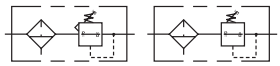
PB11, PB12 Filter / Regulator – Standard

- Stainless steel construction handles most corrosive environments
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- 1/8" female threaded drain
- Meets NACE specifications MR-01-75/ISO-15156
- Low temperature version available
- 1/2" port (NPT, BSPP)



PB11 PB12

Port Size	Description	Part Number
With Sight Gauge, NPT		
1/2"	Standard Knob, Twist Drain	**PB11-04WJCSS**
1/2"	Standard Knob, Auto Float Drain	**PB11-04WJCRSS**
1/2"	Stainless Steel T-Handle, Twist Drain	**PB12-04WJCSS**
1/2"	Stainless Steel T-Handle, Auto Float Drain	**PB12-04WJCRSS**

Operating information

Operating pressure:	
PB11, PB12	300 psig (20.7 bar)
Auto float drain	15 to 175 psig (1 to 12 bar)
Operating temperature:	
PB11	0°F to 150°F (-18°C to 66°C)
PB12, no sight gauge	0°F to 180°F (-18°C to 82°C)
PB12, sight gauge	0°F to 150°F (-18°C to 66°C)
Auto float drain	32°F to 150°F (0°C to 66°C)
Flow capacity†:	72 scfm (34 dm^3/s, ANR)
Bowl capacity:	4.0 oz.
Filter rating:	40 micron
Sump capacity:	1.7 oz.
Gauge port:	1/4 inch
Operation:	Fluorocarbon diaphragm
Weight:	2.42 lb (1.09 kg)

Note: Air must be dry enough to avoid ice formation at temperatures below 32°F (0°C)

† scfm = Standard cubic feet per minute at 100 psig inlet, 75 psig no flow secondary setting and 15 psig pressure drop.

Ordering Information:

PB11 – 04 W J C ☐ SS

Series	
Standard Knob	PB11
Stainless Steel	PB12

Port Type	
NPT	–
BSPP	G

Port Size	
1/2 inch	04

Bowl Type	
Metal Bowl without Sight Gauge	D
Metal Bowl with Sight Gauge	W

Element	
40 micron	J
5 micron	G

Reduced Pressure Range	
B	0 to 60 psig (0 to 4.1 bar)
C	0 to 125 psig (0 to 8.5 bar)
D	0 to 250 psig (0 to 17.2 bar)

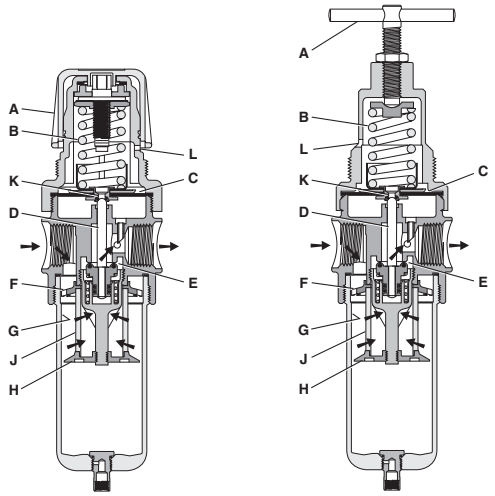
Options	
Blank	Relieving
K	Non-Relieving
P	Panel Mount Nut
R	Auto Float Drain
L*	Low Temp.

* Manual drain and without sight gauge only.

Material	
SS	Stainless Steel

☐ Most popular.

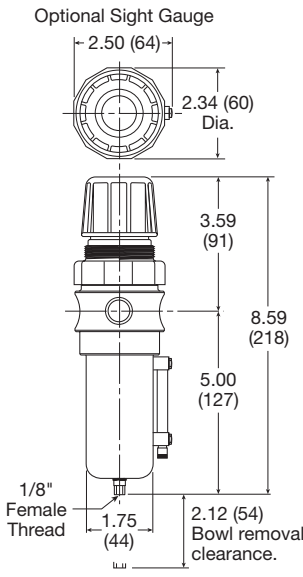
Operation



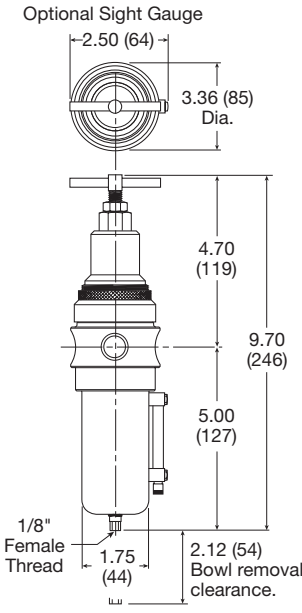
Turning the adjusting knob / T-Handle **(A)** clockwise applies a load to control spring **(B)** which forces diaphragm **(C)** and valve poppet assembly **(D)** to move downward allowing filtered air to flow through the seat area **(E)** created between the poppet assembly and the seat. **"First stage filtration"**. Air pressure supplied to the inlet port is directed through deflector plate **(F)** causing a swirling centrifugal action forcing liquids and coarse particles to the inner bowl wall **(G)** and down below the lower baffle (H) to the quiet zone. After liquids and large particles are removed in the first stage of filtration **"second stage filtration"** occurs as air flows through element **(J)** where smaller particles are filtered out and retained. The air flow now passes through seat area **(E)** to the outlet port of the unit. Pressure in the downstream line is sensed below the diaphragm **(C)** and offsets the load of spring **(B)**. When downstream pressure reaches the set-point, poppet valve assembly **(D)** and diaphragm **(C)** move upward closing seat area **(E)**. Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm **(C)** to move upward opening vent hole **(K)** venting the excess pressure to atmosphere through the hole in the bonnet **(L)**. (This occurs in the standard relieving type filter/regulators only.)

PB11

Inches (mm)



PB12



Material Specifications

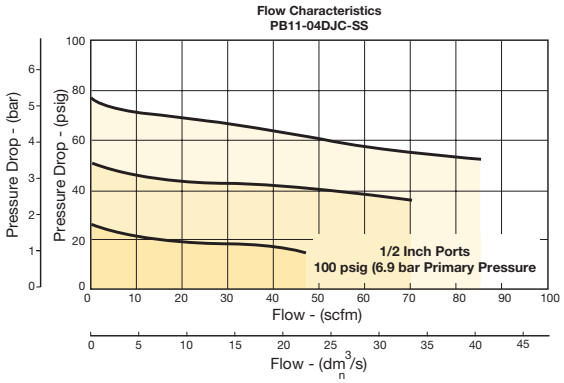
Adjustment mechanism / springs	316 stainless steel
Body	316 stainless steel
Bonnet / knob (PB11)	Acetal
Bonnet / tee handle (PB12)	316 stainless steel
Bottom plug	316 stainless steel
Poppet	316 stainless steel
Seals	Fluorocarbon
Sight gauge	Isoplast

Repair and Service Kits

PB11 bonnet kit (knob included)	**CKR10YSS**
PB12 bonnet kit	**CKR11YSS**
Auto float drain	**SA10MDSS**
Manual twist drain (small, old)	**SA600Y7-1SS**
Manual twist drain (large, new)	**SAP05481**
40 micron element	**EKF10Y**
5 micron element	**EKF10VY**
2" face 160 psig (0 to 1100 kPa), gauge (stainless)	**K4520N14160SS**
Panel mount bracket (stainless)	**R10Y57-SS**
Panel mount nut, stainless	**R10X51-SS**
Panel mount nut, plastic	**R10X51-P**
Pipe nipple, 1/2" 316 stainless steel	**616A28-SS**
Relieving	**RKR10YSS**
Non-relieving	**RKR10KYSS**
0-60 psig spring	**SPR-388-1-SS**
0-125 psig spring	**SPR-389-1-SS**
0-250 psig spring	**SPR-390-1-SS**

Flow Charts

PB11 1/2" Filter / Regulator



⚠ WARNING

Product rupture can cause serious injury.
Do not connect regulator to bottled gas.
Do not exceed Maximum primary pressure rating.

CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design. For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.