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# Stainless Steel FRLs

Air Preparation Units

Catalogue PDE2504TCUK April 2012



ENGINEERING YOUR SUCCESS.

## Stainless Steel FRLs

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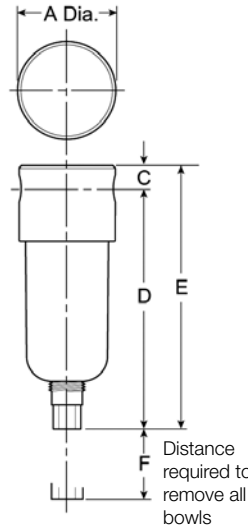
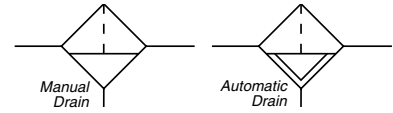
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**PF504 Filter – Miniature**

**Features**

- Stainless steel construction handles most corrosive environments
- Fluorocarbon seals standard
- Meets NACE specifications MR-01-75/ISO 15156
- High flow: 1/4" - 10.85 dm<sup>3</sup>/s<sup>§</sup>
- 1/8" female threaded drain

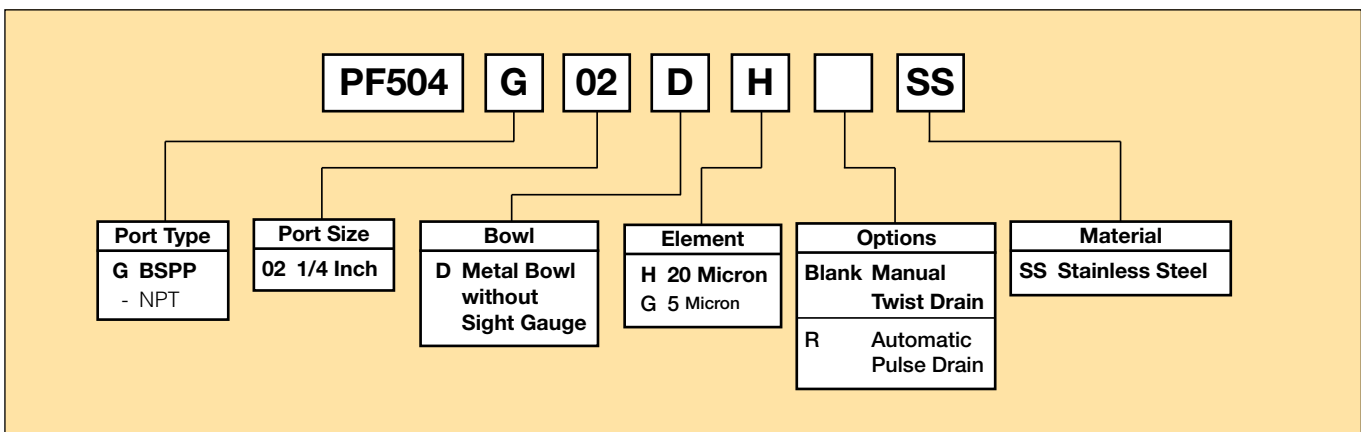


Port Size	BSPP	NPT
	Manual Twist Drain	Manual Twist Drain
1/4"	<b>PF504G02DHSS</b>	PF504-02DHSS

PF504 Filter Dimensions (mm)		
A	C	D
40	8	94
E	F	
102	40	

Standard part numbers shown bold.  
 For other models refer to ordering information below.  
<sup>§</sup> dm<sup>3</sup>/s = Flow at 6.2 bar and a 0.3 bar pressure drop.

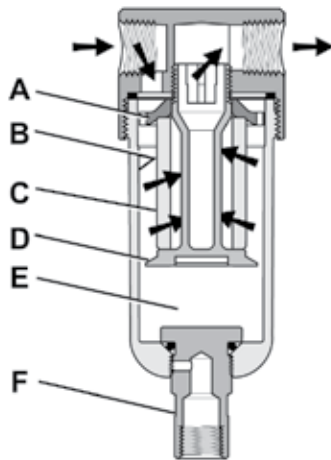
**Ordering Information**



**BOLD ITEMS ARE MOST POPULAR.**

Technical Specifications – PF504

Operation



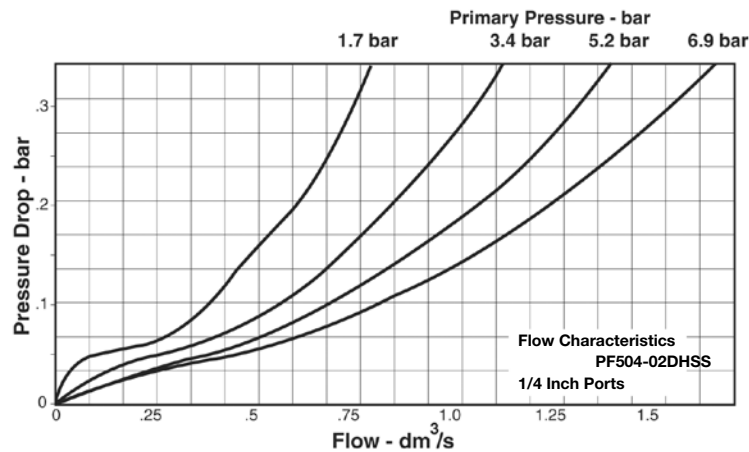
First Stage Filtration:

Air enters at inlet port and flows through deflector plate (A) which causes a swirling action. Liquids and coarse particles are forced to the bowl interior wall (B) by the centrifugal action of the swirling air. They are then carried down the bowl wall by the force of gravity. The baffle (D) separates the lower portion of the bowl into a “quiet zone” (E) where the removed liquid and particles collect, unaffected by the swirling air, and are therefore not reentrained into the flowing air.

Second Stage Filtration:

After liquids and large particles are removed in the first stages of filtration, the air flows through element (C) where smaller particles are filtered out. The filtered air then passes downstream. Collected liquids and particles in the “quiet zone” (E) should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by unscrewing the drain valve (F) slightly until the liquid begins to drain.

Technical Information



PF504 Filter Kits & Accessories

<b>Filter Element Kits –</b>	
Particulate (5 Micron).....	EK504VY
Particulate (20 Micron).....	EK504Y
<b>Drain Kits -</b>	
Automatic Pulse Drain.....	RK504SY-SS
<b>Manual Twist Drain –</b>	
Small (Old) .....	SA600Y7-1SS
Large (New) .....	SAP05481
<b>Pipe Nipple –</b>	
1/4" NPT 316 Stainless Steel .....	616Y28-SS
1/4" BSPT 316 Stainless Steel .....	AC-2SS

Specifications

<b>Bowl Capacity</b> .....	29 cm <sup>3</sup>
<b>Filter Rating</b> .....	20 Micron
<b>Sump Capacity</b> .....	12 cm <sup>3</sup>
<b>Port Threads</b> .....	1/4 Inch

Pressure & Temperature Ratings –

Manual Twist Drain .....	0 to 20.7 bar
	-18°C to 82°C
Auto Pulse Drain .....	0 to 12 bar
	0°C to 66°C

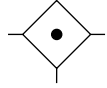
Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.

**Weight** .....274 g

Materials of Construction

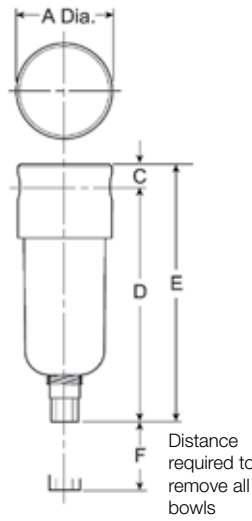
<b>Body</b> .....	316 Stainless Steel
<b>Bowls</b> .....	316 Stainless Steel
<b>Deflector</b> .....	Acetal
<b>Drain</b> .....	316 Stainless Steel
<b>Element Holder</b> .....	Acetal
<b>Filter Element</b> .....	Polyethylene
<b>Seals</b> .....	Fluorocarbon

**PF501 Coalescing Filter – Miniature**



**Features**

- Stainless steel construction handles most corrosive environments
- Meets NACE specifications MR-01-75/ISO 15156
- High flow: 1/4" - 755 dm<sup>3</sup>/s<sup>§</sup>
- 1/8" female threaded drain



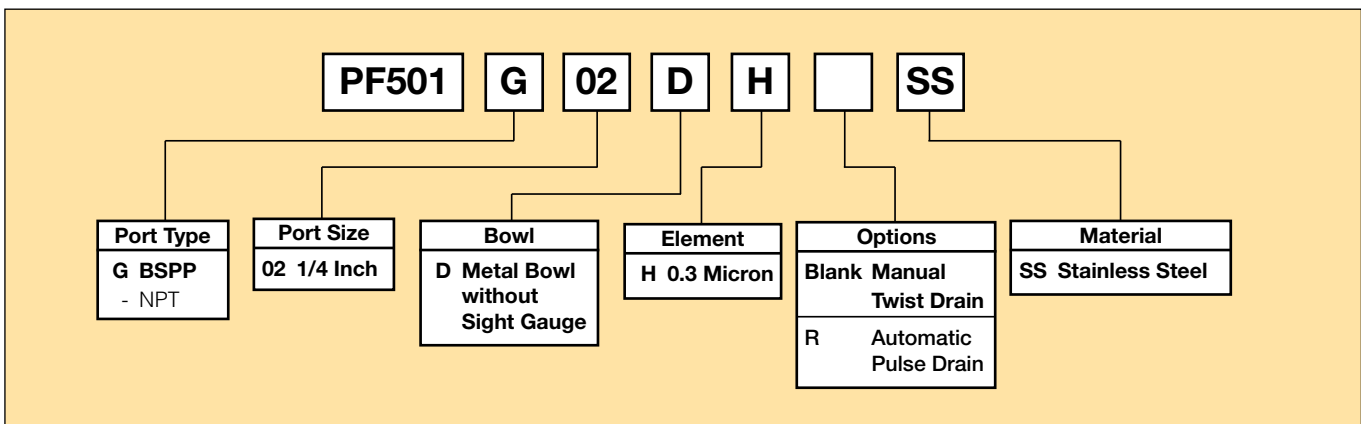
Port Size	BSPP	NPT
	Manual Twist Drain	Manual Twist Drain
1/4"	<b>PF501G02DHSS</b>	PF501-02DHSS

PF501 Coalescing Filter Dimensions (mm)		
<b>A</b> 40	<b>C</b> 8	<b>D</b> 94
<b>E</b> 102	<b>F</b> 40	

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

<sup>§</sup> dm<sup>3</sup>/s = Flow at 6.2 bar and a 0.3 bar pressure drop.

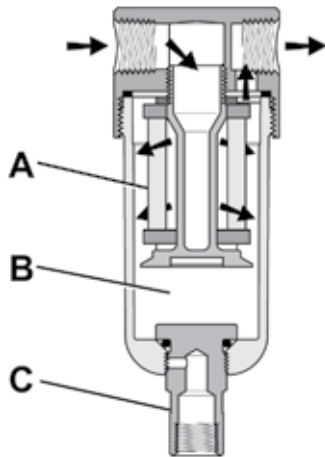
**Ordering Information**



**BOLD ITEMS ARE MOST POPULAR.**

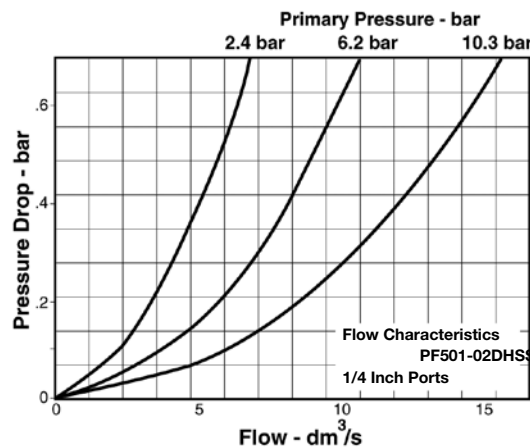
Technical Specifications – PF501

Operation



The contaminated air enters the element interior and is forced through a thick membrane (A) of “borosilicate” glass fibers coated with epoxy. Flow then passes through the element, and at this stage 99.97% of the sub micronic particles have been removed from the air stream. The tiny droplets coalesce together and are collected from the filter element by the outer drain layer. The clean, filtered air now passes through and out into the pneumatic system. The air line coalescing filter removes liquid aerosols and sub-micron particulate matter. Collected liquids and particles in the “quiet zone” (B) should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by unscrewing the drain valve (C) slightly until the liquid begins to drain.

Technical Information



F501 Filter Kits & Accessories

- Filter Element Kits –**
  - 0.3 Micron .....EKF501H
- Drain Kits -**
  - Automatic Pulse Drain.....RK504SY-SS
- Manual Twist Drain –**
  - Small (Old) .....SA600Y7-1SS
  - Large (New) .....SAP05481
- Pipe Nipple –**
  - 1/4" NPT 316 Stainless Steel..... 616Y28-SS
  - 1/4" BSPT 316 Stainless Steel.....AC-2SS

Specifications

- Bowl Capacity** ..... 29 cm<sup>3</sup>
- Filter Rating** .....0.3 Micron
- Port Threads** .....1/4 Inch

Pressure & Temperature Ratings –

- Manual Twist Drain ..... 0 to 20.7 bar  
-18°C to 82°C
- Auto Pulse Drain..... 0 to 12 bar  
0°C to 66°C

Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.

- Sump Capacity** ..... 12 cm<sup>3</sup>
- Weight** ..... 275 g

Materials of Construction

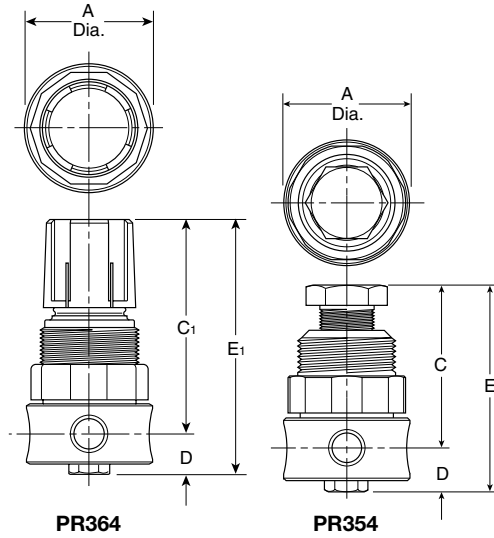
- Body** ..... 316 Stainless Steel
- Bowls** ..... 316 Stainless Steel
- Drain** ..... 316 Stainless Steel
- Element Holder** ..... Acetal
- Filter Element** ..... Borosilicate Fiber
- Seals** .....Fluorocarbon



**PR354, PR364 Regulator – Miniature**

**Features**

- Stainless steel construction handles most corrosive environments
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- Meets NACE specifications MR-01-75/ISO 15156
- High flow: 1/4" – 5.75 dm<sup>3</sup>/s<sup>§</sup>



Series	Adjustment Type	Port Size	BSP	NPT
PR364	Knob	1/4"	<b>PR364G02CSS</b>	PR364-02CSS
PR354	All Metal	1/4"	<b>PR354G02CSS</b>	PR354-02CSS

PR354, PR364 Regulator Dimensions (mm)		
A	C	C <sub>1</sub>
40	51	65
D	E	E <sub>1</sub>
13	64	78

Standard part numbers shown bold.

For other models refer to ordering information below.

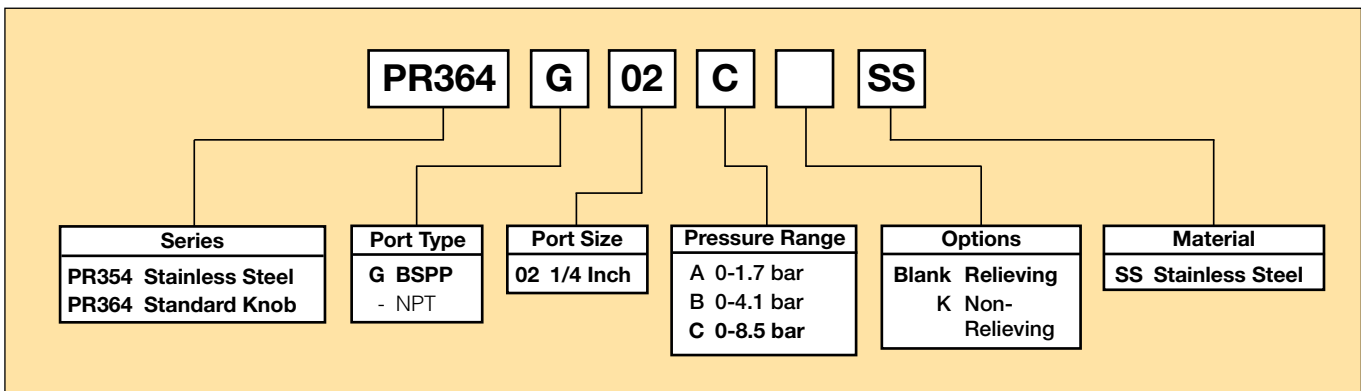
<sup>§</sup> dm<sup>3</sup>/s = 7 bar inlet pressure with 5.5 bar set pressure and 1 bar pressure drop.

(mm)  
NOTE: 32mm dia. 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**

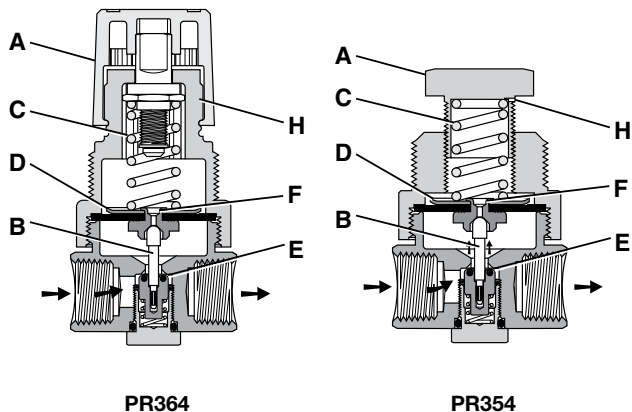


**BOLD ITEMS ARE MOST POPULAR.**



Technical Specifications – PR354, PR364

Operation



With the adjusting knob (A) turned fully counter-clockwise (no spring load), and pressure supplied to the regulator inlet port, the valve poppet assembly (B) is closed. Turning the adjusting knob clockwise applies a load to control spring (C). This load causes the diaphragm (D) and the valve poppet assembly (B) to move downward allowing flow across the seat area (E) created between the poppet assembly and the seat. Pressure in the downstream line is sensed below the diaphragm (D) and offsets the load of spring (C). As downstream pressure rises, poppet assembly (B) and diaphragm (D) move upward until the area (E) is closed and the load of the spring (C) and pressure under diaphragm (D) are in balance. A reduced outlet pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the diaphragm (D). The load of control spring (C) now causes the poppet assembly to move downward opening seat area (E) allowing air to flow to meet the downstream demand. The flow of downstream air is metered by the amount of opening (E). Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm (D) to move upward against control spring (C), open vent hole (F), and vent the excess pressure to atmosphere through the hole in the bonnet (H). (This occurs in the relieving type regulator only.)

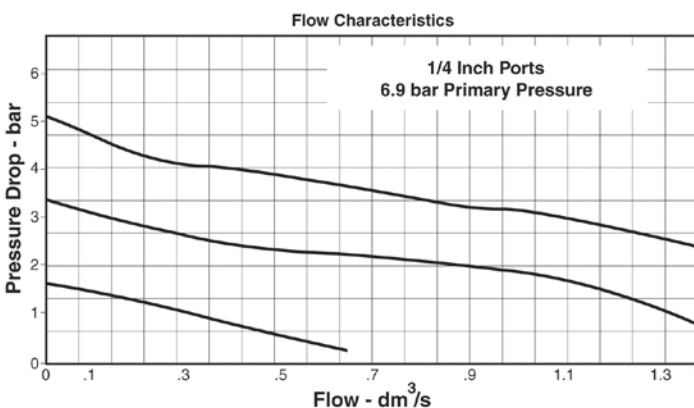
Technical Information

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.



R354, R364 Regulator Kits & Accessories

R354 Bonnet Kit .....	CKR354YSS
R364 Bonnet Kit (Knob Included) .....	CKR364YSS
Gauge –	
0 to 10 bar .....	M1/4G40S-10
Panel Mount Bracket (Stainless) .....	161X57-SS
Panel Mount Nut –	
Stainless .....	R05X51SS
Plastic .....	R05X51-P
Pipe Nipple –	
1/4" NPT 316 Stainless Steel .....	616Y28-SS
1/4" BSPT 316 Stainless Steel .....	AC-2SS
Service Kit –	
Relieving .....	RKR364YSS
Non-Relieving .....	RKR364KYSS

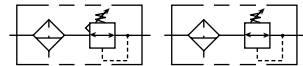
Specifications

Gauge Port .....	1/4 Inch
Operation .....	Fluorocarbon Diaphragm
Port Threads .....	1/4 Inch
Pressure & Temperature Ratings –	
PR354 .....	20.7 bar
PR364 .....	20.7 bar
PR354 .....	-18°C to 82°C
PR364 .....	-18°C to 66°C
Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.	
Weight .....	230 g

Materials of Construction

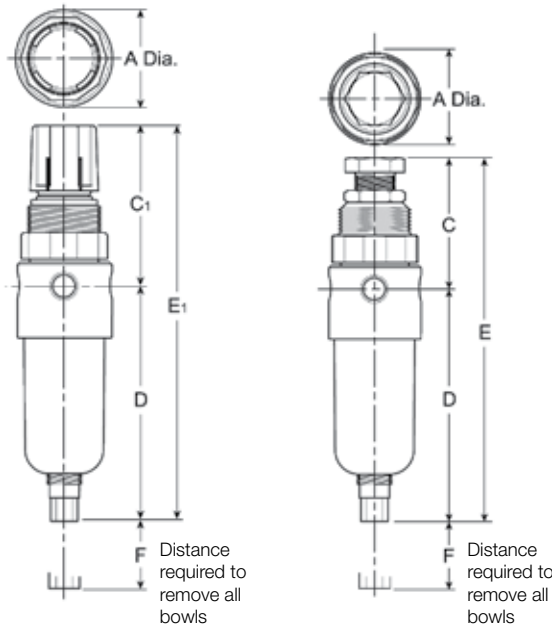
Adjustment Mechanism / Springs .....	316 Stainless Steel
Adjusting Knob (PR354) .....	316 Stainless Steel
Adjusting Knob (PR364) .....	Polypropylene
Body .....	316 Stainless Steel
Bonnet (PR354) .....	316 Stainless Steel
Bonnet (PR364) .....	Acetal
Bottom Plug .....	316 Stainless Steel
Poppet .....	316 Stainless Steel
Seals .....	Fluorocarbon

**PB548, PB558 Filter / Regulator – Miniature**



**Features**

- Stainless steel construction handles most corrosive environments
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- Meets NACE specifications MR-01-75/ISO 15156.
- High flow: 1/4" – 5.75 dm<sup>3</sup>/s<sup>§</sup>
- 1/8" female threaded drain



Port Size	BSPP	NPT
1/4"	<b>PB548G02DHCSS</b>	PB548-02DHCSS
1/4"	<b>PB558G02DHCSS</b>	PB558-02DHCSS

PB548, PB558 Piggyback Dimensions (mm)		
<b>A</b> 40	<b>C</b> 55	<b>C<sub>1</sub></b> 67
<b>D</b> 92	<b>E</b> 78	<b>E<sub>1</sub></b> 147
<b>F</b> 40		

Standard part numbers shown bold.

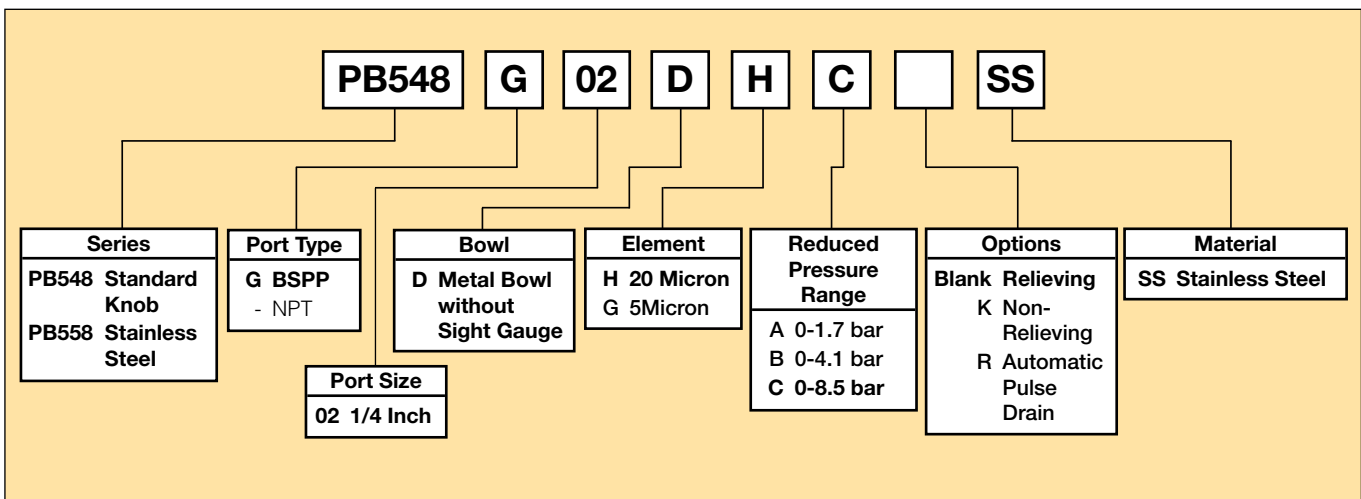
For other models refer to ordering information below.

<sup>§</sup> dm<sup>3</sup>/s = 7 bar inlet pressure with 5.5 bar set pressure and 1 bar pressure drop.

(mm)  
NOTE: 32mm dia. hole required for panel mounting.

<b>⚠ WARNING</b>
<p><b>Product rupture can cause serious injury.</b>  <b>Do not connect regulator to bottled gas.</b>  <b>Do not exceed maximum primary pressure rating.</b></p>

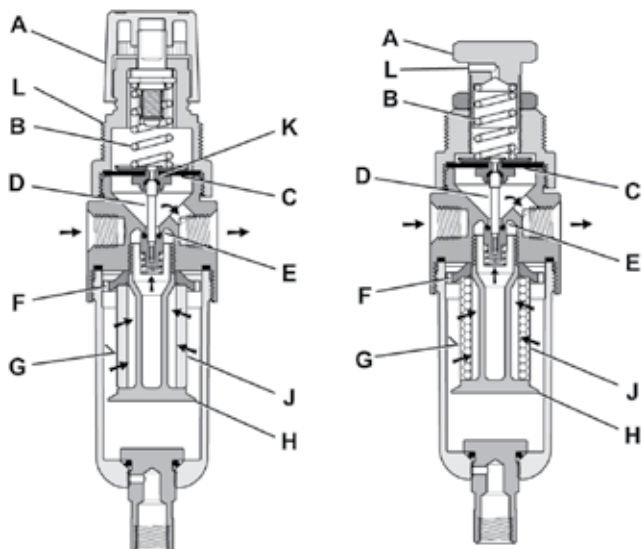
**Ordering Information**



**BOLD ITEMS ARE MOST POPULAR.**

Technical Specifications – PB548, PB558

Operation



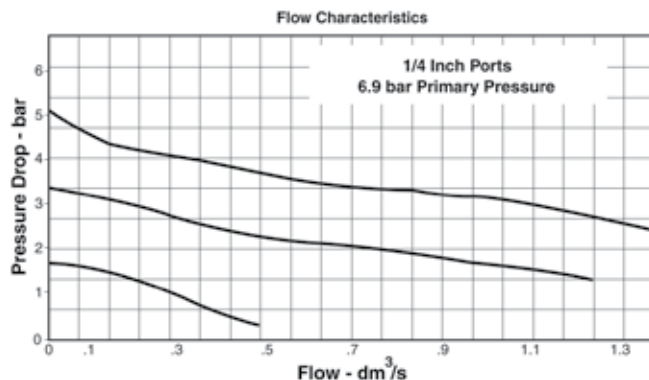
Turning the adjusting knob clockwise applies a load to control spring (B) which forces diaphragm (C) and valve poppet assembly (D) to move downward allowing filtered air to flow through the seat area (E) created between the poppet assembly and the seat. "First stage filtration". Air pressure supplied 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.



PB548, B558 Regulator Kits & Accessories

- Filter Element Kits –**
  - Particulate (5 Micron).....EK504VY
  - Particulate (20 Micron).....EK504Y
- Gauge –**
  - 0 - 10 bar ..... M1/4G40S-10
- Drain Kits -**
  - Automatic Pulse Drain.....RK504SY-SS
  - Manual Twist Drain -
  - Small (Old).....SA600Y7-1SS
  - Large (New).....SAP05481
- Panel Mount Bracket (Stainless).....161X57-SS**
- Panel Mount Nut –**
  - Stainless ..... R05X51SS
  - Plastic ..... R05X51-P
- Pipe Nipple –**
  - 1/4" NPT 316 Stainless Steel..... 616Y28-SS
  - 1/4" BSPT 316 Stainless Steel.....AC-2SS
- Service Kit –**
  - Relieving .....RK549YSS
  - Non-Relieving.....RK548YSS

Specifications

- Bowl Capacity** ..... 29 cm<sup>3</sup>
- Filter Rating** .....20 Micron
- Gauge Port** ..... 1/4 Inch
- Operation** ..... Fluorocarbon Diaphragm
- Port Threads** ..... 1/4 Inch
- Pressure & Temperature Ratings –**
  - PB548.....20.7 bar max.  
-18°C to 82°C
  - PB558.....20.7 bar max.  
-18°C to 82°C
  - Auto Pulse Drain.....0 to 12 bar max.  
0°C to 66°C

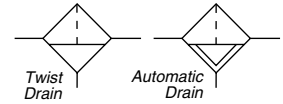
Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.

- Sump Capacity** ..... 12 cm<sup>3</sup>
- Weight** ..... 270 g

Materials of Construction

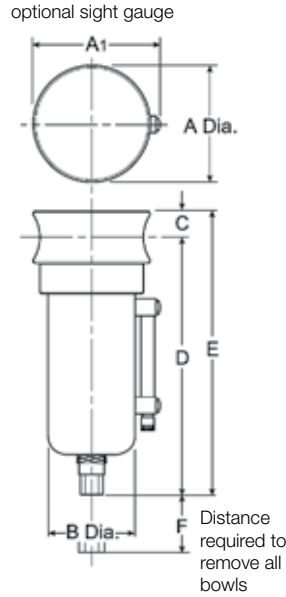
- Adjustment Mechanism / Springs** .....316 Stainless Steel
- Body** .....316 Stainless Steel
- Bonnet (PB548)** .....Acetal
- Bonnet (PB558)** .....316 Stainless Steel
- Bottom Plug** .....316 Stainless Steel
- Knob (PB548)** .....Polypropylene
- Knob (PB558)** .....316 Stainless Steel
- Poppet** .....316 Stainless Steel
- Seals** ..... Fluorocarbon

**PF10 Filter – Standard**



**Features**

- Stainless steel construction handles most corrosive environments
- Meets NACE specifications MR-01-75/ISO 15156
- High flow: 1/2" - 34 dm<sup>3</sup>/s<sup>§</sup>
- 1/8" female threaded drain



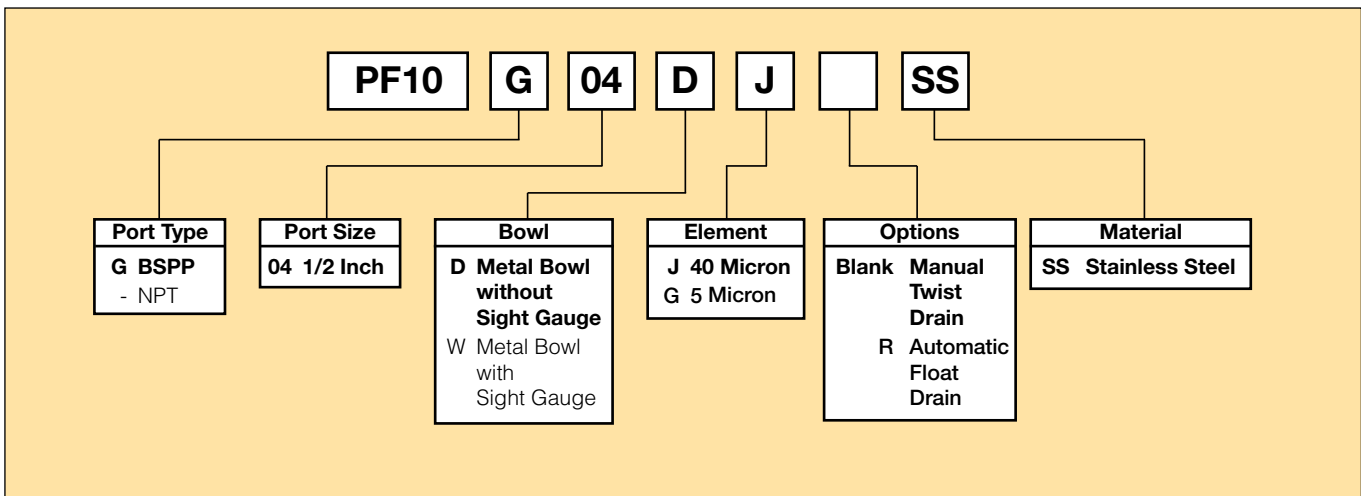
Port Size	BSPP		NPT	
	Manual Twist Drain	Automatic Float Drain	Manual Twist Drain	Automatic Float Drain
1/2"	<b>Metal Bowl Without Sight Gauge</b>			
	<b>PF10G04DJSS</b>	<b>PF10G04DJRSS</b>	PF10-04DJSS	PF10-04DJRSS

PF10 Filter Dimensions (mm)		
<b>A</b> 60	<b>A1</b> 64	<b>B</b> 44
<b>C</b> 14	<b>D</b> 127	<b>E</b> 141
<b>F</b> 54		

Standard part numbers shown bold.  
For other models refer to ordering information below.  
<sup>§</sup> dm<sup>3</sup>/s = Flow at 6.2 bar and a 0.3 bar pressure drop.

(mm)

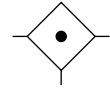
**Ordering Information**



**BOLD ITEMS ARE MOST POPULAR.**

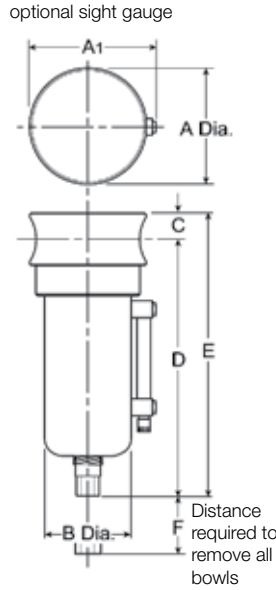


**PF11 Coalescing Filter – Standard**



**Features**

- Stainless steel construction handles most corrosive environments
- Meets NACE specifications MR-01-75/ISO 15156
- High flow: 1/2" - 21 dm<sup>3</sup>/s<sup>§</sup>
- 1/8" female threaded drain
- High efficiency 0.01µm filtration
- Removes liquid aerosols and sub micron particles



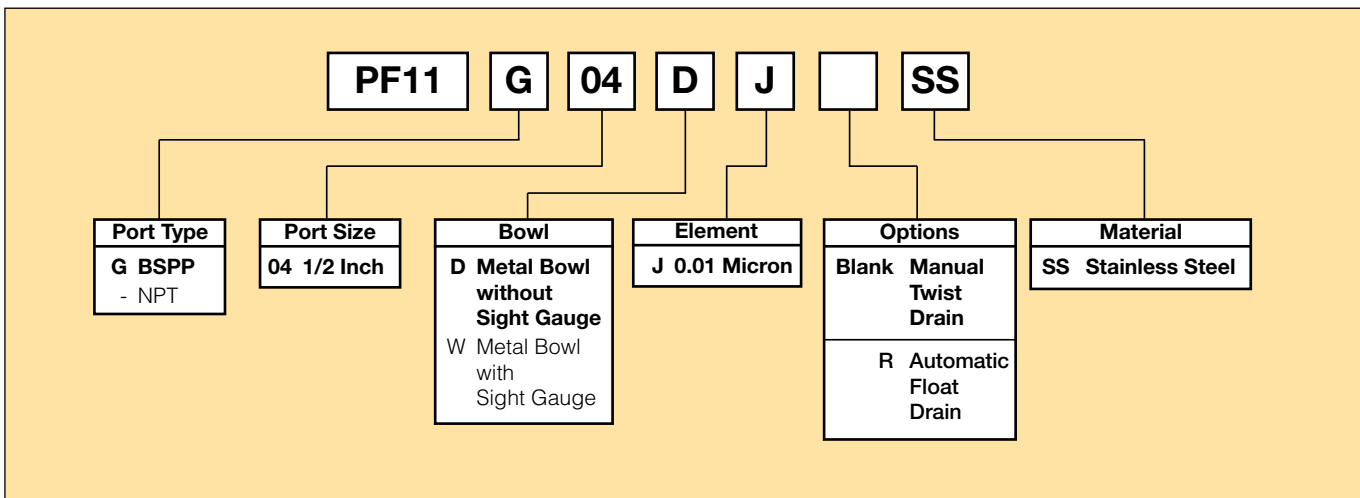
Port Size	BSPP		NPT	
	Manual Twist Drain	Automatic Float Drain	Manual Twist Drain	Automatic Float Drain
1/2"	<b>Metal Bowl Without Sight Gauge</b>			
	<b>PF11G04DJSS</b>	<b>PF11G04DJRSS</b>	PF11-04DJSS	PF11-04DJRSS

F11 Coalescing Filter Dimensions (mm)		
<b>A</b> 60	<b>A<sub>1</sub></b> 64	<b>B</b> 44
<b>C</b> 14	<b>D</b> 127	<b>E</b> 141
<b>F</b> 54		

Standard part numbers shown bold.  
 For other models refer to ordering information below.  
<sup>§</sup> dm<sup>3</sup>/s = Flow at 6.2 bar and a 0.3 bar pressure drop.

(mm)

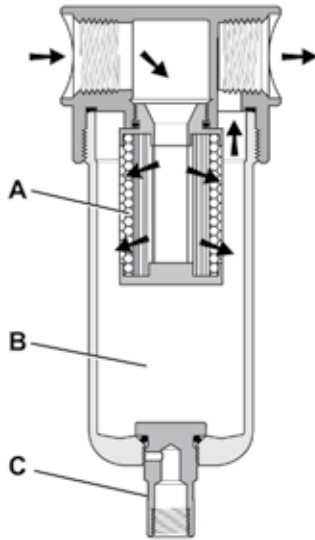
**Ordering Information**



**BOLD ITEMS ARE MOST POPULAR.**

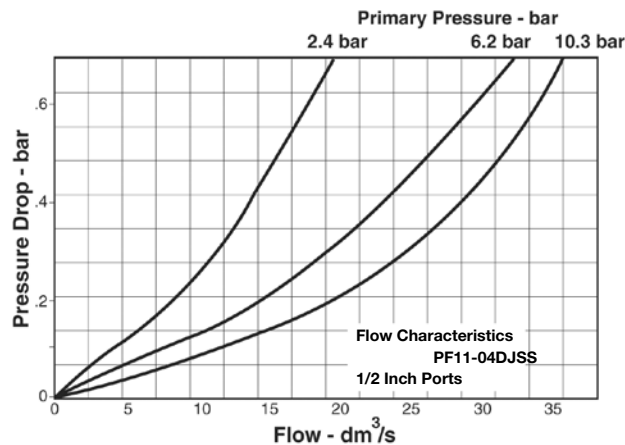
Technical Specifications – PF11

Operation



The contaminated air enters the element interior and is forced through a thick membrane (A) of “borosilicate” glass fibers coated with epoxy. Flow then passes through the element, and at this stage 99.97% of the sub micronic particles have been removed from the air stream. The tiny droplets coalesce together and are collected from the filter element by the outer drain layer. The clean, filtered air now passes through and out into the pneumatic system. The air line coalescing filter removes liquid aerosols and sub-micron particulate matter. Collected liquids and particles in the “quiet zone” (B) should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by unscrewing the drain valve (C) slightly until the liquid begins to drain.

Technical Information



F11 Filter Kits & Accessories

<b>Drain Kit –</b>	
Automatic Float Drain .....	SA10MDSS
Manual Twist Drain–	
Small (Old) .....	SA600Y7-1SS
Large (New) .....	SAP05481
<b>Filter Element Kits –</b>	
0.01 Micron .....	EKF71
<b>Pipe Nipple –</b>	
1/2" NPT 316 Stainless Steel.....	616A28-SS
1/2" BSPT 316 Stainless Steel.....	AC-4SS

Pressure & Temperature Ratings –

Manual Twist Drain .....	0 to 20.7 bar
	-18°C to 82°C
Manual Twist Drain (W) .....	0 to 17.2 bar
	-18°C to 66°C
Automatic Float Drain .....	0 to 12 bar
	0°C to 66°C
Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.	
<b>Weight</b> .....	850 g

Specifications

<b>Bowl Capacity</b> .....	118 cm <sup>3</sup>
<b>Filter Rating</b> .....	0.01 Micron
<b>Sump Capacity</b> .....	50 cm <sup>3</sup>
<b>Port Threads</b> .....	1/2 Inch

Materials of Construction

<b>Body</b> .....	316 Stainless Steel
<b>Bowls</b> .....	316 Stainless Steel
<b>Drain</b> .....	316 Stainless Steel
<b>Element Holder</b> .....	Acetal
<b>Filter Element</b> .....	Borosilicate Fiber
<b>Seals</b> .....	Fluorocarbon
<b>Sight Gauge</b> .....	Isoplast

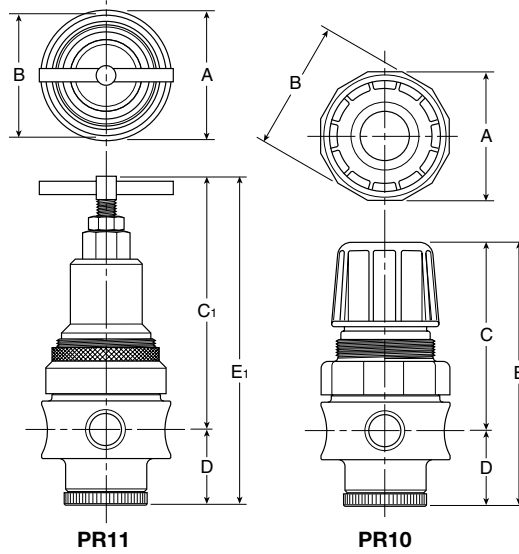




PR10, PR11 Regulator – Standard

Features

- Stainless steel construction handles most corrosive environments
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- Meets NACE specifications MR-01-75/ISO 15156
- Low temperature version available
- High flow: 1/2" – 37.75 dm<sup>3</sup>/s<sup>§</sup>



Port Size	BSPP	NPT
1/2"	<b>PR10G04CSS</b>	PR10-04CSS
1/2"	<b>PR11G04CSS</b>	PR11-04CSS

PR10, PR11 Regulator Dimensions (mm)		
A	B	C
60	62	91
C <sub>1</sub>	D	E
119	35	126
E <sub>1</sub>		
154		

Standard part numbers shown bold.

For other models refer to ordering information below.

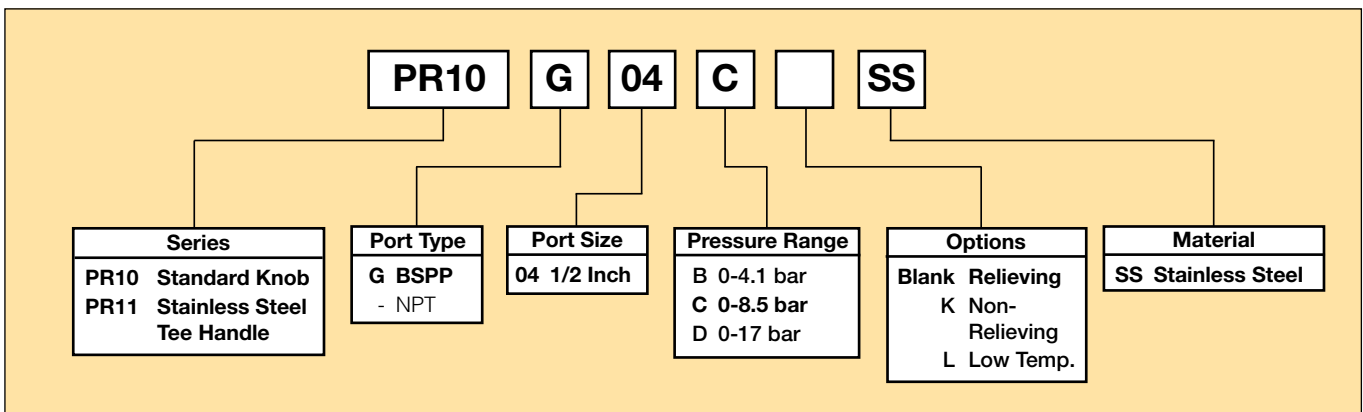
<sup>§</sup> dm<sup>3</sup>/s = 7 bar inlet pressure with 5.5 bar set pressure and 1 bar pressure drop.

(mm)  
NOTE: 44mm dia. 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

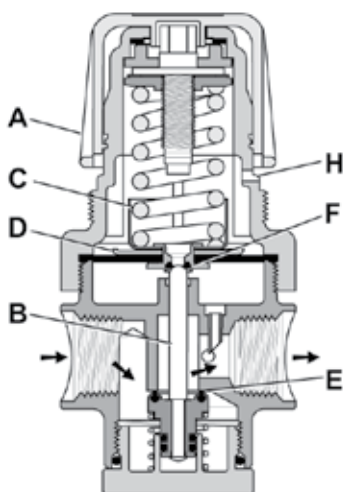


BOLD ITEMS ARE MOST POPULAR.



Technical Specifications – PR10, PR11

Operation



With the adjusting knob (A) turned fully counter-clockwise (no spring load), and pressure supplied to the regulator inlet port, the valve poppet assembly (B) is closed. Turning the adjusting knob clockwise applies a load to control spring (C). This load causes the diaphragm (D) and the valve poppet assembly (B) to move downward allowing flow across the seat area (E) created between the poppet assembly and the seat. Pressure in the downstream line is sensed below the diaphragm (D) and offsets the load of spring (C). As downstream pressure rises, poppet assembly (B) and diaphragm (D) move upward until the area (E) is closed and the load of the spring (C) and pressure under diaphragm (D) are in balance. A reduced outlet pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the diaphragm (D). The load of control spring (C) now causes the poppet assembly to move downward opening seat area (E) allowing air to flow to meet the downstream demand. The flow of downstream air is metered by the amount of opening (E).

Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the diaphragm (D) to move upward against control spring (C), open vent hole (F), and vent the excess pressure to atmosphere through the hole in the bonnet (H). (This occurs in the relieving type regulator only.)

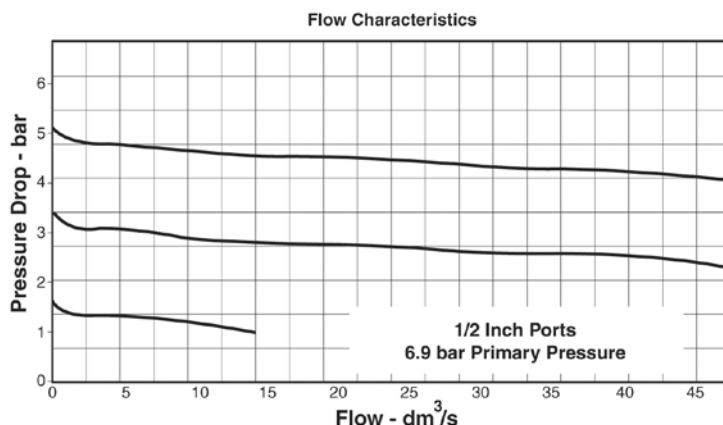
Technical Information

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.



PR10, PR11 Regulator Kits & Accessories

- R10 Bonnet Kit (Knob Included) ..... CKR10YSS
- R11 Bonnet Kit..... CKR11YSS
- Gauge –
- 0 - 10 bar ..... M1/4G40S-10
- Panel Mount Bracket (Stainless)..... R10Y57-SS
- Panel Mount Nut –
- Stainless ..... R10X51SS
- Plastic ..... R10X51-P
- Pipe Nipple –
- 1/2" NPT 316 Stainless Steel..... 616A28-SS
- 1/2" BSPT 316 Stainless Steel..... AC-4SS
- Service Kit –
- Relieving.....RKR10YSS
- Non-Relieving..... RKR10KYSS

Materials of Construction

- Adjustment Mechanism / Springs .....316 Stainless Steel
- Body .....316 Stainless Steel
- Bonnet / Tee Handle (PR11).....316 Stainless Steel
- Bonnet / Knob (PR10) .....Acetal
- Bottom Plug .....316 Stainless Steel
- Poppet .....316 Stainless Steel
- Seals ..... Fluorocarbon

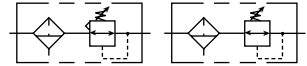
Specifications

- Gauge Port .....1/4 Inch
- Operation ..... Fluorocarbon Diaphragm
- Port Threads .....1/2 Inch
- Pressure & Temperature Ratings –
- PR10.....20.7 bar max.
- 18°C to 66°C
- PR11.....20.7 bar max.
- 18°C to 82°C
- Option "L" minimum operating temperature\* ..... -40° C/F
- Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.
- Weight .....810 G

\* Note: "Low Temperature" option is intended for applications where the ambient temperature may be down to -40° C/F. Air supply must be free of moisture to prevent ice formation and malfunction of units. These units contain EPDM seals. Make sure any oils in the airstream are compatible.

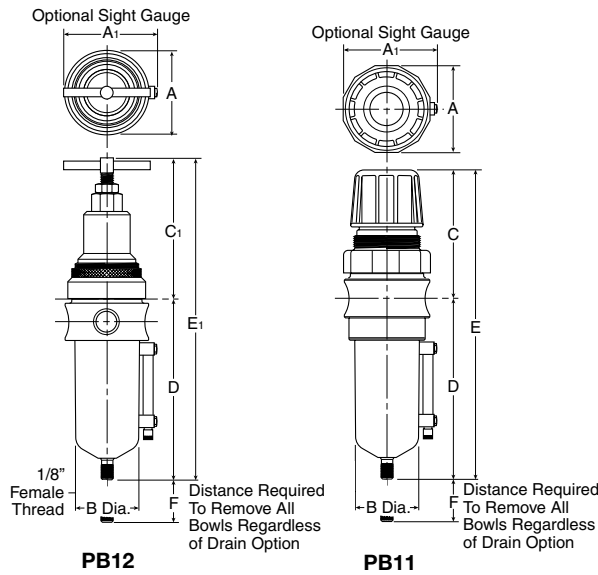


**PB11, PB12 Filter / Regulator – Standard**



**Features**

- Stainless steel construction handles most corrosive environments
- Large diaphragm to valve area ratio for precise regulation and high flow capacity
- Meets NACE specifications MR-01-75/ISO-15156
- Low temperature version available
- High flow: 1/2" – 34 dm<sup>3</sup>/s<sup>§</sup>
- 1/8" female threaded drain



Port Size	Adjustment Type	BSPP		NPT	
		Manual Twist Drain	Automatic Float Drain	Manual Twist Drain	Automatic Float Drain
1/2"	<b>Metal Bowl without Sight Gauge</b>				
	Knob	<b>PB11G04DJCSS</b>	<b>PB11G04DJCRSS</b>	PB11-04DJCSS	PB11-04DJCRSS
	Tee-Handle	<b>PB12G04DJCSS</b>	<b>PB12G04DJCRSS</b>	PB12-04DJCSS	PB12-04DJCRSS

PB11, PB12 Piggyback Dimensions (mm)		
A	A1	B
60	64	44
C	C1	D
91	119	127
E	E1	F
218	246	54

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

<sup>§</sup> dm<sup>3</sup>/s = 7 bar inlet pressure with 5.5 bar set pressure and 1 bar pressure drop.

(mm)  
NOTE: 44mm dia. 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**

PB11 G 04 D J C SS

<b>Series</b> PB11 Standard Knob PB12 Stainless Steel	<b>Port Type</b> G BSPP - NPT	<b>Bowl</b> D Metal Bowl without Sight Gauge W Metal Bowl with Sight Gauge	<b>Element</b> J 40 Micron G 5 Micron	<b>Reduced Pressure Range</b> B 0-4.1 bar C 0-8.5 bar D 0-17 bar	<b>Options</b> Blank Relieving K Non-Relieving R Automatic Float Drain L Low Temp. *	<b>Material</b> SS Stainless Steel
<b>Port Size</b> 04 1/2 Inch						

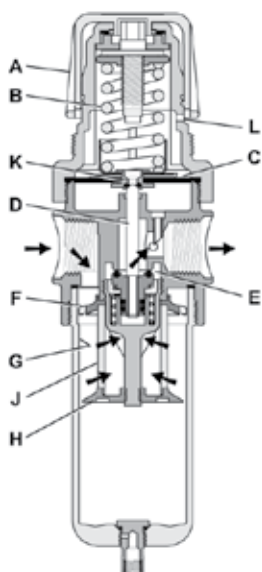
\* Manual drain without sight gauge only

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Technical Specifications – PB11, PB12

Operation



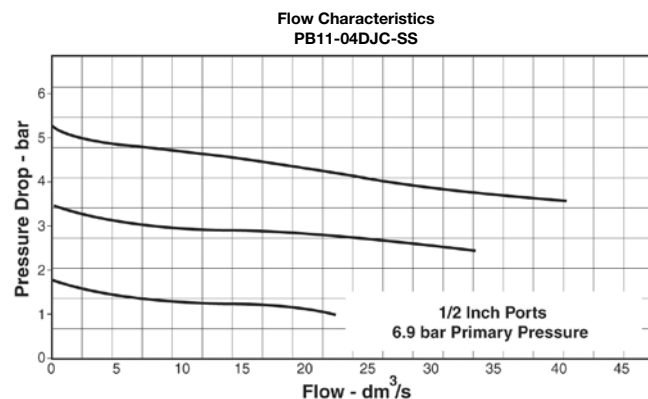
Turning the adjusting knob clockwise applies a load to control spring (B) which forces diaphragm (C) and valve poppet assembly (D) to move downward allowing filtered air to flow through the seat area (E) created between the poppet assembly and the seat. "First stage filtration". Air pressure supplied 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.



PB11, PB12 Regulator Kits & Accessories

- Drain Kits -**
- 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 -**
- 0 - 10 bar .....M1/4G40S-10
- Panel Mount Bracket (Stainless).....R10Y57-SS**
- Panel Mount Nut -**
- Stainless .....R10X51SS
- Plastic .....R10X51-P
- Pipe Nipple -**
- 1/2" NPT 316 Stainless Steel.....616A28-SS
- 1/2" BSPT 316 Stainless Steel.....AC-4SS
- Service Kit -**
- Relieving .....RKR10YSS
- Non-Relieving.....RKR10KYSS

Materials of Construction

- 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

Specifications

- Bowl Capacity** ..... 118 cm<sup>3</sup>
- Filter Rating** .....40 Micron
- Gauge Port** .....1/4 Inch
- Operation** ..... Fluorocarbon Diaphragm
- Port Threads** ..... 1/2 Inch
- Pressure & Temperature Ratings -**
- PB11 (Metal bowl D or W).....20.7 bar -18°C to 66°C
- PB12 (Metal bowl D).....20.7 bar -18°C to 82°C
- PB12 (Metal bowl W).....20.7 bar -18°C to 66°C
- Automatic float drain.....1 to 12 bar 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 2°C.
- Sump Capacity** ..... 50 cm<sup>3</sup>
- Weight** ..... 1090 g

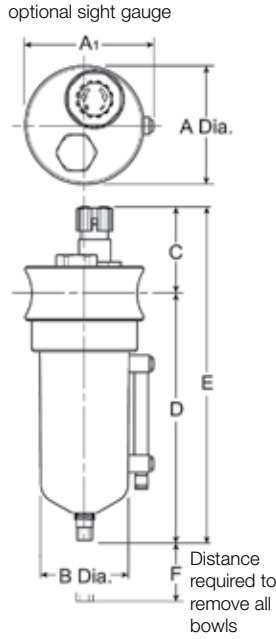
\* **Note:** "Low Temperature" option is intended for applications where the ambient temperature may be down to -40° C/F. Air supply must be free of moisture to prevent ice formation and malfunction of units. These units contain EPDM seals. Make sure any oils in the airstream are compatible.



**PL10 Lubricator – Standard**

**Features**

- Stainless steel construction handles most corrosive environments
- Fillable under pressure
- Meets NACE specifications MR-01-75/ISO 15156
- High flow: 1/2" - 47 dm<sup>3</sup>/s<sup>§</sup>
- 1/8" female threaded drain

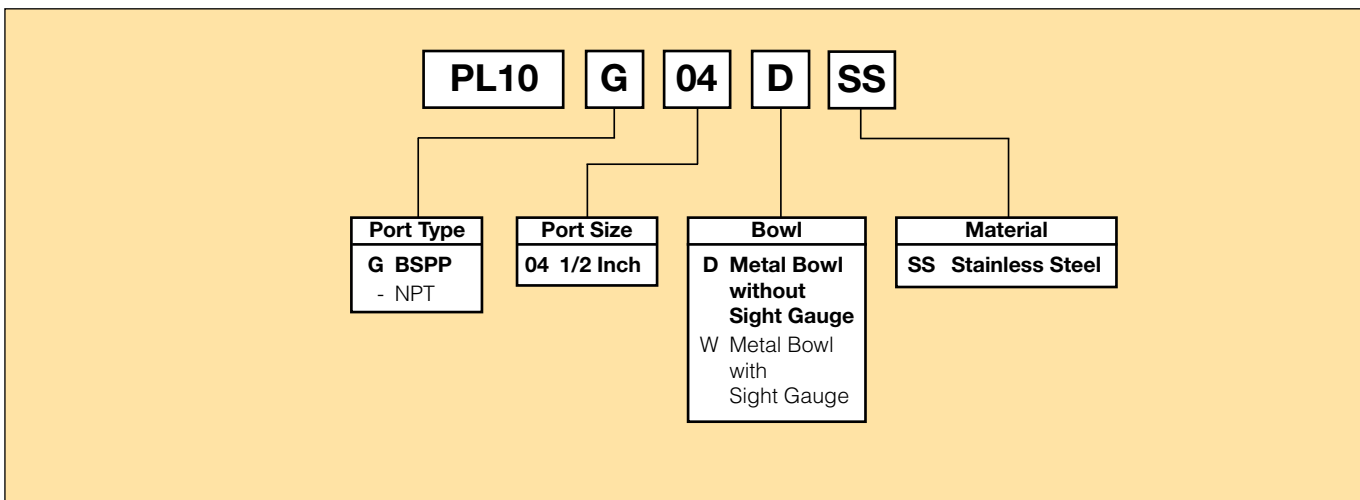


Port Size	BSPP	NPT
	Manual Twist Drain	Manual Twist Drain
1/2"	<b>Metal Bowl Without Sight Gauge</b>	
	<b>PL10G04DSS</b>	PL10-04DSS

PL10 Lubricator Dimensions (mm)		
<b>A</b> 60	<b>A1</b> 64	<b>B</b> 44
<b>C</b> 46	<b>D</b> 127	<b>E</b> 173
<b>F</b> 89		

Standard part numbers shown bold.  
 For other models refer to ordering information below.  
<sup>§</sup> dm<sup>3</sup>/s = Flow at 6.2 bar and a 0.3 bar pressure drop.

**Ordering Information**



**BOLD ITEMS ARE MOST POPULAR.**







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