

# Low & High Temperature Particulate Filters



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### PPC Particulate Filter Cartridges

The high area PPC particulate filter cartridge has been designed for use as an afterfilter downstream of regenerative desiccant dryers or downstream of activated carbon bed adsorbers. All such adsorbers tend to generate small quantities of dust particles, one micrometer and larger. These abrasive contaminants erode instruments, valve seats, air cylinders, and pneumatic tools. The PPC filter can also be used prior to coalescers prolonging the life of the more costly coalescer. The PPC afterfilter, with an absolute particle rating of 0.9 micrometers, prevents these fine particles from entering the compressed air or gas stream. Stopping particles before they enter the stream means sustained system performance, longer component life, and reduced maintenance and downtime. The PPC high temperature afterfilter is designed to perform in the same manner and efficiency as the low temperature afterfilter with one difference - the media is glass fiber. This allows use of the filter downstream of heat-reactivated dryers. During this type of dryer regeneration, temperatures typically reach 450°F. Standard dryer afterfilters of epoxy coated cellulose fibers quickly deteriorate under these extreme temperatures.

- Varied Applications & Gas Compatibility
- Absolute Removal Rating
- Low Operating Costs
- Uniform, Predictable Performance
- Extended Service Life

### SUPERIOR "CAKE VOLUME" IMPROVES ECONOMY

A key benefit of the PPC afterfilter cartridge is economy through long service — even longer than its predecessor. What extends the working life of a PPC cartridge? A design innovation in its construction which allows the medium to hold more dirt, increasing the "cake volume". Any standard filter medium collects particles, its pores plug with debris and a loss of pressure occurs. To overcome this pressure loss, more energy must be used to operate the system or the filter must be replaced. With a larger cake volume than standard filters, the PPC filter medium holds more particles before plugging. Its unique corrugated construction extends the on-stream life of the filter before substantial pressure loss, thereby reducing overall operating costs. Additionally the high temperature cartridge construction combines galvanized steel mesh and steel inner support core assuring reliable performance under adverse conditions and high temperatures. Advantages of PPC Particulate cartridges over "molded" or "wound" cartridges using glass, cotton, wool, rayon, and other loose fiber construction.

- Corrugated construction produces high filter area in a compact configuration. Ensures high dirt holding capacity and lower pressure drops which result in longer on-stream life, less frequent change-out, and lower operating cost.
- PPC elements will not unload or release particles because of fluctuations in flow, mechanical shock, vibration or pressure.
- Media migration (the shedding of the filter media into the system) is eliminated.

### MATERIALS OF CONSTRUCTION

	Low Temp Filters:	High Temp Filters:			
Filter Media:	Resin Impregnated Cellulose	Glass Fiber			
Support Core:	Plated Carbon Steel	Plated Carbon Steel			
Cuppert Core.					
End Caps:	Plated Carbon Steel	Plated Carbon Steel			
Gaskets:	Buna-N (60, 1001, 200, 400, 1201) Silicone (600, 1200)	Silicone			

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Typical particle size distribution downstream of an adsorption bed (activated alumina, silica gel, zeolites, or carbon). Particle size distribution measured using a PMS Las-X laser spectrometer.



## **Product Specifications**

FLOW RATE <sup>1</sup> (SCFM)	60	100	120	200	400	600	1200
FLUID SERVICE:	Air/Gas						
CARTRIDGE - MAX. AP (PSID)	50	50	50	50	50	50	50
REMOVAL RATING <sup>2</sup>	0.9µm absolute						
CLEAN CARTRIDGE AP (PSID)	0.8	0.3	0.3	0.3	0.3	0.3	0.8

Typical Gases: Nitrogen, Helium, Argon. Contact PPC for filter cartridge compatibility with gases other than air.

<sup>1</sup> Recommended flow rate at 100 psig and 100°F.

 $^{2}$  Absolute filtration rating: the diameter of the largest hard spherical particle will pass through a filter under specified test conditions. This is an indication of the largest opening in the filter element. 1  $\mu$ m (one micrometer) = 0.000039 inches.

### **PPC PURIFICATION SYSTEM**





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