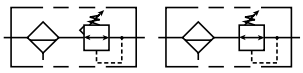
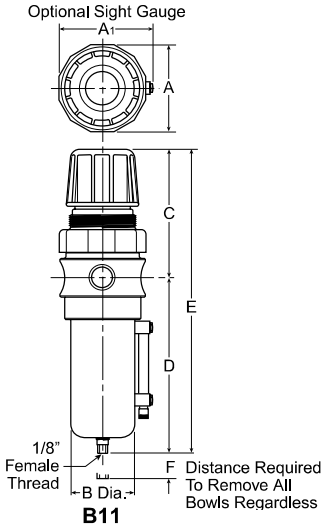
B11, B12 Filter / Regulator – Standard

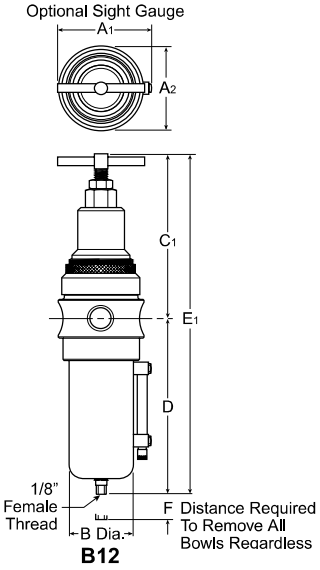


B11 B12

Features

- 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.
- High Flow: 1/2" – 72 SCFM§





Series	Adjustment Type	Port Size	NPT		BSPP	
			Manual Twist Drain	Automatic Float Drain	Manual Twist Drain	Automatic Float Drain
			Metal Bowl with Sight Gauge			
B11	Knob	1/2"	**B11-04WJCSS**	**B11-04WJCRSS**	B11G04WJCSS	B11G04WJCRSS
B12	Tee-Handle	1/2"	**B12-04WJCSS**	**B12-04WJCRSS**	B12G04WJCSS	B12G04WJCRSS

Standard part numbers shown bold. For other models refer to ordering information below.

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 90 PSIG no flow secondary setting and 15 PSIG pressure drop.

B11, B12 Filter / Regulator Dimensions

A	A1	B
2.34 (60)	2.50 (64)	1.75 (44)
C	**C1**	**D**
3.59 (91)	4.70 (119)	5.00 (127)
E	**E1**	**F**
8.59 (218)	9.70 (246)	2.12 (54)

inches (mm)
NOTE: 1.75 Dia. (44mm) hole required for panel mounting.

⚠ WARNING

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

Ordering Information

B11	-	04	W	J	C	—	SS

Series
- **B11 Standard Knob**
- **B12 Stainless Steel**

Port Type
- **- NPT**
- G BSPP

Port Size
- **04 1/2 Inch**

Bowl
- D Metal Bowl without Sight Gauge
- **W Metal Bowl with Sight Gauge**

Element
- **J 40 Micron**
- G 5 Micron

Reduced Pressure Range
- B 0-60 PSIG (0-4.1 bar)
- **C 0-125 PSIG (0-8.5 bar)**
- D 0-250 PSIG (0-17 bar)

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

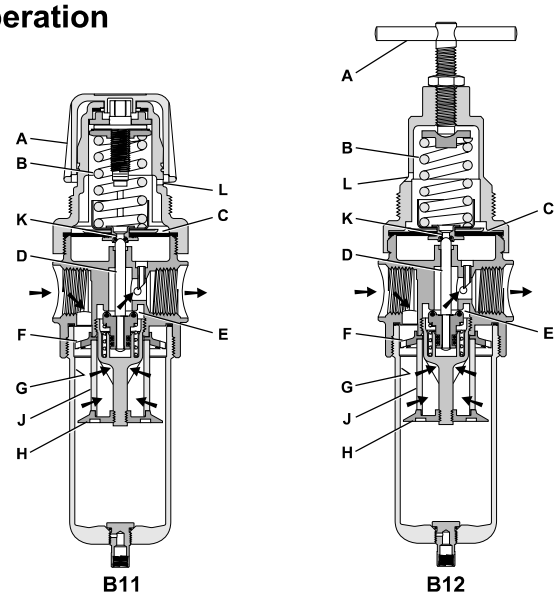
* Manual Drain and Without Sight Gauge Only.

Material
- **SS Stainless Steel**

BOLD ITEMS ARE MOST POPULAR.

Pneumatic Division
Richland, Michigan
www.parker.com/watts

Operation



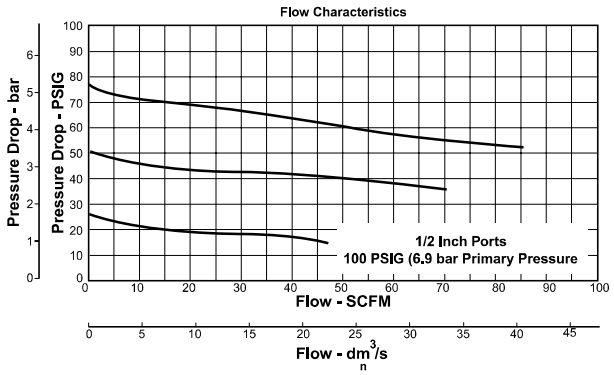
Turning the adjusting knob / T-Handle **(A)** clockwise applies a load to control spring **(B)** which forces diaphragm **(C)** and valve poppet assembly **(D)** to move downward allowing filtered air to flow through the seat area **(E)** created between the poppet assembly and the seat. **"First stage 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.)

Technical Information

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.



B11, B12 Regulator Kits & Accessories

B11 Bonnet Kit (Knob Included) CKR10YSS
B12 Bonnet Kit CKR11YSS
Drain Kit –
Automatic Float Drain SA10MDSS
Manual Twist Drain–
Small (Old) SA600Y7-1SS
Large (New) SAP05481
Filter Element Kits –
Particulate (40 Micron) EKF10Y
Particulate (5 Micron) EKF10VY
Gauge (Stainless) –
160 PSIG (0 to 1100 kPa), 2" Face K4520N14160SS
Panel Mount Bracket (Stainless) R10Y57-SS
Panel Mount Nut –
Stainless R10X51-SS
Plastic R10X51-P
Pipe Nipple –
1/2" 316 Stainless Steel 616A28-SS
Service Kit –
Relieving RKR10YSS
Non-Relieving RKR10KYSS
Springs –
0-60 PSIG Range SPR-388-1-SS
0-125 PSIG Range SPR-389-1-SS
0-250 PSIG Range SPR-390-1-SS

Specifications

Bowl Capacity ..... 4.0 Ounces
Filter Rating ..... 40 Micron
Gauge Port ..... 1/4 Inch
Operation ..... Fluorocarbon Diaphragm
Port Threads ..... 1/2 Inch
Pressure & Temperature Ratings –
B11 (Metal Bowl D or W) ..... 300 PSIG Max (20.7 bar)
0°F to 150°F (-18°C to 66°C)
B12 (Metal Bowl D) ..... 300 PSIG Max (20.7 bar)
0°F to 180°F (-18°C to 82°C)
B12 (Metal Bowl W) ..... 300 PSIG Max (20.7 bar)
0°F to 150°F (-18°C to 66°C)
Automatic Float Drain ..... 15 to 175 PSIG (1 to 12 bar)
32°F to 150°F (0°C to 66°C)
Option "L" Minimum Operating Temperature† ..... -40° C/F

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

Sump Capacity ..... 1.7 Ounce
Weight ..... 2.42 lb. (1.09 kg)

Materials of Construction

Adjustment Mechanism / Springs ..... 316 Stainless Steel
Body ..... 316 Stainless Steel
Bonnet / Knob (B11) ..... Acetal
Bonnet / Tee Handle (B12) ..... 316 Stainless Steel
Bottom Plug ..... 316 Stainless Steel
Poppet ..... 316 Stainless Steel
Seals ..... Fluorocarbon
Sight Gauge ..... Isoplast