



ELECTRO-PNEUMATIC CONTROL VALVE

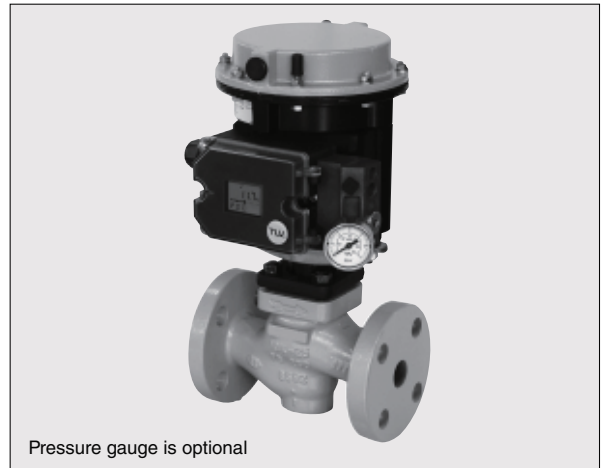
MODEL CV5 CAST IRON, CAST STEEL, STAINLESS STEEL

COMPACT MULTI-PURPOSE CONTROL VALVE WITH ELECTRO-PNEUMATIC POSITIONER

Features

Electro-pneumatic globe valve with I/P positioner for steam and non-hazardous fluids.

1. Pneumatic actuator with digital I/P positioner in a compact configuration.
2. Rolling actuator diaphragm ensures linearity over the operating stroke and maximizes life.
3. Self-adjusting positioner features zero calibration by auto-tuning, which ensures tight shut-off and improves control during low flow.
4. Positioner LCD allows simple operation with capacitive keys and displays valve travel and error codes.
5. Self-adjusting chevron packing minimizes seal leaks, stem wear and stiction/hysteresis problems.
6. Multi-spring actuator is highly efficient, and its low overall height facilitates compact installation.



Pressure gauge is optional

Specifications

VALVE

Model		CV5											
Body Material		Cast Iron (EN-GJL-250)				Cast Steel (1.0619)				Cast Stainless Steel (1.4408)			
Connection		Flanged PN 16 DIN EN 1092-2						Flanged PN 40 DIN EN 1092-1*					
Size (DN)**		15	20	25	32	40	50	15	20	25	32	40	50
Maximum Operating Pressure (barg)	PMO	13						25		17		10	
Maximum Operating Temperature (°C)	TMO	200						220					
Seat Plug Sealing/Leak Rate Class (IEC 60534-4)		Metal to Metal / Class IV											
Characteristic		Equal percentage											
Rangeability		50 : 1											
Applicable Fluids***		Steam, Water, Air											

* ASME standards also available ** Sizes up to DN 100 available upon request *** Do not use with toxic, flammable or otherwise hazardous fluids. 1 bar = 0.1 MPa
 PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 13 (Cast Iron), 25 (Cast Steel, Cast Stainless Steel)
 Maximum Allowable Temperature (°C) TMA: 200 (Cast Iron), 220 (Cast Steel, Cast Stainless Steel)

ACTUATOR* / POSITIONER

Fail-safe Position	Valve CLOSED**	Valve OPEN***
Motive Medium	Oil-free air, filtered to 5 µm	
Electrical Input Signal (mA)	4 to 20	
Load Impedance (V)	Max. 6.3	
Air Supply Pressure Range for Positioner (barg)	3.7 to 6	
Ambient Temperature Range (°C)	- 20 to 80	
Protection Class	IP 66	
Intrinsically Safe Rating (optional)	ATEX II 2G Ex ia IIC T4	

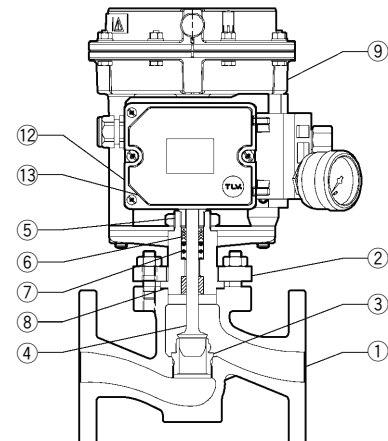
* Pneumatic actuators, various electric actuators available upon request
 ** Air to open *** Air to close



CAUTION To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	DIN EN
①	Valve Body	Cast Iron	EN-GJL-250
		Cast Steel	1.0619
		Cast Stainless Steel	1.4408
②	Valve Bonnet	Carbon Steel	1.0460
		Stainless Steel	1.4401
③	Valve Seat	Stainless Steel	1.4305
		Valve Seat (DN 32 – 50)	Stainless Steel
④	Plug and Stem	Stainless Steel	1.4305
⑤	Guide Bushing	Stainless Steel	1.4104
⑥	Stuffing Box V-ring	Fluorine Resin with Carbon	PTFE
⑦	Stuffing Box Spring	Stainless Steel	1.4310
⑧	Body Gasket	Graphite	—
⑨	Actuator Body	Aluminum GD-Al Si 12	—
⑩	Diaphragm**	Nitrile Rubber NBR	NBR
⑪	Actuator Stem**	Stainless Steel	1.4305
⑫	Positioner Housing	Polyphthalamide PPA	—
⑬	Positioner Cover	Polycarbonate PC	—
⑭	Yoke**	Carbon Steel Zinc Coated	1.0715

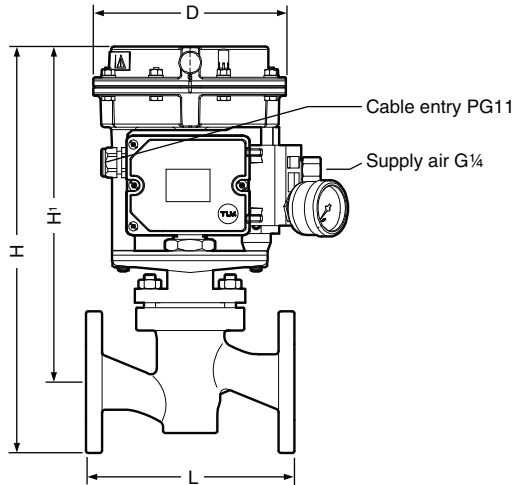
* Equivalent materials ** Not shown



NOTE: Pressure gauge is optional

Dimensions

● **CV5 Flanged**



NOTE: Pressure gauge is optional

CV5 Flanged (mm)

DN	L		Actuator Area (cm ²)	H	H ₁	φ D	Weight* (kg)
	DIN EN 1092-2 PN16	PN25/40					
15	130	130	120	332	292	168	9.5
20	150	150					10.5
25	160	160					11.5
32	180	180		15.5			
40	200	200		16.5			
50	230	230	369	297	19.5		

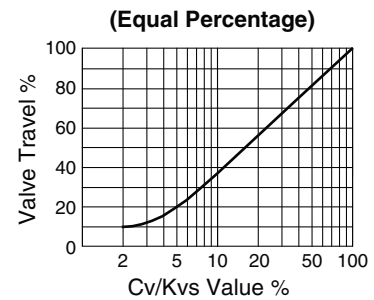
ASME flanges available
 * Approximate weight for PN 16; add 15% for PN 25/40

Cv & Kvs Values

DN	15	20	25	32	40	50
Kvs (DIN)	4	6.3	10	16	25	35
Cv (UK)	3.9	6.1	9.7	16	24	34
Cv (US)	4.7	7.4	12	19	29	41
Seat Diameter (mm)	12	24	32	38	48	

Other options for Kvs values available upon request

Characteristic Graph



Options

Item	Options
Valve Plug	Plug for soft sealing to Class VI (IEC 60534-4)
Limit Switches	1 or 2 Limit switches
Motorized Electric Actuator	Details on request
Pneumatic Actuator without Positioner	Details on request
Intrinsically Safe Positioner	ATEX II 2G Ex ia IIC T4
Pressure Gauge for Positioner	Details on request

ISO 9001/ISO 14001

TLV CO., LTD.
 Kakogawa, Japan
 is approved by LRQA Ltd. to ISO 9001/14001

