



# ELECTRO-PNEUMATIC CONTROL VALVE

## MODEL CV5 CAST IRON CAST STEEL

### Features

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

1. One combination I-P positioner/actuator (I-P positioned actuator) fits all size valves, to minimize spare inventory requirements.
2. Integrated I-P positioner design simplifies installation. Only a single air and electrical signal needed, with no additional instrumentation or mounting kit requirements.
3. Top mounting of the I-P positioned actuator eliminates passerby damage and misadjustment associated with side-mount components.
4. Positioner vents air automatically to simplify zero setting which ensures tight shut-off and improves control during low flow.
5. Multi-spring actuator is highly efficient, and its low overall height facilitates compact installation.
6. Self-adjusting chevron packing minimizes seal leaks, stem wear and stiction/hysteresis problems.
7. Rolling actuator diaphragm ensures linearity over the operating stroke and maximizes life.



### Specifications

#### VALVE

Model	CV5											
Body Material	Cast Iron GG-25, WN 0.6025						Cast Steel GP240GH, WN 1.0619					
Connection	Flanged PN 16 DIN 2526 Form C						Flanged PN 40 DIN 2526 Form C*					
Size (DN)	15	20	25	32	40	50	15	20	25	32	40	50
Maximum Operating Pressure (barg) PMO	13						10					
Maximum Operating Temperature (°C) TMO	200						220					
Seat Plug Sealing/Leak Rate Class (DIN EN 60 534)	Metal to Metal / Class IV											
Characteristic	Equal percentage											
Rangeability	50 : 1											

\* ASME standards also available

1 bar = 0.1 MPa

#### ACTUATOR

Actuator Area (cm <sup>2</sup> )	120	
Fail-safe Position	Valve CLOSED*	Valve OPEN**
Bench Range (bar)	2.1 – 3.3	0.4 – 1.4
Electrical Input Signal (mA)	4 to 20	
Air Supply Pressure Range (barg)	3.7 to 6	
Transit Time for Rated Travel (Seconds)	approx. 3	
Hysteresis	< 1 %	
Protection Class	IP 65	
Ambient Temperature Range (°C)	-30 to 70	
Motive Medium	Oil-free air, filtered to 5 µm	

\* Air to open \*\* Air to close

#### PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS):

Maximum Allowable Pressure (barg) PMA: 13 (Cast Iron), 25 (Cast Steel)

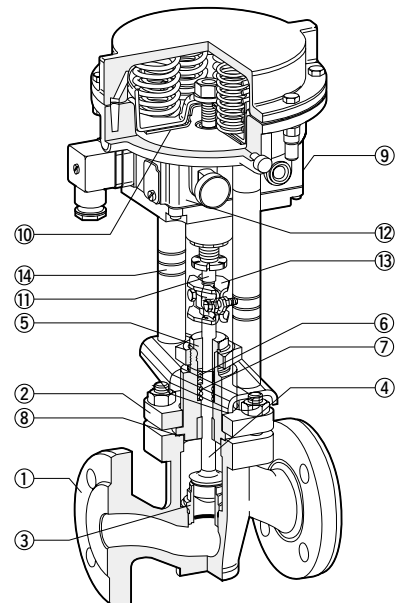
Maximum Allowable Temperature (°C) TMA: 200 (Cast Iron), 220 (Cast Steel)



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	ASTM/AISI*
①	Valve Body	Cast Iron	0.6025	A126 Cl. B
	Valve Body	Cast Steel	1.0619	A216 Gr. WCB
②	Valve Bonnet	Carbon Steel	1.0460	A105
③	Valve Seat	Stainless Steel	1.4305	AISI303
	Valve Seat (DN 32 – 50)	Stainless Steel	1.4104	AISI430F
④	Plug and Stem	Stainless Steel	1.4305	AISI303
⑤	Guide Bushing	Stainless Steel	1.4104	AISI430F
⑥	Stuffing Box V-ring	Fluorine Resin with Carbon	PTFE	PTFE
⑦	Stuffing Box Spring	Stainless Steel	1.4310	AISI301
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	AISI303
⑫	Positioner Case	Synthetic Resin POM GF	—	—
⑬	Stem Bracket	Stainless Steel	1.4301	AISI304
⑭	Yoke	Carbon Steel Zinc Coated	1.0715	A1213

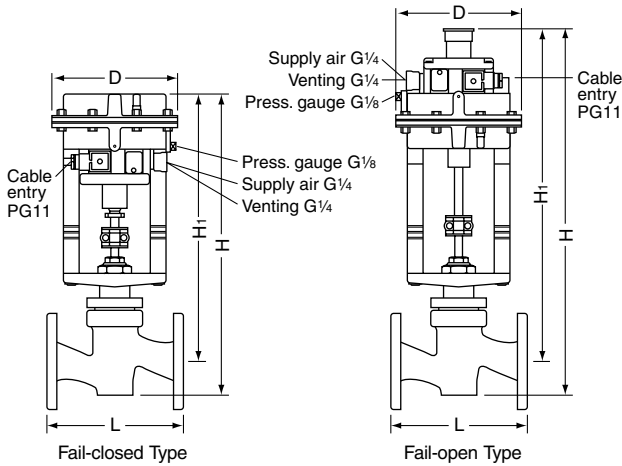
\* Equivalent



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**Dimensions**

● **CV5** Flanged



**CV5** Flanged (mm)

DN	L		H		H <sub>1</sub>		φ D	Weight* (kg)
	DIN 2526 Form C	PN16	PN25/40	Fail-closed	Fail-open	Fail-closed		
15	130	130					168	8.7
20	150	150	386	471	346	431		9.7
25	160	160						11
32	180	180						15
40	200	200	423	508	351	436		16
50	230	230						19

ASME flanges available  
 \* Approximate weight for PN16; 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	24	32	38	48

**Options**

Item	Options
Valve Plug	Plug for soft sealing to Class VI (DIN EN 60 534)
Fail-safe Position	Valve OPEN
Limit Switches	1 or 2 Limit switches
Motorized Electric Actuator	Details on request
Pneumatic Actuator without Positioner	Details on request

ISO 9001/ISO 14001

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

