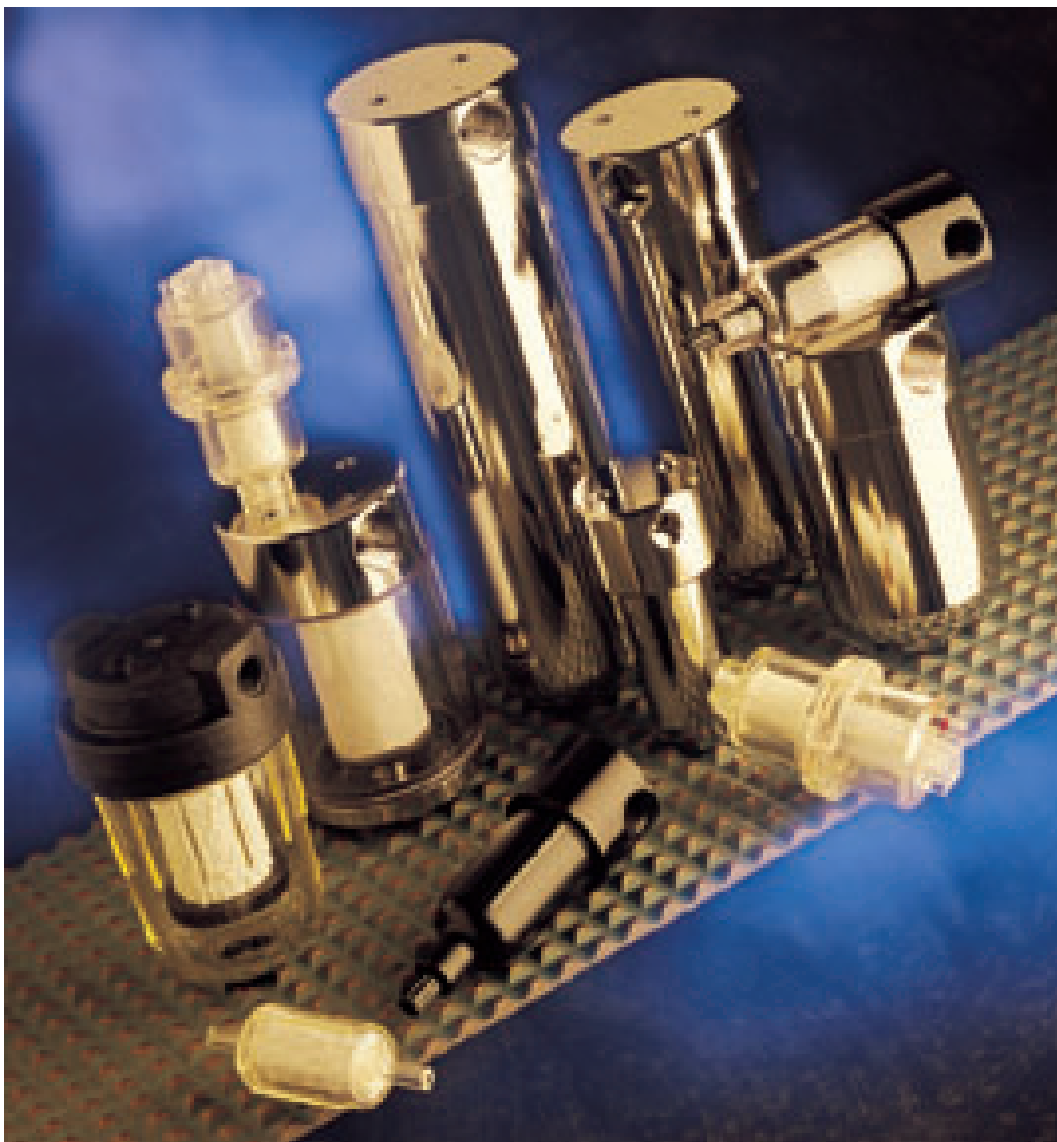


Instrumentation and Gas Sampling Filters

- Stainless Steel
- Aluminum
- Plastic
- Hastelloy®

Instrumentation
and Steam Filter



Instrumentation and Gas Sampling Filters

Instrumentation
and Steam Filter

PFP's instrumentation and point-of-use product line offers compressed air/gas filtration solutions for food processing, chemical processing, and compressed natural gas applications.

Typical installations include contaminant removal for breathing air, protection of gas analyzers and prefilters for instrument air dryers.

Our UNI-CAST element technology allows us to vacuum form high-efficiency particulate and coalescing filter elements.



Our elements are designed with high void volumes to provide longer element life while yielding lower pressure drops.

Made directly from the highest quality microglass fibers available, PFP's elements are constructed in 5 porosity grades and 9 media types to meet nearly all compressed air/gas applications.

PFP's instrumentation filter housings are carefully engineered to meet critical application specifications. A complete line of stainless steel housings are

available with a variety of pressure ratings and flows for corrosive applications. Combination aluminum head/nylon bowl assemblies are offered for lower operating pressures and temperatures, while disposable plastic in-lines are offered for low flow and OEM applications.

How to select your PFP Filter...

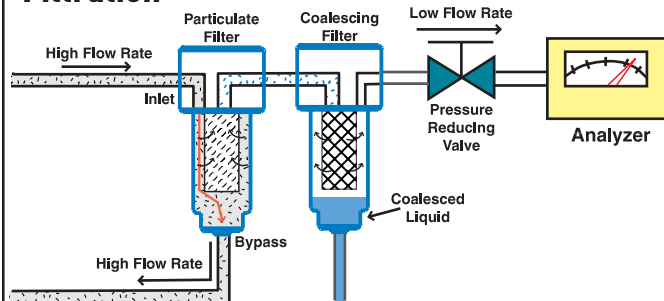
The following steps will help you to choose the correct filter for your application. If there are other factors involved or if you have special requirements, call one of PFP's application engineers.

1. Evaluate the requirements of your application. The sketches on page 3 depict popular examples of gas sampling, process filtration, instrument air and breathing air applications.
2. What type of filtration is needed? Coalescing filter medias remove solid and liquid contaminants from gas streams. Particulate filter medias remove solids from gas streams. Adsorber media removes hydrocarbon vapors from gas streams.
3. Are you searching for a specific micron rating... or efficiency rating? If so, page 5 provides a complete breakdown of PFP's filter media grades and their performance specifications.
4. What are the operating conditions of your application? Key criteria to consider: flow, pressure, materials of construction... stainless steel, nylon, aluminum

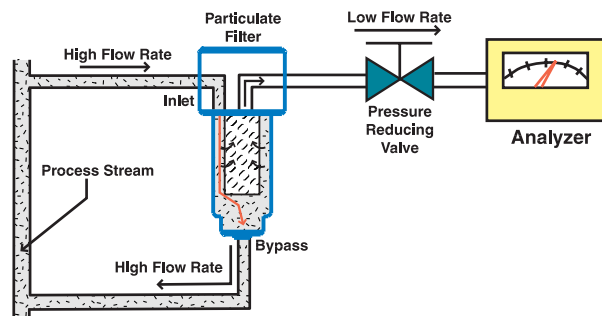


PFP Instrumentation Applications

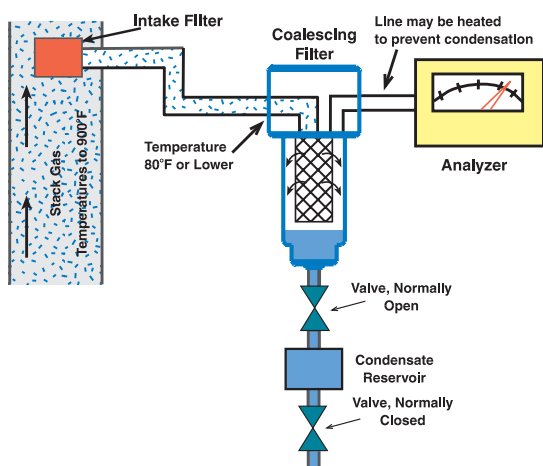
Slipstream Sampling Plus Coalescing Filtration



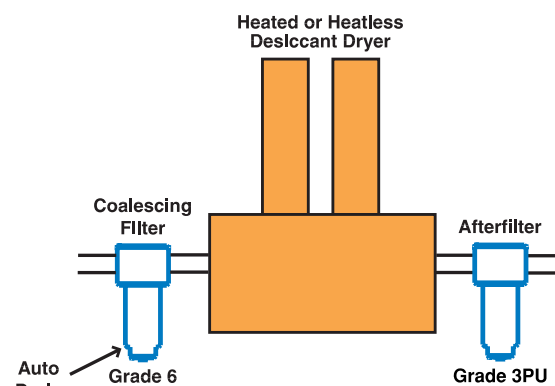
Slipstream or Bypass Sampling



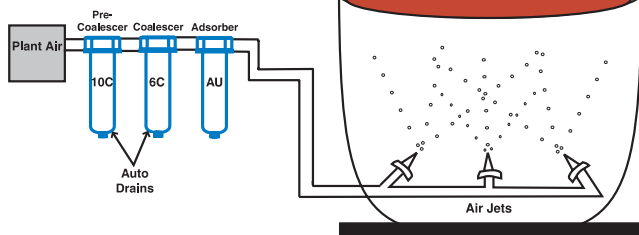
Stack Gas Sampling



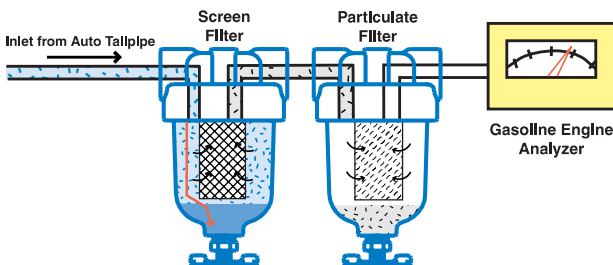
Instrumentation Regenerative Dryer



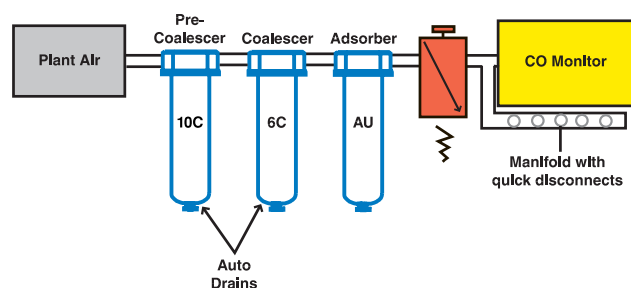
Air Mixing



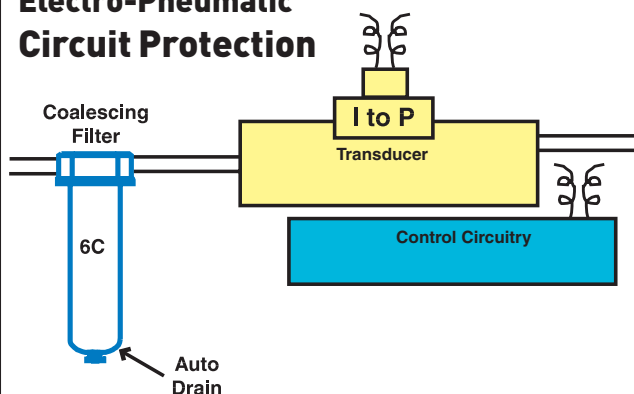
Auto Emission Sampling



Breathing Air



Electro-Pneumatic Circuit Protection



PFP media types

PFP's various media types are determined by their materials of construction and are described below. Each element starts from high-quality raw materials, then is hand-crafted and put through our rigorous ISO 9001 certified manufacturing and inspection process. Determine the type of media your application requires. Then determine the grade you need on the next page.

Coalescing elements:

Coalescing elements are especially designed for the removal of liquid contaminants from gaseous flows. These media types flow from the inside of the element to the outside. Coalesced liquid, water and oil, collects in the bowl where it is drained, while clean air or gas exits the housing through the outlet port. Particulate contaminants are captured and held in the media.



type C

Coalescing element composed of an epoxy saturated, borosilicate glass micro-fiber tube in intimate interlocking contact with rigid seamless retainer. Surrounded by a coarse fiber drain layer, retained by a synthetic fabric safety layer. Some models include molded polyurethane end seals (CU).

(For applications up to 175°F)



type H

Coalescing element similar to type "C," however no rigid retainer is used. Typically for lower pressure or higher temperature applications.

(For applications up to 350°F)



type Q

Coalescing element with the same configuration as "C" tube, but with "3P" type pleated cellulose prefilter built-in. Includes molded polyurethane end seals (QU).

(For applications up to 175°F)



type 7CVP

Coalescing element made of pleated glass media. Metal retained for added strength. Includes metal end caps and fluorocarbon gasket for proper sealing. Only available in grade 7.

(For applications up to 175°F)

Particulate and adsorption elements:

Particulate filters such as G, F, T and 3P flow from the outside of the element to the inside. Particles collect in the element, while the clean air exits through the outlet port. Type A, an adsorption element, also flows from the outside of the element to the inside. Hydrocarbon vapors collect in the element, while clean air exits the housing through the outlet port.



type G

Particulate removal element constructed of the same fiber matrix as type "C," but with no rigid retainer or drain layer.

(For applications up to 350°F)



type F

Particulate removal element like "G" tube, except fluorocarbon saturant replaces epoxy.

(For applications up to 275°F)



type T

Particulate removal element like "G" tube, except high temperature fluorocarbon saturant replaces epoxy.

(For applications up to 450°F)



type 3P

Pleated cellulose particulate removal element. Includes molded polyurethane end seals (3PU).

(For applications up to 175°F)



type A

Hydrocarbon vapor removal element. Ultrafine grained, highly concentrated, activated carbon sheet media. Includes molded polyurethane end seals (AU).

(For applications up to 175°F)

PFP media grades and specifications

PFP media grades

determine the filtration

efficiency. Capture

efficiencies are available

up to 99.999%. Micron

ratings range from .01 to 3

micron. The chart on the right

notes both the wet and dry

pressure drops.

PFP media specifications

Grade Designation	Coalescing Efficiency .3 to .6 Micron Particles	Coalescing Filters - C, H, Q, 7CVP Maximum Oil Carryover ¹ PPM w/w	Particulate Filters - G, F, T, 3P Micron Rating	Pressure Drop (PSID) @ Rated Flow ²	
				Media Dry	Media Wet With 10-20 wt. oil
2	99.999%	.001	.01	1.5	4-6
4	99.995%	.003	.01	1.25	3-4
6	99.97%	.008	.01	1.0	2-3
7CVP	99.5%	.09	.5	.25	.5-.7
8	98.5%	.2	.5	.5	1-1.5
10	95%	.85	1.0	.5	.5
3P	N/A	N/A	3.0	.25	N/A
A	99%+	N/A	N/A	1.0	N/A

¹Tested per ADF-400 at 40 ppm inlet.

²Add dry + wet for total pressure drop.

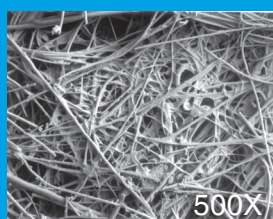
Instrumentation
and Steam Filter

grade 2



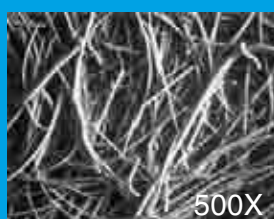
Grade 2 filter elements are used for extremely fine particulate and "last trace" aerosol coalescing filtration; for lighter molecular weight gases and aerosols at elevated pressures.

grade 4



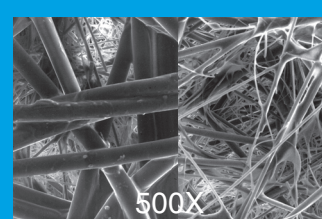
Grade 4 filter elements are very high efficiency coalescers; for elevated pressures or lighter weight gases. Recommended when system pressure exceeds 500 PSIG.

grade 6



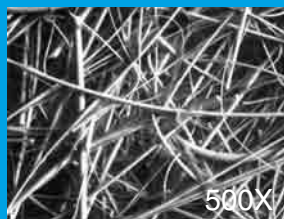
Grade 6 filter elements are used when "total removal of liquid aerosols and suspended fines" is required. **Because of its overall performance characteristics, this grade is most often recommended.**

grade 7CVP



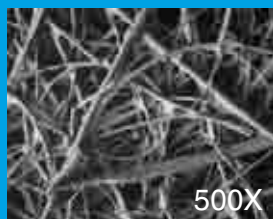
Grade 7CVP filter elements are made with two layers. The inner layer (left) effectively traps dirt particles, protecting and extending the life of the outer layer. The coalescing outer layer (right) consists of a dense matrix of glass fibers, providing highly efficient aerosol removal.

grade 8



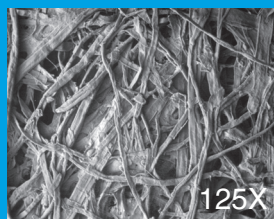
Grade 8 filter elements provide high efficiency filtration in combination with high flow rate and long element life.

grade 10



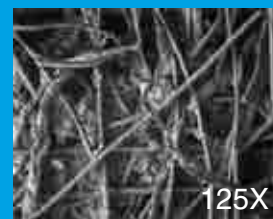
Grade 10 filters are used as prefilters for grade 6 to remove gross amounts of aerosols or tenacious aerosols which are difficult to drain. This grade is often used as a 'coarse' coalescer.

grade 3P



Three micron pleated cellulose filters are used for particulate interception where very high dirt holding capacity and a relatively fine pore structure are required.

grade A



A (Adsorption) filters are used to remove hydrocarbon vapor, most typically in preparation for breathing air. (Must be preceded by grade 6C coalescer.)

S-Series Process Gas Filters

Application: PFP's S-Series filters provide high efficiency particulate and liquid aerosol coalescing filtration for critical gas process applications, instrument quality air, and microcircuit applications under the most corrosive of conditions. These stainless steel filter housings are ideal for dairy and food processing plants. These filters are also used for the protection of gas analyzers and when the highest quality materials of construction are desired. Includes 1/8" NPT drain port with plug.



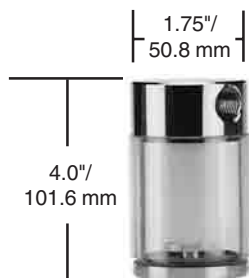
How to Order:

<input type="checkbox"/> S	<input type="checkbox"/>	<input type="checkbox"/> — <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 10-025
Port Size	Bowl Length	Media	Media	Media	Element Size
1 = 1/4" NPT	M = Short	blank for 3PU, AU	G	T	
2 = 1/2" NPT	A = Medium	2	F	H	
	Q = Long	4	C	CU	
		6	QU	3PU	
		8	AU		
		10			

For Example: S1M-2T10-025 for complete assembly, including element. S1M x 1 for an empty housing.

Stainless Steel Filters With Glass Bowl

Application: The S1P and S2P filter units are used for gas analyzer protection and corrosive applications where element visibility is required. Coalescing, particulate and adsorptive filter elements available. Includes 1/8" NPT drain port with plug.



How to Order:

<input type="checkbox"/> S	<input type="checkbox"/>	<input type="checkbox"/> P	—	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 10-025
Port Size		Media		Media	Media	Element Size
1 = 1/4" NPT		Grade		Type	G	
2 = 1/2" NPT		blank for 3PU, AU		T	F	
		2		H	C	
		4		CU	QU	
		6		3PU	AU	
		8				
		10				

For Example: S1P-6F10-025 for complete assembly, including element. S1P x 1 for an empty housing.

Specifications:

Model Number	Port Size (NPT)	Max. Pressure	Max. Temp.	Materials of construction			Seals	Shipping Weight
				Head	Internals	Bowl		
S1M,S2M	1/4", 1/2"	300 PSIG/ 21 bar	450°F(T Media) 350°F(G, H) 275°F(F) 175°F(C,CU,QU,3PU,AU)	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	Fluorocarbon	3.75 lbs./1.70 kgs.
S1A,S2A	1/4", 1/2"	300 PSIG/ 21 bar	450°F(T Media) 350°F(G, H) 275°F(F) 175°F(C,CU,QU,3PU,AU)	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	Fluorocarbon	4 lbs./1.81 kgs.
S1Q,S2Q	1/4", 1/2"	300 PSIG/ 21 bar	450°F(T Media) 350°F(G, H) 275°F(F) 175°F(C,CU,QU,3PU,AU)	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	Fluorocarbon	4.9 lbs./2.22 kgs.
S1P,S2P	1/4", 1/2"	150 PSIG/ 10 bar	175°F(All media types)	316 Stainless Steel	316 Stainless Steel	Heat Resistant Borosilicate Glass	Fluorocarbon	2.25 lbs./1.02 kgs.

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