

# PCV

## CONTROL VALVE

### DESCRIPTION:

Pennant offers the top – guided globe valve to meet a wide range of automated process control applications. The product features a single - ported design configuration, which permits numerous trims, actuation and instrumentation solutions. Rugged top – guiding of the plug ensures maximum valve stability under the most adverse conditions.

### Features:

1. High Flow Capacity
2. Excellent Flow Control Rangeability
3. Tight Shutoff
4. Designed and tested to deliver 100% performance under specified operating conditions

### Characteristics and Types:

The different types of control valves are classified by a relationship between the valve stem position and the flow rate through the valve. This control valve characteristic is assigned with the assumptions that the stem position indicates the extent of the valve opening and that the pressure difference is determined by the valve alone. There are three basic types of control valves

- 1. Quick Opening** - For frequent on-off services. Process where instantly large flow is needed like safety systems or cooling systems.
- 2. Linear** - Typically used for level control or flow loops, in steady state systems where pressure drop across the valve is expected to remain fairly constant
- 3. Equal Percentage** - Typically used for pressure, temp., flow control used where large changes in pressure drop across the valve is expected. Used in temperature and pressure control loops



### Sizes:

DN15 to DN200 as standard

### End Connection:

- Raised Face Flanged End (ASME B16.5) standard
- Flat Faced Flanged End (Optional Special)

### Valve Rating:

ANSI #150, #300

Higher classes available on request

### NIBR/IBR approved

### Leakage Class:

Class IV standard/Class V on request

### Gland Packing:

PTFE up to 200 °C – For Liquid/Gases  
Graphite up to 600 °C – For Steam

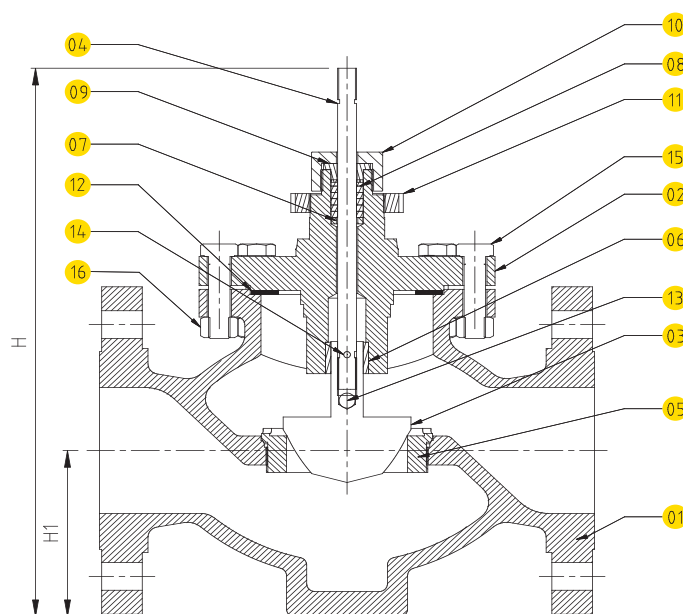
### MATERIAL:

NO.	PART NAME	MATERIAL	QTY. (Nos)
1	BODY	ASTM A216 Gr. WCB	01
2	BONNET	ASTM A216 Gr. WCB	01
3	PLUG	AISI 410	01
4	SPINDLE	AISI 410	01
5	SEAT	AISI 410	01
6	GUIDE BUSH	NITRONIC 60	01
7	GLAND WASHER	AISI 410	01
8	GLAND PACKING	GRAPHITE/PTFE	01
9	GLAND FOLLOWER	AISI 410	01
10	GLAND NUT	AISI 410	01
11	CHUCK NUT	ASTM A105	01
12	BONNET GASKET	GRAPHITE WITH SS REIN.	01
13	BALL	AISI 304	01
14	LOCKING PIN	AISI 304	01
15	BOLT	ASTM A193 Gr. B7	*
16	NUT	ASTM A194 Gr. 2H	*

\* Varies with Valve Size (4~16)

### FACE TO FACE DIMENSIONS (MM):

Valve Sizes	RF Flange	
	#150	#300
DN		
15	184	190
20	184	194
25	184	197
40	222	235
50	254	267
80	298	318
100	352	368
150	451	473
200	543	568



Size	Overall Dimensions (mm)		Weight of Valve (kg)	
	H	H1	#150	#300
DN				
15	260	63	8	8.5
20	260	63	8.5	9
25	260	63	9	10
40	300	80	13	16
50	330	83	23	25
80	358	114	40	43.5
100	420	132	53	57.5
150	496	167	129	134
200	580	208	215	219

### MATERIAL OF CONSTRUCTION:

Valve trim material as well as body material is selected on the basis of process fluid, pressure drop, contamination and environmental conditions. Some of the material is listed below:

#### Body Material:

Standard MOC is WCB  
CF8, CF8M – available on request

#### Trim Material:

Standard MOC is SS410  
SS304, SS316, SS316L, SS420 available on request

### **Kv VALUES:**

<b>Valve Size</b>	<b>Trim Size</b>	<b>Cv Values</b>
DN	mm	m <sup>3</sup> /hr @ 1 bar
15	15	4
20	15	4
	20	7
25	15	4
	20	7
	25	11
40	25	11
	32	18
	40	26
50	32	18
	40	26
	50	43
80	50	43
	65	68
	80	100
100	65	68
	80	100
	100	150
150	100	150
	125	260
	150	380
200	125	260
	150	380
	200	650

### **AVAILABLE ACCESSORIES:**

1. Pneumatic Actuator (Reverse/Direct Acting)
2. Positioner (Pneumatic/Electro Pneumatic)
3. Electro Pneumatic Convertor
4. Solenoid Valves
5. Air Filter Regulator

### **AVAILABLE SPARES:**

Trims, Gland Packing

### **HOW TO ORDER:**

1. Type of Fluid
2. Maximum, normal and minimum flow rate
3. Inlet & Outlet Pressure
4. Inlet & Outlet Temperature
5. Design Temperature and Pressure
6. Maximum working differential pressure
7. Density & Velocity of line fluid
8. Vapor Pressure of Line Fluid
9. Type of End Connection Required
10. Leakage Class Required
11. Actuation – fail condition
12. Accessories Required
13. Maximum compressed air pressure available
14. IBR/ NIBR