

Matrex™ Cartridges

Tripod Mount

Revolutionary Media Provides Initial Efficiency Better than 92% on Submicron Particles

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.

Matrex media also provides excellent water repellency properties, preventing contaminants absorbed by moisture from reaching the turbine, which results in fouling problems.

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.



- 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.

| | |
|---|------|
| 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 |

| 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 Blended media w/ membrane | 65% |
| MERV Ratings | |
| Pneumafil Matrex Synthetic | 16 |
| Brand D 100% Synthetic w/ membrane | 13 |
| Pneumafil Matrex Blend | 15 |
| Brand D Blended media w/ membrane | 13 |

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Dimensions/Part Nos. for Replacement Filter Pairs

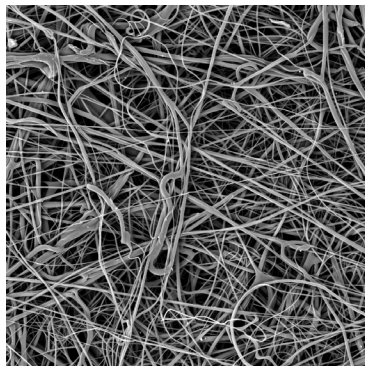
| | |
|-------------|--|
| Cylindrical | OD 12.75" (324 mm), L 26" (660 mm) |
| Conical | OD 12.75" (324 mm), x 17.5" (445 mm), L 26" (660 mm) |

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 | |
| S52324C2 S52325C2 | 100% synthetic with Matrex | Galvanized | |
| S52422C1 S52421C1 | 100% synthetic with Matrex | Stainless Steel | |

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 | |



Matrex media shown at 500X magnification.

Fractional Efficiency vs. Particle Diameter per ASHRAE 52.2

