PCV
CONTROL VALVE

DESCRIPTION:

Pennant offers the top-guided Globe Control Valve with inter convertible facility of fail to open or fail to close type of operation. The product features a single-port design configuration, which permits numerous trims, actuation and instrumentation solutions to meet a wide range of automated process and control applications. Rugged top-guiding of the plug ensures maximum valve stability under the most adverse conditions.

Neatly engineered trim design; carefully sized actuator combined with a highly reliable positioner ensures high turndown ratio even at minimum flowrate conditions.

Features:

1. High turndown ratio upto 40:1
2. Excellent Flow Control Rangeability
3. Tight-shutoff; Class IV as standard
   Class V on request
4. High Flow Capacity
5. 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, temperature, flow control used where large changes in temperature drop across the valve is expected. Used in temperature and pressure control loops

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

Leakage Class:

Class IV standard/Class V on request

Gland Packing:

PTFE up to 392 °F – For Liquid/Gases

Graphite up to 1112 °F – For Steam

All Dimensions in inches. weights in lbs.

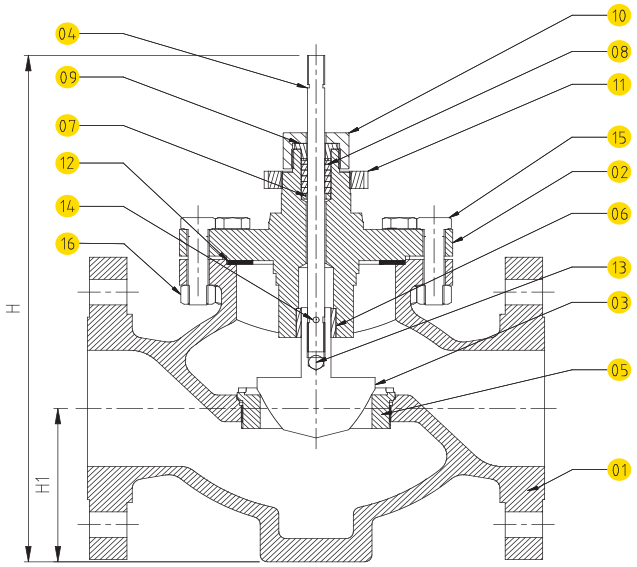
MATERIAL:

NO.	PART NAME	MATERIAL	QTY.
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 FOLLOW-ER	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:

Valve Size INCH	RF Flange	
	#150	#300
1/2"	7.24	7.48
3/4"	7.24	7.64
1"	7.24	7.75
1 1/2"	8.74	9.25
2"	10.00	10.51
3"	11.73	12.52
4"	13.86	14.49
6"	17.76	18.62
8"	21.38	22.36



Sizes:

½" to 8" as standard

Size	Overall Dimensions (inch)		Weight of Valve (lbs)	
	H	H1	#150	#300
1/2"	10.3	2.5	17.5	18.5
3/4"	10.3	2.5	19.0	20.0
1"	10.3	2.5	20.0	22.0
1 1/2"	11.8	3.2	28.5	35.0
2"	13.0	3.3	50.5	55.0
3"	14.0	4.5	88.0	96.0
4"	16.5	5.2	116.5	126.5
6"	19.5	6.6	284.0	295.0
8"	22.8	8.2	473.0	482.0

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:

Valve Size	Trim Size	Cv Values
inches	inches	gal/hr @ 1 psi
1/2"	1/2"	5
3/4"	1/2"	5
	3/4"	8
1"	1/2"	5
	3/4"	8
	1"	13
1 1/2"	1"	13
	1 1/4"	21
	1 1/2"	30
2"	1 1/4"	21
	1 1/2"	30
	2"	50
3"	2"	50
	2 1/2"	80
	3"	117
4"	2 1/2"	80
	3"	117
	4"	176
6"	4"	176
	5"	305
	6"	445
8"	5"	305
	6"	445
	8"	760

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. Density & Velocity of Line Fluid
3. Vapor Pressure of Line Fluid
4. Maximum, normal & minimum Flow Rate
5. Maximum, normal & minimum Inlet & Outlet Pressure
6. Maximum, normal & minimum Inlet & Outlet Temperature
7. Design Temperature and Pressure
8. Actuation-fail condition
9. IBR/NIBR
10. Type of End Connection required
11. Leakage Class required
12. Maximum Compressed Air Pressure available
13. Accessories required

All Dimensions in inches. weights in lbs.