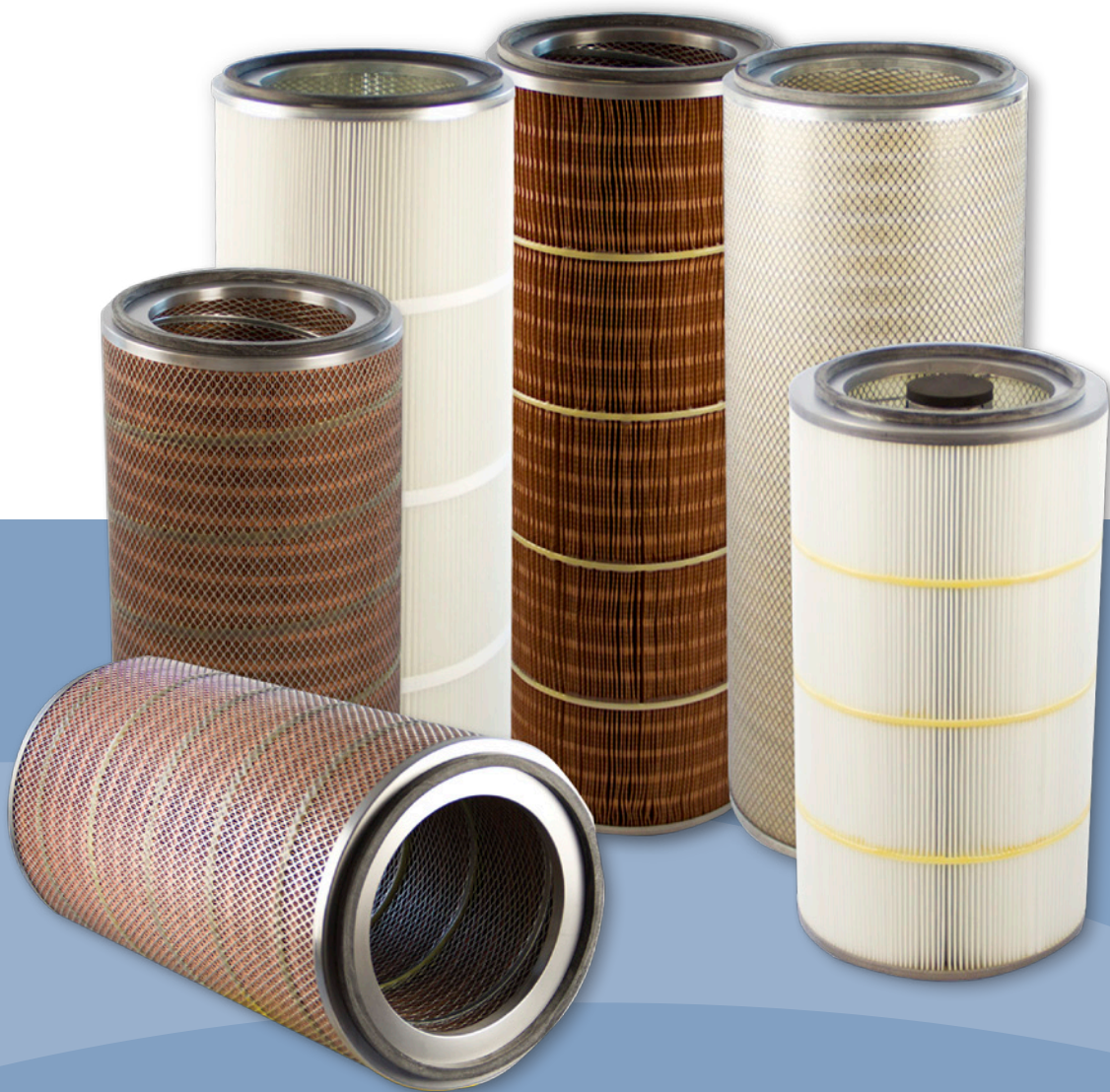




## Original Equipment Cartridge Filters for DustHog<sup>®</sup> by UAS

*featuring ProTura<sup>®</sup> DH Nanofiber Technology*



*Clean air. It's what we do.<sup>®</sup>*

[www.dusthog.com](http://www.dusthog.com)

**CLARCOR**  
Industrial Air

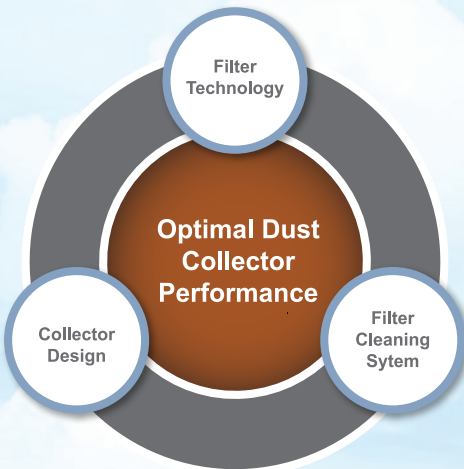
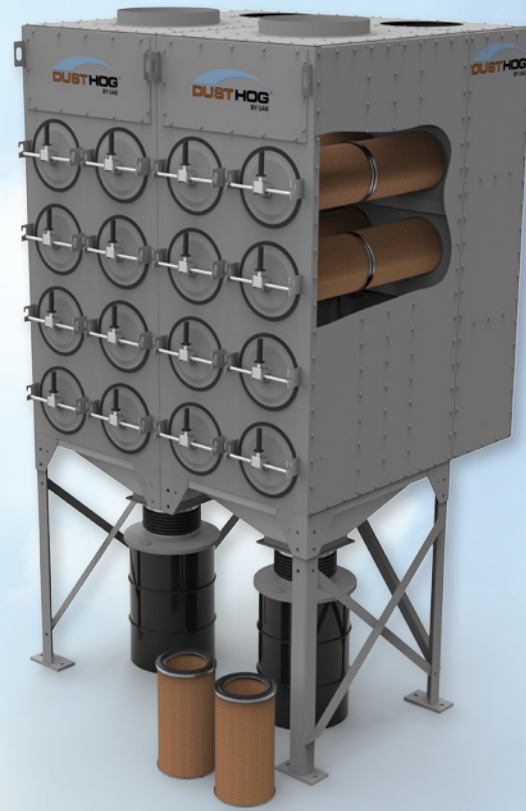




## Discover the Difference in Performance and Value

DustHog is a name synonymous with high quality and performance driven solutions for industrial filtration needs. Our customers realize improved reliability and decreased operational costs with our industry leading product portfolio in dust collection media technology and collector design. Our engineers study the full solution, designing and testing to ensure the filter media, product construction and filter cleaning technology found in the equipment are optimized to work in tandem, leveraging the features and technology of each to ensure the final solution delivers the best possible dust collection remedy.

We are at the forefront of technology and innovation; we develop and manufacture proprietary filter media technologies using our advanced research capabilities to ensure the latest developments are in our filters. We offer superior filtration solutions including ProTura DustHog® (DH) nanofiber, Preveil® ePTFE membrane, and media treatments and coatings along with half of a century of industry expertise to ensure the filter you select is the most appropriate and effective for your application and business needs.



### Quality

DustHog cartridge filters are manufactured to the highest standards, our Quality Management System at ISO 9001:2008. Our products are performance certified by 3rd party testing services, you can trust our products will perform reliably. Why risk using a commodity filter that may diminish the value of your equipment, waste time / money and put workers at risk.

We are committed to the following principles:

**Customer Focus** – Providing excellent products and services that meet our customer needs.

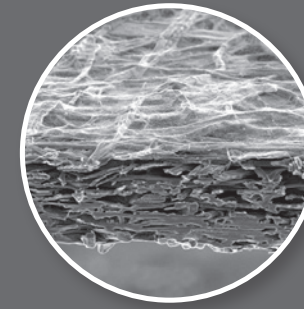
**Integrity and Compliance** – Strict adherence to all statutory, regulatory, and customer requirements.

**Quality Management System** – Defining our expectations of safety, quality, reliability and service; with a drive for continual improvement of all processes using industry expertise and customer feedback.

**Engagement** – Employees and suppliers engaged and committed to improving quality performance and creating a competitive advantage for both UAS and our Customers.

We will continue to build on our strong foundation of Quality, elevating our standards to the next level.

## What is ProTura DH?



Protura DH nanofiber surface treatment provides an ultra-thin, web-like coating

ProTura DustHog (DH) is a proven filter technology. ProTura DH has lower DP out of the box and over the life of the filter, higher dust holding capacity before pulsing is required, which means fewer pulsing cycles over the life of the filter, lower emissions and ultimately, with less pulsing you will have longer filter life.

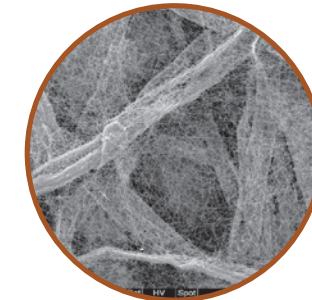
- **Superior surface-loading technology** to enhance dust cake release, leading to extended filter life.
- **Capture of highly-respirable, submicron particles** and reduction of dust collector emissions for cleaner and safer workplace air.
- **Advanced manufacturing process** that strengthens the media pleats keeping them more open delivering lower pressure drop and improved pulse cleaning.
- **Durable base sheet** that features a proprietary synthetic blend offering some resistance to moisture and abrasion.
- **Fire Retardant** construction offering an additional layer of safety per UL900.

## Surface Loading Excels Over Depth Loading

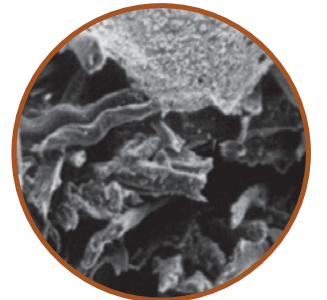
Generic cartridge filters allow particulate to embed deep within the substrate, making them more difficult to clean. Unlike ProTura DH nanofiber cartridges, these depth-loading filters have large spaces or pores within their base media fibers which allow particles to penetrate deep within the media substrate increasing pressure drop. Subsequently, they plug at a faster rate requiring more frequent cleaning which leads to increased abrasion, wear and reduced filter life. Some generic filters include surface treatments; however their coatings form layers 100 times thicker (or more) than ProTura DH nanofiber thus creating additional depth-loading layers which further decreases filter life.

ProTura DH nanofiber, therefore, acts as a shield to prevent submicron sized particles from entering and becoming embedded within the filter's substrate media. As a result, dust particles are easily released from the surface layer while the media substrate remains clean leading to **fewer cleaning cycles required, lower pressure drop, reduced outlet emissions and increased filter life.**

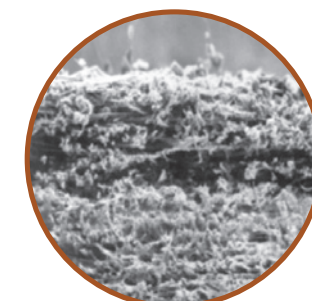
Nanofiber technology independently proven to achieve higher initial efficiency, cleaner air, lower pressure drop and greater energy savings than commodity filter media.



Protura DH nanofiber surface layer at 600x magnification



Protura DH nanofiber surface media loaded with ISO fine test dust



Commodity depth media loaded with ISO fine test dust



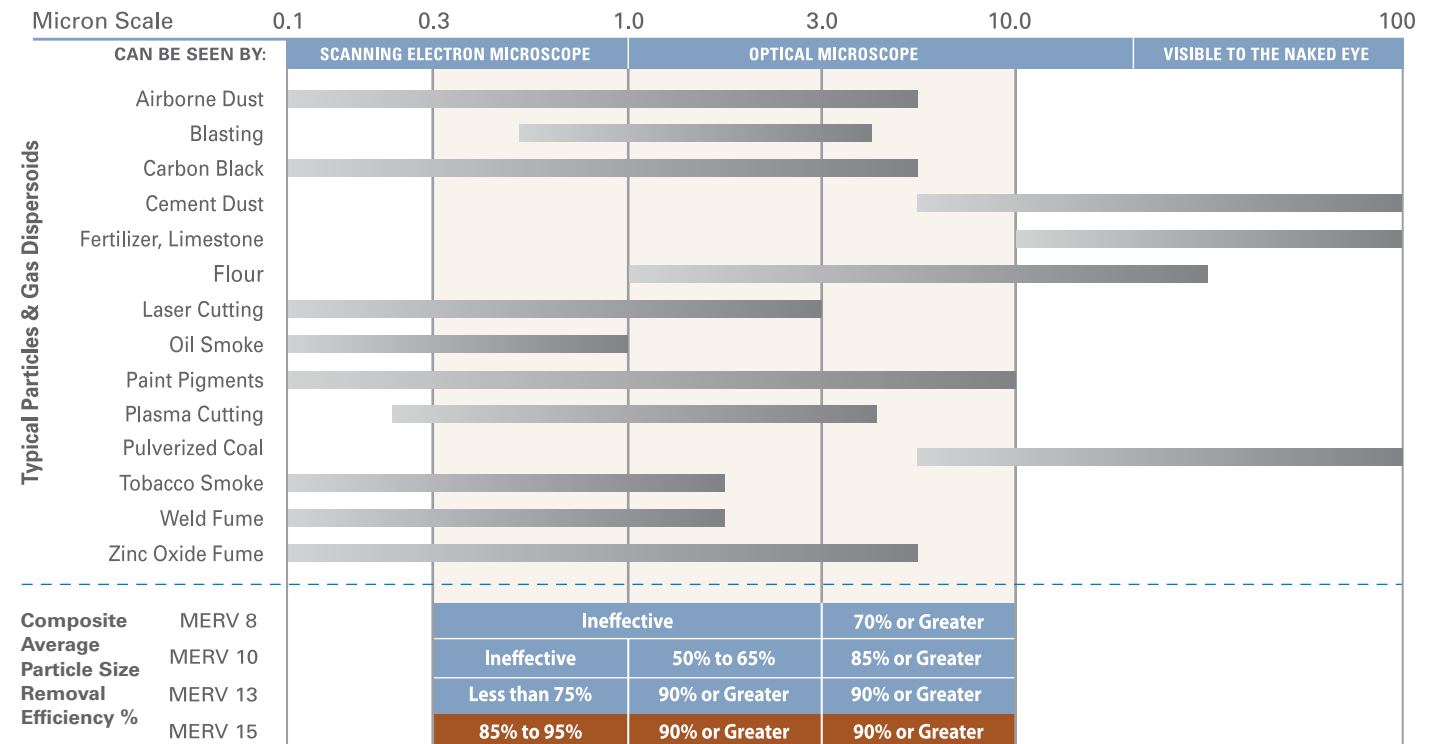
## Dramatic Savings and Value

ProTura DH nanofiber filters deliver outstanding performance and quality to which the results are well documented and time proven. ProTura DH fire retardant nanofiber offers dramatic savings and value:

- **Double the Filter Life Means Half the Cost.** Lower pressure drop and fewer pulse cleaning cycles result in up to double the life.
- **Compressed Air Savings.** Compressed air usage is significantly less because dust on the ProTura DH filters is easily dislodged during pulse cleaning cycles. The dust remains on the nanofiber surface layer and does not embed within the media base substrate.
- **Energy Savings.** Exceptional surface-loading capability dramatically reduces pressure build up resulting in reduced energy requirements to operate your system.
- **Cleaner Air.** MERV 15 efficiency, reduced pressure drop and fewer cleaning cycles result in significantly reduced outlet emissions from system operation and a healthier work environment.

We have the most comprehensive selection of industrial filtration products and systems in the market. We have options and do not force fit products. Our technology and solutions combined with our technical expertise allow us to provide you with systems that perform for your unique application.

## Filter Efficiency Ratings for Capture of Common Contaminants



## Understanding MERV Ratings

The industry's most accurate test method to measure a cartridge filter's efficiency is ASHRAE 52.2, which is the method for testing general ventilation air-cleaning devices for removal efficiency by particle size. Using this benchmark, filters are assigned a MERV (Minimum Efficiency Reporting Value) rating to determine how well they capture dust based on particle size. The higher the MERV rating, the more efficient the filter is at removing smaller particulate.

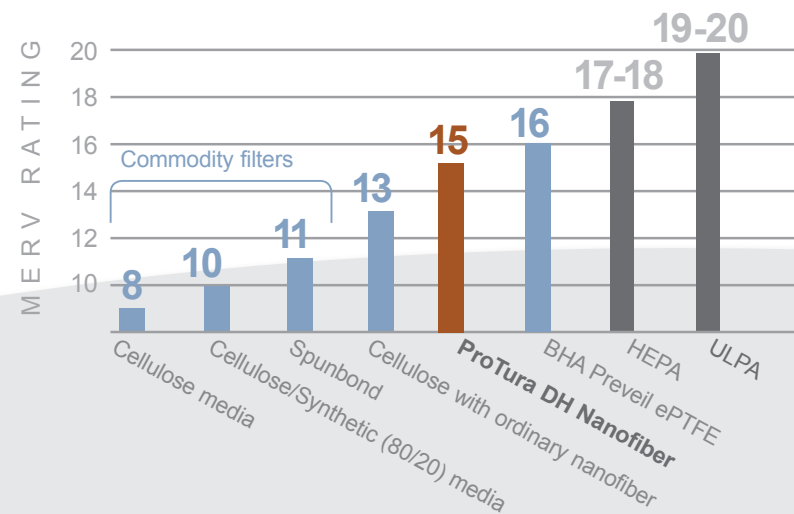
Although MERV is important, it can also be misleading. A filter may achieve a high MERV rating but result in higher pressure drop. So be aware of filters that use restrictive surface layers to boost efficiency as they ultimately lead to an increase in pressure and frequent filter replacement.

ProTura DH nanofiber cartridge filters not only offer a MERV 15 rating but also deliver the ultimate combination of high efficiency, low operating costs and longer filter life.

## Can MERV Ratings Determine Dust Collector Performance?

MERV ratings are only an indication of a dust collector's filter efficiency while in contrast dust collector performance is measured through total emissions which are the result of ongoing dust accumulation, operating pressure and filter cleaning cycles. Emissions are minimized by retaining dust on the media surface making the need to clean less frequent and easier.

Therefore, the best filter for industrial dust collectors will offer high efficiency, low pressure drop and excellent surface-loading capacity to reduce emissions, lower operating costs and ensure longer filter life.



Independent lab testing has certified ProTura DH nanofiber filters at MERV 15, which means they are up to 95% efficient on 0.3 to 1.0 micron size dust.

# Selecting the Right Filter Media

Consider these factors to help you choose the best filter media for your industrial process

- 1 **Efficiency Rating**  
Efficiency of the filter as it relates to dust particle size
- 2 **Surface-Loading Capacity**  
Ability to form and easily clean a dust cake on the media surface
- 3 **Pressure Drop**  
Lower resistance to airflow over the life of the filter uses less energy
- 4 **Environmental Conditions**  
Ambient air characteristics that may affect the filter
- 5 **Other Resources**  
Enhancements to increase efficiency, durability, corrosion resistance and filter life

## Filter Options

Filter Media	Special Characteristics	U.S. Efficiency Rating (MERV)*	European Efficiency Rating**	Surface-Loading Capacity	Pressure Drop	Washable	Maximum Operating Temperature	Abrasion Resistance	Chemical Tolerance	Applications	Industries / Dust Types
ProTura DH Nanofiber	High-efficiency ProTura DH nanofiber media provides superior performance on extremely fine dusts < 1 micron. Also provides excellent surface-loading and particle release.	15	BIA M EN 779-F9	Excellent	Lower	No	180° F / 82° C	Good	Average	General applications with dry, coarse particulate and larger thermally-generated fume particles. Can also be used where live sparks could enter dust collector. Most applications with extremely fine and non-fibrous dust and some abrasive dust. Applications where thermally-generated fume, including live sparks, could enter dust collector.	Dry weld fume, Flame cutting, Laser cutting, Metal grinding, dust, Metallic fume, Plasma cutting, Thermal spraying, Cocoa, Coffee, Detergents, General industrial, Metal grinding, Metal sanding, Milk powder, Salt, Stearates, Sugar, Textiles
ProTura DH Nanofiber Wide Pleat	Same as ProTura DH nanofiber media with the added benefit of wide pleat spacing which provides excellent surface loading and particle release of fibrous and agglomerative particles	15	BIA M EN 779-F9	Excellent	Lower	No	180° F / 82° C	Good	Average	Applications where larger or irregularly shaped particles enter dust collector.	Ceramics, Composite grinding, Cotton, Fiberglass, Food, Grain handling, Leather finishing, Pharmaceutical compounds, Textiles, Tobacco, Woodworking
Spunbond Polyester	Full synthetic media with good particle release characteristics and wide pleat spacing. FDA food contact acceptable.	11	BIA M EN 779-F6	Average	Higher	Yes	180° F / 82° C or 275° F / 135° C	Excellent	Excellent	Applications where high-strength, moisture-resistant media and good release characteristics are necessary. Recommended when product contamination must be minimized.	Cardboard, Cement, Ceramics, Cotton, Fiberglass, Gypsum, Lime, Paper, Polishing, Powder coating, Rubber grinding, Shot blast, Tobacco
Spunbond Polyester with ePTFE Membrane	Full synthetic media with ePTFE membrane provides excellent particle release. Also repels water while allowing air and moisture vapor to pass through the membrane's extremely small pores. FDA food contact acceptable.	16	BIA M EN 779-F9	Excellent	Very High	Yes	180° F / 82° C or 275° F / 135° C	Excellent	Excellent	Applications demanding ultra-high efficiencies or difficult dust cake release. Highly recommended for chemical, food and industrial processing when product contamination must be minimized. Excellent performance on moist, hygroscopic or agglomerative dust.	Agglomerating materials, Asbestos, Chemical processing, Fluidized bed dryers, Food processing (Flour, Starch, Sugar, Whey), Pesticides
Anti-static Spunbond Polyester with ePTFE Membrane	Spunbond polyester integrated with stainless steel mesh for anti-static properties and laminated with ePTFE membrane. FDA food contact acceptable.	16	BIA M EN 779-F9	Excellent	Very High	Yes	180° F / 82° C or 275° F / 135° C	Excellent	Excellent	Applications where conveyed dust may generate static charges that require dissipation. Can be used in explosive dust applications to lessen the risk of ignition sources due to static electricity discharges.	Chemical processing, Coal, Food processing, General industrial, Pharmaceutical, Plastics, Powdered materials



CLARCOR Industrial Air is committed to providing clean air solutions that protect your employees, improve plant performance and enable you to realize your operating goals.

Our commitment is backed by continuous investment in research, leading-edge technology and product development, our people whom are the most knowledgeable in the industry, and a product portfolio that is proven to deliver results. We have been solving problems for you, our customers across the globe for over 50 years. Clean Air. It's What We Do®.

## Industrial Applications

- Abrasive Blasting
- Detergents
- Thermal Spraying
- Metal Sanding
- Dry Chemical Processing
- Metal Grinding Dust
- Metallic Fume
- Plasma Cutting
- Dry Weld Fume
- Flame Cutting
- Laser Cutting
- Powder Pain
- General Industrial
- Metallurgical Powders
- Pharmaceutical Compounds

**Important** – Understand and follow NFPA guidance in selecting equipment for your intended application, including required safety devices and testing your dust to determine combustion hazards. At your election, we can coordinate sample collection and testing.

### CLARCOR Industrial Air

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