal percentage
	Leakage rate	0% for A–AB
	Pipe connection	Internal thread NPT (female)
	Servicing	maintenance-free
	Flow Pattern	2-way
	Controllable flow range	75°
	No Characterized Disc	TRUE
Materials	Valve body	nickel-plated brass body
	Stem	stainless steel
	Stem seal	EPDM (lubricated)
	Seat	PTFE
	Characterized disc	No Disc (full flow)
	O-ring	EPDM (lubricated)
	Ball	stainless steel
Suitable actuators	Non Fail-Safe	ARB(X) ARQB(X) ARB(X) N4
	Spring	AFRB(X)

Safety notes

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

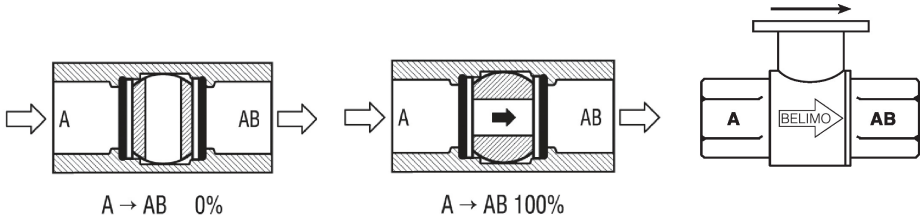
Product features

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

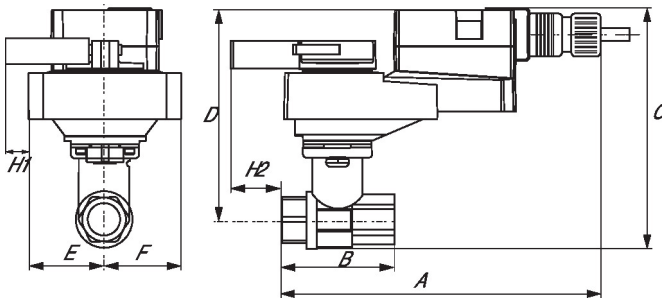
Two-way valves should be installed with the disc upstream.



Dimensions

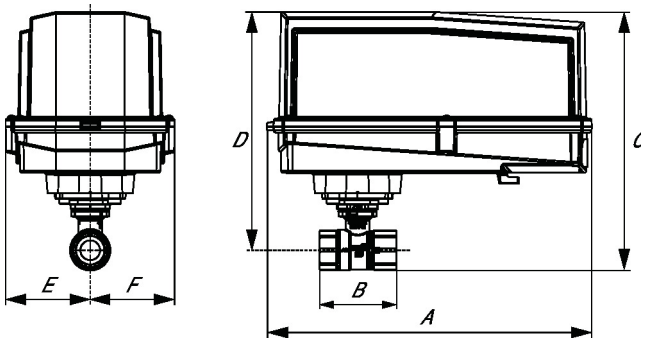
Type	DN	Weight
B250	2" [50]	2.8 lb [1.3 kg]

ARCB, ARCX, ARB, ARX



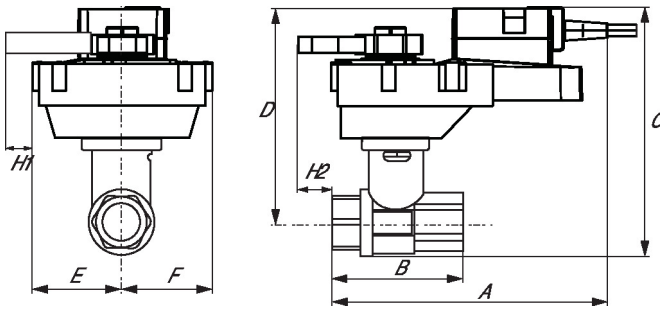
A	B	C	D	E	F	H1	H2
10.0" [254]	4.2" [107]	6.9" [175]	5.5" [140]	1.77" [44]	1.7" [44]	0.8" [20]	1.2" [30]

ARB N4, ARX N4, NRB N4, NRX N4



A	B	C	D	E	F
11.4" [289]	4.2" [107]	9.8" [249]	7.6" [194]	3.1" [80]	3.1" [80]

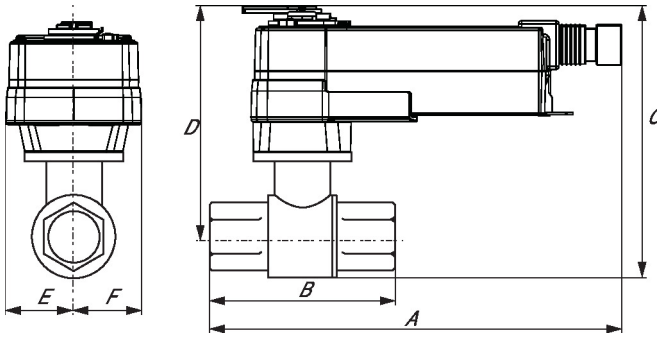
ARQB, ARQX



A	B	C	D	E	F	H1	H2
9.9" [251]	4.2" [107]	7.5" [191]	6.1" [155]	2.3" [58]	2.3" [58]	0.8" [20]	0.6" [15]

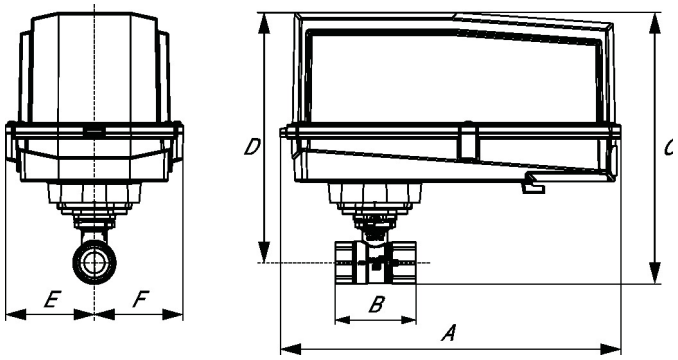
Dimensions

AFRB, AFRX



A	B	C	D	E	F
10.8" [275]	4.2" [107]	7.5" [191]	6.1" [155]	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]

Modulating, Non fail-safe, 24 V



Picture may differ from product

5-year warranty

Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...28.8 V / DC 21.6...28.8 V
	Power consumption in operation	2.5 W
	Power consumption in rest position	0.4 W
	Transformer sizing	5 VA
	Overload Protection	electronic thoughout 0...90° rotation
Functional data	Operating range Y	2...10 V
	Operating range Y note	4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)
	Input impedance	100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA
	Position feedback U	2...10 V
	Position feedback U note	Max. 1 mA
	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)	90 s / 90°
	Sound power level motor	45 dB(A)
	Position indication	Mechanical, pluggable
Safety data	Power source UL	Class 2 Supply
	Degree of protection NEMA/UL	NEMA 2
	Housing	UL Enclosure Type 2
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU
	Quality Standard	ISO 9001
	UL 2043 Compliant	Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
Weight	Weight	2.2 lb [1 kg]
Materials	Housing material	Galvanized steel and plastic housing

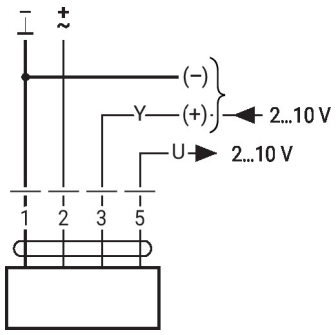
Technical data

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

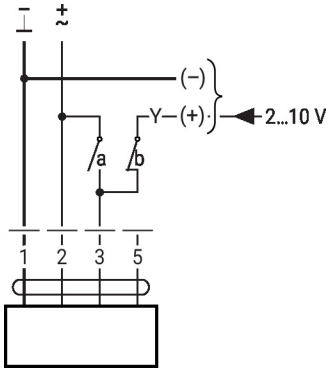
Electrical installation

Wire colors:
1 = black
2 = red
3 = white
5 = orange

AC/DC 24 V, modulating



Override control (frost protection circuit)



1	2	3 (a)	3 (b)	
				A–AB = 100%
				A–AB = 0%
			2 V	A–AB = 0%
			10 V	A–AB = 100%