







Technical data

	ona	

Valve Size	0.5" [15]		
Fluid	chilled or hot water, up to 60% glycol		
Fluid Temp Range (water)	0250°F [-18120°C]		
Body Pressure Rating	600 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	10		
Body pressure rating note	600 psi		
Cv Flow Rating	A-port: as stated in chart B-port: 70% of A – AB Cv		
Valve body	Nickel-plated brass body		
Stem seal	EPDM (lubricated)		
Seat	PTFE		
Pipe connection	NPT female ends		

Materials

Suitable actuators

Valve body	Nickel-plated brass body	
Stem seal	EPDM (lubricated)	
Seat	PTFE	
Pipe connection	NPT female ends	
0-ring	EPDM (lubricated)	
Ball	stainless steel	
Non-Spring	TR LRB(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

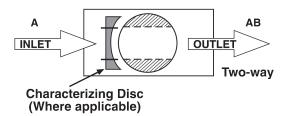
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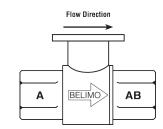
Product features

Application

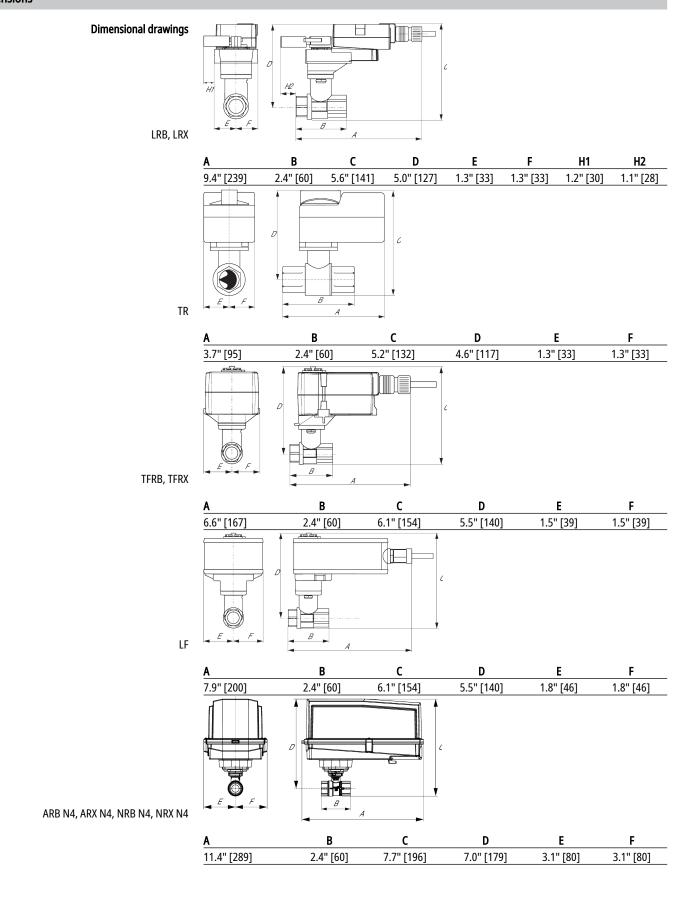
This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV box re-heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.

Flow/Mounting details

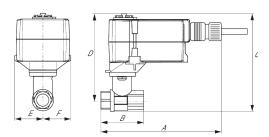




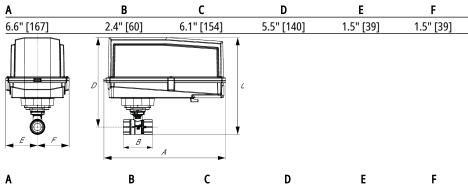








TFRB, TFRX



ARB N4, ARX N4, NRB N4, NRX N4

A	В	С	D	E	F
11.4" [289]	2.4" [60]	7.7" [196]	7.0" [179]	3.1" [80]	3.1" [80]

Modulating, Non-Spring Return, 24 V, 0 to 20 V **Phasecut**







al data		
Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	2.5 W
	Power consumption in rest position	1.2 W
	Transformer sizing	5 VA (class 2 power source)
	Electrical Connection	18 GA plenum cable with 1/2" conduit connector, degree of protection NEMA 2 / IP54, 3 ft [1 m] 10 ft [3 m] and 16ft [5 m]
	Overload Protection	electronic thoughout 090° rotation
Functional data	Operating range Y	020 V PhC
	Operating range Y note	Phasecut control (PhC) is only for the positive part of the sine wave (max. of 10 volts)
	Input Impedance	8000 Ω (50mW)
	Position feedback U	210 V
	Position feedback U note	Max. 0.5 mA
	Direction of motion motor	selectable with switch 0/1
	Manual override	external push button
	Angle of rotation	90°
	Running Time (Motor)	default 90 s, variable 90 or 150 s
	Running time motor variable	90 or 150 s
	Noise level, motor	35 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
	Quality Standard	ISO 9001
	Ambient temperature	-22122°F [-3050°C]
	Storage temperature	-40176°F [-4080°C]
	Ambient humidity	max. 95% r.H., non-condensing
	Servicing	maintenance-free

Electrical installation

Provide overload protection and disconnect as required.

Actuators may be connected in parallel. Power consumption and input impedance must be observed.

Actuators may also be powered by 24 VDC.

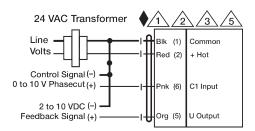
1.5 lb [0.70 kg]

Weight

Weight

Only connect common to negative (-) leg of control circuits.





Phasecut Control