

Pressure Sustaining Valve - Pilot Piston - 1 1/2" to 12"

Benefits & Features

- Compact design with no external pipe work to damage
- Pressure adjustment screw on pilot assembly
- Internal diaphragm (pilot) controls main piston body
- Pressure gauge indicates the sustained pressure setting
- Constant outlet pressure, unaffected by inlet pressure fluctuations
- Designed for water supply lines, air conditioning systems etc
- High flow applications



Specification

Configuration	Pilot piston design
Port Sizes	2" to 12" flanged
Orifice	see table below
Kv	see table below
Body	Bronze, cast iron, ductile iron, 304 Stainless Steel and 316 stainless steel
Media	Air, water, liquids etc. subject to material compatibility
Pressure ranges	Adjusting range: 0.3 - 4 Bar 2 - 8 Bar

Technical Data

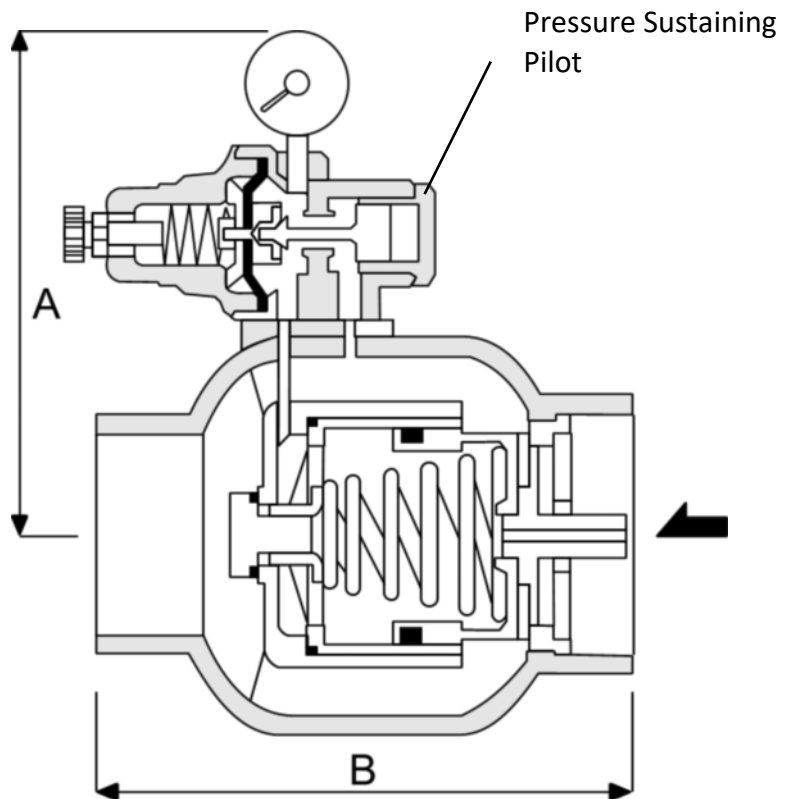
Model: Ported Body	A	B	C	Orifice mm	Min	Maximum Working Pressures. Bar.				KV L/Min.	
						Bronze	Cast Iron	Ductile Iron	Stainless Steel		
P04	50			1 1/2"	50	0.3	16	16	20	22	686
P04	65			2"	65	0.3	16	16	20	22	1072
Model: Flanged Body PN16. (PN10, PN25 & ANSI available upon request)											
P04	50			2"	50	0.3	16	16	20	22	1072
P04	65			2 1/2"	65	0.3	16	16	20	22	1501
P04	80			3"	80	0.3	16	16	20	22	2002
P04	100			4"	100	0.3	16	16	20	22	3718
P04	125			5"	125	0.3	16	16	20	22	5577
P04	150			6"	150	0.3	16	16	20	22	7865
P04	200			8"	200	0.3	16	16	20	22	14300
P04	250			10"	250	0.3	16	16	20	22	22880
P04	300			12"	300	0.3	16	16	20	22	31460
P04	350			14"	350	0.3	16	16	20	22	42900
P04	400			16"	400	0.3	16	16	20	22	50050
P04	450			18"	450	0.3	16	16	20	22	74360
P04	500			20"	500	0.3	16	16	20	22	82940



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Weights & Dimensions

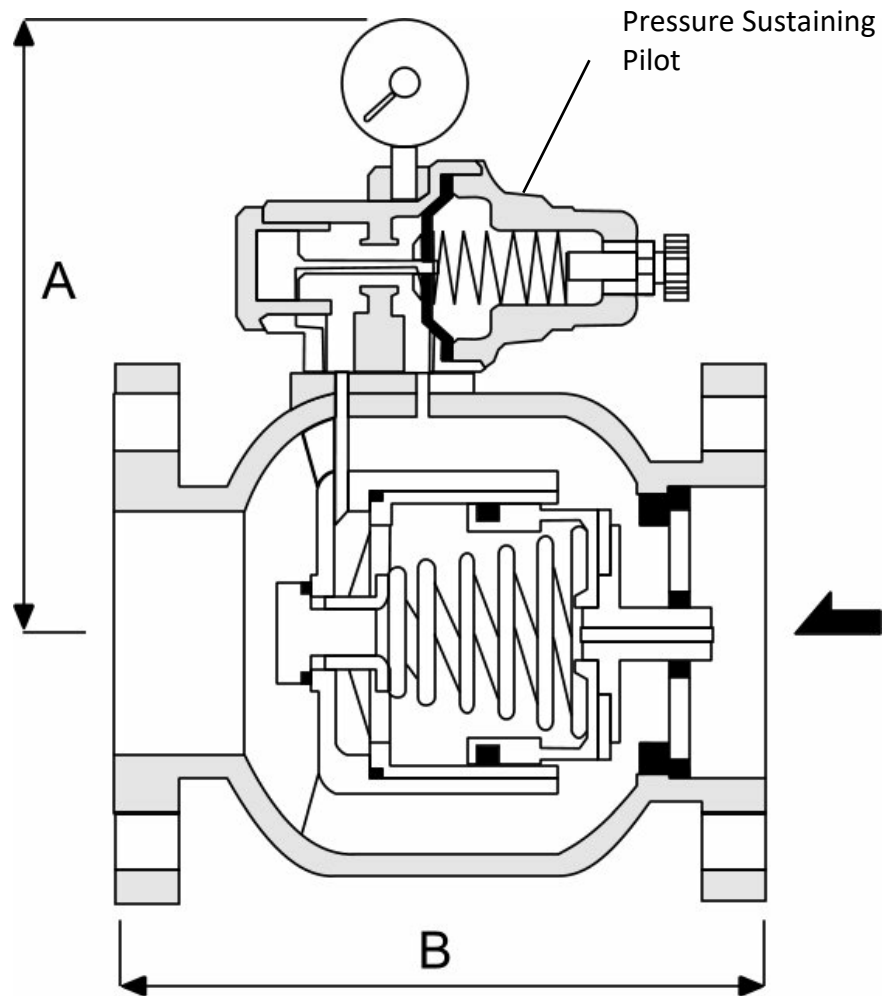
Weight Kg	Dimensions. mm	
	A	B
3.5	75	120
8	95	200



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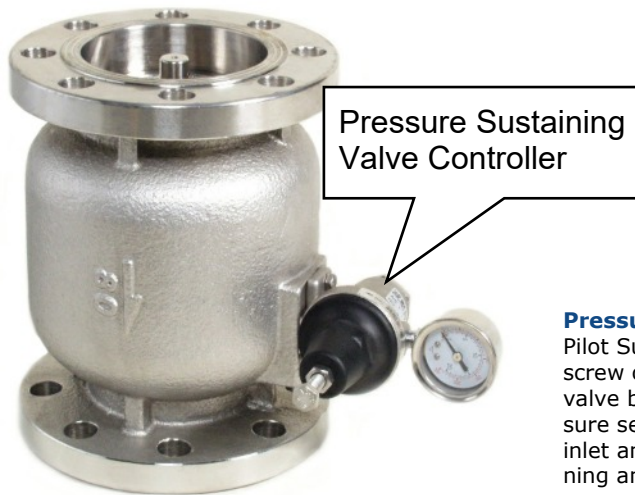
Weight Kg	Dimensions. mm	
	A	B
10	95	190
13	100	210
16	115	225
22	127	250
30	150	280
42	165	310
85	205	420
150	240	470
200	275	530
285	405	600
350	435	600
620	495	750
650	495	750



Order Codes

A	Body	B	Ported Body	Flanged Body. PN16. (PN10, PN25 & ANSI available upon request)					C	Seals (fluid temp min / max)	
T	Bronze	O	1 1/2" BSP	2A	2" PN16	6A	6" PN16	16A	16" PN16	0	NBR (-10°C to + 80°C)
C	Cast Iron	P	2" BSP	25A	2 1/2" PN16	8A	8" PN16	18A	18" PN16	1	VITON (-10°C to + 90°C)
D	Ductile Iron			3A	3" PN16	10A	10" PN16	20A	20" PN16		
H	304 Stainless Steel			4A	4" PN16	12A	12" PN16				
I	316 Stainless Steel			5A	5" PN16	14A	14" PN16				

Design Details - Multi function control body



- Easy installation & commissioning
- Compact body
- Lightweight yet robust
- NO external pipe work
- Higher KV flow rates
- Easy adjustment

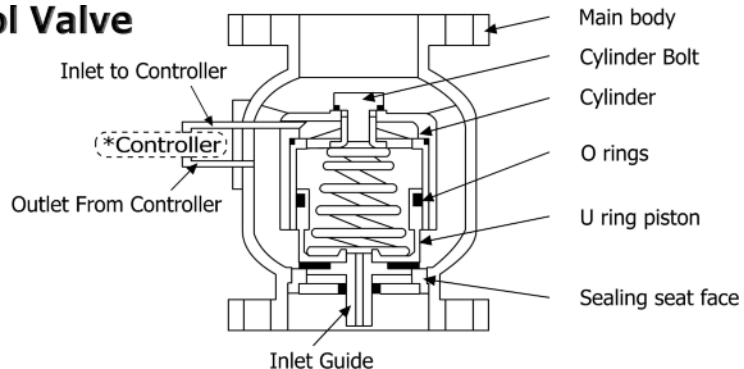
Pressure Sustaining Valve

Pilot Sustaining valve is adjusted by means of adjustment screw on pilot assembly. Internal diaphragm controls main valve body piston. Pressure gauge indicates sustaining pressure setting. Maintains safe pipeline pressure by balancing inlet and downstream pressures during normal system running and emergency conditions.

Function

Multi Function Control Valve

* By substituting the controller valve, the multi - function valve can become:
 Solenoid Valve
 Float Valve
 Pressure Relief Valve
 Pressure Reducing Valve
 Pressure Sustaining Valve
 Check Valve



Multi-Function Valve Operating Principles.

The valve body houses the control Piston assembly which operates in the cylinder. The media enters the inlet guide and fills the cylinder. The cylinder has an outlet which supplies the media to the Controller, which could be Solenoid, Float, Pressure Relief, Pressure Reducing or Pressure Sustaining. If the controller is closed, the media cannot escape from the cylinder, so the valve remains closed. When the controller opens, the media is discharged from the cylinder and the U Ring Piston moves and the valve opens.

The benefits of the design are:

- Low and High Pressure Applications
- Valve works in either vertical or horizontal plain
- Straight flow path allows for high flow KV
- Elegant design which is compact and lightweight

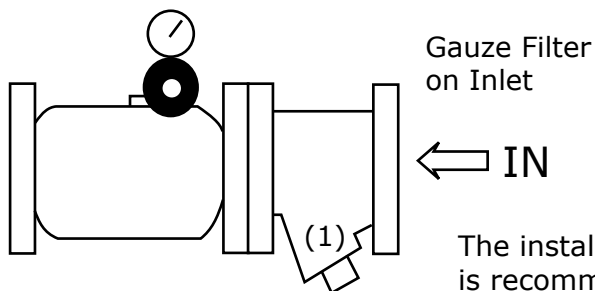
	Working Pressure (Bar)	Test Pressure
Cast Iron	16	24
Ductile Iron	20	32
Bronze	16	24
Stainless Steel	22	35

Installation Procedure



Features

- Only one adjustment to make
- Compact body
- Lightweight construction
- No external pipe work to damage
- No external pipe work to leak
- Tamper proof facility



The installation of a Gauze Filter on the valve Inlet is recommended to ensure optimum performance. Depending on the system, the filter should be cleaned as part of a regular maintenance schedule. Isolate the system and remove the media pressure. Unscrew the cap (1) And remove the gauze strainer. Clean and dry the gauze filter.

Installation Procedure

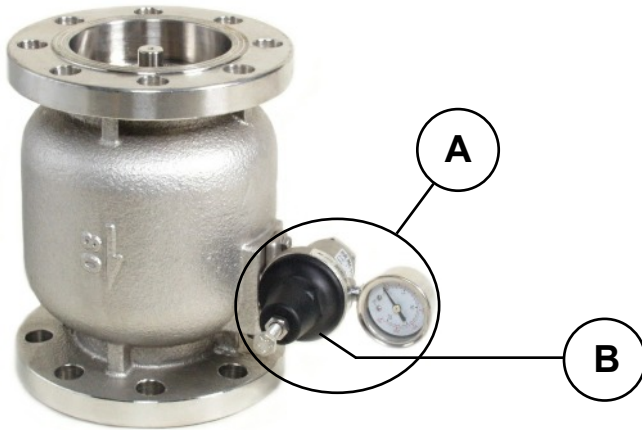
Before Installation

1. Clean & remove all the impurities inside the pipe.
A Gauze filter is recommended to maintain optimum performance.
2. Make sure the flow direction, indicated on the valve body is correct.
3. The setting pressure gets higher by turning the adjusting stem clockwise.
4. The pressure gauge indicates the sustaining pressure.

Adjusting the Set Pressure

1. Turn anti-clockwise the adjusting stem to the lowest pressure.
2. Adjust the pressure to the required setting pressure by turning the stem clockwise.

Routine Maintenance



- P04 sustaining valve
- Suggested schedule
- Maintenance plan

Maintenance Schedule

The P04 Series Pressure Sustaining Valve is designed to give many years of trouble free operation. The valve will complete many years of active service, typically between 3 and 5 years, depending on site conditions, media, temperature etc. The simple design is the key to this longevity, by allowing maintenance staff to carry out simple visual inspections. The valve has a single Pilot Assembly (A) which can be replaced as a spare part in a matter of minutes. This assembly also has a cap assembly (B) that can be removed in order to replace the internal diaphragm. Whilst this is a simple operation, we suggest that the complete Pilot assembly (A) is replaced as this is more cost effective, and easier for maintenance staff to administer.

Before Maintenance:

Isolate the valve from the system pressure. Make sure that the plant cannot restart. Confirm to all personnel the Maintenance Procedure.

1. **Remove the two securing bolts holding the Pilot Sustaining Valve assembly to the main body (A).**
2. **Check the rubber seal and make sure the hollow dowel that locates the Pilot assembly is retained.**

Monthly Schedule:

Visual check of valve for leaks, damage and set pressure.

6 Monthly Schedule:

Check the Pilot Assembly and pressure gauge for signs of external leaks or damage.

Yearly Schedule:

Replace the Pilot Assembly if required(A).