ELECTRO-PNEUMATIC CONTROL VALVE

MODEL CV-COSR

POSITIONER/ACTUATOR CONTROL VALVE

Features

Control valve with I/P positioner integrated into a compact pneumatic actuator.

1. One combination I/P positioner/actuator (I/P positioned actuator) saves space and simplifies system layout, piping and maintenance.
2. Top mounting of the I/P positioned actuator eliminates passerby damage and misadjustment associated with side-mount components.
3. Zero/span adjustment can be performed by simple dial rotation.
4. Self-adjusting chevron packing minimizes seal leaks, stem wear and stiction/hysteresis problems.
5. A condensate drainage port is prepared at the bottom of the body to facilitate piping for installing a blow valve or steam/air trap to eliminate condensate.

Specifications

VALVE

Model	CV-COSR	
Connection	Flanged	
Size (mm)	15, 20, 25, 40	50
Maximum Operating Pressure (MPaG) PMO	1.6	1.0
Maximum Operating Temperature (°C) TMO	220	
Seat Plug Sealing / Leak Rate Class (DIN EN 60 534)	Metal to Metal / Class IV	
Characteristic	Equal percentage	
Rangeability	50 : 1	
Applicable Fluids*	Steam, Water, Air	

*Do not use for toxic, flammable or otherwise hazardous fluids.

1 MPa = 10.197 kg/cm²

ACTUATOR

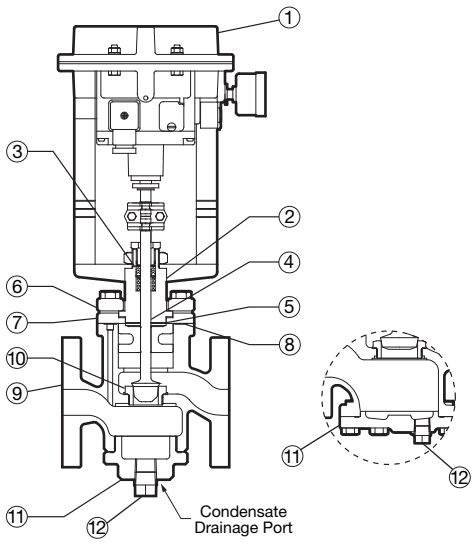
Actuator Area (cm²)	120
Fail-safe position	Valve CLOSED (Air to open)
Bench Range (MPa)	0.21 to 0.33
Electrical Input Signal (mA)	4 to 20
Load Resistance (Ω)	Approx. 300
Air Supply Pressure for Positioner (MPaG)	0.38
Transit Time for Rated Travel (seconds)	Approx. 3
Hysteresis (%)	< 1
Protection Class	IP 54
Ambient Temperature Range (°C)	-10 to 60
Motive Medium	Oil-free air, filtered to 5µm

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.

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS):
Maximum Allowable Pressure (MPaG) PMA: 1.6
Maximum Allowable Temperature (°C) TMA: 220

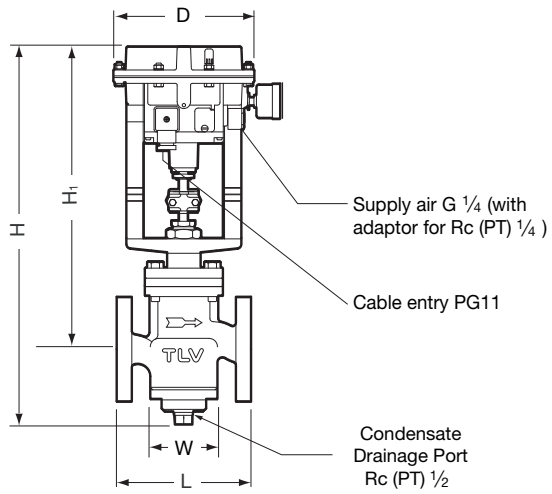
No.	Description		Material	JIS	ASTM/AISI*
①	Actuator Body		Aluminum	GD-Al Si 12	—
②	Valve Bonnet		Carbon Steel	—	A105
③	Stuffing Box V-rings		Fluorine Resin w/ Carbon	PTFE	PTFE
④	Valve Plug and Stem		Stainless Steel	SUS304	AISI304
⑤	Valve Bonnet Gasket		Fluorine Resin	PTFE	PTFE
⑥	Flange		Cast Stainless Steel	—	A351 Gr.CF8
⑦	Valve Bonnet Guide		Cast Stainless Steel	—	A351 Gr.CF8
⑧	Valve Bonnet Guide Gasket		Fluorine Resin	PTFE	PTFE
⑨	Body		Cast Iron	FC250	A126 Cl.B
⑩	Valve Seat		Stainless Steel	SUS304	AISI304
⑪	Cover Plug	15-25 mm	Cast Iron	FC250	A126 Cl.B
	Cover	40, 50 mm	Ductile Cast Iron (GGG 40.3)	FCD-S*	A395
⑫	Drain Plug		Carbon Steel	SS400	A6

* Equivalent



Dimensions

● **CV-COSR** Flanged



15 - 25 mm size shown.
Configuration of larger sizes differs slightly

CV-COSR Flanged (mm)

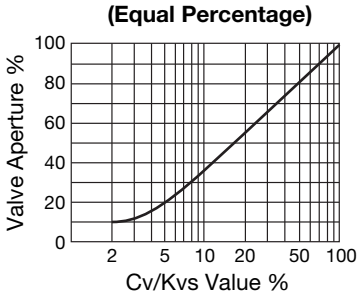
Size	L				H	H1	W	φD	Weight* (kg)
	ASME Class								
	125FF	(150RF)	250RF	(300RF)					
(15)	—	170	—	170	451	364	88	168	12.5
(20)	—	182	—	182					14
25	176	188	188	192	452	362	93		16
40	209	220	222	224	475	377	126		22
50	255	255	260	261	503	391	157		29

( ) No ASME standard exists for cast iron; machined to fit steel flanges
Class 125 FF can connect to 150 RF, 250 RF can connect to 300 RF
Other standards available, but length and weight may vary
* Weight is for Class 250 RF/300 RF

Cv & Kvs Values

DN	15	20	25	40	50
Cv (US)	3.5	6.0	9.0	27	40
Cv (UK)	2.9	5.0	7.5	23	33
Kvs (DIN)	3.0	5.1	7.7	23	34
Seat Diameter (mm)	12	24		38	48

Characteristic Graph



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