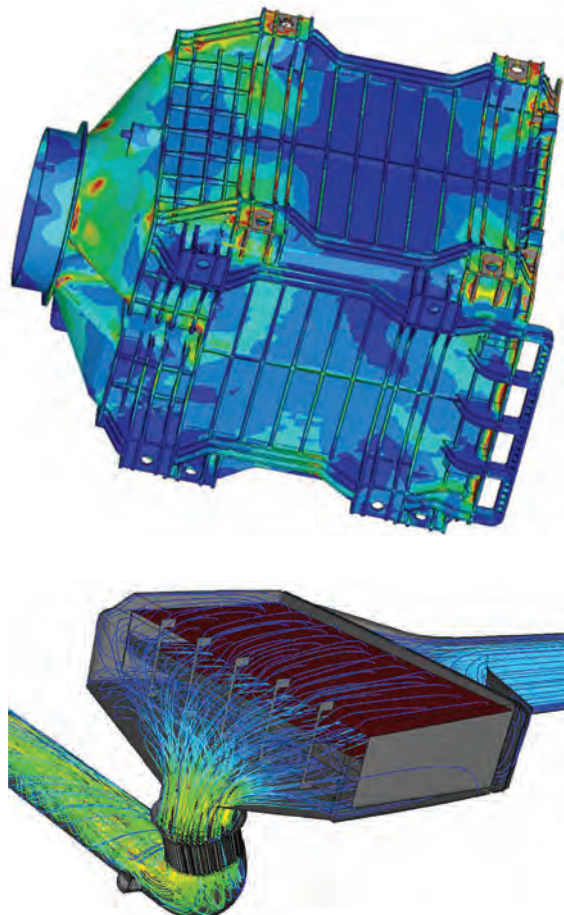


Approaching Design

With the Science of Filtration

Experience Uncompromising Quality

Based on specific operating parameters, Cummins Filtration has decades of experience working with both On and Off-Highway customers to reach an efficient and cost effective design to meet their air filtration needs. All of our eleven manufacturing facilities across five continents comply with the most stringent quality standards and meet industry standards (TS16949, ISO9001, ISO14001) to ensure our products are made with no compromises. As part of the Cummins family, Cummins Filtration strives to be sure our customers receive the most advanced technology, best sourcing and optimal delivery to meet their specific needs, providing an unmatched competitive advantage. Keep your equipment and investment protected with Cummins Filtration.



Expertise

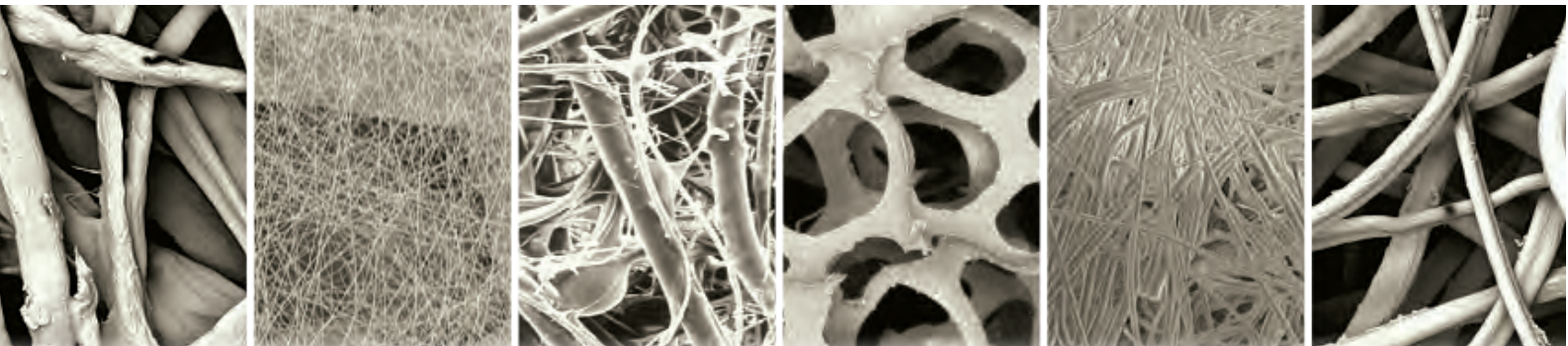
In Media Technology

Designed to Exceed Specifications

Cummins Filtration is experienced in working to meet customers' technical specifications for air filtration systems including factors such as: media fiber size, shape, pore size, thickness, weave and mechanical strength to name a few. These specifications play a critical part in ensuring our products meet the maximum filter capacity and life possible for each application. Capable of controlling numerous variables of the media we produce at a higher level than ever before, Cummins Filtration is able to manipulate our own media to optimize the performance levels of many products we produce.

Specialized Media for Specialized Environments

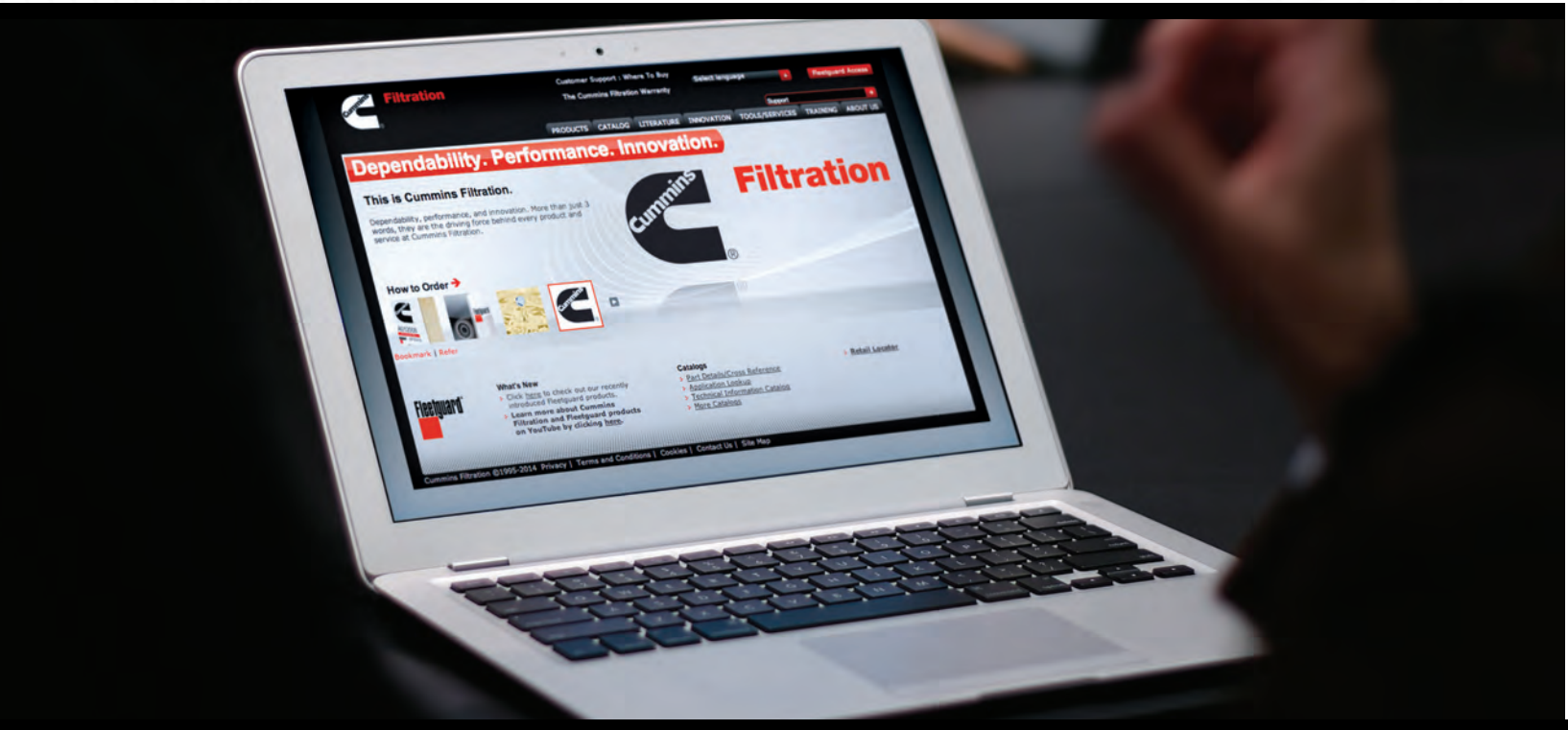
It's no secret that one type of media can be significantly more effective than another depending on the operating conditions in which the filter will be used—even if the difference in efficiency appears to be marginal. From standard to sub-micron, Cummins Filtration medias are produced for high performance in the harshest of environments, all in accordance with OEM specifications and SAE/ISO standards.



Cellulose Nano Fiber Microglass Foam Melt Blown Synthetic

Support



And Information 24/7 Around the Globe



Cummins Filtration is committed to providing excellent support for all of our customers around the world. And that commitment does not stop once a sale is made. Our service offerings extend the value you receive when you buy a quality Cummins Filtration product far beyond the point of sale.

From our website and online portal to our customer assistance centers around the globe, the support and information you need is only a click or call away.

Give us a call at 1-800-22FILTER (1-800-223-4583) or visit us at cumminsfiltration.com

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For technical details, refer to the **Fleetguard Technical Information Catalog** or visit **Fleetschool**.
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Nothing Guards Like Fleetguard.



Air Filtration

Technology



OptiAir™

Innovation in Radial Seal Design



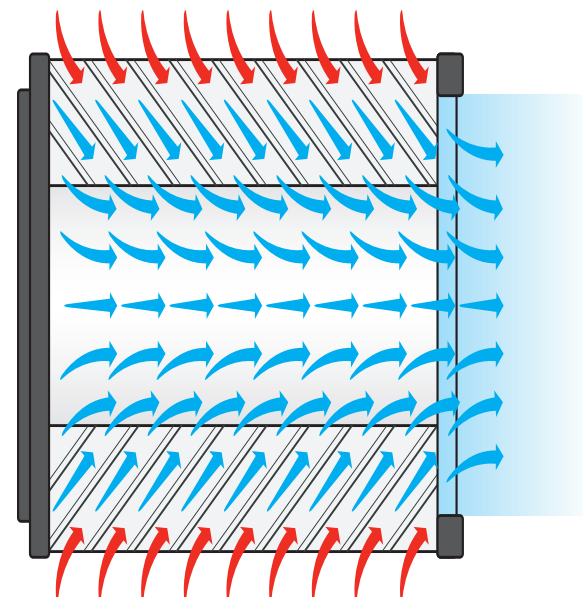
OptiAir Media Technology

With its unique design, OptiAir delivers higher air flow, lower restriction and greater capacity than conventional radial seal filters as a result of 2 major design innovations:

- **Up to 30% More Effective Media Area** by optimizing the pleat spacing and pleat depth of the filter element.
- **Up to 60% More Outlet Area** allowing for higher flow rates with lower initial restriction.

Design Flexibility

OptiAir housings, which come in both all composite or hybrid composite and metal configurations, provide design flexibility allowing customization for varying needs. Design options include 360° flexible mounting, multiple outlet configurations and a pressure tap for easy filter restriction gauge installation.



Easy to Service

For easier service, the OptiAir has a Mono Latch Twist Lock™ Cover with Multi Locking Positions which help to reduce overall maintenance time.

Complete Coverage & Protection

OptiAir technology covers a complete range of options for both on and off highway applications up to 1100 CFM (31.15 m³/min) in the composite design, and up to 1600 (45.31 m³/min) in the hybrid design.

All options include an integrated precleaner, secondary element and a dust ejection valve for additional protection from particulates and moisture.

Fleetguard Direct Flow™

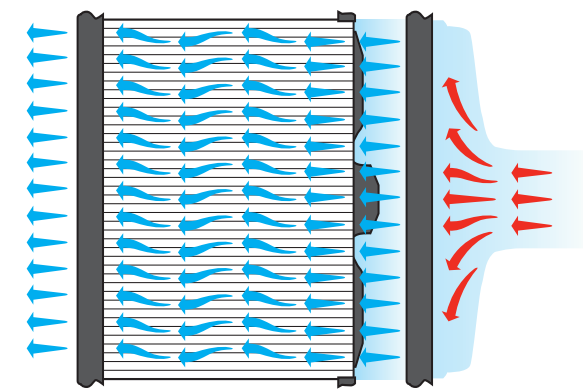
Versatility & Performance in One Package



Fleetguard Direct Flow Media Technology

The proven integrated Fleetguard Direct Flow technology utilizes highly optimized, stiff phenolic media arrayed in a rectangular “V-Block” configuration which optimizes the space normally wasted in the inner diameter of a typical cylindrical air filter. This unique design provides improved performance over conventional products, including:

- **Up to 50% Improved Performance to Size Ratio** by utilizing more media than cylindrical systems.
- **Greater than 99.97% Efficiency Over Filter Life** resulting in improved service intervals.
- **Improved Design Flexibility** allowing for mounting in locations not suitable with conventional designs.



Versatile Design

Available in flow ranges from 180-1300 CFM (5.10 - 36.81 m³/min), Fleetguard Direct Flow is available in both composite and hybrid composite and metal designs which provide product strength and design flexibility for applications in both low and high dust environments. The use of composite materials allows for integrated features including built-in mounting brackets, a restriction gauge port, and a dust ejector valve. For additional protection, Fleetguard Direct Flow provides an optional precleaner and secondary filter.

Promote Your Brand

The patented, proprietary Fleetguard Direct Flow technology supports the use of only the highest quality service products for your applications, limiting the potential for will fit and counterfeit products. Additionally, the unique element design allows for customized artwork including branding and servicing information directly on sides of the air filter.

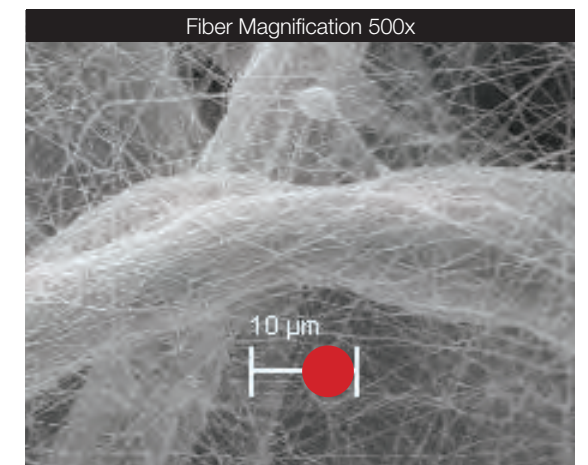
NanoForce™ Air Filters

A New Alternative in Superior Air Filtration



The Cleanest Engine Air

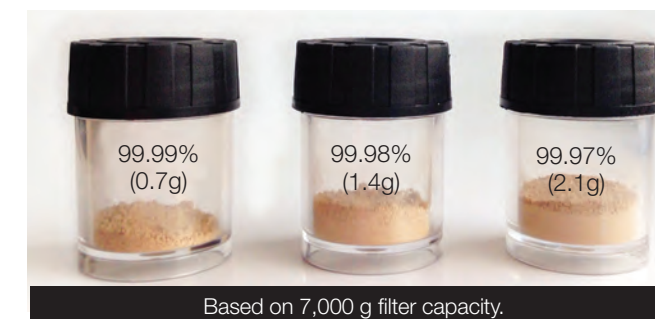
NanoForce AF879NF and AF899NF air filters deliver the cleanest combustion air possible for large construction and mining engines. Nanofiber, when combined with newly enhanced pleating and pleat stabilization, delivers optimal air filter performance for superior engine protection and a low cost of equipment operation.



The red circle represents a dust/dirt particle of 5 micron size. NanoForce media provides a barrier to small, but harmful particles.

Leveling the Dusty Battle Field

In the world of large off-highway equipment, small particles can quickly bring productivity to a halt. Due to the use of air pre-cleaners, the typical primary air filter is challenged with capturing dust particles in the 0-5 micron size range. These tiny dust particles wreak havoc on pistons, rings, liners and many other engine parts. NanoForce filters combat tiny particles at a submicron level, removing and retaining the particles before they reach engine components. NanoForce nanofibers are significantly smaller in diameter than a coarse human hair. The nanofibers work together with the base cellulose media to provide the most advanced air filtration engine protection available in the industry today.



Vials illustrate 3X more dust may reach the engine through a filter with 99.97% efficiency vs. NanoForce filter with 99.99% efficiency.