



Matrex™ Cartridges

Tripod Mount

Available in all pulse style cartridge filters
Pneumafil OEM and replacement style

Description

Pneumafil's Matrex media is now available in all pulse style cartridge filters for gas turbine inlet systems. The Matrex media offers dramatically improved initial efficiency, particularly at submicron particle sizes. This improved efficiency provides cleaner operation for the compressor section of combustion turbines and reduced compressor washing cycles, resulting in direct cost savings to the turbine operator.

Over the past several years, pulse style inlet filtration systems have become widely used, even in temperate environments with relatively low ambient dust concentrations, because major turbine OEMs have used the pulse style as their standard inlet design. In those environments— where it takes a long time to develop a dust cake on the pulse cartridge — it is important to have a high initial efficiency to avoid fouling the compressor section of the turbine.

Pneumafil has developed a unique filter medium that combines the robust cellulose /polyester blended base material with a synthetic microfiber layer on the dirty air side. The microfiber layer dramatically increases the initial collection efficiency on small particles without increasing the initial resistance of the complete cartridge assembly. The efficiency of this media surpasses all OEM minimum filtration efficiency requirements as well as that of competitive cartridges with “membrane” or other fine fiber layers on the dirty air side.

Construction

Cartridge construction is otherwise the same as Pneumafil's standard OEM cartridge products:

- The pleated media pack is supported by cylindrical inner and outer cores of flattened expanded galvanized or stainless steel.
- Pleats are stabilized by bonding the media to cores with a spiral of hot-melt adhesive on both inner and outer cores.

Revolutionary Media Provides Initial Efficiency Better Than 92%+ on Submicron Particles



- Media is permanently and completely bonded to the end caps with either polyurethane sealant. A seamless polyisoprene sponge rubber gasket for positive seal to the filter house grid plate is bonded to the end cap of each cartridge.
- Available in all galvanized or stainless steel.

Competitive Comparison

Initial Dust Spot Efficiency Tested per ASHRAE 52.1

Pneumafil Matrex synthetic	92%
Brand D 100% synthetic w/ membrane	81%
Pneumafil Matrex blend	88%
Brand D blend media w/ membrane	65%

MERV Ratings

Pneumafil Matrex synthetic	16
Brand D 100% synthetic w/ membrane	13
Pneumafil Matrex blend	15
Brand D blend media w/ membrane	13

Rated flow per set (CFM)	1533
Clean resistance (inches W.G.)	0.85
Avg. atmospheric dust spot efficiency %	99.6
Avg. SAE fine dust weight arrestance %	99.9

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Dimensions / Part Nos. for Replacement Filter Pairs

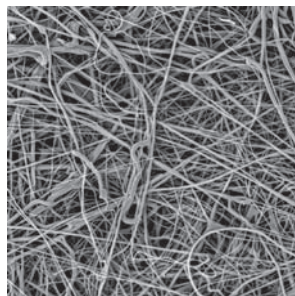
Cylindrical	OD 12.75" (324 mm), L 26" (660 mm)
Conical	OD 12.75" (324 mm) x 17.5" (445 mm), L 26" (660 mm)

Pneumafil OEM

Part No.	Media	Construction	Comments
S52324C1 S52325C1	Blended with Matrex™	Galvanized	Cylindrical cartridge, open/closed Conical cartridge, open/open
S52420C1 S52419C1	Blended with Matrex™	Stainless steel	Cylindrical cartridge, open/closed Conical cartridge, open/open
S52324C2 S52325C2	100% synthetic with Matrex	Galvanized	Cylindrical cartridge, open/closed Conical cartridge, open/open
S52422C1 S52421C1	100% synthetic with Matrex	Stainless steel	Cylindrical cartridge, open/closed Conical cartridge, open/open

Replacement (Donaldson P19-1280 & P19-1281, P19-1177 & P19-1178) will fit

A43459C1 A43460C1	Blended with Matrex™	Galvanized	Cylindrical cartridge, open/closed Conical cartridge, open/open
A44428C1 A44429C1	100% synthetic with Matrex	Galvanized	Cylindrical cartridge, open/closed Conical cartridge, open/open



Matrex medium (shown at 500X magnification).

Fractional Efficiency vs. Particle Diameter per ASHRAE 52.2

