



aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
**pneumatics**  
process control  
sealing & shielding



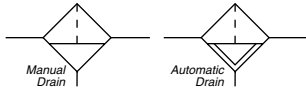
# Stainless Steel FRLs

Air Preparation Units



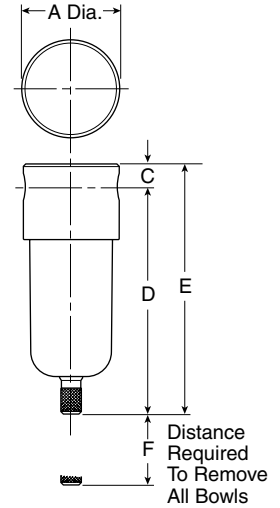
ENGINEERING YOUR SUCCESS.

**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>



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

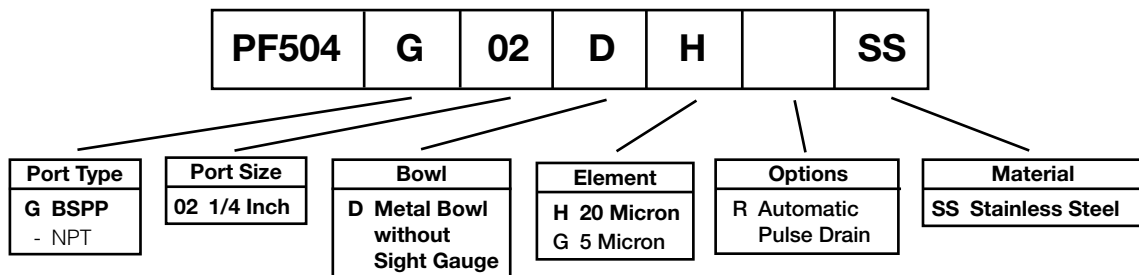
PF504 Filter Dimensions		
A 40	C 8	D 94
E 102	F 40	

**Bold Items are Most Popular.**  
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)

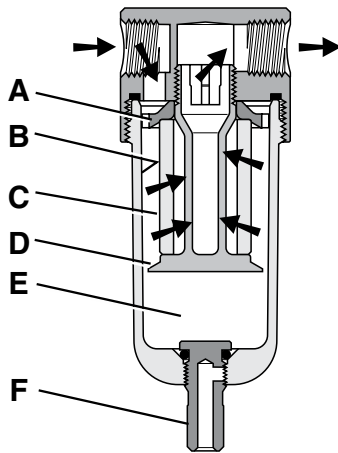
**Ordering Information**



**BOLD ITEMS ARE MOST POPULAR.**

Technical Specifications – PF504

Operation



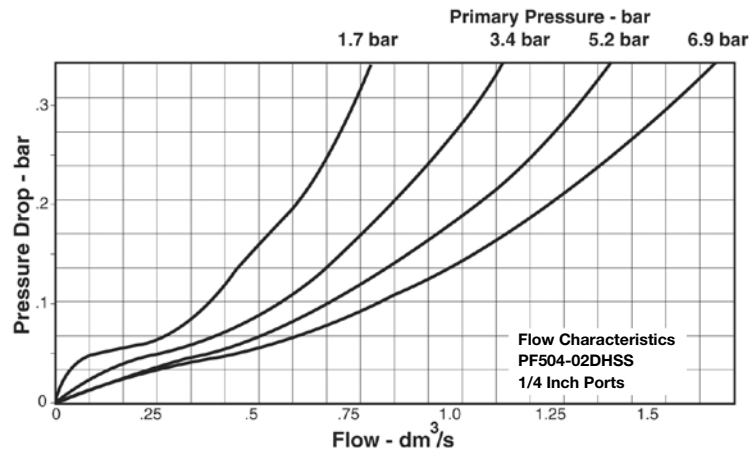
First Stage Filtration:

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

- Filter Element Kits –
  - Particulate (5 Micron) ..... EK504VY
  - Particulate (20 Micron) ..... EK504Y
- Manual Twist Drain –
  - Small (Old) ..... SA600Y7-1SS
  - Large (New) ..... TBA
- 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 ..... 20 Micron
- Sump Capacity ..... 12 cm<sup>3</sup>
- Port Threads ..... 1/4 Inch

Pressure & Temperature Ratings –

- Manual Twist Drain ..... 0 to 20.7 bar  
-18°C to 82°C

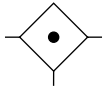
Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.

- Weight ..... 274 g

Materials of Construction

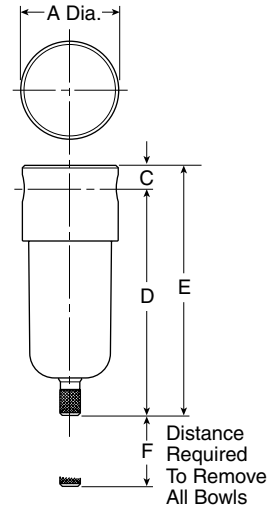
- Body ..... 316 Stainless Steel
- Bowls ..... 316 Stainless Steel
- Deflector ..... Acetal
- Drain ..... 316 Stainless Steel
- Element Holder ..... Acetal
- Filter Element ..... Polyethylene
- Seals ..... Fluorocarbon

# 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>



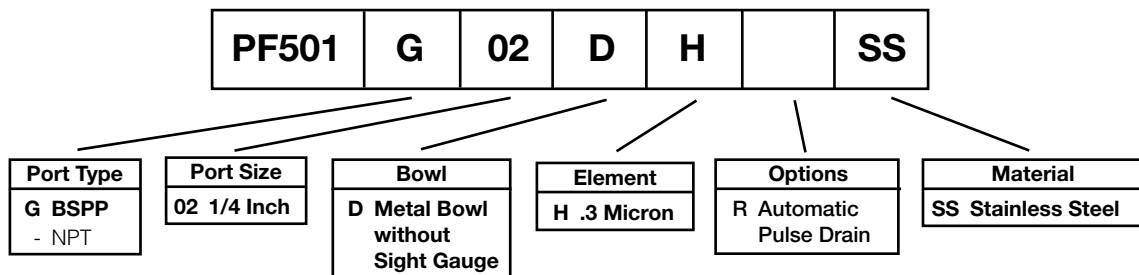
Port Size	BSPP	NPT
	Manual Twist Drain	Manual Twist Drain
1/4"	<b>PF501G02DHSS</b>	PF501-02DHSS

PF501 Coalescing Filter Dimensions		
A 40	C 8	D 94
E 102	F 40	

**Bold Items are Most Popular.**  
 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)

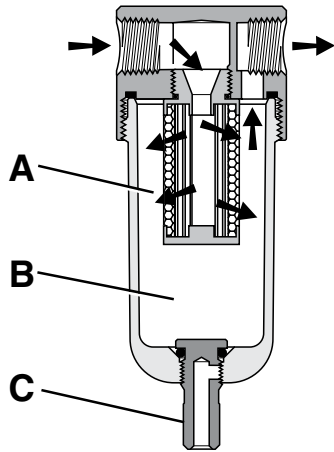
## Ordering Information



**BOLD ITEMS ARE MOST POPULAR.**

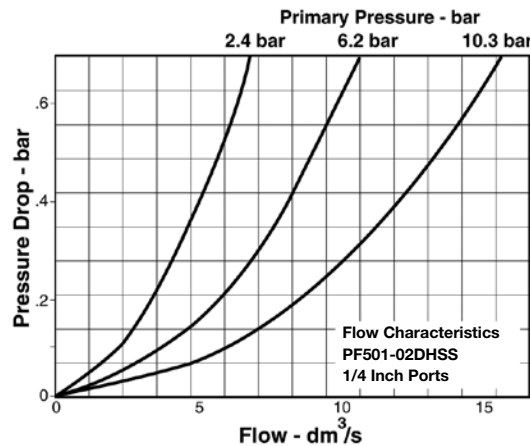
Technical Specifications – PF501

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 micron 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 .....EKF31
- Manual Twist Drain –
  - Small (Old) ..... SA600Y7-1SS
  - Large (New) ..... TBA
- 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

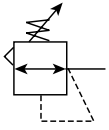
Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.

- 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

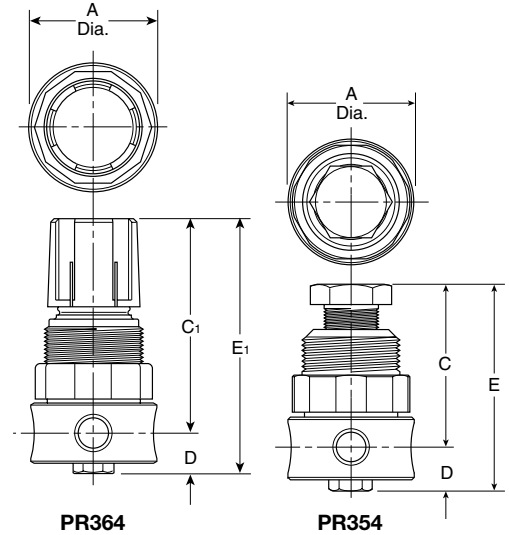
- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Meets NACE Specifications MR-01-75/ISO 15156
- High Flow: 1/4" – 5.75 dm<sup>3</sup>/s<sup>§</sup>



PR364



PR354



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		
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.

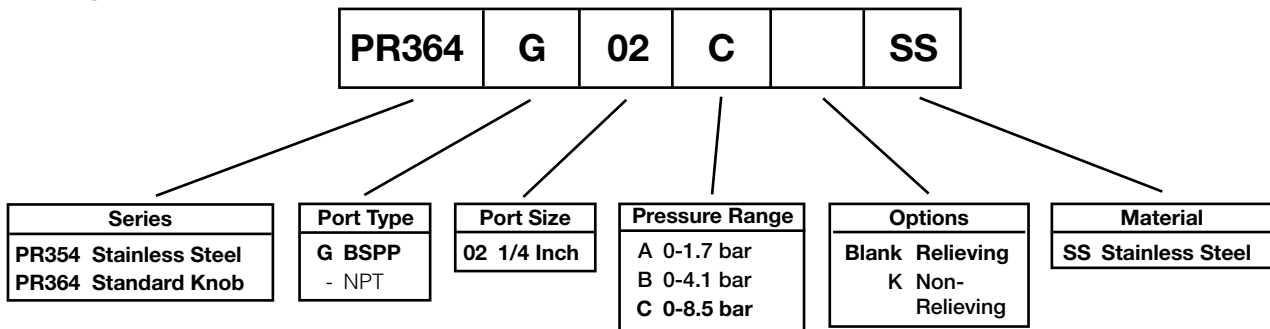
<sup>§</sup> dm<sup>3</sup>/s = 7 bar inlet pressure with 5.5 bar set pressure and 1 bar pressure drop.

(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

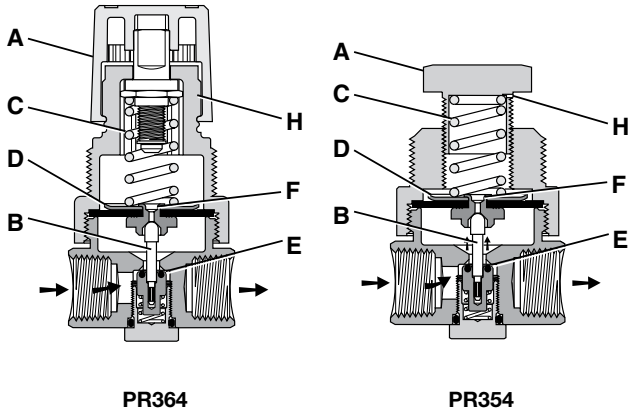


BOLD ITEMS ARE MOST POPULAR.



Technical Specifications – PR354, PR364

Operation

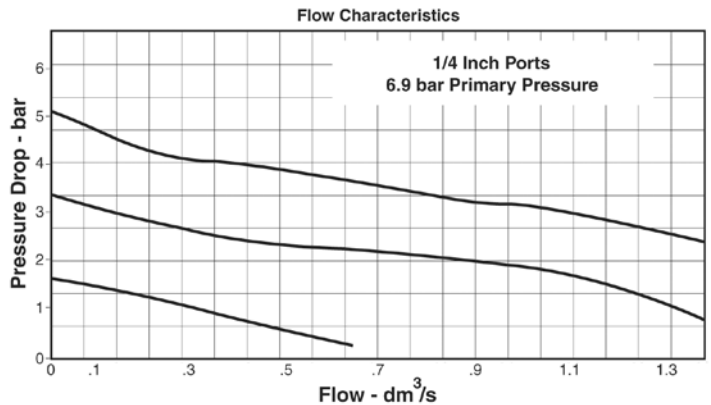


With the adjusting knob (A) turned fully counter-clockwise (no spring load), and pressure supplied to the regulator inlet port, the valve poppet assembly (B) is closed. Turning the adjusting knob clockwise applies a load to control spring (C). This load causes the diaphragm (D) and the valve poppet assembly (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

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
<b>Gauge –</b>	
0 to 10 bar .....	M1/4G40S-10
Panel Mount Bracket (Stainless) .....	161X57-SS
<b>Panel Mount Nut –</b>	
Stainless .....	R05X51SS
<b>Pipe Nipple –</b>	
1/4" NPT 316 Stainless Steel .....	616Y28-SS
1/4" BSPT 316 Stainless Steel .....	AC-2SS
<b>Service Kit –</b>	
Relieving .....	RKR364YSS
Non-Relieving .....	RKR364KYSS

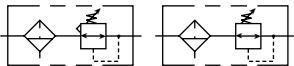
Specifications

Gauge Port .....	1/4 Inch
Operation .....	Fluorocarbon Diaphragm
Port Threads .....	1/4 Inch
Pressure & Temperature Ratings – .....	20.7 bar 4°C to 66°C
<b>Note:</b> 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**



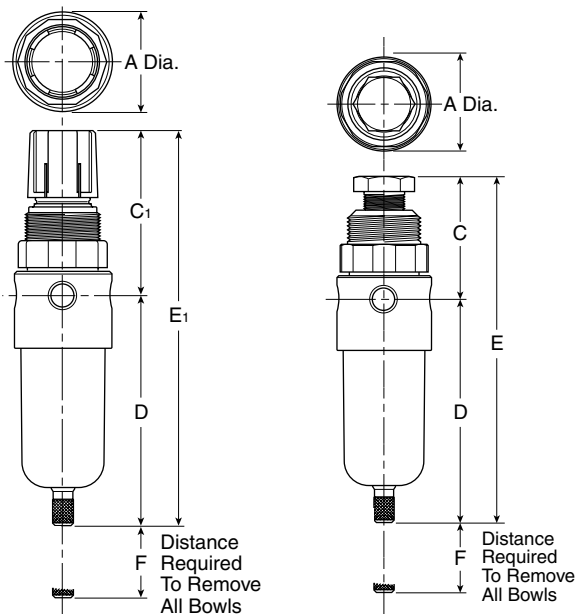
**Features**

- 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>



PB548

PB558



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

Standard part numbers shown bold.

For other models refer to ordering information below.

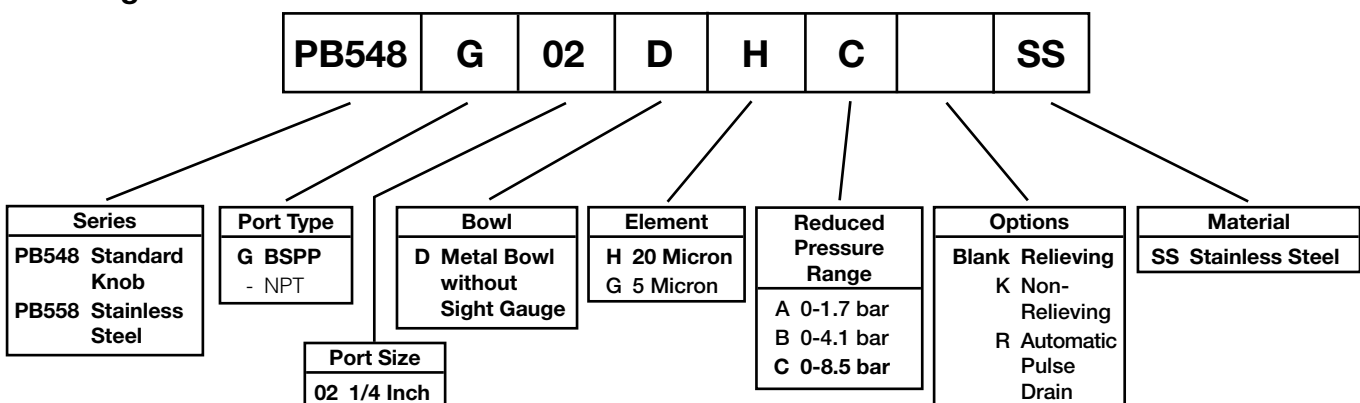
<sup>§</sup> dm<sup>3</sup>/s = 7 bar inlet pressure with 5.5 bar set pressure and 1 bar pressure drop.

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

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

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

**Ordering Information**

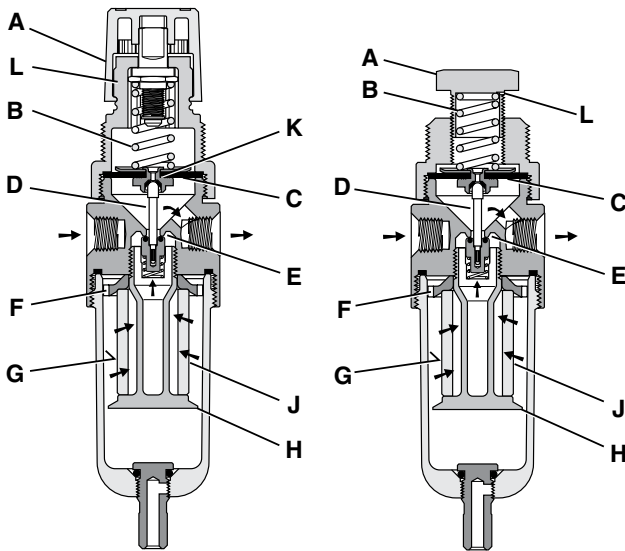


BOLD ITEMS ARE MOST POPULAR.



Technical Specifications – PB548, PB558

Operation



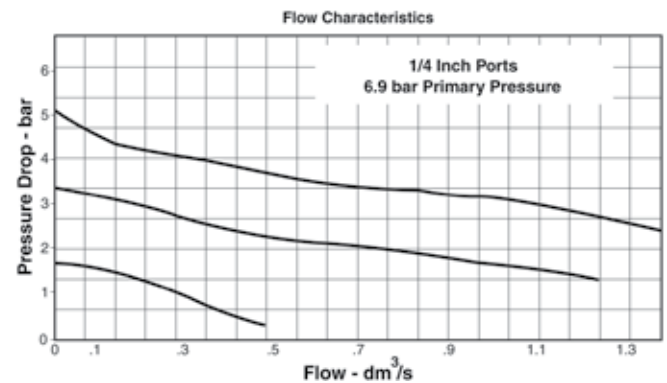
Turning the adjusting knob clockwise applies a load to control spring (B) which forces diaphragm (C) and valve poppet assembly (D) to move downward allowing filtered air to flow through the seat area (E) created between the poppet assembly and the seat. "First stage filtration". Air pressure supplied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

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

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

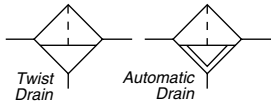
Specifications

<b>Bowl Capacity .....</b>	29 cm <sup>3</sup>
<b>Filter Rating .....</b>	20 Micron
<b>Gauge Port .....</b>	1/4 Inch
<b>Operation .....</b>	Fluorocarbon Diaphragm
<b>Port Threads .....</b>	1/4 Inch
<b>Pressure &amp; Temperature Ratings – .....</b>	20.7 bar max. -18°C to 66°C
<b>Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.</b>	
<b>Sump Capacity .....</b>	12 cm <sup>3</sup>
<b>Weight .....</b>	270 G

Materials of Construction

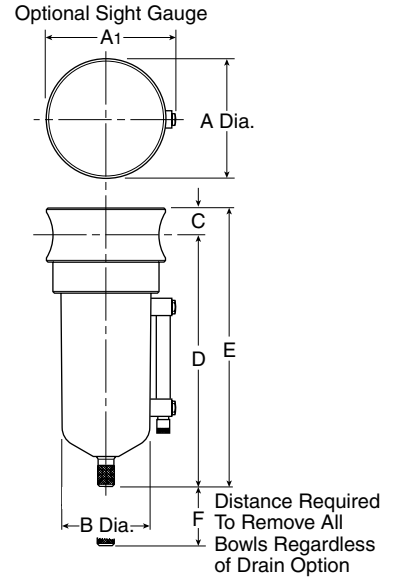
<b>Adjustment Mechanism / Springs .....</b>	316 Stainless Steel
<b>Body .....</b>	316 Stainless Steel
<b>Bonnet (PB548) .....</b>	Acetal
<b>Bonnet (PB558) .....</b>	316 Stainless Steel
<b>Bottom Plug .....</b>	316 Stainless Steel
<b>Knob (PB548) .....</b>	Polypropylene
<b>Knob (PB558) .....</b>	316 Stainless Steel
<b>Poppet .....</b>	316 Stainless Steel
<b>Seals .....</b>	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>



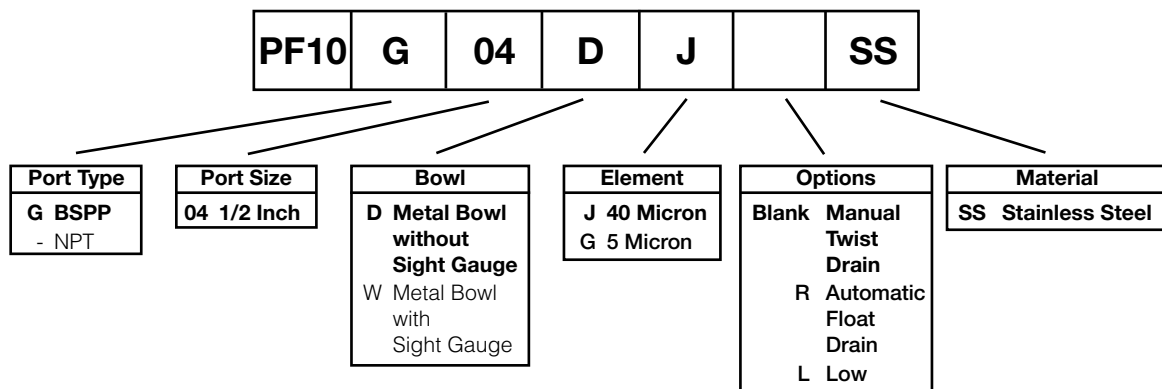
Port Size	BSPP		NPT	
	Manual Twist Drain	Automatic Float Drain	Manual Twist Drain	Automatic Float Drain
1/2"	<b>Metal Bowl Without Sight Gauge</b>			
	<b>PF10-04DJSS</b>	<b>PF10-04DJRSS</b>	PF10G04DJSS	PF10G04DJRSS

PF10 Filter Dimensions		
<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		

**Bold Items are Most Popular.**  
 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)

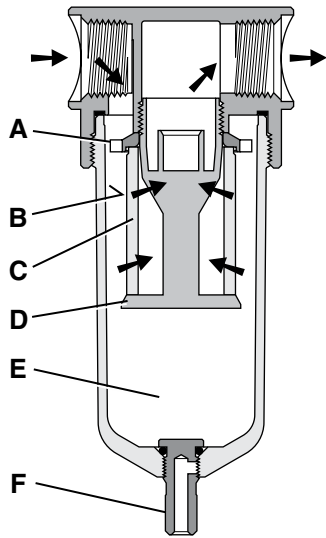
Ordering Information



**BOLD ITEMS ARE MOST POPULAR.**

Technical Specifications – PF10

Operation



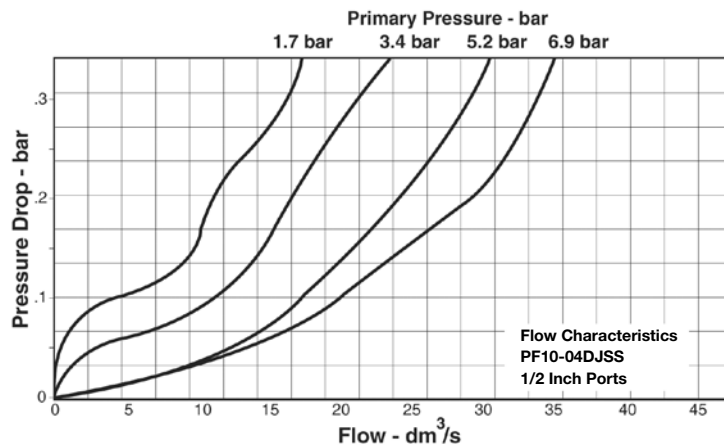
First Stage Filtration:

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



PF10 Filter Kits & Accessories

- Drain Kit –
  - Automatic Float Drain ..... SA602MDSS
  - Manual Twist Drain–
    - Small (Old) ..... SA600Y7-1SS
    - Large (New) ..... TBA
- Filter Element Kits –
  - Particulate (40 Micron) ..... EK55J
  - Particulate (5 Micron) ..... EK55G
- Pipe Nipple – 1/2" NPT 316 Stainless Steel..... 616A28-SS
- 1/2" BSPT 316 Stainless Steel..... AC-4SS

- Manual Twist Drain (W).....0 to 17.2 bar  
-18°C to 66°C
- Automatic Float Drain .....1 to 12 bar  
4°C to 52°C

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

Weight ..... 850 g

Specifications

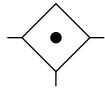
- Bowl Capacity ..... 118 cm³
- Filter Rating ..... 40 Micron
- Sump Capacity ..... 50 cm³
- Port Threads ..... 1/2 Inch
- Pressure & Temperature Ratings –
  - Manual Twist Drain (D) .....0 to 20.7 bar  
-18°C to 82°C

Materials of Construction

- Body ..... 316 Stainless Steel
- Bowls ..... 316 Stainless Steel
- Deflector ..... Acetal
- Drain ..... 316 Stainless Steel
- Element Holder ..... Acetal
- Filter Element ..... Polyethylene
- Seals ..... Fluorocarbon
- Sight Gauge ..... Isoplast

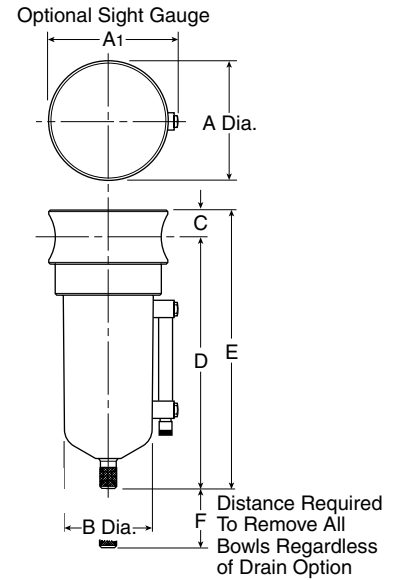


# PF11 Coalescing Filter – Standard



## 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>



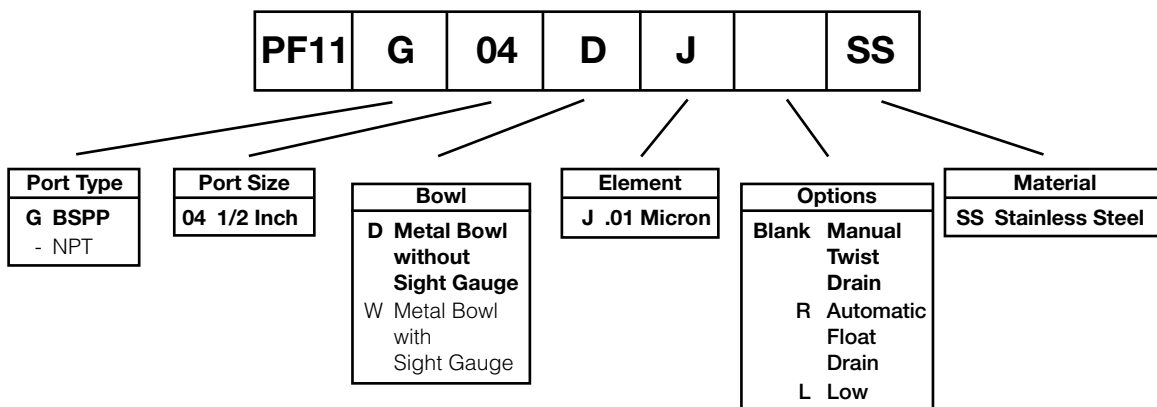
Port Size	BSPB		NPT	
	Manual Twist Drain	Automatic Float Drain	Manual Twist Drain	Automatic Float Drain
1/2"	<b>Metal Bowl Without Sight Gauge</b>			
	<b>PF11-04DJSS</b>	<b>PF11-04DJRSS</b>	PF11G04DJSS	PF11G04DJRSS

A	A1	B
60	64	44
C	D	E
14	127	141
F		
54		

**Bold Items are Most Popular.**  
 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)

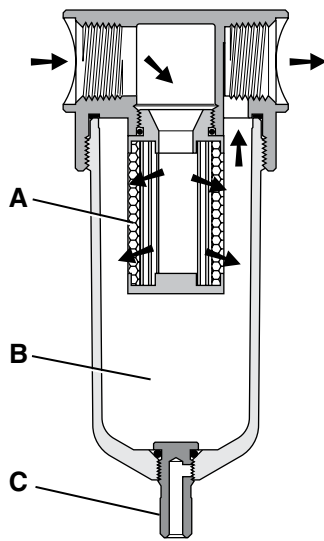
## Ordering Information



**BOLD ITEMS ARE MOST POPULAR.**

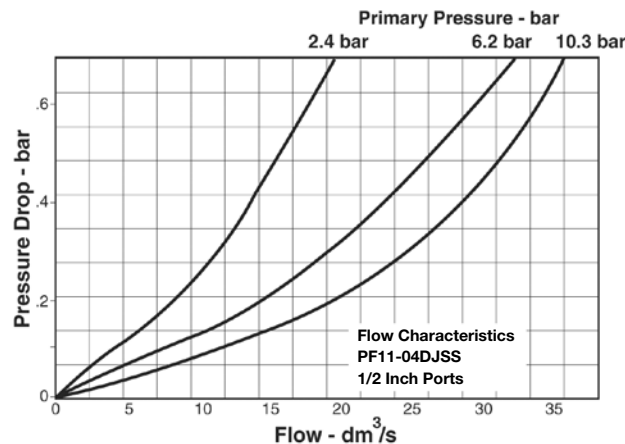
Technical Specifications – PF11

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

- Drain Kit –
  - Automatic Float Drain ..... SA602MDSS
  - Manual Twist Drain–
    - Small (Old) ..... SA600Y7-1SS
    - Large (New) ..... TBA
- Filter Element Kits –
  - 0.3 Micron .....EKF71
- Pipe Nipple –
  - 1/2" NPT 316 Stainless Steel ..... 616A28-SS
  - 1/2" BSPT 316 Stainless Steel..... AC-4SS

- Manual Twist Drain (W).....0 to 17.2 bar  
-18°C to 66°C
- Automatic Float Drain .....0 to 12 bar  
4°C to 52°C

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

Weight ..... 850 g

Specifications

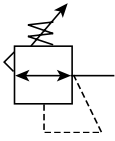
- Bowl Capacity ..... 118 cm³
- Filter Rating .....0.01 Micron
- Sump Capacity ..... 50 cm³
- Port Threads ..... 1/2 Inch
- Pressure & Temperature Ratings –
  - Manual Twist Drain .....0 to 20.7 bar  
-18°C to 82°C

Materials of Construction

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



# PR10, PR11 Regulator – Standard



## Features

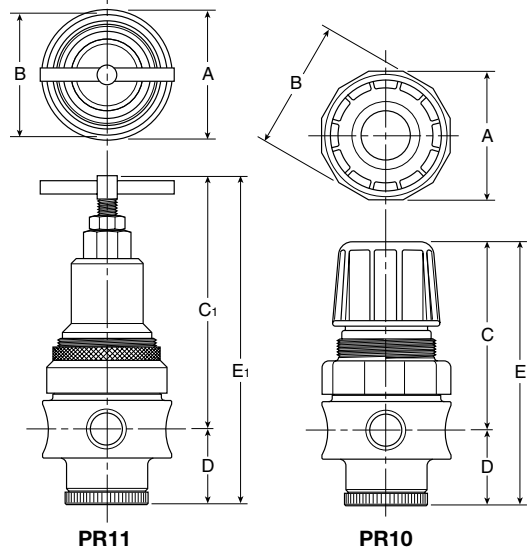
- Stainless Steel Construction Handles Most Corrosive Environments
- Large Diaphragm to Valve Area Ratio for Precise Regulation and High Flow Capacity
- Meets NACE Specifications MR-01-75/ISO 15156
- Low Temperature Version Available
- High Flow: 1/2" – 5.75 dm<sup>3</sup>/s<sup>§</sup>



PR11



PR10



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

Standard part numbers shown bold.

For other models refer to ordering information below.

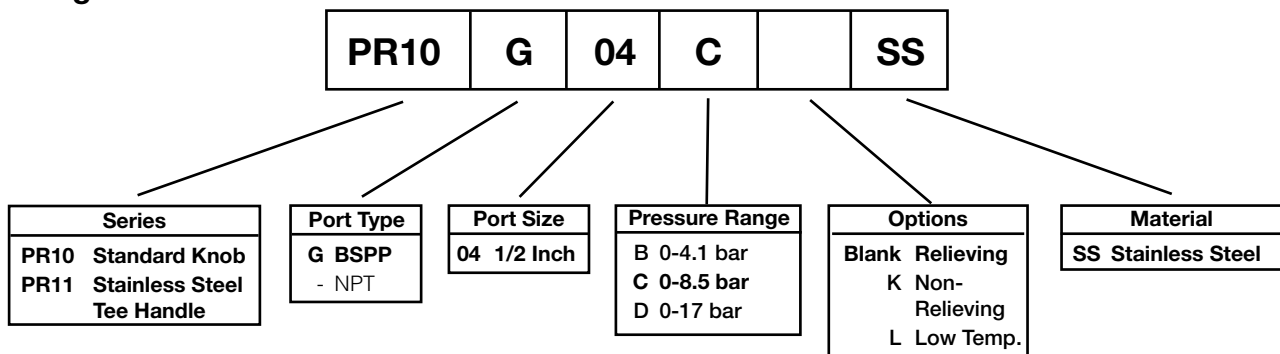
<sup>§</sup> dm<sup>3</sup>/s = 7 bar inlet pressure with 5.5 bar set pressure and 1 bar pressure drop.

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

(mm)  
NOTE: 44mm 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

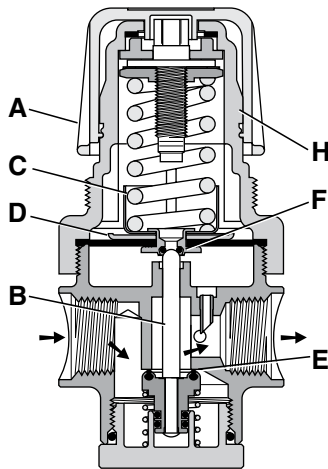


BOLD ITEMS ARE MOST POPULAR.



Technical Specifications – 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.)

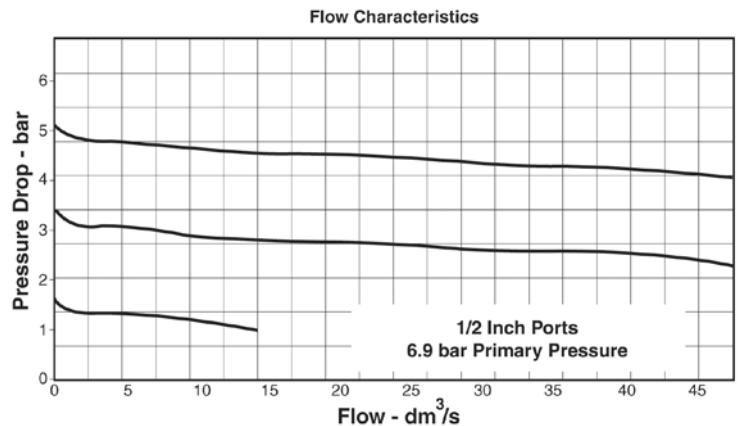
Technical Information

**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



**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
- 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

**Specifications**

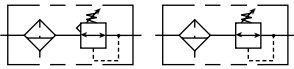
- Gauge Port ..... 1/4 Inch
- Operation ..... Fluorocarbon Diaphragm
- Port Threads ..... 1/2 Inch
- Pressure & Temperature Ratings – ..... 20.7 bar max.  
..... -18°C to 66°C
- Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.
- Weight .....810 G

**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



# 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>

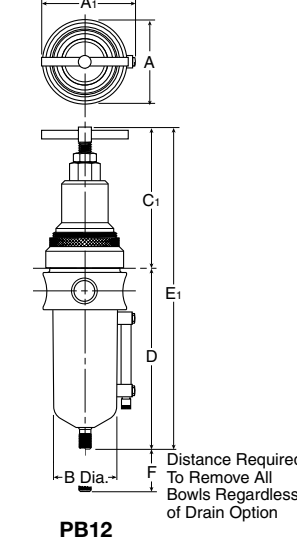


PB12



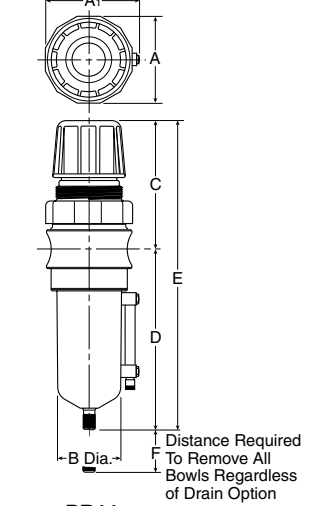
PB11

Optional Sight Gauge



PB12

Optional Sight Gauge



PB11

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>PB11-04DJCSS</b>	<b>PB11-04DJCRSS</b>	PB11G04DJCSS	PB11G04DJCRSS
	Tee-Handle	<b>PB12-04DJCSS</b>	<b>PB12-04DJCRSS</b>	PB12G04DJCSS	PB12G04DJCRSS

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.

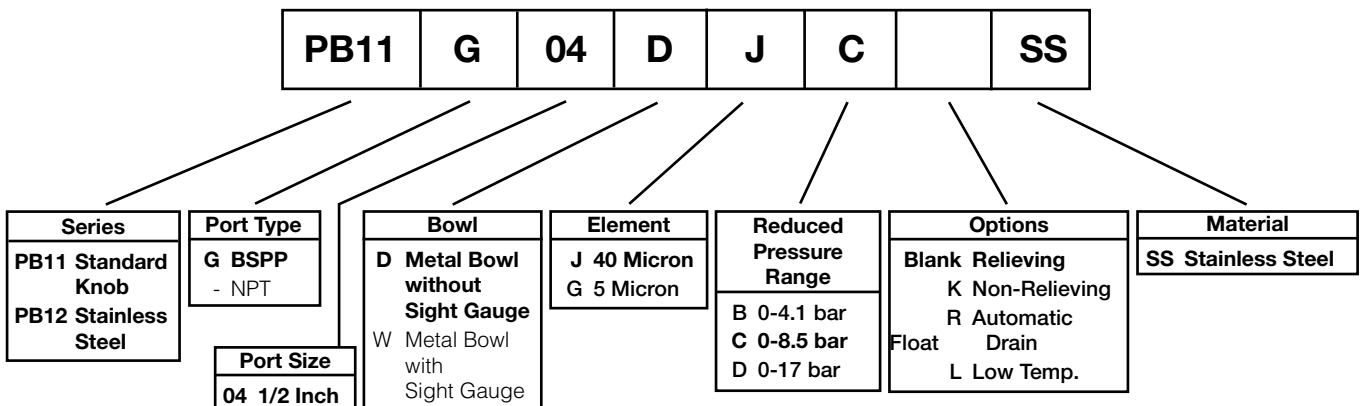
PB11, PB12 Piggyback Dimensions		
A	A <sub>1</sub>	B
60	64	44
C	C <sub>1</sub>	D
91	55	127
E	E <sub>1</sub>	F
218	218	54

(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.**

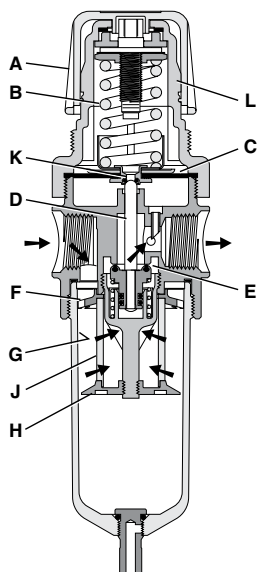
## Ordering Information



BOLD ITEMS ARE MOST POPULAR.

Technical Specifications – 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

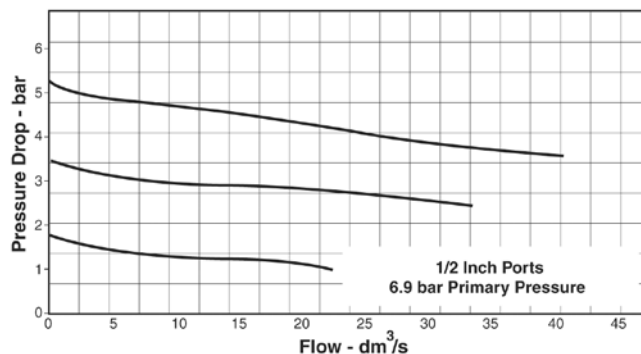
Technical Information

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.

Flow Characteristics  
PB11-04DJC-SS



PB11, PB12 Regulator Kits & Accessories

- Drain Kit –
  - Automatic Float Drain ..... SA602MDSS
  - Manual Twist Drain ..... SA600Y7-1SS
- 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
- 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

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 –
  - Metal Bowl (D) ..... 20.7 bar max.  
-18°C to 66°C
  - Metal Bowl (W) ..... 0 to 17.2 bar  
-18°C to 66°C
  - Automatic Float Drain ..... 1 to 12 bar  
4°C to 52°C

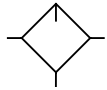
Note: Air must be dry enough to avoid ice formation at temperatures below 2°C.

- Sump Capacity ..... 50 cm<sup>3</sup>
- Weight ..... 1.09 kg

Materials of Construction

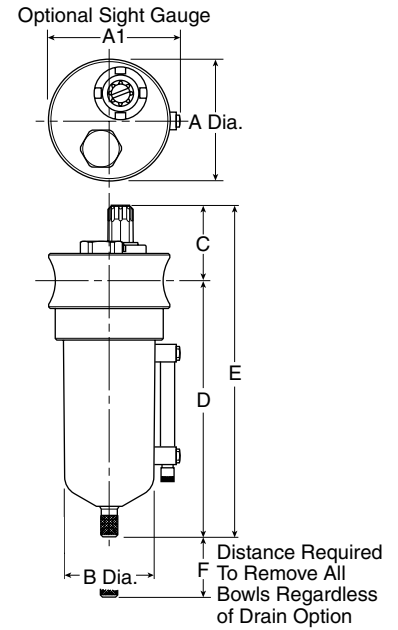
- Adjustment Mechanism / Springs ..... 316 Stainless Steel
- Body ..... 316 Stainless Steel
- Bonnet / Knob (PB11) ..... Acetal
- Bonnet / Tee Handle (PB12) ..... 316 Stainless Steel
- Bottom Plug ..... 316 Stainless Steel
- Poppet ..... 316 Stainless Steel
- Seals ..... Fluorocarbon
- Sight Gauge ..... Isoplast

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>



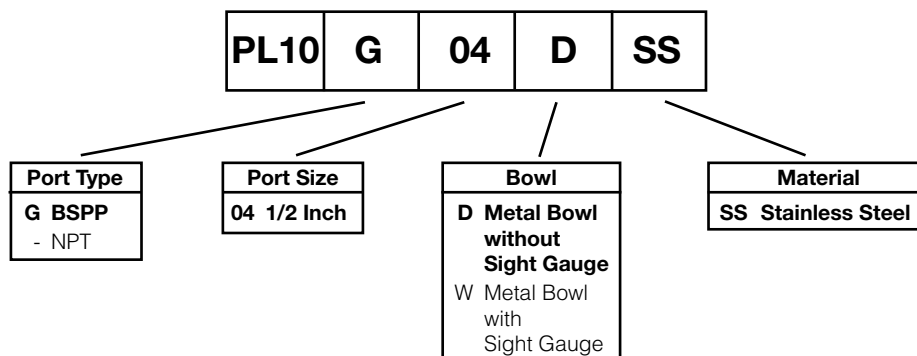
Port Size	BSPP	NPT
	Manual Twist Drain	Manual Twist Drain
1/2"	Metal Bowl Without Sight Gauge	
	PL10-04DSS	PL10G04DSS

PL10 Lubricator Dimensions		
A	A1	B
60	64	44
C	D	E
46	127	173
F		
89		

Bold Items are Most Popular.  
 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)

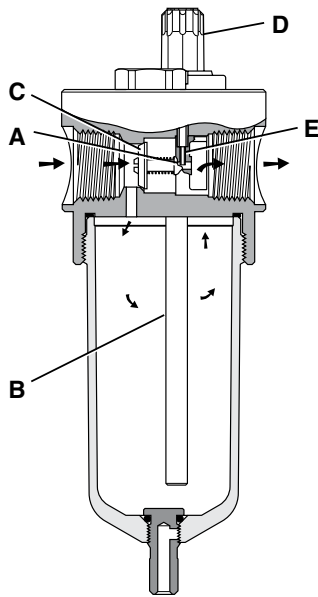
Ordering Information



BOLD ITEMS ARE MOST POPULAR.

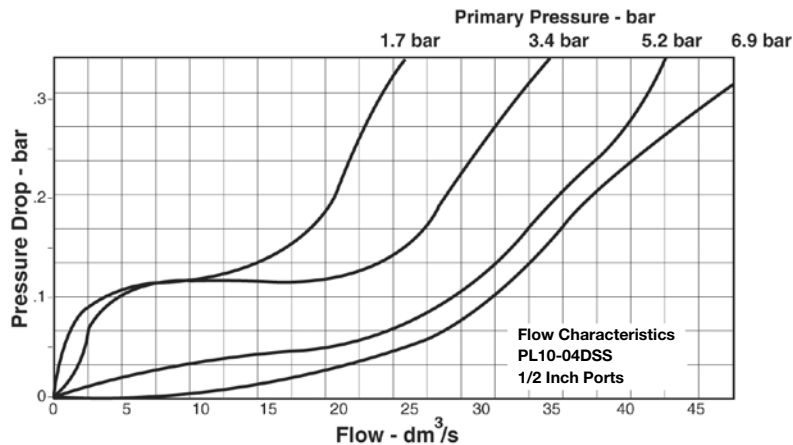
Technical Specifications – PL10

Operation



Air flowing through the unit goes through two paths. At low flow rates the majority of the air flows through the Venturi section (A). The rest of the air opens the check valve (C). The velocity of the air flowing through the Venturi section (A) creates a pressure drop. This lower pressure allows the oil to be forced from the reservoir through the pickup tube (B) and travels up to the metering screw (D). The rate of oil delivery is then controlled by adjusting the metering screw (D). Oil flows past the metering screw (D) and forms a drop in the nozzle tube (E). As the oil drops through the dome (F) and back into the Venturi section (A), it is broken up into fine particles. It is then mixed with the air flowing past the check valve (C) and is carried downstream. As the air flow increases the check valve (C) will open more fully. This additional flow will assure that the oil delivery rate will increase linearly with the increase of air flow.

Technical Information



L10 Filter Kits & Accessories

- Drain Kit –
  - Manual Twist Drain ..... SA600Y7-1SS
- Pipe Nipple –
  - 1/2" NPT 316 Stainless Steel ..... 616A28-SS
  - 1/2" BSPT 316 Stainless Steel ..... AC-4SS
- Sight Dome Kit ..... RKL10SS

Specifications

- Bowl Capacity ..... 118 cm<sup>3</sup>
- Port Threads ..... 1/2 Inch
- Pressure & Temperature Ratings –
  - Metal Bowl (D) ..... 20.7 bar max.  
-18°C to 66°C
  - Metal Bowl (W) ..... 0 to 17.2 bar  
-18°C to 66°C

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

Weight ..... 850 g

Materials of Construction

- Body ..... 316 Stainless Steel
- Bowl ..... 316 Stainless Steel
- Dip Tube ..... 316 Stainless Steel
- Drain ..... 316 Stainless Steel
- Fill Plug ..... 316 Stainless Steel
- Seals ..... Fluorocarbon
- Sight Dome ..... Nylon
- Sight Gauge ..... Isoplast

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