



Globe Control Valve

An ISO 9001:2008 Certified Company



Steam Distribution | Steam Generation | Customized Package Solution | Steam Accessories | Steam Services

Globe Control Valve

Applications

VOLFRAM Globe Control Valve for Steam and Compressed Air

Nominal valve sizes ½" to 10" (15 to 250 mm) Pressure ratings ANSI Class 125 to 300

Temperatures – 320 °F to +800 °F (– 196 °C to +427 °C)

The control valves consist of a body with trim, bonnet and pneumatic actuator, optionally with metal bellows or insulating extension. The valves may be also equipped with electric, electrohydraulic, or hand-operated actuators, as well as control accessories and other instrumentation.



Features:

- Modular design, rugged and heavy duty construction, full range of body and trim materials
- One-piece ultra-rigid valve bonnet and yoke up to size 6"
- Field retrofittable extension bonnets and metal bellows seals
- Many configurations, e.g. Cryogenic or 'Lethal service'
- Self-adjusting, live-loaded PTFE V-ring stuffing box
- Port-guided V-port asymmetric plugs above CV 20 standard
- Excellent dynamic response and high trim stability
- Self-locking seats, exchangeable for various CV values
- Low height, reversible, multi-spring/rolling diaphragm actuator
- Complete selection of actuators options, positioners and control accessories

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Standard Versions:

- Body ASTM Cast A 126 Cl. B, A 216 WCB, A 351 CF8M, alternatively Forged A105 or A 182 F316
- End connections ANSI Class 125 with FF-Flanges, Class 250 Female threaded NPT, Class 150 or 300 with RF-Flanges
- Packing PTFE V-ring spring-loaded/self-adjusting, temperature range 15 °F to 430 °F (– 10 °C to + 220 °C)
- Trim equal percentage characteristic , metal-to-metal seal

Fail-safe Action:

Depending on the arrangement of the diaphragm plate and springs within the actuator, the control valve offers two different fail-safe actions upon loss of air supply (see Technical Data Sheets T 8310 and T8311 for details):

Actuator "extends" stem (fail-close)

The actuator springs close the valve upon loss of air supply.

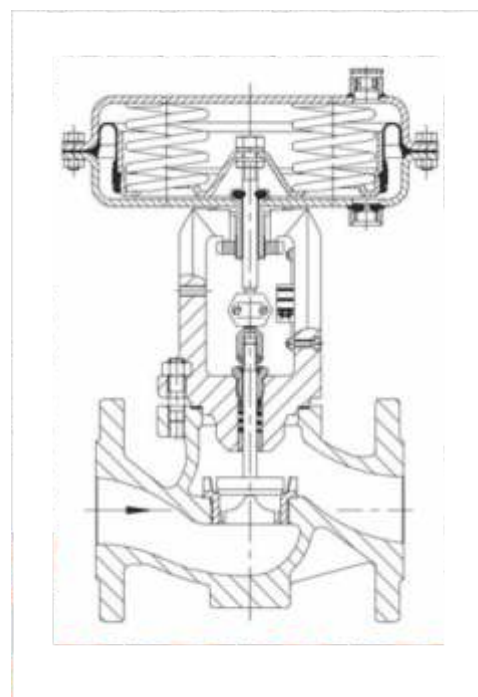
Actuator "retracts" stem (fail-open)

The actuator springs open the valve upon loss of air supply.

Notes on the differential pressure tables 4a to 5d

The differential pressure tables listed have been prepared under the following conditions:

- Process medium flow directed against the closing direction of the valve plug (flow-to-open valve)
- Version with PTFE stuffing box
- With the maximum differential pressures specified, the leak-age rates specified in Table 1 (ANSI/FCI – Class IV) are not exceeded.
- The differential pressure specified must not exceed the pressure rating (see Pressure-Temperature Diagram).
- For valve sizes ½" to 3" with actuators containing an effective diaphragm area of 700 cm² (108 in²), the maximum permissible supply pressure is 60 psi (4 bar).



Technical Data:

Nominal valve size	in		1 ... 6		½ ... 2		½ ... 10		½, 1, 1½, 2, 3		½, 1, 1½, 2, 3	
Body material, ASTM	A 126 Class B		A 216 Grade WCB		A 105		A 351 Grade CF8M		A 182 Grade F316			
End connection	Flange		Thread		Flange		Flange					
Form of connection	Flat face		NPT-F		Raised Face		Raised Face					
Pressure rating, ANSI (B16.34) Class	125		250		150 or 300		300		150 or 300		300	
Face-to-face dimension	According to ANSI/ISA S-75.03 (Flanges according to ASME/ANSI B16.5)											
Seat/plug seal	Metal, soft or lapped-in metal											
Packing design	V-ring, spring-loaded, self-adjusting											
Flow direction (standard)	Flow to open (FTO)											
Characteristic	Equal percentage or linear											
Terms for valve sizing according to ISAS75.02 and IEC 60 534, parts 2-1 and 2-2	FL = 0.95, xT = 0.75 (at 75% rated travel)											
Rangeability	50:1 for sizes ½" ... 2" 30:1 for sizes 2½" ... 10"											
Temperature ranges °F (°C) Max. operating pressures acc. to pressure-temperature diagram												
Body without insulating section	15 ... 430 °F (-10 ... 220 °C)											
Leakage rate class according to ANSI/FCI F70-2												

Electro-Pneumatic Positioner

Applications

VOLFRAM The Electro-Pneumatic Positioner YT-1000L is used for operation of pneumatic linear valve actuators by means of electrical controller or control system with an analog output signal of DC 4 to 20 mA or split ranges.

- Simple zero and span adjustment
- No resonance between 5-200 Hz
- Auto/Manual Switch
- RA v.s. DA action and 1/2 split range setting by simple adjustment
- Internal feedback signal is available as an option (weather proof only)



- Easy maintenance
- Precise calibration with SPAN and ZERO adjustments
- Simple conversion to direct acting or reverse acting
- 1/2 split range available
- Rugged aluminum housing with corrosion-resistant coating
- Vibration resistant design
- Stainless steel gauges standard
- Restricted pilot valve orifice kit for small actuators included
- ATEX - certified flameproof Eex md IIB T5
- NEPSI - certified flameproof Ex dmb IIB+h₂ T6
- ATEX - certified flameproof Ex dmb IIC T6/T5
- ATEX - certified intrinsically safe EX ia IIC T6

Item - Type	Single	Double
Input Signal	4-20 mA DC	
Impedance	250 ± 15 Ω	
Supply Pressure	0.14 - 0.7 M Pa (1.4 - 7 Bar)	
Stroke	10 - 150 mm	
Air Connection	PT (NPT,G) 1/4	
Gauge Connection	PT (NPT) 1/8	
Conduit	G (PF, NPT) 1/2, M20	
Ingress Protection	IP 66	
Operating Temperature	-20°C - 70°C (-4 - 158°F)	
Operating Explosion	-20°C - 60°C (-4 - 140°F)	
Linearity	+ 1% F.S	+ 1% F.S.
Hysteresis	± 1% F.S.	
Sensitivity	± 0.2% F.S.	± 0.5% F.S.
Repeatability	± 0.5% F.S.	
Air Consumption	2.5 LPM (Sup=0.147Mpa)	
Flow Capacity	80LPM (Sup=0.14Mpa)	
Material	Aluminum Diecasting	
Weight	2.7 Kg (6.1 lb)	

Volfram Boiler and Steam Accessories



Steam Boilers



Condensate Recovery System



Rotating Plug Float Trap



Flow Meter



Pressure Gauge



SS Safety Valve



Non Return Valve



Steam Injector



Control Valve