



Donaldson[®]
FILTRATION SOLUTIONS



Dust Collectors Downflo[®] Oval

More Airflow, Less Filter Media

Simply The Best Dust Collectors Available

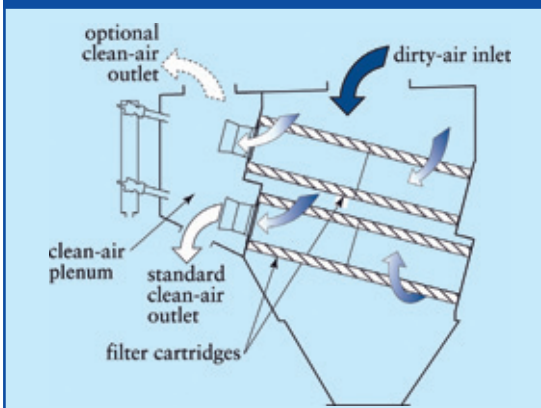
The full line of DFO collectors offer a variety of benefits that distinguish them from all other collectors available in the market today.

- ▶ **Easy to use.** Quick-release handles provide easy cover removal and faster filter access.
- ▶ **Compact.** Smaller footprints for applications that require maximum cleaning efficiency in even smaller spaces.
- ▶ **Powerful.** DFO collectors provide 25% more capacity than same-sized dust collectors.

25%
More Capacity

- ▶ **Cost effective.** The patented ExtraLife™ Filter Cleaning System averages up to 30% increase in pulse cleaning energy for unmatched cleaning ability.
- ▶ **Innovative unique.** Oval-shaped Ultra-Web® cartridge filters provide the longest filter life and highest filtration efficiency – which lowers cost.

Normal Operations for Models 2-8 to 4-128



DFO Models 1-1 to 4-128

- ▶ 26 standard model sizes
- ▶ Customised sizes available
- ▶ Many options and accessories
- ▶ Exceptionally compact design
- ▶ Highest energy savings



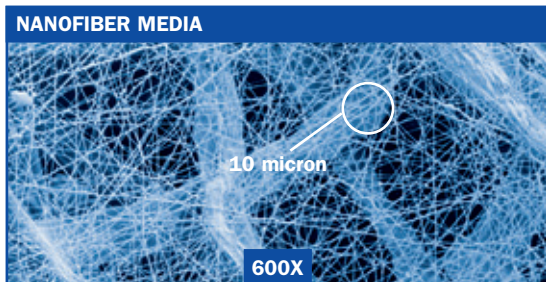
DFO Models 1-1, 2-2 and 3-3

- ▶ Incorporate several exclusive and unique features
- ▶ Completely self-contained, “plug-and-play” type units
- ▶ Packaged with power pack, controls, silencer, damper, dust container and more
- ▶ Remarkably quiet operation
- ▶ Exceptionally compact design
- ▶ Easily movable

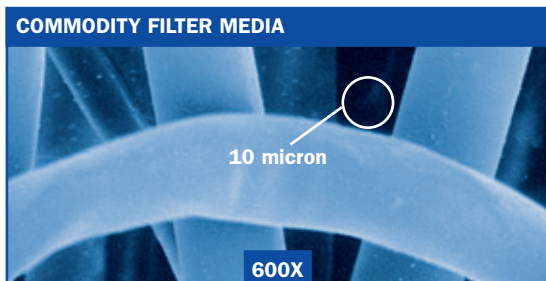


The Remarkable Story of DFO Began with the Oval Cartridge Filter Itself

► **Ultra-Web® Nanofiber Media.** A dramatic departure from traditional circular-shaped cartridge filters, DFO's oval-shaped filters, in conjunction with our patented nanofiber filter media, trap more dust on the surface of the filter than conventional commodity types of filter media such as depth-loading cellulose, polyester or cellulose/polyester blend.



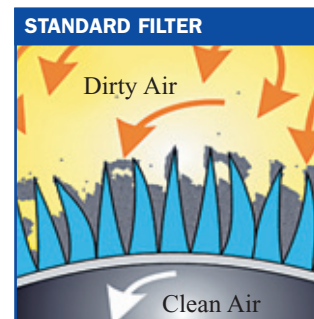
Nanofiber technology is available in all Ultra-Web and Fibra-Web cartridges



Conventional media has spaces of up to 60 microns between fibers, allowing dust to become deeply embedded

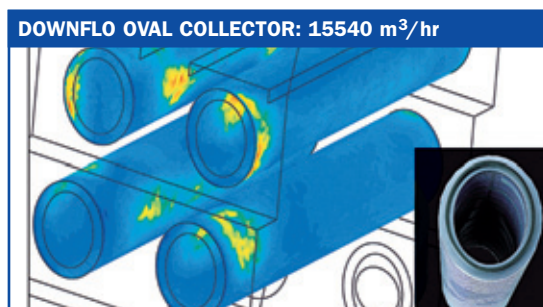
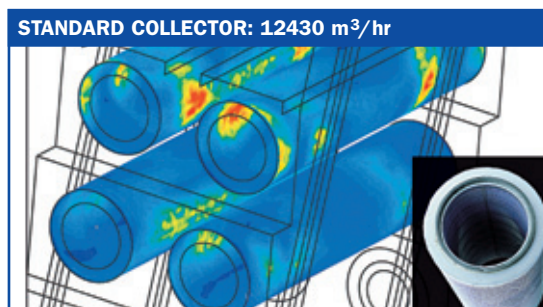
The Innovation Continues with DFO's Shorter, Stiffer Filter Pleats

► **DFO Filter Media Pleats.** Shorter and stiffer filter pleats help minimise dust entrapment and simplify filter cleaning. By reducing the height of the filter pleats from the standard 50 mm to 38 mm, the pleat wall is less likely to collapse or bend, an event which can encapsulate dust and prevent its expulsion.



Unique Oval Shape Contributes to Higher Airflow Capacity

► **High Performance Filters.** The Downflo Oval filter design is a reflection of Donaldson's commitment to technical research and development. Oval-shaped filters handle up to 25 percent more airflow without increasing velocities, which can cause filter abrasion. Sophisticated Fluent®* airflow modelling software revealed that oval-shaped cartridge filters have fewer areas of high velocity, resulting in a lower potential for media abrasion and increased filter life.

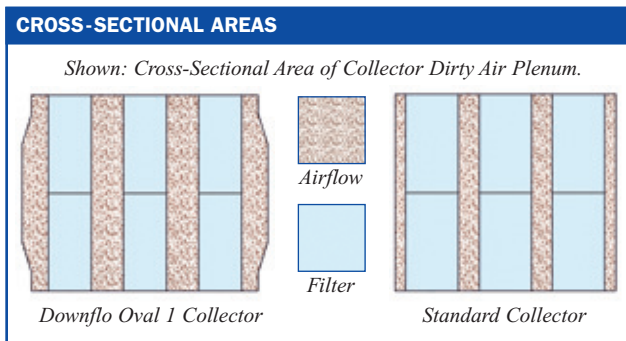


* FLUENT is a registered trademark of Fluent, Inc.

Better Filtration, Prolonged Filter Life

Technical Discoveries Improved Filtration Performance and Prolonged Filter Life

► **Convex Side Walls.** A new casing design with convex side walls streamlines the airflow path and increases the casing's cross-sectional area. The convex side walls provide more space between filters, lowers internal velocities and reduces the potential for media abrasion.



Cross-sectional area of collector dirty air

► **Pulse Cleaning Technology.** ExtraLife Filter Cleaning System uses proprietary, computer-modeled pulse cleaning technology to easily “pulse off” dust from the surface of the filter, improving filtration

on efficiency and prolonging filter life. The red lines in the illustration show the increased pressure at the front of the Downflo filter generated by the ExtraLife system. The blue line shows the pulse signature of a standard cartridge collector.

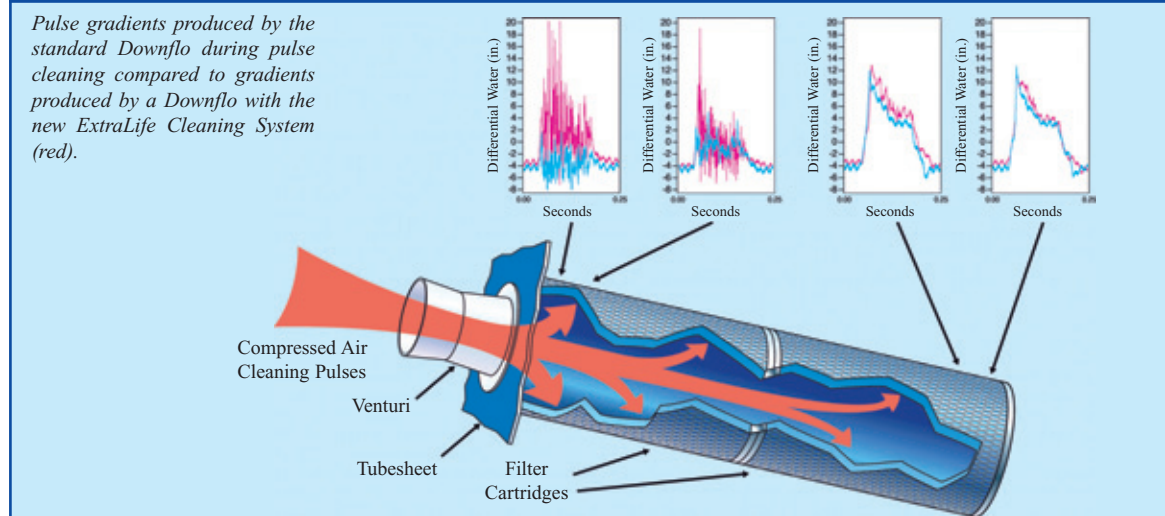
Filter Changes and Discharge Maintenance

► **Easy Maintenance.** With the new design of the DFO's quick-release access handles, filter removal and maintenance is extremely fast with one simple movement of the clamp. Bag-In/Bag-Out arrangements improve filter changeouts and hopper discharge maintenance, help minimize worker exposure to potentially harmful dusts, and reduce exposure of contaminants to the atmosphere.



DOWNFLO PULSE PRESSURE GRADIENTS

Pulse gradients produced by the standard Downflo during pulse cleaning compared to gradients produced by a Downflo with the new ExtraLife Cleaning System (red).



DFO Cartridge Filters

DFO dust collectors' patented downward airflow design delivers highest filtration efficiency while using less energy. The DFO collector, patented ExtraLife filter cleaning and Donaldson's unique oval-shaped filter cartridges are an unbeatable system. Choose from our superior line of filters to complete the most powerful dust collection solution available.

Ultra-Web®

▶ Featuring patented nanofiber technology, Ultra-Web cartridges provide unequalled filtration efficiency of 99.999 % on 0.5 micron particles. This advanced surface filtration technology ensures longest filter life and lowest operating pressure drop in a full range of cartridges:

- ▶ Ultra-Web
- ▶ Ultra-Web (flame retardant)



Fibra-Web®

▶ Featuring patented nanofiber technology, the Fibra-Web filter features an open washable design for easy cleaning in both fibrous and non-fibrous (agglomerative) applications. A proprietary blend of synthetic fibers in the base media and even wider pleat spacing provide filtration efficiency of 99.999 % on 0.5 micron particles in two cartridge choices:

- ▶ Fibra-Web



Torit-Tex™

▶ With a high tolerance for moisture, Torit-Tex filter cartridges provide exceptional filtration efficiency of 99.999 % on 0.5 micron particles in moist, hygroscopic and agglomerative applications. Its flexing media and quick-release Tetratex® PTFE membrane consists of extremely small pore sizes, allowing air and moisture vapour to pass efficiently, resulting in long filter life, even in difficult applications.



Thermo-Tek™

▶ Designed for high-temperature applications, Thermo-Tek filters have a proprietary media that offers exceptional filtration efficiency of 99.99 % on 1 micron particles. Special heatresistant construction and gaskets maintain seal strength and integrity at temperatures up to 135 °C (275 °F).



Equipment Options For DFO 1-1 Through 4-128

- ▶ Stainless steel 316L (hybrid welded & bolted)
- ▶ ATEX compliance
- ▶ Abrasion resistant inlets
- ▶ Spark trap
- ▶ Steep-sided hoppers
- ▶ Explosion vents
- ▶ Slide gates
- ▶ Hostile environment paint
- ▶ Lined clean air plenum (for pulsing noise)
- ▶ Afterfilters
- ▶ Integrated silencer (standard fan option)*
- ▶ Direct drive fans*
- ▶ Air management module**
- ▶ Extended dirty air plenum**
- ▶ Chamber and exhaust silencers**
- ▶ Rotary valves and transitions**
- ▶ Service platform (available on large units)**
- ▶ Solenoid enclosure**
- ▶ Total control board**

Standard Features For DFO 1-1 Through 4-128

- ▶ Ultra-Web and Fibra-Web cartridges
- ▶ ExtraLife Filter Cleaning System
- ▶ Quick removal cartridge access
- ▶ Ledge-free hopper

DFO Offers:

- ▶ Lower initial cost per cubic meter of air per hour (m³/hr)
- ▶ Fewer filter changeouts
- ▶ Reduced filter disposal cost
- ▶ Easy system set-up
- ▶ Less maintenance cost

* DFO 1-1, 2-2, 3-3 only

** DFO 4-128 only

U.S. Patents 6,364,921; 6,488,746; 6,387,162; 6,368,388; 4,395,269;
5,562,746; 5,882,379; 6,090,173; 6,955,755; 6,924,028; 6,716,274;
6,743,273

Technical alterations reserved (1/2008)

Donaldson. And everything just got better.

Total Filtration Management

▶ Donaldson offers a wide variety of solutions to reduce your energy costs, improve your productivity, guarantee production quality and help protect the environment.

Compressed Air Filtration, Sterile Filtration, Process Filtration, Refrigerant Drying, Adsorption Drying, Condensate Drains, Condensate Purification Systems, Water Chillers, Air / Oil Separation, Dust and Fume Removal, Process Air and Gas Processing, Oil Mist Separation, Industrial Hydraulics

Total Filtration Service

▶ A comprehensive range of services especially designed to keep your production at peak performance and at the lowest total cost of ownership.

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