



5-year warranty



Type overview

Type	DN
G250B-N	50

Technical data

Functional data	Valve Size	2" [50]
	Fluid	chilled or hot water, up to 60% glycol, steam
	Fluid Temp Range (water)	20...280°F [-7...138°C]
	Body Pressure Rating	ANSI Class 250, up to 400 psi below 150°F
	Flow characteristic	modified equal percentage
	Servicing	repack kits available
	Rangeability Sv	100:1
	Max Differential Pressure (Steam)	20 psi [103 kPa]
	Flow Pattern	2-way
	Leakage rate	ANSI Class VI
	Controllable flow range	stem up - open A – AB
	Cv	40
	Maximum Inlet Pressure (Steam)	35 psi [241 kPa]
	ANSI Class	250
	Body pressure rating note	up to 400 psi below 150°F
Materials	Valve body	Bronze
	Valve plug	brass
	Stem	stainless steel
	Stem seal	EPDM O-ring
	Seat	Bronze
	Pipe connection	NPT female ends
Suitable actuators	Non-Spring	LVB(X)
	Electronic fail-safe	LVKB(X)

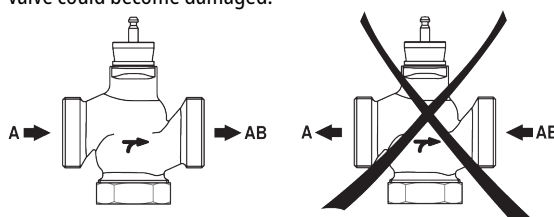
Safety notes



- **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
- The valve has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The valve does not contain any parts that can be replaced or repaired by the user.
- When determining the flow rate characteristic of controlled devices, the recognised directives must be observed.

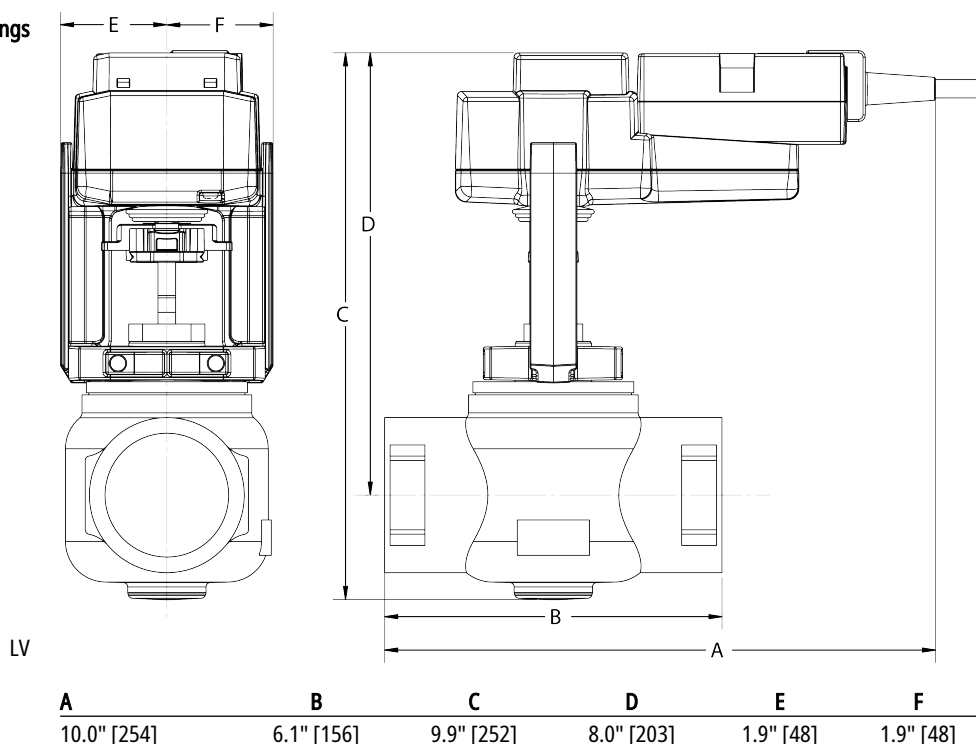
Installation notes

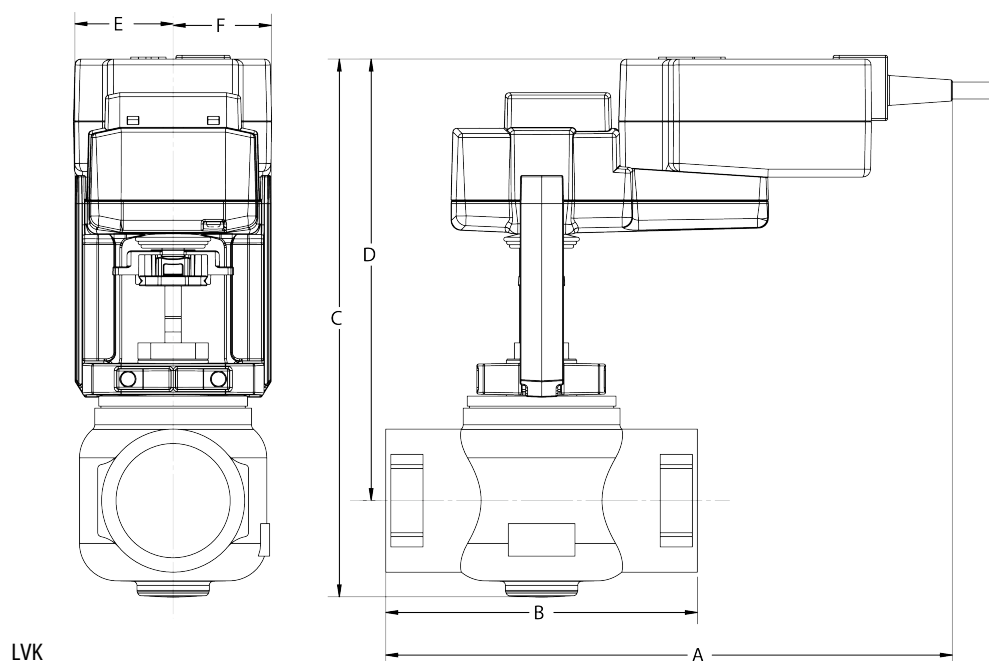
Flow direction The direction of flow, specified by an arrow on the housing, is to be complied with, since otherwise the valve could become damaged.



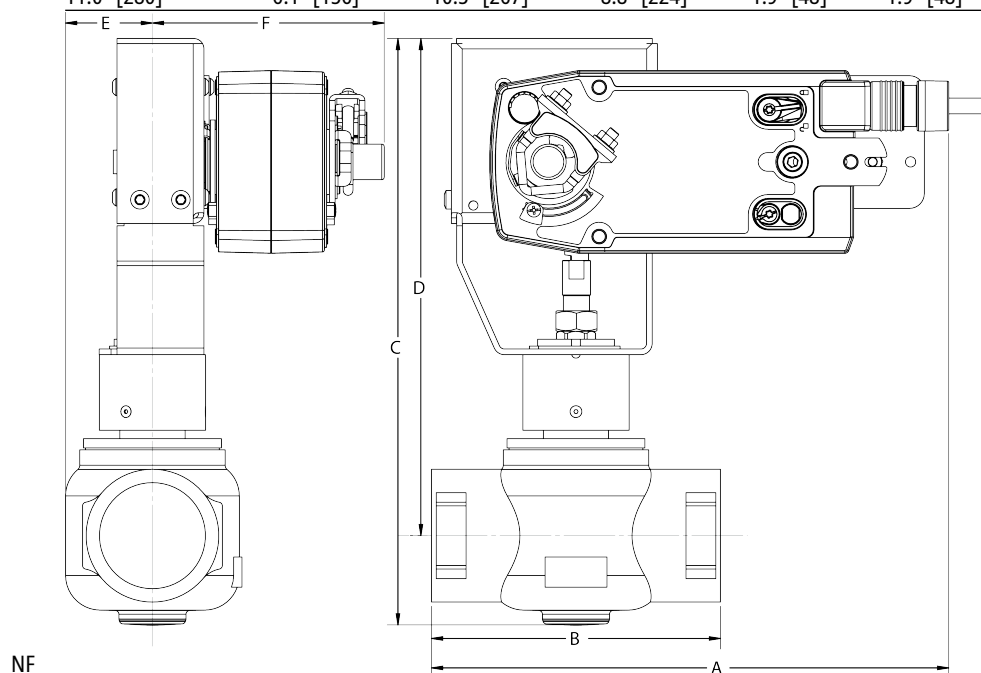
Dimensions

Dimensional drawings

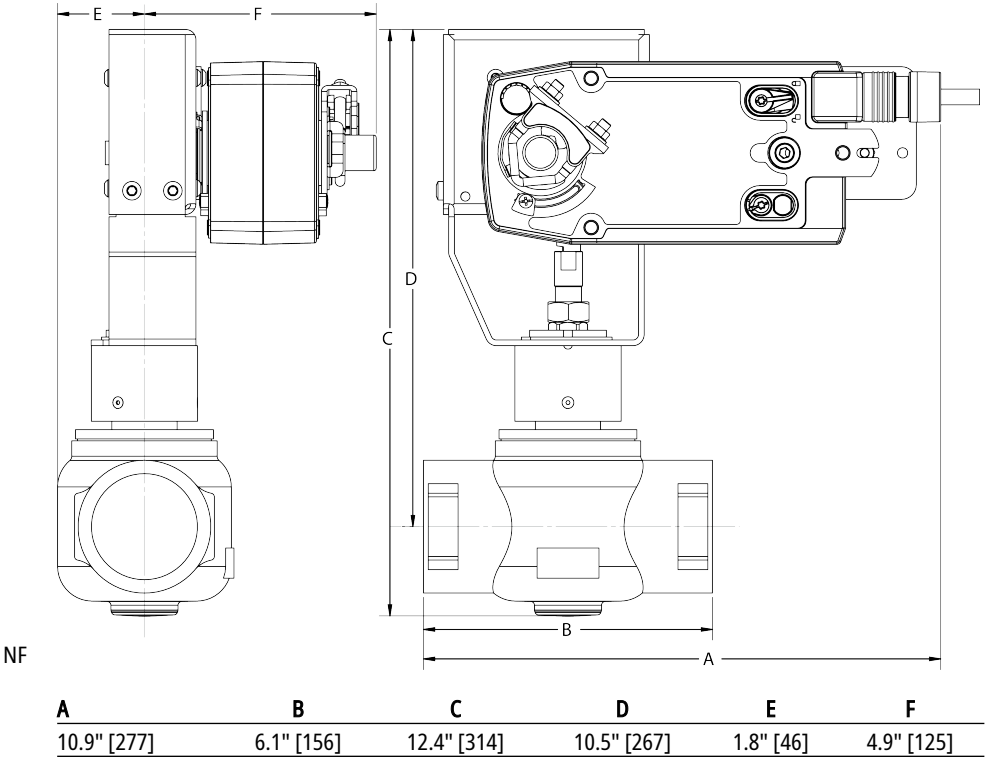




A	B	C	D	E	F
11.0" [280]	6.1" [156]	10.5" [267]	8.8" [224]	1.9" [48]	1.9" [48]



A	B	C	D	E	F
10.9" [277]	6.1" [156]	12.4" [314]	10.5" [267]	1.8" [46]	4.9" [125]





5-year warranty



Technical data

Electrical data	Nominal voltage	AC 24...240 V / DC 24...125 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	6 W
	Power consumption in rest position	2.5 W
	Transformer sizing	6 VA @ AC 24 V (class 2 power source), 6.5 VA @ AC 120 V, 9.5 VA @ AC 240 V
	Auxiliary switch	2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, one set at 10°, one adjustable 10...90°
	Switching capacity auxiliary switch	3 A resistive (0.5 A inductive) @ AC 250 V
	Electrical Connection	(2) 18 GA appliance cables with 1/2" conduit connectors, 3 ft [1 m],
	Overload Protection	electronic throughout 0...95° rotation
Functional data	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	95°,
	Running Time (Motor)	75 s
	Running time fail-safe	<20 s @ -4...122°F [-20...50°C], <60 s @ -49°F [-45°C]
	Noise level, motor	50 dB(A)
	Noise level, fail-safe	62 dB(A)
Safety data	Position indication	Mechanical
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2 UL Enclosure Type 2
	Agency Listing	UL 873 listed, CSA C22.2 No. 24 certified
	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
Weight	Servicing	maintenance-free
	Weight	4.5 lb [2.0 kg]

Safety notes



- PVC W'Shld for GV w/UGLK (AM)
- Battery Back Up System for SY(7-10)-110
- ZS-300 Mounting Bracket Set
- Weather shield - galvaneal 13x8x6" (LxWxD).
- Cable for ZTH US to diagnostic/programming socket.
- Cable for ZTH US to actuators w/o diagnostics socket.
- PC Tool computer programming interface, serial port.
- 3/4" shaft adaptor for ZS-300(-5).
- Battery Back Up System for SY(8-12)-110P
- 1/2" shaft adaptor, standard wth ZS-300(-5).

Electrical installation

✂ INSTALLATION NOTES

- (A) Actuators with appliance cables are numbered.
- (UP) Universal Power Supply (UP) models can be supplied with 24 VAC up to 240 VAC, or 24 VDC up to 125 VDC.
- 1 Provide overload protection and disconnect as required.
- 4 Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.
- ⚡ Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.
- ◆ 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.

