



PNEUMATIC CONTROL VALVE

MODEL CV10 WITH POSITIONER

CAST IRON, DUCTILE CAST IRON, CAST STEEL

MULTI-PURPOSE CONTROL VALVE WITH ELECTRO-PNEUMATIC POSITIONER

Features

Reliable two-port globe-style valve with equal percentage and linear characteristics for use on steam, water or air. These extremely durable control valves with actuators deliver Class IV or VI performance in severe service applications.

1. Multi-spring actuator is highly efficient, and its low overall height facilitates compact installation.
2. Size DN 40 and above utilize V-port plugs to improve control stability and provide durability resulting in a long service life.
3. Self-adjusting chevron packing minimizes seal leaks, stem wear and stiction/hysteresis problems.
4. Rolling actuator diaphragm delivers linearity over the operating stroke and maximizes life.
5. Multi-spring actuator is highly efficient, and its low overall height facilitates compact installation.
6. One combination I/P converter/positioner and standardized actuator sizes with field reversability maximize potential applications while minimizing spare inventory requirements.
7. Intrinsically safe version and a wide variety of other special options are available for exceptional performance in demanding duties.



Specifications

VALVE

Model		CV10		
Body Material		Cast Iron (GG-25)	Ductile Cast Iron (GGG40.3)	Cast Steel (GS-C25)
Connection		Flanged DIN 2501 PN 16	Flanged DIN 2501 PN 25	Flanged DIN 2501 PN 40**
Size (DN)		15, 20, 25, 32, 40, 50, 65, 80, 100, 150		
Max. Operating Pressure (barg)	PMO	13	19	25
Max. Operating Temperature (°C)	TMO	200	200*	
Leak Rate Class (IEC 60534-4)/Seat Plug Sealing		Standard: IV (metal sealing), VI (soft sealing special option) Balanced: IV (metal sealing with PTFE ring), III (metal sealing with graphite ring)		
Characteristic		Equal percentage or linear		
Rangeability		50 : 1 for DN 15 to 50, 30 : 1 for DN 65 and above		
Applicable Fluids***		Steam, Water, Air		

* Higher values available with insulating section ** ASME standards also available *** Do not use for toxic, flammable, or otherwise hazardous conditions. 1 bar = 0.1 MPa
PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 13 (Cast Iron), 19 (Ductile Cast Iron), 25 (Cast Steel)
Maximum Allowable Temperature (°C) TMA: 200 (Cast Iron), 220 (Ductile Cast Iron, Cast Steel)

ELECTRO-PNEUMATIC POSITIONER

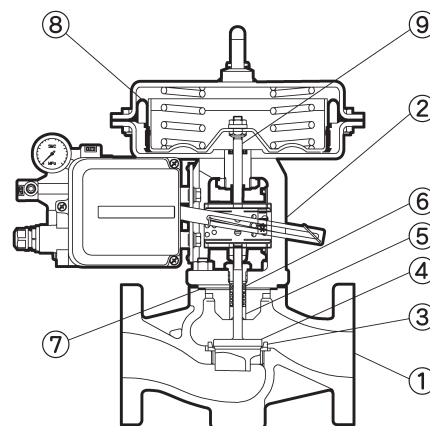
Electrical Input Signal (mA)	4 to 20		
Internal Resistance Ri at 20 °C (Ω)	235 ± 15		
Air Supply Pressure Range for Positioner (barg)	1.4 to 7		
Characteristic	Linear, deviation from terminal based conformity < 1.5%		
Hysteresis	Sensitivity	< 0.75%	< 0.1%
Operating Direction	Field-reversible open or closed		
Ambient Temperature Range (°C)	- 20 to 80		
Protection Class	IP 65		
Intrinsically Safe Rating (optional)	ATEX II 2G Ex iB IIC T5/T6		
Approx. weight (kg)	2.4		



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.

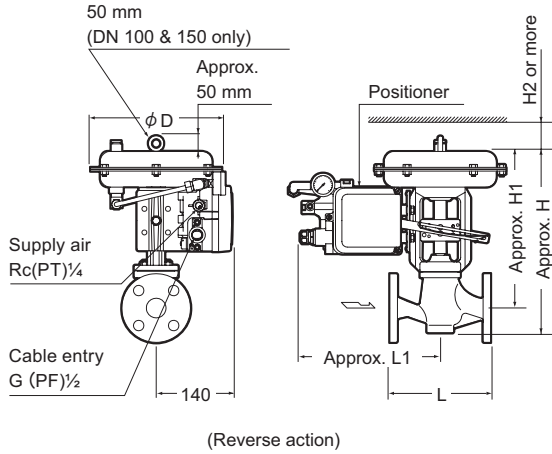
No.	Description	Material	DIN	ASTM/AISI*
①	Valve Body	Cast Iron	0.6025	A126 Cl.B
		Ductile Cast Iron	0.7043	A395
		Cast Steel	1.0619	A216 Gr.WCB
②	Valve Bonnet	Carbon Steel	1.0460	A105
③	Valve Seat	Stainless Steel	1.4006	AISI410
④	Valve Plug	Stainless Steel	1.4006	AISI410
⑤	Guide Bushing	Stainless Steel	1.4104	AISI430F
⑥	Stuffing Box V-ring Packing	Fluorine Resin with Carbon	PTFE	PTFE
⑦	Body Gasket	Metal/Graphite	—	—
⑧	Rolling Diaphragm	NBR with Fabric Insert	NBR	NBR
⑨	Actuator Stem	Stainless Steel	1.4404	AISI303

* Equivalent materials



Dimensions

● **CV10 Flanged**



CV10 Flanged (mm)

DN	L			L ₁	Actuator Area (cm ²)	H	H ₁	H ₂	φ D	Weight (kg)			
	DIN 2501												
	PN16	PN25	PN40										
15	130	130	130	280	240	350	282	110	240	12			
20	150	150	150							13			
25	160	160	160							14			
32	180	180	180							18			
40	200	200	200	300	240	377	282	190	19				
50	230	230	230						350	400	305	22	
									240	374	282	240	22
									350	397	305	280	25
65	290	290	290	350	463	345	280	34					
				700	512	394	390	48					
				350	463	345	280	40					
80	310	310	310	700	512	394	390	54					
				100	350	350	350	290	700	618	484	190	390
150	480	480	480	295	700	720	524	190	390	144			

ASME flanges available

Maximum Operating Differential Pressure* PMX (Air to open)

DN	Actuator Area (cm ²)	Spring Bench Range (bar)	Minimum Air Supply Pressure (barg)	Maximum Differential Pressure* (bar)
15	240	0.2 - 1.0	1.4	28
20	240	0.4 - 2	2.2	14.8
	240	0.6 - 3	3.2	24
25	240	0.4 - 2	2.2	14.8
	240	0.6 - 3	3.2	24
32	240	0.6 - 3	3.2	14
	240	0.9 - 3.3**	3.8	23
40	240	0.9 - 3.3**	3.8	15
	350	1.4 - 2.3	2.5	37

DN	Actuator Area (cm ²)	Spring Bench Range (bar)	Minimum Air Supply Pressure (barg)	Maximum Differential Pressure* (bar)
50	240	0.9 - 3.3**	3.8	9
	350	1.4 - 2.3	2.5	23
65	350	1.4 - 2.3	2.5	13
	350	2.1 - 3.3	3.5	20
	700	1.2 - 2	2.2	23
80	350	2.1 - 3.3	3.5	12
	700	1.2 - 2	2.2	14
	700	1.85 - 2.03	2.5	22
100	700	0.2 - 1	1.2	12***
150	700	0.4 - 2	2.2	40***

* Subject to limitation of maximum operating pressure rating of valve (PMO)
 ** Pre-tensioned spring
 *** Balanced plug

Cv & Kvs Values

DN	15	20	25	32	40	50	65	80	100	150
Kvs (DIN)	4	6.3	10	16	25	40	60	80	160	260
Cv (UK)	3.9	6.7	9.7	15.5	24	39	58	78	155	252
Cv (US)	5	7.5	12	20	30	47	70	95	190	300
Seat Diameter (mm)	12	24	31	38	48	63	80	100	130	

Other options for Kvs values available upon request

Options*

- Air Filter Regulator
 - Manual Handwheel
 - Limit Switches
 - Reduced Kvs (Cv) Plug and Seat
 - Pneumatic Positioners
- * Details available on request