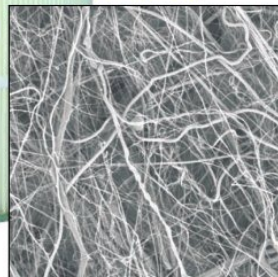


NANOFIBER CARTRIDGE FILTERS

Ultra-Efficiency Filtration from Filter 1



Filter media is enhanced with ultra-fine nanofiber coating (top view, 260X).



At Filter 1, Advanced Nanofiber Technology is Our Standard

What is nanofiber filter media?

Tiny, sub-micron fibers (nanofibers) are woven into a thick, ultra-efficiency media coating, resulting in unsurpassed performance for dust collection and air filtration. In addition, our nanofiber-coated media demonstrates an increased durability in withstanding stringent pulse-cleaning forces, resulting in longer filter life than that of traditional cartridge filters.

How does it work?

With nanofibers in the ultrafine 0.3 to 0.5 micron (300 to 500 nanometer) range, the pores in the media are much finer and far more numerous than in traditional filter medias, resulting in significantly improved collection efficiency for collecting very small dust particles.

How does nanofiber technology reduce costs?

Because nanofiber filters clean better, they last longer. And with the higher efficiency and lower pressure drop of nanofiber-coated media, less fan pressure is required and less compressed air is consumed. The savings thus add up: fewer filter replacements + lower energy consumption = great performance at a lower overall operating cost.

The Nanofiber Advantages

It Filters Better. The new extra small fibers form a "web" on the outside of the thicker and stronger base media. The pores in this web are much smaller than the openings in the products made with larger fibers. Higher filter efficiency is the result of these smaller pores.

It Cleans Better. These fibers are 300 to 500 nanometer in diameter and they form a layer that is 15 to 30 micrometers thick. This layer is able to screen out the very small sub-micron dust and smoke particles before they penetrate and get trapped deep into the base. The result of the dust being kept on the outside of the filter media is a more complete release of the dust cake during the cleaning back-flush.

It Breathes Better. The layer of small fibers on the surface of the filter media has many more openings than the materials made from larger fibers. Thus the total area for the air to pass through is greatly increased. This effect can be easily measured in lower pressure drop across the filter. And a lower pressure drop means less fan pressure required and less energy consumed.

It Lasts Longer. With almost no penetration of even the finest dust particles, the nanofiber coating resists blinding of the media, allowing the filter to continue performing at a consistently high efficiency. Better dust removal also means less frequent cleaning is required.

Nanofiber-Coated Cartridges

FILTER 1

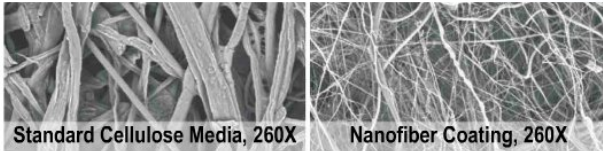
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CUSTOM SPECIALISTS FOR INDUSTRIAL NEEDS

NANOFIBER CARTRIDGE FILTERS

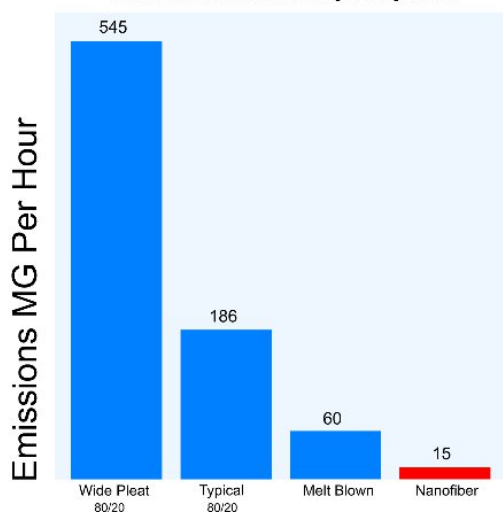
Outstanding Performance from Nanofiber Technology

See the Difference...



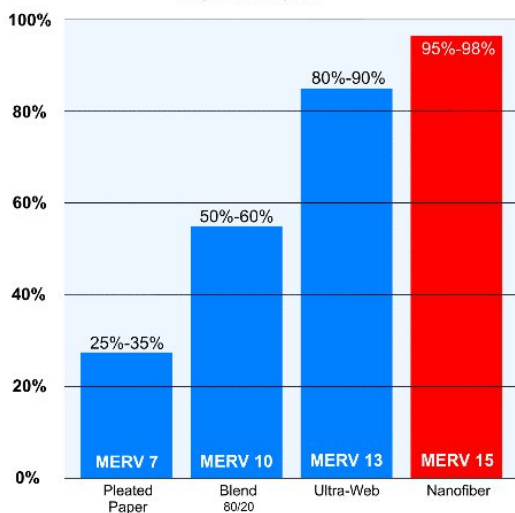
Mass Emission Testing

Amount of Particulate Passing Through Fiber



Dust Spot Efficiency

ASHRAE 52.1



Ultra-Efficiency Filters for Improving the Work Environment and the Bottom Line

Nanofiber Cartridge Filters from Filter 1 are designed to handle tough dust collection applications, including heavy dust loads and submicron smoke and fume. The advantages of nanofiber technology add up to higher-efficiency filtration at a lower operating cost.

- **Ultra-Efficiency.** Tiny pores between nanofibers provide better collection efficiency for collecting very small dust particles.
- **Better Airflow.** High density of tiny pores means lower airflow resistance, resulting in more air flow and less pressure drop, and lower energy consumption.
- **Resists Clogging.** Tiny fibers 0.3 to 0.5 microns (300 to 500 nanometers) form a thick layer of coating (15 to 30 microns thick); dust stays more on the surface, resisting penetration and blinding of the filter.
- **More Effective Filter Cleaning.** Better release of the dust cake during cleaning; cleaning required less frequently.
- **Longer-Lasting.** Nanofibers are thicker and more durable than standard electrospun nanofibers, with stronger adhesion to the base filter media; less frequent change-out needed, resulting in lower cost for replacement filters and reduced downtime for maintenance.
- **Flexible.** Nanofiber diameters and thickness of the layer can easily be varied to meet the requirements of specific applications. Thus nanofiber technology provides filtration media to fit a wide range of industrial needs.

Filter 1 has a policy of continuous design improvement and reserves the right to update designs and specifications without notice.

FILTER 1

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