

# **ANSI-Flanged Globe Valves**

- chilled or hot water, up to 60% glycol, steam
- ANSI Class 250, up to 280 psi below 350°F
- 250
- Cast iron ASTM A126 Class B





Type overview		
Гуре		DN
G6125CS-250		125
Fechnical data		
Functional d	ata Valve size [mm]	5" [125]
	Fluid	chilled or hot water, up to 60% glycol, stean
	Fluid Temp Range (water)	32350°F [0176°C]
	Fluid Temp Range (steam)	32338°F [0170°C]
	Body Pressure Rating	ANSI Class 250, up to 280 psi below 350°F
	Flow characteristic	equal percentage
	Leakage rate	ANSI Class III
	Pipe connection	Flange
		for use with ASME/ANSI class 250
	Servicing	repack/rebuild kits available
	Rangeability Sv	100:1
	Max Differential Pressure (Steam)	50 psi [345 kPa]
	Flow Pattern	2-way
	Controllable flow range	stem up - open A – AB
	Cv	263
	Maximum Inlet Pressure (Steam)	100 psi [690 kPa]
Mater	als Valve body	Cast iron - ASTM A126 Class B
	Valve plug	Stainless steel
	Stem	316 stainless steel
	Stem seal	NLP EPDM (no lip packing)
	Seat	Stainless steel AISI 316

Suitable actuators

Non Fail-Safe

Electronic fail-safe

EVB(X)

AVKB(X)



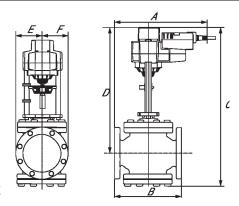
# Safety notes



- 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 authorized specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with 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.

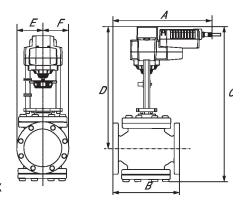
# **Dimensions**

Туре	DN	Weight
G6125CS-250	125	150 lb [67 kg]



EVB, EVX, RVB, RVX

Α	В	С	D	E	F	Number of Bolt Holes
16.6" [422]	15.5" [394]	25.4" [646]	17.5" [445]	5.5" [140]	5.5" [140]	8



AVKB, AVKX

Α	В	D	E	F	Number of Bolt Holes
15.5" [394]	16.6" [422]	17.5" [445]	5.5" [140]	5.5" [140]	8



# Modulating, Non fail-safe, 24 V





5-year warranty





2 / IP54	echnical data		
Nominal voltage range   AC 19.228.8 V / DC 21.628.8 V   Power consumption in operation   5 W	Electrical data	Nominal voltage	AC/DC 24 V
Power consumption in operation       5 W         Power consumption in rest position       1.5 W         Transformer sizing       7.5 VA         Electrical Connection       18 GA plenum cable, 1 m, with 1/2" NPT conduit connector, degree of protection 2 / IP54         Overload Protection       electronic throughout full stroke         Electrical Protection       actuators are double insulated         Functional data       Actuating force motor       2500 N [560 lbf]         Operating range Y       210 V         Operating range Y note       420 mA w/ ZG-R01 (500 Ω, 1/4 W resist Input impedance         Input impedance       100 kΩ for 210 V (0.1 mA), 500 Ω for 4mA         Position feedback U       210 V         Position feedback U note       Max. 0.5 mA         Direction of motion motor       selectable with switch 0/1         Manual override       5 mm hex crank (3/16" Allen), supplied         Stroke       2" [50 mm]         Running Time (Motor)       90 s /         Running time motor variable       90 or 150 s         Noise level, motor       60 dB(A)         Position indication       Mechanical, with pointer         Safety data       Power source UL       Class 2 Supply         Degree of protection IEC/EN       IP54         De		Nominal voltage frequency	50/60 Hz
Power consumption in rest position Transformer sizing Transformer selection Transformer selectable with switch G500 Ω, 1/4 W resist Transformer sizing Transformer sizing Transformer sizing Transformer selectable with switch G500 Ω, 1/4 W resist Transformer se		Nominal voltage range	AC 19.228.8 V / DC 21.628.8 V
Transformer sizing 7.5 VA  Electrical Connection 18 GA plenum cable, 1 m, with 1/2" NPT conduit connector, degree of protection 2 / IP54  Overload Protection electronic throughout full stroke Electrical Protection actuators are double insulated  Functional data  Actuating force motor 2500 N [560 lbf]  Operating range Y 210 V  Operating range Y 100 kΩ for 210 V (0.1 mA), 500 Ω for 4. mA  Position feedback U 210 V  Position feedback U 100 kΩ for 210 V (0.1 mA), 500 Ω for 4. mA  Position feedback U 100 kΩ for 210 V (0.1 mA), 500 Ω for 4. mA  Direction of motion motor selectable with switch 0/1  Manual override 5 mm hex crank (3/16" Allen), supplied Stroke 2" [50 mm]  Running Time (Motor) 90 s /  Running time motor variable 90 or 150 s  Noise level, motor 60 dB(A)  Position indication Mechanical, with pointer  Safety data  Power source UL Class 2 Supply  Degree of protection IEC/EN 1P54  Degree of protection NEMA/UL NEMA 2  Enclosure UL Enclosure Type 2  Agency Listing CULus acc. to UL60730-1A/-2-14, CAN/CS E60730-1:02		Power consumption in operation	5 W
Electrical Connection  18 GA plenum cable, 1 m, with 1/2" NPT conduit connector, degree of protection 2 / IP54  Overload Protection electronic throughout full stroke electronic throughout full stroke actuators are double insulated  Functional data  Actuating force motor 2500 N [560 lbf]  Operating range Y 210 V  Operating range Y 100 kΩ for 210 V (0.1 mA), 500 Ω for 4mA  Position feedback U 210 V  Position feedback U 100 kΩ for 210 V (0.1 mA), 500 Ω for 4mA  Position feedback U 100 mAx. 0.5 mA  Direction of motion motor selectable with switch 0/1  Manual override 5 mm hex crank (3/16" Allen), supplied Stroke 2" [50 mm]  Running Time (Motor) 90 s /  Running Time (Motor) 90 s r 150 s  Noise level, motor 60 dB(A)  Position indication Mechanical, with pointer  Safety data  Power source UL Class 2 Supply  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/CS E60730-1:02		Power consumption in rest position	1.5 W
Conduit connector, degree of protection 2 / IPS4  Overload Protection electronic throughout full stroke Electrical Protection actuators are double insulated  Functional data  Actuating force motor 2500 N [560 lbf] Operating range Y 210 V Operating range Y note 420 mA w/ ZG-R01 (500 Ω, 1/4 W resist Input impedance 100 kΩ for 210 V (0.1 mA), 500 Ω for 4. mA  Position feedback U 210 V Position feedback U note Max. 0.5 mA  Direction of motion motor selectable with switch 0/1 Manual override 5 mm hex crank (3/16" Allen), supplied Stroke 2" [50 mm] Running Time (Motor) 90 s / Running time motor variable 90 or 150 s  Noise level, motor 60 dB(A) Position indication Mechanical, with pointer  Safety data  Power source UL Class 2 Supply Degree of protection IEC/EN IP54 Degree of protection NEMA/UL NEMA 2 Enclosure UL Enclosure Type 2 Agency Listing Cultus acc. to UL60730-1A/-2-14, CAN/CS E60730-1:02		Transformer sizing	7.5 VA
Functional data  Actuating force motor  Operating range Y  Operating range Y note  Input impedance  Position feedback U  Position of motion motor  Manual override  Stroke  Z" [50 mm]  Running Time (Motor)  Running time motor variable  Noise level, motor  Safety data  Power source UL  Degree of protection NEMA/UL  Enclosure  Agency Listing  Actuating force motor  Actuating force motor  2500 N [560 lbf]  2500 N [500 N [500 N ] [500 N ]  2500 N [500 N ]  2500		Electrical Connection	conduit connector, degree of protection NEMA
Functional data  Actuating force motor  Operating range Y  Operating range Y  Operating range Y note  Input impedance  Input impedance  Position feedback U  Position feedback U note  Max. 0.5 mA  Direction of motion motor  Selectable with switch 0/1  Manual override  Stroke  2" [50 mm]  Running Time (Motor)  Running time motor variable  Noise level, motor  Position indication  Safety data  Power source UL  Degree of protection IEC/EN  Degree of protection NEMA/UL  Enclosure  Agency Listing  Actuating force motor  2500 N [560 lbf]  210 V  210 V  610 V		Overload Protection	electronic throughout full stroke
Operating range Y Operating range Y note A20 mA w/ ZG-R01 (500 Ω, 1/4 W resist Input impedance 100 kΩ for 210 V (0.1 mA), 500 Ω for 4. mA  Position feedback U Position feedback U note Max. 0.5 mA Direction of motion motor Selectable with switch 0/1 Manual override Stroke 2" [50 mm] Running Time (Motor) 90 s / Running time motor variable Noise level, motor Fosition indication  Safety data Power source UL Degree of protection IEC/EN Degree of protection NEMA/UL Enclosure Agency Listing  CLass 2 Supply  DUL Enclosure Type 2  Agency Listing  CULus acc. to UL60730-1A/-2-14, CAN/CS E60730-1:02		Electrical Protection	actuators are double insulated
Operating range Y note Input impedance Input inpu	Functional data	Actuating force motor	2500 N [560 lbf]
Input impedance    100 kΩ for 210 V (0.1 mA), 500 Ω for 4. mA   Position feedback U   210 V     Position feedback U note   Max. 0.5 mA     Direction of motion motor   selectable with switch 0/1     Manual override   5 mm hex crank (3/16" Allen), supplied     Stroke   2" [50 mm]     Running Time (Motor)   90 s /     Running time motor variable   90 or 150 s     Noise level, motor   60 dB(A)     Position indication   Mechanical, with pointer     Safety data   Power source UL   Class 2 Supply     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/CS     E60730-1:02		Operating range Y	210 V
mA  Position feedback U  Position feedback U note  Max. 0.5 mA  Direction of motion motor  Manual override  Stroke  2" [50 mm]  Running Time (Motor)  Running time motor variable  Noise level, motor  Position indication  Safety data  Power source UL  Degree of protection IEC/EN  Degree of protection NEMA/UL  Enclosure  Agency Listing  mA  210 V  Max. 0.5 mA  Safety doll with switch 0/1  Manual override  5 mm hex crank (3/16" Allen), supplied  5 mm hex crank (3/16" Allen), supplied  5 mm hex crank (3/16" Allen), supplied  6 dB(A)  90 or 150 s  Noise level, motor  60 dB(A)  Position indication  Mechanical, with pointer  Class 2 Supply  Degree of protection IEC/EN  IP54  Degree of protection NEMA/UL  Enclosure  UL Enclosure Type 2  CULus acc. to UL60730-1A/-2-14, CAN/CS  E60730-1:02		Operating range Y note	420 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)
Position feedback U note Max. 0.5 mA  Direction of motion motor selectable with switch 0/1  Manual override 5 mm hex crank (3/16" Allen), supplied  Stroke 2" [50 mm]  Running Time (Motor) 90 s /  Running time motor variable 90 or 150 s  Noise level, motor 60 dB(A)  Position indication Mechanical, with pointer  Safety data Power source UL Class 2 Supply  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/CS E60730-1:02		Input impedance	100 k $\Omega$ for 210 V (0.1 mA), 500 $\Omega$ for 420 mA
Direction of motion motor  Manual override  Stroke  2" [50 mm]  Running Time (Motor)  Running time motor variable  Noise level, motor  Position indication  Power source UL  Degree of protection IEC/EN  Degree of protection NEMA/UL  Enclosure  Agency Listing  Direction Manual override  Sam hex crank (3/16" Allen), supplied  5 mm hex crank (3/16" Allen), supplied  6 degree of mexical supplied  Closs 2 Supply  Degree of degree of protection IEC/EN  NEMA 2  Enclosure  UL Enclosure Type 2  Agency Listing  CULus acc. to UL60730-1A/-2-14, CAN/CS E60730-1:02		Position feedback U	210 V
Manual override 5 mm hex crank (3/16" Allen), supplied Stroke 2" [50 mm] Running Time (Motor) 90 s / Running time motor variable 90 or 150 s Noise level, motor 60 dB(A) Position indication Mechanical, with pointer  Safety data Power source UL Class 2 Supply 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/CS E60730-1:02		Position feedback U note	Max. 0.5 mA
Stroke 2" [50 mm] Running Time (Motor) 90 s / Running time motor variable 90 or 150 s Noise level, motor 60 dB(A) Position indication Mechanical, with pointer  Safety data Power source UL Class 2 Supply 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/CS E60730-1:02		Direction of motion motor	selectable with switch 0/1
Running Time (Motor)  Running time motor variable  Noise level, motor  Position indication  Safety data  Power source UL  Degree of protection IEC/EN  Degree of protection NEMA/UL  Enclosure  Agency Listing  Running Time (Motor)  90 s /  Running time motor variable  90 or 150 s  60 dB(A)  Class 2 Supply  IP54  Degree of protection IEC/EN  NEMA 2  UL Enclosure Type 2  cULus acc. to UL60730-1A/-2-14, CAN/CS  E60730-1:02		Manual override	5 mm hex crank (3/16" Allen), supplied
Running time motor variable  Noise level, motor  Position indication  Safety data  Power source UL  Degree of protection IEC/EN  Degree of protection NEMA/UL  Enclosure  Agency Listing  Running time motor variable  90 or 150 s  60 dB(A)  Mechanical, with pointer  Class 2 Supply  IP54  Degree of protection NEMA/UL  NEMA 2  UL Enclosure Type 2  cULus acc. to UL60730-1A/-2-14, CAN/CS  E60730-1:02		Stroke	2" [50 mm]
Noise level, motor Position indication  Mechanical, with pointer  Class 2 Supply  Degree of protection IEC/EN Degree of protection NEMA/UL Enclosure Agency Listing  Noise level, motor 60 dB(A)  Mechanical, with pointer  Class 2 Supply  IP54  Degree of protection NEMA/UL NEMA 2  UL Enclosure Type 2  Agency Listing  cULus acc. to UL60730-1A/-2-14, CAN/CS E60730-1:02		Running Time (Motor)	90 s /
Position indication Mechanical, with pointer  Power source UL Class 2 Supply  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/CS E60730-1:02		Running time motor variable	90 or 150 s
Safety data  Power source UL  Degree of protection IEC/EN  Degree of protection NEMA/UL  Enclosure  Agency Listing  Class 2 Supply  IP54  NEMA 2  UL Enclosure Type 2  CULus acc. to UL60730-1A/-2-14, CAN/CS  E60730-1:02		Noise level, motor	60 dB(A)
Degree of protection IEC/EN  Degree of protection NEMA/UL  Enclosure  UL Enclosure Type 2  Agency Listing  cULus acc. to UL60730-1A/-2-14, CAN/CS E60730-1:02		Position indication	Mechanical, with pointer
Degree of protection NEMA/UL  Enclosure  UL Enclosure Type 2  Agency Listing  cULus acc. to UL60730-1A/-2-14, CAN/CS E60730-1:02	Safety data	Power source UL	Class 2 Supply
Enclosure  UL Enclosure Type 2  Agency Listing  CULus acc. to UL60730-1A/-2-14, CAN/CS E60730-1:02		Degree of protection IEC/EN	IP54
Agency Listing cULus acc. to UL60730-1A/-2-14, CAN/CS E60730-1:02		Degree of protection NEMA/UL	NEMA 2
E60730-1:02		Enclosure	UL Enclosure Type 2
( F acc to 2014/30/FU and 2014/35/FU		Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02 CE acc. to 2014/30/EU and 2014/35/EU
Quality Standard ISO 9001		Quality Standard	



# Technical data Safety data 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 Ambient temperature Storage temperature -40...176°F [-40...80°C]

Weight Weight maintenance-free maintenance-free

Materials Housing material Die cast aluminium and plastic casing

### **Footnotes**

† Use flexible metal conduit. Push the listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control pollution degree 3.

### **Electrical installation**

# **X** INSTALLATION NOTES

🐧 Actuators may also be powered by DC 24 V.

 $\underline{\chi}$  A 500  $\Omega$  resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.

Actuators with plenum cable do not have numbers; use color codes instead.

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

