



Air Intake Systems

Standard product offering for engines & vehicles



For any dust condition or airflow requirement, Donaldson air intake systems deliver clean air when engines need it most.



Donaldson Delivers



Why Donaldson

Broad Air Product Offering
Light to Heavy Dust Conditions
Air Cleaners for New Equipment
Replacements for In-Use Equipment
Wide Variety of Accessories

Proven Technology

PowerCore® Systems
Ultra-Web® Nanofiber Technology
RadialSeal™ Sealing Technology
Pleatloc™ Media Spacing
Donaldson Blue™ (formerly Donaldson Endurance™)
Single & Two-Stage Filtration
Pre-cleaners & Inlet Hoods
Filter Indicators & Gauges

Lasting Quality & Value

Quality & Environmental Management Practices
TS & ISO Certified
Durable products that protect engines and
control maintenance costs

Readily Available

Stock Product – No Lead Time
Ship Orders Same Day Received
Local Availability Through Distributors
and OE Dealers

Single Filtration Source

Not just air. Donaldson has lube, fuel, coolant,
hydraulic, transmission filters for all vehicles from
pick-ups, hybrids, and SUVs to mining haul trucks!

History of Innovation

Established as a filtration company in 1915
More than 1500 active patents worldwide

Air Cleaner Families

**PowerCore® • PowerPleat™
E Series • F Series • S Series**

PSD, PCD, ECD, EBB, ECD, EBA, ERA, ECG, FWA,
FHG, FPG, FKB, FRG, FTG, XRB, SRG, STB, SSG



Custom PowerCore® intake systems are the new standard on OE equipment around the world. OEs now have access to off-the-shelf line of original PowerCore PSD and PCD air cleaners.



Donaldson PowerPleat™ is the next generation of RadialSeal™ air cleaners from the company that invented RadialSeal. Available in multiple sizes for a broad range of applications.



XRB Housings have radial seal technology, built in mounting brackets and latched covers. Each feature takes less time to service than older housing designs.



SSG Housings can be found on large mining vehicles. These units are massive in size and performance compared to most other housings. Their overall size is about 43" x 50" (1092mm x 1255mm).



EPG Housings were one of the first series to feature RadialSeal technology. Metal end caps were replaced with urethane, which created a more reliable critical seal between the housing cover and filter. Donaldson Blue™ extended service filters with Ultra-Web Technology are an option.



FPG Housings are ideally suited for smaller engine intake requirements.

Materials • Finishes • Construction

Designed for long life, rust resistance and aesthetic appearance.

Injection and Blow-Molded Air Cleaners

Our non-metal finish is black plastic and can be found on our DuraLites, PowerCore® (PSD and PCD), PowerPleat™ and other radial seal air cleaners (FPG, XRB, FKB). Advantages include:

- Lighter weight than metal air cleaners
- Corrosion and chemical resistant
- Impact, mar and vibration resistant



Polymer Coating Resists Corrosion

Donaldson's gloss black finish – on most of our metal air cleaners (ERA, FVG, FRG) – is resistant to chemicals and corrosion.

Advantages include:

- Improved durability. Coating lasts 5 to 10 times longer than traditional paint.
- Impact and mar resistant. Coating is up to 17 times harder than most solvent-based paint.
- Consistent coating thickness – even in crevices and small, hard-to-reach places.



Buff Prime Finish

A buff prime finish is applied to our large S series air cleaners (SRG, STB, SSG and STG) so our customers can apply their own paint to match the overall look of the equipment.



Intake Accessories for On- and Off-Road Systems

Donaldson has what you need to:

- ✓ Mount or install an air cleaner
- ✓ Solve air intake water problems
- ✓ Pre-clean or protect air inlet from debris
- ✓ Know when to service a filter
- ✓ Aspirate (or scavenge) an intake system
- ✓ Connect intake components
- ✓ Reduce service time
- ✓ Replace the filter





Air Filter Features & Technology

RadialSeal™ filter seals

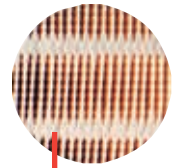
RadialSeal filters slip easily on and off the outlet tube during installation and service. This design eliminated the separate gaskets used with metal end-cap filters.

Axial filter seals

Strong, pliable gasket ensures a leak-free seal when properly installed. The gasket won't harden or deteriorate over the useful life of the filter.

Pleatloc™ media spacing

Ensures uniform pleat spacing, keeps filter media from bunching during operation and promotes longer filter service life.



Filter end caps

Designed to protect the filter media and provide structural integrity.

Beading

Applied to both inner and outer liners, beading is designed to stabilize the media and prevent pleat tip wear.

Heavy-duty liners

Corrosion resistant, coated steel liners support the filter media during operation and maximizes airflow.



PowerCore®
A Donaldson Filtration Technology

Original PowerCore® Filtration Technology

PowerCore provides maximum design flexibility. You gain equal performance in significantly less space, freedom to design unique configurations to fit tight spots, and overall design simplicity.



RadialSeal™ filter seals

Our RadialSeal™ technology on PowerCore filters provides a tight critical seal on unique filter shapes.

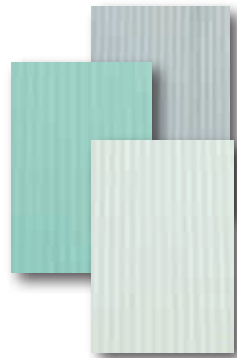
Non-metal construction

Weighs less – less disposal impact.

PowerCore® Filtration Technology

Filtration Performance

The standard filter media in our primary air filters is a cellulose based material used primarily in single and two-stage intake system applications (e.g., off-road, on-highway trucks, buses and underground mines.) We also have flame retardant and vibration resistant cellulose media variations that are required in specialty engine applications.



Donaldson Filter Media

Our blue, primary air filters (Donaldson Blue™ and PowerCore® filters) contain Ultra-Web® nanofiber filtration technology. This media is composed of a cellulose or a cellulose/synthetic substrate with nanofibers applied to one side. Filters with Ultra-Web media deliver consistent, high efficiency filtration. Donaldson Blue air filters are guaranteed to go twice the distance compared to their original cellulose filters in on-road/transportation applications. Blue filters in PowerCore housings offer high efficiency, with the added benefit of a more compact air cleaner.

ULTRA-WEB®
 Primary engine filters featuring Ultra-Web are always blue!

Many Donaldson air cleaners have safety (or secondary) filters to protect the engine during the service of the primary filter or in case the primary filter is damaged. A variety of safety filter medias are used, including pleated cellulose, pleated or flat cellulose/synthetic, and spun bond materials treated with special additives.

Key factors that affect air cleaner selection and performance

The engine intake system is designed to direct, isolate and capture contaminant before it reaches the engine.

The dust environment in which the engine must work, the available space for installation and service, and the filter service interval are key factors that affect air cleaner selection and performance.

Proper maintenance is another essential factor. A damaged filter or improper servicing will pass contaminants that cause wear in the engine.

Compare for yourself — see how much dust can pass through your air filter during 100 hours of operation.

Donaldson Air Filter Media
 Ultra-Web®

Standard

Will-fit Air Filters
 Standard Media



up to 99.99%
 0.1 gram dust



99.9%
 1 gram dust



99.0%
 10 grams dust

Filtration efficiency (%) and dust passed after exposure to 1 kilogram of dust (approximately 100 hours of operation) for a typical off-road application.

Donaldson efficiency is based on ISO 5011 — the test standard for air filter life and efficiency.

Donaldson Air Filtration Technologies Help OEMs Meet Global Emissions Regulations

The emissions solutions introduced to meet diesel engine emissions regulations have resulted in numerous vehicle design changes for original equipment manufacturers. Changes that we have seen include engine compartment size reductions and lower system weight requirements.

For engine manufacturers, regulators now recognize that engine blow-by gas emitted from the crankcase is a major emissions source and require that the vent be closed or filtered with high efficiency filtration.

Donaldson has been providing OEMs with custom and standard filtration solutions that meet their specifications to be emissions compliant: PowerCore® G2 Filtration Technology and Spiracle™ Crankcase Filtration Systems.

PowerCore®

Our PowerCore G2 Filtration Technology is a perfect fit for the new space limitations, offering higher capacity and improved efficiency in a much smaller footprint. The geometric flexibility of PowerCore air intake systems gives OEM engineers the freedom to design unique configurations to fit tight spots.



Spiracle™ Crankcase Filtration Systems

Our CCV or OCV systems reduce or eliminate harmful and unwanted crankcase emissions. Our Synteq XP™ coalescing media technology offers high efficiency filtration with low operating pressure drop.



Three standard models (small, small extended and mid-sized) are available for engine blow-by flow ranges up to 300 lpm / 10.6 cfm and with blow-by mass flow rates up to 15 gms/hr.

Air Filtration Go-To Place

www.donaldsonfilters.com

Need to find a local source for Donaldson air filtration products?

> go to <https://dynamic.donaldson.com/webc/WebStore/locator/locator.html>

Need to select a new air cleaner?

> go to www.donaldson.com/aircleaners

Need a replacement filter for your air cleaner?

> go to www.donaldsonfilters.com

Looking for a PDF file of our Engine Intake Systems Catalog?

> go to www.donaldsonfilters.com/literature.html

View what we have for your industry

> go to www.donaldsonfilters.com/industries.html

Looking for helpful maintenance tips?

> go to www.donaldson.com/en/engine/shoptalk/index.html

Looking for how to service video training?

> go to www.youtube.com/user/donaldsonengine



Single Filtration Source

Not just air. Donaldson has lube, fuel, coolant, hydraulic, and transmission filters for all vehicles, from pick-ups SUVs and hybrids, to mining haul trucks!





Engine Air Filtration Guide

When you need air filtration systems for new and existing equipment applications, consider Donaldson as your single source. Donaldson filters and accessories are the best way to protect equipment in any industry.

See the F110027 Engine Air Filtration Guide for complete details and product offering.

Global Presence with Local Touch

Donaldson has established a global distribution network to serve our customers locally as well as worldwide. We operate as a global company with a network of primary distribution locations that support a mature hub of regional distribution centers and warehouses.

Donaldson distribution centers are strategically located to quickly and accurately deliver filtration and exhaust products wherever replacement products are needed. We work with a network of transportation, third party logistics companies, consolidators, and cross-docking facilities to meet or exceed our customers' requirements.

All regions of the world benefit from our global umbrella of distribution centers. We focus our efforts on local support and the capabilities of our staff. We continue to make significant investments in facilities, systems, supply chain relationships, and staffing to offer the best order fulfillment options available.



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