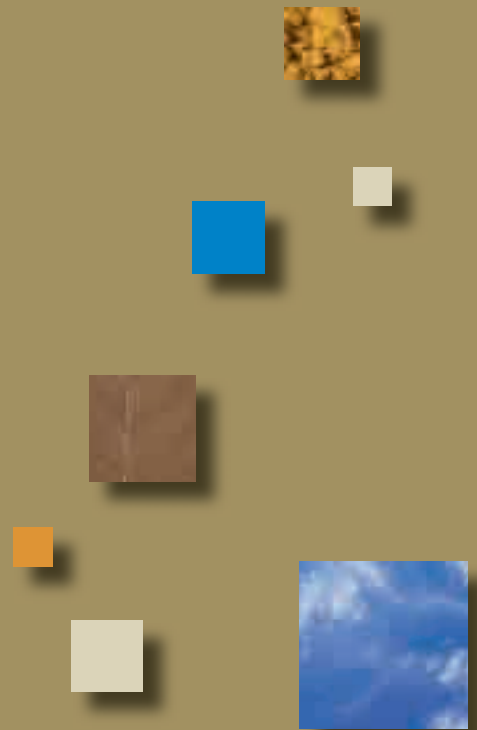




Donaldson®  
*Filtration Solutions*



A Cleaner World  
*for Industry*





# Filtration Solutions

## FOR GLOBAL CUSTOMERS

Donaldson Company, headquartered in Minneapolis, Minnesota (USA), is a global organization of over 12,000 professionals who are dedicated to providing filtration systems that improve people's lives, enhance equipment performance and protect our environment.

As one of the largest and consistently growing filtration manufacturers in the world, Donaldson creates a broad spectrum of filtration products and services to meet the evolving needs of its diverse customers. These filtration solutions span the entire life cycle of a customer's application, from initial system design through replacement products.

Since 1915, Donaldson has differentiated itself by innovating new technologies — delivering the best filtration products in the markets it serves, offering superior customer support and providing a vast network of locations around the world. All of this combines to make Donaldson the premier source of quality filtration solutions for its customers and a premier employer for talented people who enjoy a collaborative and performance-driven environment.

**Improve. Enhance. Protect.** From construction sites to semiconductor labs and nearly everything in between, Donaldson products are solving complex filtration challenges that improve people's lives, enhance equipment performance and protect our environment.

## Aerospace

Donaldson has developed a wide range of state-of-the-art filters for commercial airliners, military applications and general aviation aircraft.



## Agriculture

For hardworking agriculture and forestry equipment, Donaldson provides that extra measure of engine protection in difficult working environments.

## Construction

Donaldson is the world's leading first fit supplier of air filtration, exhaust and hydraulic systems for construction and mining markets that require heavy-duty protection.



## Disk Drive & Micro-Environment Venting

Precision manufacturing and assembly capabilities allow seamless integration of Donaldson's filtration components with a wide variety of microelectronic devices.



## Manufacturing

Donaldson dust, fume and oil mist collectors improve air quality and provide energy savings, while its hydraulic filters help safeguard critical components in machinery.



## Power Generation

Since the early 1970s, Donaldson's self-cleaning air filtration systems have been cleaning combustion air on gas turbines, generators, and compressors providing blade protection and boosting power output.

## Semiconductors

Donaldson provides chemical and particulate filtration solutions for semiconductor manufacturing and other highly sensitive processes.

## Transportation

Leading truck, refuse vehicle and bus manufacturers around the globe rely on Donaldson for quality engine protection and emission control products. Superior design features optimize performance and efficiency while reducing maintenance costs.



# Engine Filtration Technology

## FOR LONG LIFE AND REDUCED MAINTENANCE

Applying innovative technology, Donaldson products maximize equipment performance and reduce maintenance costs for customers around the world.

### Filter Media Technology

Donaldson manufactures the world's most advanced engine filtration products, enhanced by our innovative media technologies for both air and liquid filters. We rely on continuous advancements by our dedicated scientists and engineers to maintain our leadership position.

### Liquid Filtration Systems

Changes in emissions laws and new engine technologies place ever increasing demands on liquid filtration systems. Today's diesel engines run at higher temperatures and require optimum filtration performance. With greater efficiency, more capacity and longer service life, our customers get maximum engine protection. Donaldson has the unique capability to design and integrate your entire liquid filtration system.

### Mobile Hydraulic Systems

Donaldson hydraulic filtration sets the standard for performance, reliability, value and ease of use. Hydraulic system designs include sensors, porting options, high performance spin-on filters and metal or metal-free cartridges. Our product offering covers low, medium and high pressure applications on mobile equipment.





## Air Filtration Systems

Donaldson has pioneered the development of nearly every major advancement in heavy-duty engine air filtration since 1915. We've expanded this tradition by introducing new designs for SUVs, light-duty trucks and high performance cars.

Donaldson air filtration technology for vehicle and equipment manufacturers includes PowerCore™, Ultra-Web® and Spiracle™ Filtration Technologies, among others.

PowerCore Filtration Technology (pictured above) is 10 times more efficient and considerably more compact than standard pleated cellulose filters. With over 2,300,000 units in use, PowerCore is becoming the new standard of filtration for diesel-powered engines and equipment.



## Aerospace and Defense

Our products are used in the roughest aircraft and military applications, effectively filtering air, lube, fuel, transmission and hydraulic fluids, as well as reducing exhaust noise and emissions.

Donaldson, AFS and Le Bozec deliver industry-leading filtration systems for avionics, rotorcraft engines, cooling systems and marine applications — delivering reliable, low-maintenance durable filtration solutions.



# Emissions Control & Exhaust Systems

## FOR A CLEANER AND QUIETER WORLD

For more than 55 years, Donaldson has led the development of exhaust systems, components and accessories by utilizing acoustics, flow distribution, thermal management, durability and system integration technologies.



### Diesel Emission Reduction Systems

Donaldson has been producing emissions reduction systems since the late 1980s. We work with our customers to design and apply the best available reduction technologies, both for tailpipe and crankcase emissions sources.



### Design Capabilities for Original Equipment Manufacturers

Donaldson leads the development and supply of exhaust and emission systems for medium- and heavy-duty diesel-powered vehicles and equipment. By applying our on-site technologies in flow distribution, thermal management, durability, system integration and acoustics, we design efficient and cost-effective solutions.



### Emissions Retrofit Solutions

Public awareness and government regulations continue to make diesel emission reductions a high priority in the industries we serve. Donaldson works with national, state and local government environmental agencies and industry organizations to educate and recommend solutions that meet applicable regulations.

Donaldson retrofit solutions can reduce emissions from 25-90%, depending on our customers' needs. Our offering includes both passive and active emission systems. Passive systems include Diesel Oxidation Catalyst (DOC) mufflers, Diesel Multi-stage Filter (DMF) mufflers, and Diesel Particulate Filter (DPF) mufflers. Our active DPF regeneration system provides a reliable, unique solution for equipment operating in low temperature, transient and extended idling conditions. Donaldson also offers DPF cleaning systems.



## Cleaner and Quieter Vehicles & Equipment

Donaldson provides exhaust systems, crankcase filtration systems and other solutions to reduce the emissions, noise and odor caused by on-and off-highway vehicles.

### Crankcase Filtration Systems

An increasing portion of a vehicle's total diesel emissions are attributed to an open crankcase, with current engines being up to 25%. The Donaldson Spiracle Crankcase Filtration System eliminates emissions and blow-by odor, without fouling turbochargers or aftercoolers.

### Mufflers, Clamps, Tubing and More

We offer a competitive line of replacement exhaust products for on-and off-highway vehicles through our extensive distribution network.





# Replacement Filters

FOR ENGINES AND EQUIPMENT



**Quality and Value** Donaldson replacement products meet the same quality standards as the products we supply to equipment and vehicle manufacturers. They are durable, reliable and built to withstand the intended operating conditions.



## Global Distribution System

Donaldson's distribution network delivers filtration and exhaust products quickly and accurately to meet the needs of our customers around the world. Our streamlined delivery processes are key to saving our customers' time and money.

## Technology

Donaldson filters utilize the latest in filtration technology, such as Ultra-Web<sup>®</sup>, PowerCore<sup>™</sup> and Synteq<sup>™</sup> filtration technologies. Donaldson Endurance<sup>™</sup> air filters go twice the distance as conventional filters, and Donaldson Endurance Plus lube filters reduce oil usage by 50%.

## E-Commerce

Through our website, Donaldson customers can easily find the proper replacement part, view detailed product information, place orders and track order progress. Donaldson also uses a variety of other business transaction methods for communicating with customers of all sizes.

## Diverse Customer Reach

Donaldson products are readily available through authorized independent and original equipment distribution outlets throughout the world. Visit [www.donaldson.com](http://www.donaldson.com) to find the location nearest you!





# Industrial Hydraulics

## FOR EFFICIENT SYSTEMS WITH SUPERIOR PERFORMANCE

Whether it's located inside a plant or outdoors, manufacturing machinery needs clean oil for maximum life and optimal productivity. Donaldson industrial hydraulic filters and accessories reduce contaminants to keep equipment running smoothly.

Our value proposition is to provide industry the lowest cost of ownership via clean oil. That means less downtime, longer machine life and lower maintenance cost. To that end, we strive to design highly effective filters with consistent and verifiable performance.



### Bulk Oil Filtration

Donaldson Duramax<sup>®</sup> units at this South Africa ore mine filter bulk oil as it runs from storage tanks to delivery trucks for transport to the customer.

## Comprehensive Filter Line

Donaldson offers a full line of low, medium and high pressure hydraulic filters, filter housings, assemblies, heads and spin-ons for in-plant and mobile industrial applications. Advanced Synteq® synthetic media and Duramax® spin-on filters protect machinery and clean hydraulic and lubrication oils in thousands of applications around the world.

## Hydraulic System Accessories

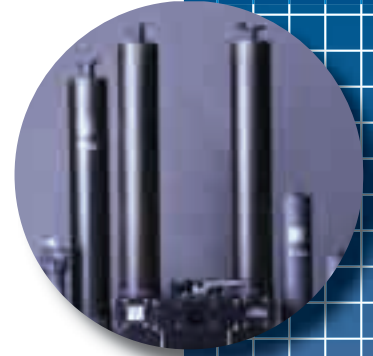
Hydraulic systems are made up of more than filters. That's why Donaldson offers a wide selection of indicators, reservoir tank breathers, suction strainers, filler breather caps, gauges, flanges, valves, test points and more.

## Filtering Bulk Oil

In bulk applications, oil can easily get contaminated with built-in, ingressed or induced particulate and bacteria growth. Filtering oil in bulk storage tanks and reservoirs makes it easier to keep it clean in machines and hydraulic circuits.

## Replacement Elements

Donaldson carries the industry's largest selection of replacement hydraulic filters — in stock and ready to ship. A convenient part number cross-reference guide is located on our web site, [www.donaldson.com](http://www.donaldson.com).



# Compressed Air & Gas

## FOR TOTAL SYSTEM PURIFICATION

Donaldson delivers a complete system of filtration and separation products for compressed air systems. Our technology in the field of compressed air, gas, fluid separation and condensate management extends from the compressor room to all points of use in the factory.

### On-Compress Systems

Donaldson provides total system purification solutions for the reliable and economical use of compressed air and gas. Donaldson mobile and stationary compressor solutions include air intake filters and housings, air/oil separators, fuel and lube filters, emissions and exhaust systems. Donaldson has the analytical tools and engineering expertise to tailor comprehensive filtrations for specific production requirements.



### Dry Compressed Air

A dryer is essential in improving compressed air and gas quality throughout manufacturing plants. Donaldson's reliable refrigerated air dryers consume the lowest amount of energy and optimize productivity. Our regenerative adsorption dryers ensure clean, dry air in even the most extreme conditions.





## Industrial Filters

Donaldson offers a full line of industrial filter housings and elements in stock and ready to ship. The Donaldson Ultra-Filter™ filter design reduces pressure loss by 50% compared to conventional filters and delivers unrivaled performance, efficiency, ease of use and safety.

## Process Filtration

Donaldson sterile air and culinary steam filtration products are among the most effective and efficient filters in use in the food and beverage industries. Our membrane and depth process filters are also widely used in the electronics, pharmaceuticals, paints, inks, coatings and other process industries where high purity compressed air, gas, liquids or steam are required.





# Gas Turbine Filtration

## FOR OPTIMAL TURBINE PERFORMANCE

Donaldson is the leading supplier of complete custom-engineered air intake systems for gas turbines and industrial compressors. We supply systems for new and retrofit applications.

Development initiatives in gas turbine are supported by the most advanced engineering tools in the industry, including structural analysis, fluid dynamic analysis and filter modeling.

### Self-Cleaning Air Filtration Systems

Donaldson self-cleaning air intake systems offer high-performance/low-maintenance protection for gas turbines, generators, and compressors. We offer the GDX™ model, which utilizes pairs of cartridge filters, and the XLR™ model, featuring PowerCore™ media technology in a 40% smaller system. Our UniMod component designs yield faster and easier field assembly. Donaldson facilities are located all over the globe to serve turbine OEMs and engineering firms.

### Air Inlet Enhancements

Donaldson evaporative coolers and chiller coil systems help optimize turbine output in warm operating environments. Ducting from the filter system into the turbine can also include an inlet silencer section, which is especially effective in urban areas. Donaldson also offers inlet heaters, anti-icing devices and inlet bleed heaters to optimize and/or boost turbine output.

### Static Filter Systems

When the self-cleaning function is not needed, Donaldson offers the GDS™ system for on-shore or the GTM™ system for off-shore usage. This four-stage unit works well in urban, industrial, off-shore and marine environments. A full range of inlet enhancements is available.



## Powerful Performance

Donaldson air intake systems and filtration products optimize power plant operations.

## Conversions, Modifications & Upgrades

Whether it's time to upgrade, update or add features to existing air inlet systems, Donaldson is ready to serve. Our CM&U team stands ready to discuss our customers' specific needs and find the best solution for their update.

## Replacement Filters & System Spare Parts

Donaldson offers cartridge and panel filters with our patented Spider-Web® media technology, pre-filter panels and wraps, mist eliminator and coalescers, solenoids and valves, gauges and switches — everything necessary for inlet system maintenance.





# Dust, Fume & Oil Mist Collection

FOR INDUSTRIAL  
AIR FILTRATION



## Cleaner Air in the Plant

Donaldson Torit helps manufacturers control, reduce and eliminate airborne contaminants to enhance air quality in the plant.





## Nuisance Dust Collection

Through leading equipment brands such as Downflo Oval®, Unimaster®, Vibra Shake™ and Dalamatic®, Donaldson provides unrivaled quality and versatility to solve most in-plant nuisance dust control problems.



## Process Dust Collection

Process industries such as pharmaceuticals, cement manufacturing, chemicals and food demand meticulous dust control systems. World-renowned Ultra-Web® filter media technology has provided effective solutions for these industries for over 25 years.



## Fume Control and Collection

Industrial processes such as welding and laser and plasma cutting generate heavy fumes, containing particulates that are often comprised of submicron-sized particles. At the heart of the Downflo Oval collector is Donaldson's Ultra-Web® nanofiber technology, delivering the highest possible filtration efficiency.



## Oil Mist Collection

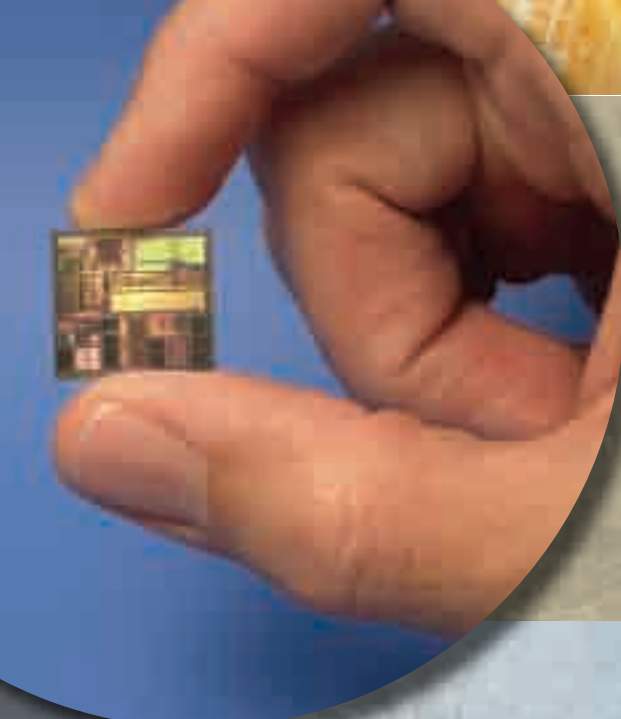
Uncollected coolant and machine oil mist leaves condensation and residue on floors, machines, walls and ceilings, creating an unclean manufacturing environment. With our enhanced mist collector design and Synteq® XP media, Donaldson Torit enables manufacturing facilities to control and contain mist and smoke.



## Replacement Filters

Torit-Built® filters and bags are stocked and distributed quickly through strategically located Product Distribution Centers.





# Semiconductor & Imaging

**FOR APPLICATIONS WITH AIRBORNE  
MOLECULAR CONTAMINANTS**



Donaldson focuses on critical applications that require a high degree of cleanliness and protection for processes and equipment.

Our products are designed to control airborne molecular contaminants in highly sensitive process environments, such as semiconductor manufacturing and industrial photocopiers.

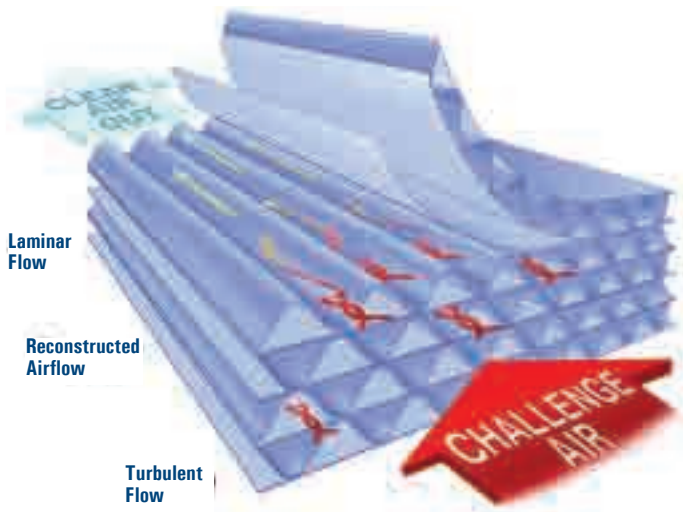
## From Wafer to Computer Chips

Donaldson filtration solutions control the chemistry in highly sensitive process environments.



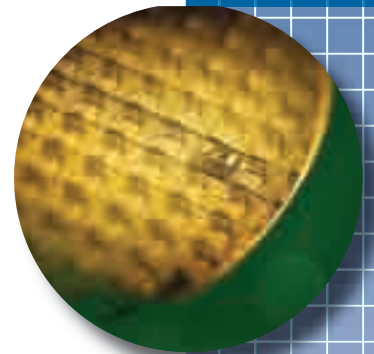
## Filtration for Semiconductor Manufacturing

Working closely with Original Equipment Manufacturers, fabricators and academic institutions, Donaldson Semiconductor Applications Group offers solutions to control the chemistry in ambient air and process gases.



## Filtration for Imaging Machines

Our filters remove toner, ozone and other gases generated within copy machines and high speed printers. We improve the environment and safeguard the sensitive parts of the equipment.



## ChemCore™ Filter Media

ChemCore's chemically-treated filter material is a light weight alternative to packed-bed filters and allows for filtration by diffusion.

# Disk Drive & Micro-Environment Venting

## FOR CONTAMINATION CONTROL IN CRITICAL APPLICATIONS

Donaldson filtration technologies protect critical applications from the damaging effects caused by particles, gases and humidity. Our precision manufacturing capabilities allow seamless integration of filtration components into a wide variety of devices.

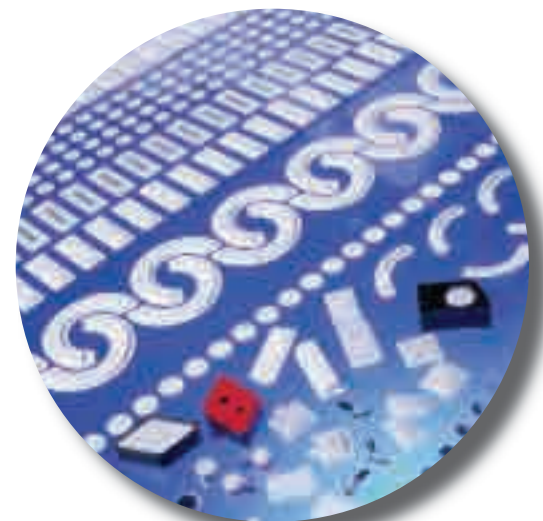
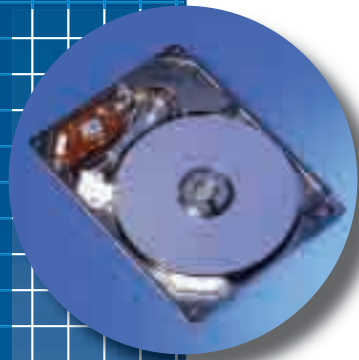
Donaldson Disk Drive and Micro-Environment Venting groups combine filtration and adsorbent technologies with device integration expertise to develop contamination control solutions for a diverse range of applications. These include innovative solutions for disk drives, sensors, hearing aids, gas vents, horns, headlamps, critical enclosures and a host of other applications.

### Disk Drives

Donaldson filtration technology, combined with carbon or dessicants, helps protect disk drives from contamination by particles, hydrocarbons, acid gases and water vapor condensation.

### Sensors

Long-term exposure to airborne contamination such as particles, oil, water, salt water, hydrocarbons, water vapor and acid gases can lead to signal error, calibration drift and, finally, sensor failure. Donaldson makes a wide variety of filters and breathers designed to help protect sensitive electronic devices from this contamination.





## Hearing Aid & Acoustic Vents

Portable electronic devices are increasingly used in outdoor environments. Therefore, it is essential to protect the speaker and microphone on these devices from environmental contaminants that could impair their effectiveness. Donaldson's acoustically transparent filtration products provide speakers and microphones with an effective barrier to dirt, dust, hairspray, oils, perspiration and water.

## General Breathers & Venting

The unique hydrophobic, oleophobic and high filtration efficiency properties of Donaldson membranes have led to use in medical container venting and a variety of microelectronic, medical device and general applications that require simultaneous pressure relief and liquid barrier properties.



# Donaldson Membranes

## FOR INDUSTRIAL FILTRATION & TECHNICAL PRODUCTS

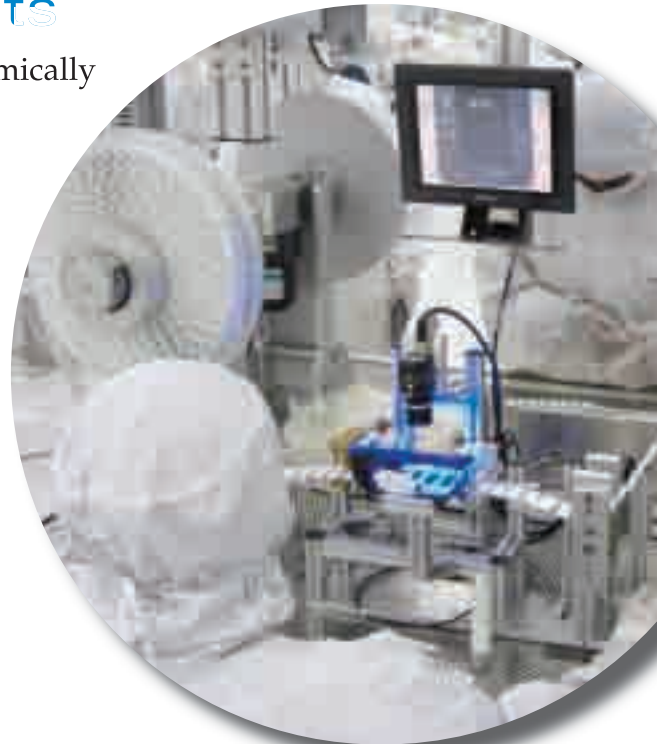
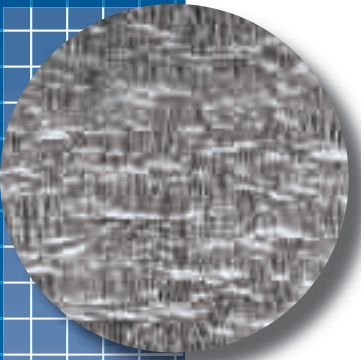
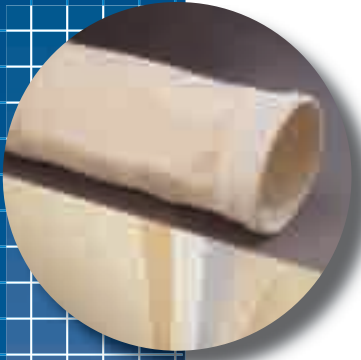
Donaldson Membranes is a leading worldwide manufacturer of microporous expanded PTFE membranes. We are a technology-driven business committed to satisfying customer needs through innovative research, development and continuous product improvement.

### Quality & Expertise

Donaldson places great emphasis on high quality manufacturing and customer service and has been accredited ISO/9001:2000, a testament to our high standards. Our expertise enables us to manufacture PTFE (polytetrafluoroethylene) membranes to a wide range of specifications to meet the most demanding requirements.

### Technical Products

Tetratex<sup>®</sup> is dimensionally and chemically stable in almost any environment ranging in temperatures from -270 C to 260 C. The inherently hydrophobic characteristics make Tetratex an excellent choice for advanced technical applications such as enclosure venting, vacuums, microfiltration, chemical filtration and other demanding end uses.





## A Breath of Fresh Air

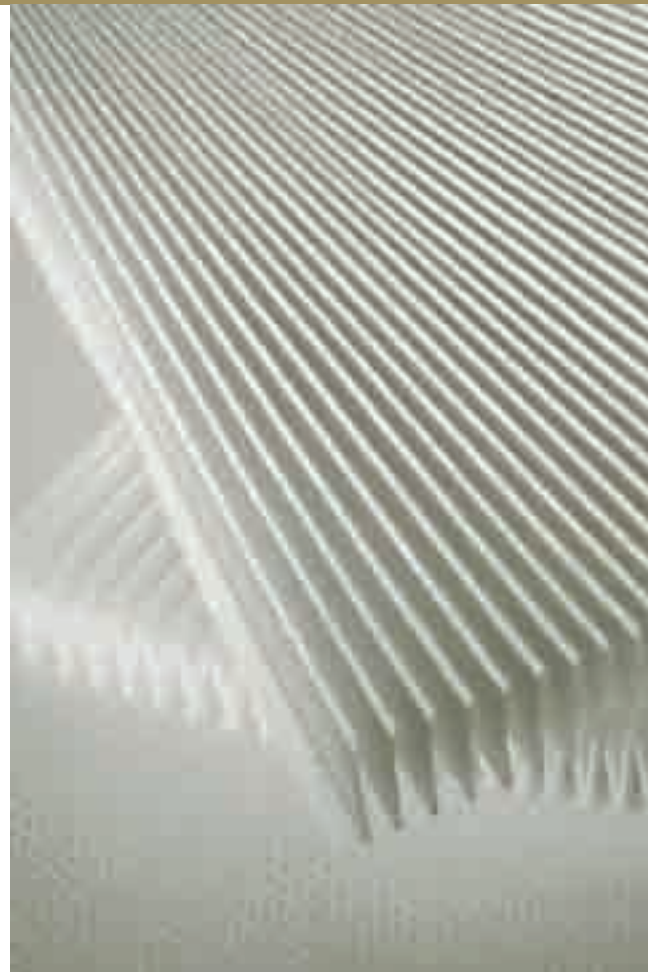
Donaldson Membranes are helping environmentally-conscious manufacturing plants reduce air pollution. It's just another way that Donaldson is working toward a cleaner world for industry.

### Membrane Technology

The microstructure of Tetratex is comprised of millions of small, randomly connected fibriles that create unique performance characteristics.

### Industrial Air Filtration

Tetratex PTFE filter media is the technology of choice in many industries. The benefits of this membrane technology — including improved air flow, reduced pressure drop, increased air-to-cloth ratio, longer bag life, near zero particle emissions and reduced energy conditions — meet the demands of modern plant operations.





**Donaldson**<sup>®</sup>  
*Filtration Solutions*

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For a complete list of Donaldson locations and distribution outlets, visit [www.donaldson.com](http://www.donaldson.com)

Donaldson Company, Inc. is an equal opportunity/affirmative action employer committed to a diverse workforce.