



# ELECTRO-PNEUMATIC CONTROL VALVE

## MODEL CT16

### COMPACT MULTI-PURPOSE CONTROL VALVE WITH ELECTRO-PNEUMATIC POSITIONER

#### Features

**Electro-pneumatic globe valve with drain plug and 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.



#### Specifications

##### VALVE

Model			CT16					
Body Material			Cast Steel (A216 Gr.WCB) Cast Stainless Steel (A351 Gr.CF8)					
Connection			Flanged ASME					
Size			15	20	25	32	40	50
Max. Oper. Pressure (MPaG)	PMO	150RF	1.0					
		300RF	2.0			1.7	1.1	
Maximum Operating Temperature (°C)			220					
Leak Rate Class (IEC 60534-4)/Seat Plug Sealing			Class IV / Metal sealing (Option: Class VI / Soft sealing)					
Characteristic			Equal percentage					
Rangeability			50 : 1					
Applicable Fluids*			Steam, Water, Air					

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

1 MPa = 10.197 kg/cm<sup>2</sup>

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 3.1

Maximum Allowable Temperature (°C) TMA: 220

Minimum Allowable Temperature (°C): 0

##### ACTUATOR / POSITIONER

Fail-safe Position		Valve CLOSED (Air to 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 (MPaG)		0.37 to 0.6
Ambient Temperature Range (°C)		-25 to +80
Protection Class		IP 66
Intrinsically Safe Rating (optional)		ATEX II 2G Ex ia IIC T4

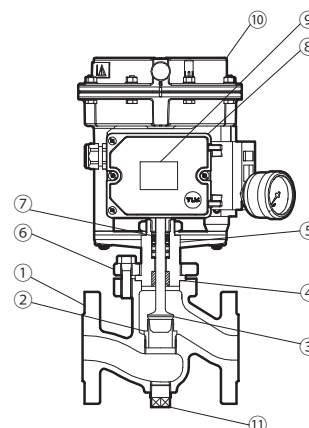
No.	Description	Material	JIS	ASTM/AISI*
①	Valve Body	See Valve Specification Table for available materials		
②	Valve Seat	Stainless Steel	—	AISI303
③	Plug and Stem	Stainless Steel	—	AISI303
④	Valve Bonnet Gasket	Graphite	—	—
⑤	Valve Bonnet	Carbon Steel	—	A105
⑥	Flange	Carbon Steel	—	A105
⑦	Stuffing Box V-ring Packing	Fluorine Resin with Carbon	PTFE	PTFE
⑧	Positioner Housing	Polyphthalamide	PPA	PPA
⑨	Positioner Cover	Polycarbonate	PC	PC
⑩	Actuator Body	Aluminium	GD-AI Si 12	—
⑪	Drain Plug	Carbon Steel	—	—

\* Equivalent

Contact TLV for available replacement parts.

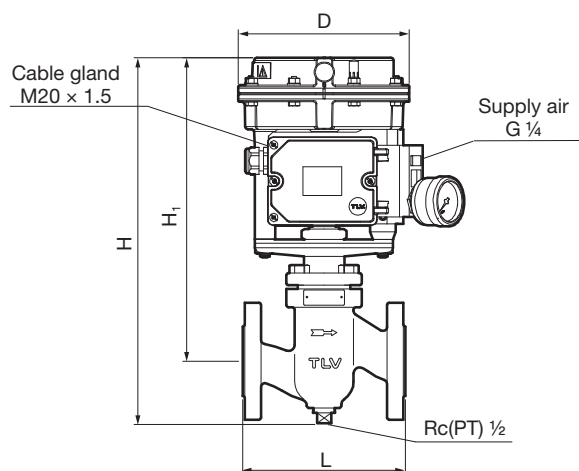


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.



## Dimensions

### ● CT16 Flanged



### CT16 Flanged (mm)

Size	L		Actuator Area (cm <sup>2</sup> )	H*	H <sub>1</sub>	ϕ D	Weight** (kg)
	ASME Class						
	150RF	300RF					
15	184	190	120	350	292	168	9
20		194					10
25		197		355			11
32	222	235		380	297		16
40							
50	254	267					385

Other standards available, but length and weight may vary

\* Approximate dimensions

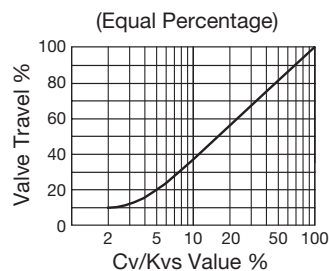
\*\* Weight is for Class 300 RF

## Cv & Kvs Values

Size	15	20	25	32	40	50
Cv (US)	5.0 [2.0]	7.5 [3.0]	12 [5.0]	20 [7.5]	30 [12]	40 [20]
Cv (UK)	3.9 [1.6]	6.1 [2.4]	9.7 [3.9]	15.5 [6.1]	24 [9.7]	34 [15.5]
Kvs (DIN)	4.0 [1.6]	6.3 [2.5]	10 [4.0]	16 [6.3]	25 [10]	35 [16]
Seat Diameter (mm)	12	24 [12]	32 [24]	38 [24]	48 [32]	

[ ] Optional

## Characteristic Graph



## Options

Intrinsically Safe Positioner	ATEX II 2G Ex ia IIC T4
Pressure Gauge for Positioner	Fitted as standard, available without
Electric Actuator*	Details on request

\* Manufacturer: Samson AG

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

ISO 9001  
ISO 14001

