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Engine Air Cleaners, Intake Accessories and Service Parts.

Technical Air Catalogue



Engine Air Cleaners, Intake Accessories and Service Parts.

Donaldson delivers Clean Air
when your Engine needs it most.



Catalogue Number F116005 / March, 2007.

For more information, contact:

Blank area for contact information.

Donaldson filters are built to provide the best protection for your engine - even in the most demanding operating environments.



Engine Air Cleaners, Intake Accessories & Service Parts

Table of Contents

This catalogue contains product details, service parts, maintenance and service tips and all the information you need to find a Donaldson air cleaner or intake accessories for your light-, medium- and heavy-duty equipment.

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European Warranty . . . (Inside Front Cover)

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Global Resources For Filtration Solutions

... a Cleaner World for Industry

Donaldson Company Inc., headquartered in Minneapolis (USA), is a leading worldwide provider of filtration systems and replacement parts.

Founded in 1915, Donaldson is a technology-driven company committed to satisfy customer needs for filtration solutions through innovative research and development. We serve customers in the industrial and engine markets including dust collection, power generation, specialty filtration, off-road equipment and trucks.

Donaldson Europe was established in Belgium in 1966. 40 years later, Donaldson Europe has approximately 50 operations doing business in excess of 18 countries throughout Europe, the Middle East and Africa. Donaldson Engine Systems & Technologies offers a full line of filtration products for use in trans-

portation, construction, mining, agriculture, defense, light vehicle, compressor and industrial applications.

Our products carry the Donaldson brand or that of our OEM partners and are available through an international dealer/distributor network.

Following brands already rely on Donaldson as their filtration partner: Agco, Bobcat, Case New Holland, Caterpillar, Claas, DAF, Daimler Chrysler, Deutz, Evobus, Fercmec, Fiat-Kobelco, Ford Ottosan, Freightliner, Furukawa, Hitachi, Hyster, Iveco, JCB, John Deere, Jungheinrich Boss, Komatsu, Landini, Liebherr, Linde, Lombardini, MAN, Manitou, Massey Ferguson, Merlo, McCormick, MTU, Renault Agriculture, Renault Truck, Same, Scania, Terex, Toyota, Volvo, Volvo CE ...



Donaldson Filters

Lasting Value

...with durable products that protect engines and control maintenance costs.

Donaldson brand performance air filters give you consistent performance over the life of your engine. Donaldson air filters are a competitively priced solution for your scheduled maintenance program that allows you to advance to your engine's next scheduled service with full engine performance and protection.

Pleatloc™ Media

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

AxialSeal 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.

Ultra-Web® Media

In field test, filters using Donaldson Ultra-Web® technology hold up to five times more contaminant and allow less contaminant to pass through the media than comparably sized cellulose air filters.

The original RadialSeal™ Filter Seals

RadialSeal™ filters slip easily on and off the outlet tube during installation and service.



PowerCore™ Filtration Technology

When you're squeezed for space, take a look at Donaldson PowerCore™ filtration technology. Unlike ordinary pleated air filters, PowerCore™ filters are shaped into parallel fluted tubes, which allow straight-through airflow for reduced restriction and more surface area in a given space.

Beading

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

Filter end caps

Designed to protect the filter media and provide structural integrity.

For more details on PowerCore™ Filtration Technology see page 58-63.

Innovative Engineering



...in every feature of every product, backed by a long tradition of innovation.

PowerCore™, peak performance in half the space of a conventional air filter.

Innovative vehicle designs call for new engineering solutions. Donaldson is right there with you. When you're squeezed for space, take a look at Donaldson PowerCore™ filtration technology.

Airflow schematic of PowerCore™ filtration technology.

Fluted channels are alternately sealed allowing air to enter through an open flute and forcing it to exit out an adjacent flute.

Increased dust and soot holding capacity.

Donaldson PowerCore™ filtration technology takes air filtration to a new level. Unlike conventional pleated configurations, PowerCore™ media is formed into parallel fluted tubes. That means filters made with PowerCore™ filtration technology are two to three times smaller than pleated filters at a given performance level.

For more details on PowerCore™ Filtration Technology see page 58-63.



Spiracle™ eliminate harmful emissions & improve engine compartment cleanliness.

As emission standards force the use of closed crankcase ventilation on diesel engines, the Donaldson Spiracle™ filtration system controls emissions without sacrificing engine power and performance. This system is highly efficient at coalescing oil, regulating crankcase pressure, and protecting turbochargers and aftercoolers from fouling. Donaldson Spiracle™ will also reduce engine oil consumption and underhood odor/fumes. Because of its unique design, the Spiracle™ filtration system will contribute to a cleaner engine compartment and lower exhaust emissions.



For more information on Spiracle™ visit our website at www.emea.donaldson.com (exhaust + emission).

Innovative Engineering

...in every feature of every product, backed by a long tradition of innovation.

Donaldson media formulations set the standard for filtration performance.

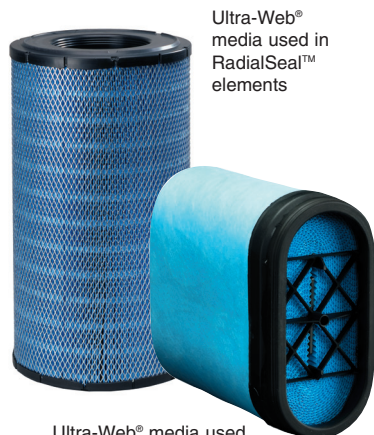
Donaldson filter media is made up of specially formulated fibers designed to trap contaminants such as dust, dirt and soot before they reach your engine. The media is pleated to maximize the filter surface area and placed between rigid liners to provide stability and support. A filter seal is applied or built-in to the open end of the filter to prevent dirty air from bypassing the filter. Donaldson has developed an extensive range of air filter media so we can deliver the best protection for your engine no matter what the operating conditions.

Ultra-Web® media technology.

Donaldson has developed Ultra-Web® media for operating conditions that require the highest level of protection.

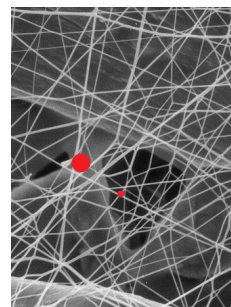
Ultra-Web® media has a web-like filtering layer applied over the surface of specially formulated cellulose media. This causes sub-micron contaminants like soot to load on the surface rather than dispersing throughout the depth of the filter.

In field test, filters using Donaldson Ultra-Web® technology hold up to five times more contaminant and allow less contaminant to pass through the media than comparably sized cellulose air filters.

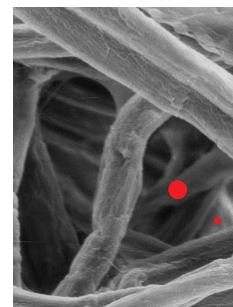


Ultra-Web® and cellulose media at same magnification.

Red circles represent the diameter of a 2 micron and a 5 micron particle. Cellulose media is used in most air filters.



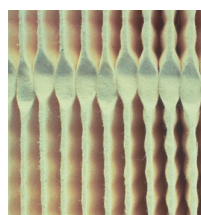
Ultra-Web® fibers have submicron diameters and small interfiber spaces, which result in more contaminant being captured on the surface of the media and low restriction.



Cellulose fibers are larger than Ultra-Web® fibers, and have larger spaces between the fibers, causing contaminant to load in the depth of the media and plug the air-flow path; resulting in higher restriction and less capacity.

Pleatloc™ media spacing.

Invented and introduced by Donaldson in 1981, Pleatloc™ media spacing delivers better engine protection because it prevents pleat bunching and media collapse during high heat or excessively humid operating conditions.



Pleatloc™ delivers superior engine protection, extended change intervals and lower maintenance costs.

Innovative

Engineering

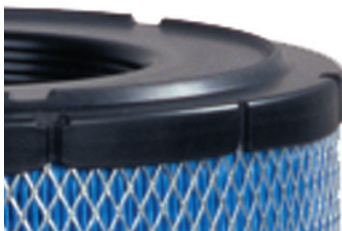


...in every feature of every product, backed by a long tradition of innovation.

RadialSeal™ Sealing Technology. The best, most reliable choice for your engine.

Filters with Donaldson RadialSeal™ Sealing Technology are lighter weight and easier to service than other filter designs.

Invented by Donaldson in the 1980s, the urethane seal compresses radially on the outside surface of the outlet tube to create a seal around the tube.



RadialSeal™ design provides the most consistent and reliable seal and the best protection for your engine.

In most applications, a safety element inside the main element seals radially to the inside of the outlet tube to provide an extra measure of protection. Filters equipped with RadialSeal™ Sealing Technology are easy to replace and provide a leak-free seal even in adverse operating conditions such as extreme heat or cold.



RadialSeal™ is a special sealing design that makes filters self-aligning and self-sealing during installation.

Compare and See the Differences! Donaldson RadialSeal™ design versus will-fit designs.

If a non-Donaldson RadialSeal™ filter or an Axial style filter is used in a RadialSeal™ housing, the proper seal won't be made and the engine is at risk. Even the few RadialSeal™ retrofits available are not the same.

Routine comparative tests show that the will-fit construction prevents a proper seal, so don't use imitations!

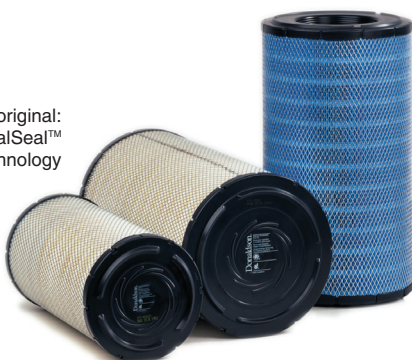
The Donaldson RadialSeal™

- High tech, pliable, resilient endcap.
- Triple seal design.
- Temperature stability.
- Very little compression set.
- Inner liner embedded into urethane.
- Exact dimensional match to air cleaner.
- Very little pressure on cover.
- Thousands of hours of lab testing.
- Millions of kilometers and hours of use.

A Competitive Imitation

- Hard rubber endcap material.
- Single contact, lip gasket.
- Seal pressure fluctuates with temperature.
- High compression set, slow recovery.
- High pressure on cover and latches.
- Short inner liner compromises sealing surface.

Choose the original:
Donaldson RadialSeal™
Sealing Technology



For more details on the RadialSeal™ air cleaners see page 17-66.

Innovative Engineering

...in every feature of every product, backed by a long tradition of innovation.

Alexin™ Air Cleaners. **Protect your engine, protect your business.**

Since the introduction of the Donaldson RadialSeal™ product line in 1989 with the launch of the FPG Air Cleaner, Donaldson has developed many new versions of these successful products and has continued to invest large sums of money in the further development of this RadialSeal™ filter concept. One of the results of this research is the Alexin™ product line.

The Donaldson Alexin™ mark identifies Donaldson product using the proven, reliable Donaldson RadialSeal™ sealing technology for the filter elements combined with the ease of use of a Twist and Lock cover, that provides a convenient cover locking system with a design that saves space.

The cover is unlocked with a yellow “finger”, twisted to the left and removed from the filter housing. That is all. It is that simple. To fit the cover to the housing, just reverse the sequence.

For more details on the Alexin™ air cleaners see page 44-51.

Donaldson TopSpin™ Pre-Cleaner.

The Donaldson TopSpin™ pre-cleaner helps you extend your main element life and boost system efficiency by removing up to 99% coarse dust of the particulate contaminants from the air before it enters your filter. It achieves this performance through the use of a spinning propeller. The Topspin™ pre-cleaner is a new alternative to our full-view pre-cleaners.

For more details on the TopSpin™ pre-cleaners see page 96-97.

Alexin™ products need less space for servicing, are easily accessible and use RadialSeal™ filter elements for easy replacement. The filter housings are made of plastic, resulting in corrosion free, rugged products able to serve you trouble free for a long time.

Alexin™ air cleaners with Twist and Lock cover.



The aerodynamically designed TopSpin™ Pre-Cleaner is made of a lightweight, durable non-corroding material that allows it to stand up to all weather and operating conditions.

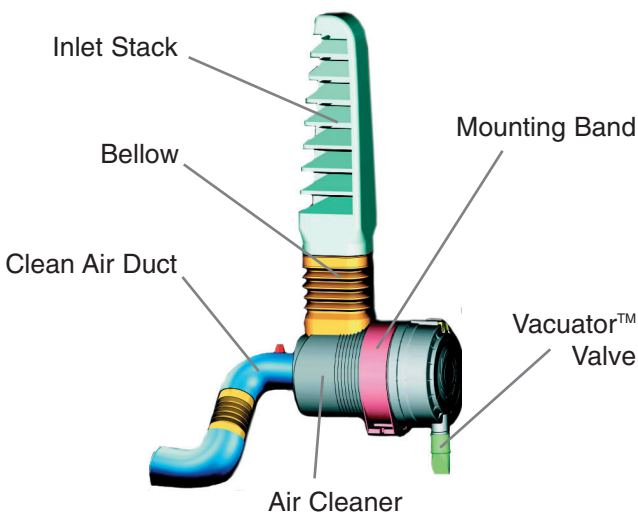
Basic Air Filtration

... common terms and definitions.

Why an Air Intake System?

Air is a critical component of combustion for a diesel engine. If the air reaching the engine is not clean, the engine will lose efficiency and have engine wear. The engine will run longer and more efficiently with a proper air intake system that is designed to keep the engine intake air as clean as possible by removing particulate matter or debris that would cause engine wear and ultimately failure.

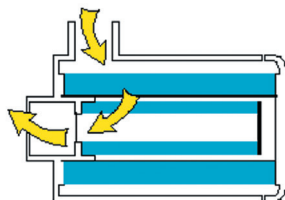
Components Air Intake System?



Air Cleaner Types.

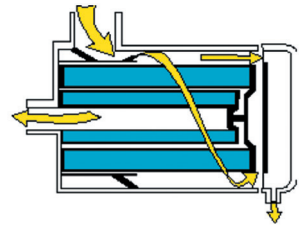
One-stage Air Cleaners

Air Cleaners in which the air goes through the inlet and directly to the main element are considered one-stage air cleaners. One-stage air cleaners are typically used where there is less contaminate in the environment, such as in on-road applications.



Two-stage Air Cleaners

Air entering a two-stage air cleaner is first pre-cleaned before reaching the main element. The air may either be sent through pre-cleaner tubes or cleaned by centrifugal flow around the filter. Depending on the type of pre-cleaner, the pre-cleaner removes between 75-98% of the contaminate from the air before the air reaches the main element. Two stage air cleaners are recommended for use in medium- and heavy dust environments, such as in agricultural, construction, and mining applications.



Element types.

Main Element

Is the filter element in the air cleaner that removes around 99,9%+ of the air's dust. The air flows through the main element first.

Safety Element

Is an optional element that protects the engine during servicing of the main element and in case of a leak in the main element.

Sealing Technologies.

RadialSeal™

RadialSeal™ refers to Donaldson's sealing technology, which uses the urethane end caps and the cleaners outlet tube to created the seal. This is the preferred method of sealing.

AxialSeal

The AxialSeal sealing method requires a force between air filter and air cleaner that provides enough compression on the gasket between the parts to create a seal.

Basic Air Filtration

... common terms and definitions.

Filtration Terms.

Dust Capacity

Dust capacity is the amount of contaminant that will be collected on a filter before final restriction level - as set by the engine manufacturer - is reached.

Efficiency

Efficiency is the percentage of dust that the air cleaner with a filter removed from intake air. Donaldson air cleaners have a 99,9% efficiency level.

Restriction

Restriction represents the resistance to the flow of air through the air cleaner system. Typical unit is kilopascal (kPa). Air cleaners with clean filters should have restrictions between 0,5 and 4 kPa.

Filter media

Filter media is the material in the filter that removes the contaminate. Conventional media is made from cellulose fibers combined with resins to keep the fibers together.

Dust Concentration

Dust concentration expresses the mass of dust in a specified volume of air. Typical ambient conditions are around 0,1 milligrams per cubic meter (mg/m^3). Dirt road conditions are around 10 milligrams per cubic meter (mg/m^3).

Laboratory Life

This is the life of an air filter, until a defined restriction, tested at a constant dust concentration (mg/m^3) following an ISO 5011 laboratory test procedure to determine performance and allow comparison with other air filter models.

Field Life

This is the life of an air filter, till a defined final restriction, during its usage in the field.

Differential Pressure

The difference in pressure between two points, generally between the inlet and outlet of an air cleaner. To be measured in pascal (Pa).

Pascal.

The SI unit to express a pressure, to be used instead of mm H₂O.

Pa (pascal)

kPa (kilopascal)

mbar (millibar)

daPa (decapascal)

1 mm H₂O = 9,80665 Pa

1000 Pa = 1 kPa

100 Pa = 1 mbar

10 Pa = 1 daPa

Airflow Requirements

Air is as critical to the operation of an engine as it is to the working of the human body. Like lungs, an engine draws air from the atmosphere. The amount of air required by engine depends on the type of engine, whether there is a turbocharger, and the amount of horsepower of the engine. The airflow requirement is a specification of the engine that should be given by the engine manufacturer.

5 Easy Steps to Air Cleaner Selection

1. Determine the Airflow Requirements of the engine.

There are 2 different formulas to estimate the airflow (m³/min) required by the engine.

One formula is based on Engine Displacement (Formula A). The other is based on Engine Horse Power (Formula B).

$$\text{Formula A} = \text{Airflow} = \frac{\text{Engine Displacement} \times \text{RPM} \times \text{VE}}{1000 \times \text{CF}} = \text{m}^3/\text{min.}$$

- Engine Displacement.
= Size of the engine expressed in litres (swept volume).
- RPM = Revolutions per minute.
- VE = Volumetric Efficiency.

VE Table

0,85 for 4 stroke natural aspirated diesel engine.
1,60 for 4 stroke turbo charged diesel engine.
1,85 for 4 stroke turbo charged after cooled diesel engine.
1,40 for 2 stroke scavenge blower diesel engine.
1,90 for 2 stroke turbo charged diesel engine.

- CF = Cycle Factor = 2 for 4 stroke engine.
1 for 2 stroke engine.

$$\text{Formula B} = \text{Airflow} = \frac{\text{HP(SAE)} \times \text{SA}}{1000} = \text{m}^3/\text{min.}$$

- HP(SAE) = Horse Power.
- SA = Specific Airflow per Horse Power.

SA Table

0,057 m³/min. for 4 stroke natural aspirated diesel engine.
0,065 m³/min. for 4 stroke turbo charged and turbo after cooled engine.
0,093 m³/min. for 2 stroke scavenge blower diesel engine.
0,102 m³/min. in for 2 stroke turbo charged diesel engine.

Additional Consideration

1. Please be aware that when you have High Pulsation engines the air inflow to the air cleaner is influenced by this pulsation. We recommend that you review the application and if necessary multiply the airflow - found by one of above formula - by the pulsation factor (PF).

PF Table

2,1 for 1 cylinder engine natural aspirated.
1,5 for 2 cylinder engine natural aspirated.
1,2 for 3 cylinder engine natural aspirated.
1,0 for 4 and more cylinder engine natural aspirated.

2. No pulsation factor needs to be considered for turbo charged engines.
3. Donaldson ECB, ECC, ECD Duralite™ (see page 18-23) and the FPG057505 Air Cleaners (see page 38-43) are not subject to the pulsation factor due to the fact that we use a specially developed High Pulsation media for these products.

Example

A tractor is equipped with a 40 HP(SAE), 3 cylinder, 4 stroke natural aspirated diesel engine of 2 litres running at 2600 RPM.

$$\text{Formula A} = \text{Airflow} = \frac{2 \times 2600 \times 0,85}{1000 \times 2} = 2,21 \text{ m}^3/\text{min.}$$

$$\text{Formula B} = \text{Airflow} = 40 \times 0,057 = 2,28 \text{ m}^3/\text{min.}$$

In High Pulsation application multiply your answer by PF table which in this case is 2,21 m³/min. x 1,2 = 2,652 m³/min.

5 Easy Steps to Air Cleaner Selection

2. Determine the type of machine and the environment in which it will operate.

For example, a truck of less than 8 ton will probably see light-dust, whereas dumpers used on construction sites would almost always be surrounded by an extremely heavy-dust concentration of large dirt particles. To determine the type of environment your machine works in, you can use the table below. You will also find there the Dust Concentration Level of your application.

Environment	Applications	Dust concentration (mg/m ³)
Light-Duty (On-Road, Marine)	On-Highway Trucks (< 8T), Lift Truck, Pumps for use in generators, compressors, marine, small engines and railroad.	1-5 + carbon, soot, oil vapour
Medium-Duty (Light Construction, Agricultural, Compressors)	Mixed operating Trucks (8 - 16T), Farm Tractor, Lift Truck, Mobile Compressor, Skid Steer.	5-15
Medium- to Heavy-Duty	Combines and Harvesters, Earth Moving Equipment, Loader, Dozer, Grader, Excavator, Artic Dumper.	15-20
Heavy-Duty (Construction, Mining)	Scraper, Dumper, Track type dozer, Mining Equipment, Rail Road (Middle East).	20-50
Extra Heavy-Duty	Special equipment, Military.	50-100

Note: These figures are only indications.

3. Choose a specific Air Cleaner Series.

You can do this by using the Air Cleaner Selection Chart on page 16.

This correlates the Airflow Requirements of your engine (which you calculated under step 1) with the Dust Concentration level of your environment (which you calculated under step 2).

5 Easy Steps to Air Cleaner Selection

4. Choose a specific Air Cleaner Model.

Once you have selected the specific Air Cleaner Series you can look in the catalogue for the specific Air Cleaner Model according to the Air Flow Requirements your engine needs.

You can do this by referring to the Air Flow Restriction Curves which you can find on each Air Cleaner Model page.

If there are two air cleaner models that fit your parameters, choose the one with the lowest restriction. Choosing a model that can operate at the low restriction end of its suggested operating range will ensure a maximum service life from that air cleaner series.

For a detailed description of each Air Cleaner Model see page 14-15.

5. Choose Intake Accessories.

Even though they're called accessories, things like pre-cleaners, mounting bands, rubber elbows and clamps are an integral and important part of the entire intake filtration system. This catalogue includes accessories for all types of operating environments.

For more details on Intake Accessories see page 85-106.

Conversion Factors

Temperature

$$^{\circ}\text{C} = (\text{^{\circ}\text{F}} - 32) \times 5/9$$

$$^{\circ}\text{F} = (^{\circ}\text{C} \times 9/5) + 32$$

Power

$$\text{HP} = \text{KW} \times 1,36 \text{ (metric)}$$

$$\text{KW} = \text{HP} \times 0,736 \text{ (metric)}$$

Flow rates

$$1 \text{ l/min.} = 0,0353 \text{ cfm}$$

$$1 \text{ m}^3/\text{min.} = 35,3147 \text{ cfm}$$

$$1 \text{ m}^3/\text{h} = 0,5886 \text{ cfm}$$

$$1 \text{ Engl. gallon/min.} = 0,1605 \text{ cfm}$$

Length

$$1 \text{ m} = 1000 \text{ mm} = 39,37 \text{ inch} = 3,281 \text{ ft.}$$

$$1 \text{ inch} = 25,4 \text{ mm} = 0,0254 \text{ m} = 0,08333 \text{ ft.}$$

$$1 \text{ ft.} = 304,8 \text{ mm} = 0,04 \text{ m} = 12 \text{ inch}$$

Volume

$$1 \text{ m}^3 = 1000 \text{ litres} = 35,31 \text{ ft.}^3 = 61024 \text{ inch}^3$$

$$1 \text{ ft.}^3 = 28,32 \text{ litres} = 0,02832 \text{ m}^3 = 1728 \text{ inch}^3$$

$$1 \text{ litre} = 0,2642 \text{ US gallon} = 0,2201 \text{ Engl. gallon}$$

$$1 \text{ US gallon} = 3,785 \text{ litres} = 231 \text{ inch}^3$$

$$1 \text{ Engl. gallon} = 4,546 \text{ litres} = 277 \text{ inch}^3$$

Weight

$$1 \text{ kg} = 2,205 \text{ lb} = 35,27 \text{ Oz}$$

$$1 \text{ lb} = 0,4536 \text{ kg} = 16 \text{ Oz}$$

$$1 \text{ Oz} = 0,02835 \text{ kg} = 0,0625 \text{ lb}$$

Pressure

$$1 \text{ mm H}_2\text{O} = 9,80665 \text{ Pa}$$

$$1 \text{ bar} = 100 \text{ kPa} = 14,5 \text{ psi}$$

$$10 \text{ mbar} = 1 \text{ kPa} = 0,145 \text{ psi}$$

$$10 \text{ psi} = 68,95 \text{ kPa} = 0,6895 \text{ bar}$$

$$1 \text{ "Hg} = 345,4 \text{ mm H}_2\text{O} = 33,21 \text{ kPa}$$

Air Weight

$$\text{Air weight at } 0^{\circ}\text{C} = 1,293 \text{ kg/m}^3$$

$$\text{Air weight at } 20^{\circ}\text{C} = 1,205 \text{ kg/m}^3$$

$$\text{Air weight at } 25^{\circ}\text{C} = 1,184 \text{ kg/m}^3$$

Air Cleaner

Selection Chart

1 ECB, ECC, ECD DuraLite™ Air Cleaner Page 18 - 23.

Type: Disposable, one-stage, dry air cleaner.
Application: Used on light-duty applications like air compressors, pumps, material handling equipment, propulsion units, breathers, welders, generator sets, lawn vehicles, recreational vehicles and many more. Ideal for high pulsating small engines.

2 EPB-ERB Primary Dry RadialSeal™ Air Cleaner Page 24 - 29.

Type: EPB = One-stage full-plastic air cleaner with RadialSeal™ Sealing Technology.
ERB = One-stage hybrid air cleaner with RadialSeal™ Sealing Technology.
Application: Used on light-duty applications like on-highway vehicles, stand-by generator sets and others. Also used on medium- and heavy-duty applications, always combined with a pre-cleaner (see point 4,5,11 and 12).



3 EPB-ERB Primary Dry RadialSeal™ Air Cleaner with Full-View Pre-Cleaner (PBH) Page 32 - 33.

Type: One-stage air cleaner with RadialSeal™ Sealing Technology combined with a separate pre-cleaner.
Application: Used on light- and medium-duty applications like fork lift trucks, compressors, backhoes, cranes, street sweepers, tractors and other agricultural, construction and industrial equipment.



4 EPB-ERB Primary Dry RadialSeal™ Air Cleaner with TopSpin™ Pre-Cleaner (PTH) Page 36 - 37.

Type: One-stage air cleaner with RadialSeal™ Sealing Technology combined with a separate pre-cleaner.
Application: Used on light- and medium-duty applications fork like lift trucks, compressors, backhoes, cranes, street sweepers, tractors and other agricultural, construction and industrial equipment.



5 FPG RadialSeal™ Air Cleaner Page 38 - 43.

Type: Two-stage full-plastic air cleaner with a built-in pre-cleaner and RadialSeal™ Sealing Technology.
Application: Used on all kind of medium-duty applications like loaders, dozers, compressors, cranes, shovels, power units, skidders, tractors, combines, sweepers, off-highway trucks, city-buses and other agricultural, construction and industrial equipment.



6 FPG RadialSeal™ Alexin™ Air Cleaner Page 44 - 51.

Type: Two-stage full-plastic air cleaner with a built-in pre-cleaner and RadialSeal™ Sealing Technology.
Application: Used on all kind of medium-duty applications like generator sets, agricultural tractors, bulldozers, drilling equipment, trucks, loaders, backhoe, liftruck, construction and industrial equipment.



7 FTG Cycloflow™ Air Cleaner Page 72 - 75.

Type: Two-stage air cleaner with built-in pre-cleaner and AxialSeal Sealing Technology.
Application: Used in medium- and heavy-duty applications.

Air Cleaner

Selection Chart

8 FRG RadialSeal™ Air Cleaner Page 52 - 57.

Type: Two-stage hybrid air cleaner with RadialSeal™ Sealing Technology.
Application: Used on medium- and heavy-duty applications.



9 FLB – Louvered Body Air Cleaner Page 68 - 71.

Type: Two-stage air cleaner with scavenge exhaust system and AxialSeal Sealing Technology.
Application: Designed especially for combines and other heavy-duty construction and agricultural equipment operating in severe dust, fibers, lint and shaft environments. To be used with an exhaust ejector.



10 EPB-ERB Primary Dry RadialSeal™ Air Cleaner with Donaspin™ Pre-Cleaner (PLH) Page 30 - 31

Type: One-stage air cleaner with RadialSeal™ Sealing Technology combined with a scavenged high efficient pre-cleaner.
Application: Used on heavy-duty applications and agricultural equipment operating in severe dust environments. To be used with an exhaust ejector.



11 EPB-ERB Primary Dry RadialSeal™ Air Cleaner with Strata™ Pre-Cleaner (PCH) Page 34 - 35.

Type: One-stage air cleaner with RadialSeal™ Sealing Technology combined with a scavenged high efficient pre-cleaner.
Application: Used on heavy-duty applications and agricultural equipment operating in severe dust environments. To be used with an exhaust ejector.



12 SPB-SRB RadialSeal™ Air Cleaner Page 64 - 66.

Type: SPB = Two-stage full-plastic air cleaner with built-in high efficiency pre-cleaner and RadialSeal™ Sealing Technology.
SRB = Two-stage hybrid air cleaner with built-in high efficiency pre-cleaner RadialSeal™ Sealing Technology.
Application: Designed especially for heavy-duty construction and agricultural equipment operating in severe dust environments. To be used with an exhaust ejector.



13 PSD PowerCore™ Air Cleaner Page 58 - 63.

Type: Two-stage air cleaner with built-in high efficiency pre-cleaner using the new PowerCore™ Filtration Technology.
Application: Designed especially for medium- and heavy-duty on and off road equipment operating in severe dust environments. Can be used with Vacuator™ Valve on the pre-cleaner or continuously scavenge of the pre-cleaner by an exhaust ejector or air blower cooling.



14 STG Donaclone™ Air Cleaner Page 80 - 83.

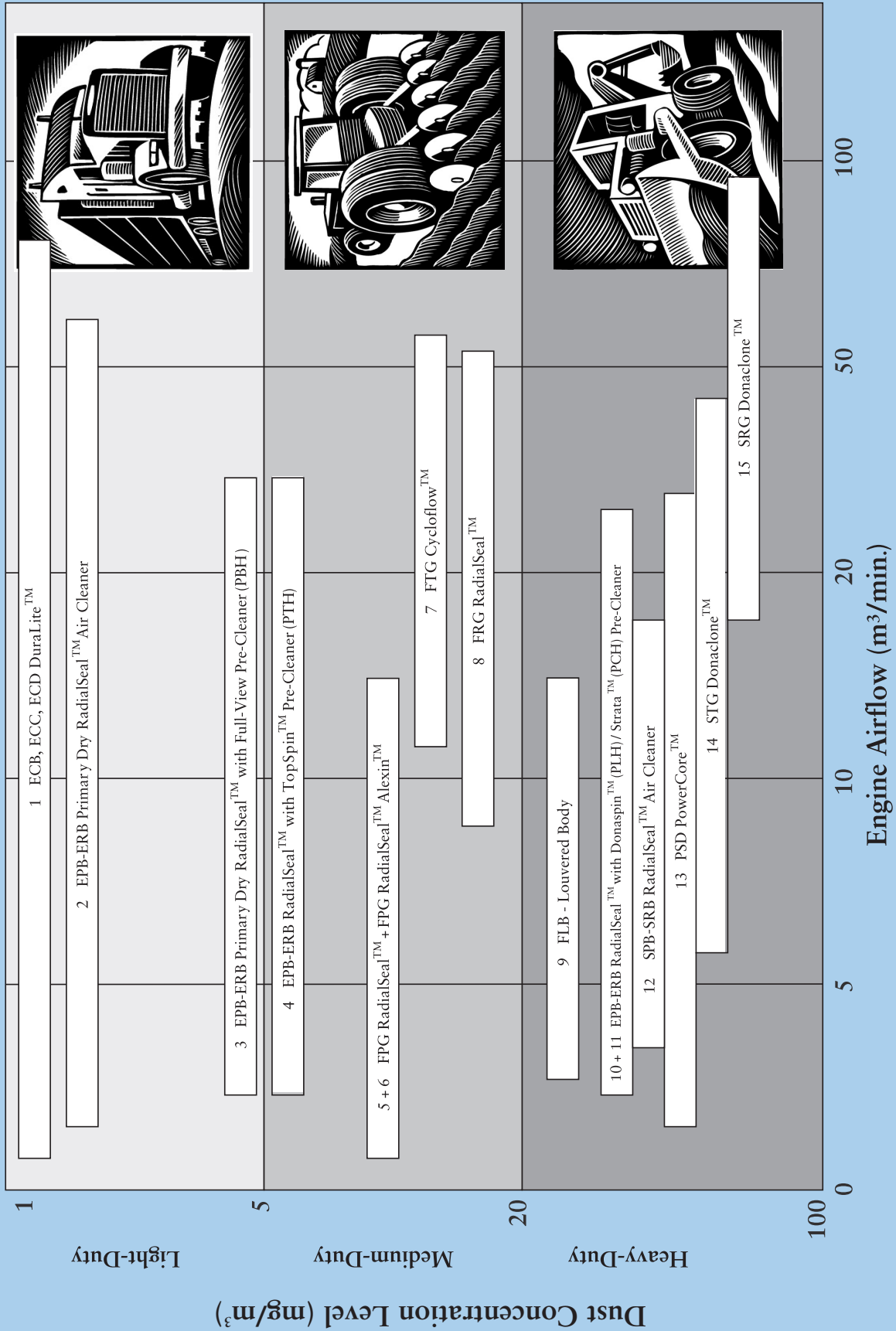
Type: Two-stage air cleaner with built-in Donaclone™ tube pre-cleaner and AxialSeal Sealing Technology.
Application: Used on heavy-duty applications such as scrapers, crawlers, dumpers and haul trucks.

15 SRG Donaclone™ Air Cleaner Page 76 - 79.

Type: Two-stage - high airflow - air cleaner with built-in Donaclone™ tube pre-cleaner and AxialSeal Sealing Technology.
Application: Used on heavy-duty construction and mining equipment.

Air Cleaner

Selection Chart



RadialSeal™ Air Cleaners

Section Index

ECB, ECC, ECD DuraLite™	18-23
EPB-ERB Primary Dry RadialSeal™ .24-29	
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+ Full-View Pre-Cleaner (PBH)32-33	
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FPG RadialSeal™	38-43
FPG RadialSeal™ Alexin™	44-51
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ECB, ECC, ECD DuraLite™ Introduction



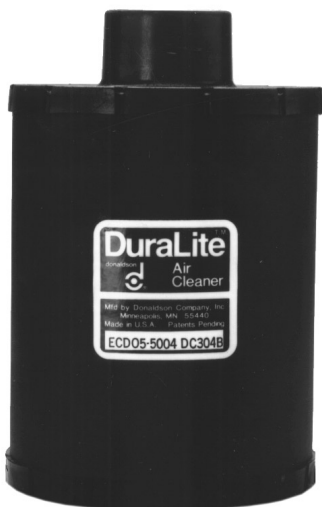
ECB DuraLite™

The DuraLite™ Air Cleaners are disposable, one-stage, dry air cleaners.

DuraLite™ Air Cleaners are used on light-duty applications like air compressors, pumps, material handling equipment, propulsion units, breathers, welders, generator sets, lawn vehicles, recreation vehicles and many more. Ideal for high pulsating small engines.



ECC DuraLite™



ECD DuraLite™



Donaldson recommends the use of a High Torque Clamps for DuraLite™ Air Cleaners. This clamp eliminates the need for double clamping – order one for each DuraLite™ Air Cleaner.

For more details on High Torque Clamps see page 86.

ECB, ECC, ECD DuraLite™ Technology

Rugged Air Cleaners for Small and/or High Pulsation Gas & Diesel Engines



Donaldson's DuraLite™ air cleaners are tough, non-metallic, lightweight, self-supporting and completely disposable. They are also easy to install, durable, and reliable.

They are designed to function well under high and severe pulsation conditions found in many applications, especially two- and three-cylinder engines. Vibration-resistant media is potted into molded housings of rugged ABS plastic – so they don't fall apart as other designs might.

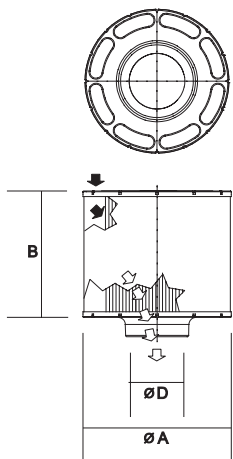
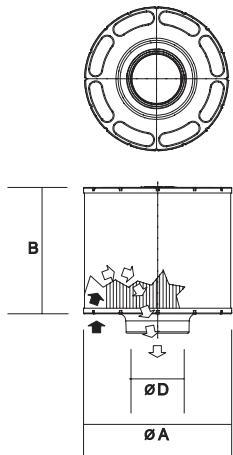
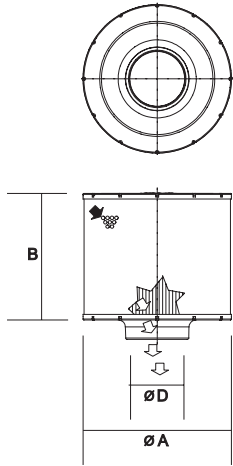
ECB, ECC, ECD DuraLite™ Applications

- Can be mounted vertically or horizontally.
- Provides variety of airflow volumes to engine: from 1,2 to 36,7 m³/min.
- Temperature tolerance: 83°C continuous. 105°C intermittent.

Features

- No serviceable parts! Air cleaner housing and filter are one unit!
- Designed to withstand severe intake pulsation.
- Economical replacement cost.
- Self-supporting, sturdy.
- Very reliable: only one critical seal.
- Lightweight and compact in size.
- Non-metallic, non-corrosive... ideal for marine applications.
- Completely disposable... acceptable for normal trash pick-up (DuraLite™ should not be incinerated).
- Easily installed & maintained.
- Minimal removal clearance needed: only 38mm.
- Three airflow styles available to fit virtually any engine intake configuration.
- Various media available for specific applications: high pulsation, high humidity, etc....

ECB, ECC, ECD DuraLite™ Specifications



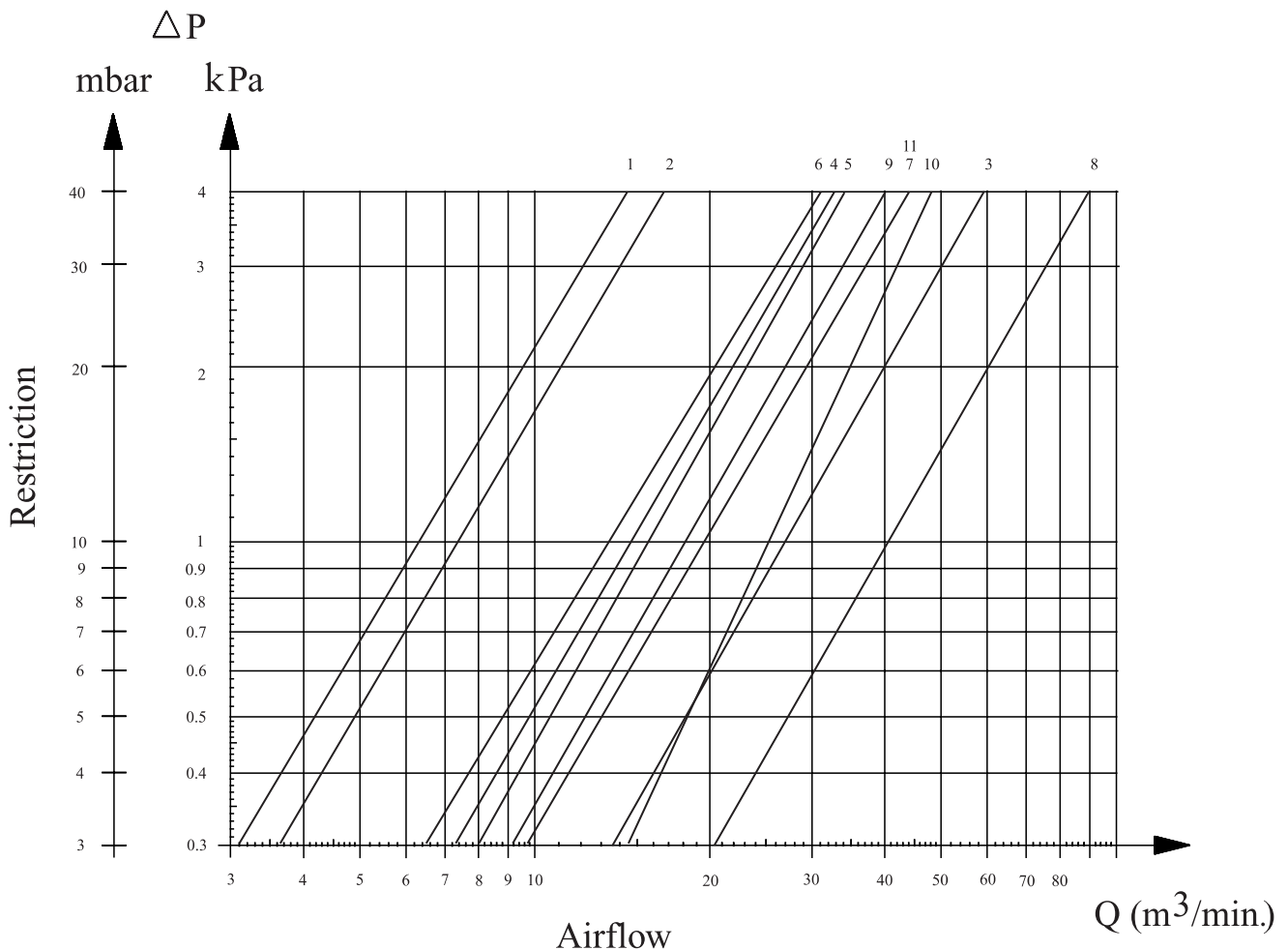
Curve No.	Style	Air Cleaner Model No.	Airflow Range m³/min.	Dimensions (mm)		
				A	B	D
1	ECB	B085001	6,2 - 12,0	216	279	76
1	ECB	B085048**	6,2 - 12,0	216	279	76
2	ECB	B085011	7,4 - 14,0	216	279	102
2	ECB	B085046**	7,4 - 14,0	216	279	102
3	ECB	B085056**	27,0 - 49,0	196	260	152
4	ECB	B100094**	15,0 - 27,0	267	228	102
5	ECB	B105002*	16,0 - 30,0	267	381	127
6	ECB	B105006	13,0 - 25,0	267	267	102
7	ECB	B105012**	18,0 - 36,0	267	381	127
8	ECB	B120376**	30,0 - 90,0	318	400	198
9	ECB	B125003*	16,0 - 31,0	318	381	153
10	ECB	B125005**	25,0 - 42,0	318	229	140
11	ECB	B125011**	22,0 - 39,0	318	228	127
Curve No.	Style	Air Cleaner Model No.	Airflow Range m³/min.	A	B	D
12	ECC	C045001*	1,4 - 2,7	114	114	38
13	ECC	C045002*	1,8 - 3,4	114	203	38
14	ECC	C055002*	1,9 - 3,6	140	178	45
15	ECC	C055003*	1,5 - 2,9	140	102	45
16	ECC	C055008*	2,0 - 3,9	140	242	45
17	ECC	C065001*	1,7 - 3,2	165	102	51
18	ECC	C065002*	2,6 - 4,9	165	190	51
19	ECC	C065003*	2,5 - 4,8	165	127	57
20	ECC	C065004*	3,3 - 6,2	165	229	57
21	ECC	C065015**	3,0 - 5,6	165	229	51
22	ECC	C085001*	2,7 - 5,1	216	102	64
23	ECC	C085002*	3,4 - 6,3	216	165	64
24	ECC	C085003*	3,6 - 6,7	216	127	76
25	ECC	C085004*	5,0 - 9,6	216	241	76
26	ECC	C085005*	2,9 - 5,4	216	127	64
27	ECC	C085006*	3,5 - 6,5	216	241	64
28	ECC	C105003	8,7 - 17,0	267	152	102
29	ECC	C105004	10,5 - 20,0	267	267	102
30	ECC	C125003	10,0 - 19,0	317	152	127
31	ECC	C125004	14,0 - 26,5	317	279	127
Curve No.	Style	Air Cleaner Model No.	Airflow Range m³/min.	A	B	D
32	ECD	D045003*	1,4 - 2,8	114	114	38
33	ECD	D045004*	1,45 - 2,9	114	152	38
34	ECD	D055004*	1,8 - 3,5	140	178	45
35	ECD	D065003*	1,6 - 3,0	165	102	51
36	ECD	D065008**	3,5 - 6,6	165	229	51
37	ECD	D085011	8,0 - 15,5	197	655	106
38	ECD	D085012	2,5 - 7,5	197	258	106
39	ECD	D125004	12,0 - 23,0	317	279	127

* High pulsation media
** Marine application

ECB DuraLite™ Restriction Curves

When specifying an Air Cleaner...

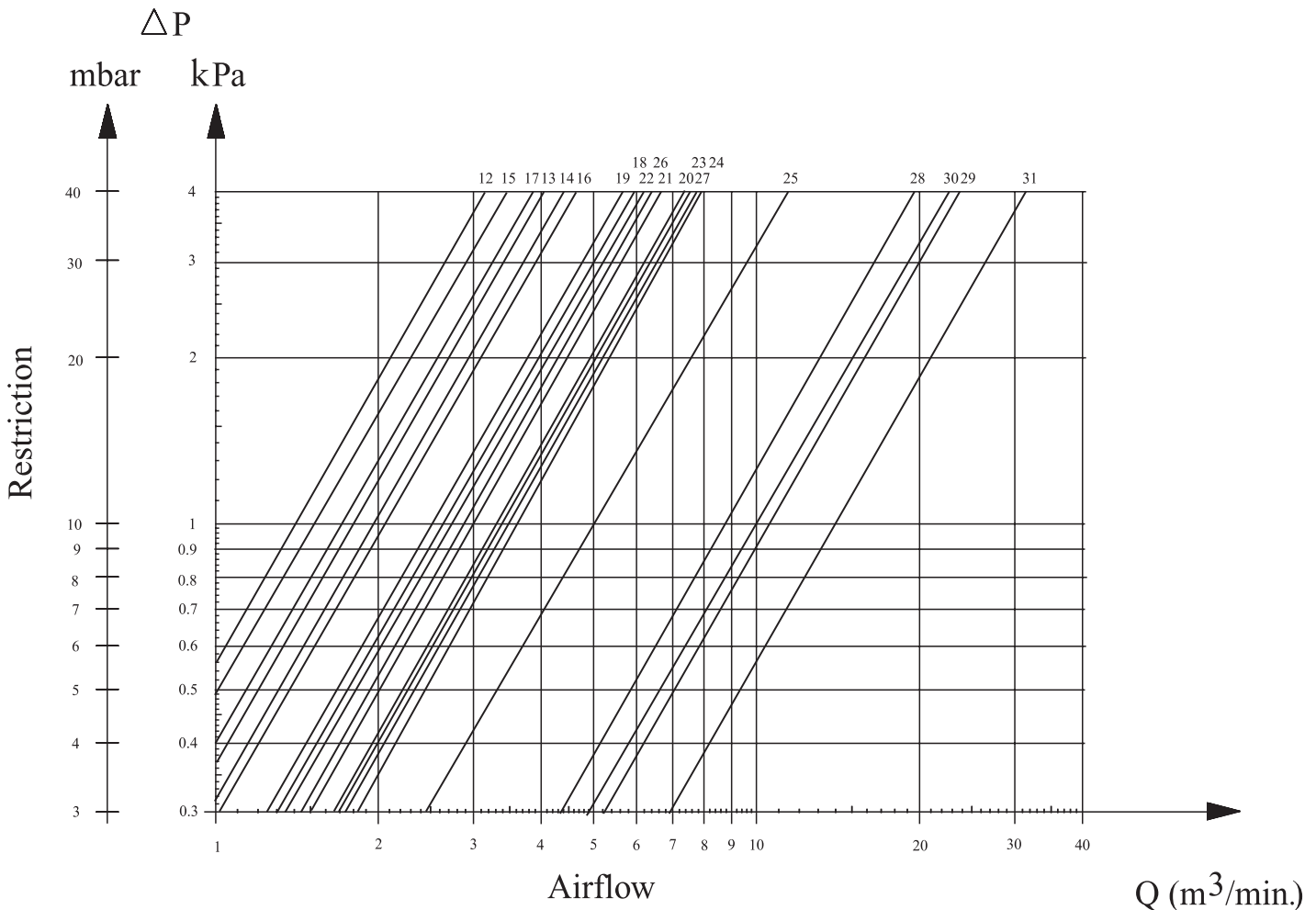
Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the table below. The restriction numbers (shown in kPa) indicate the approximate initial restriction of each model air cleaner at that m³/min. If there are two air cleaner models that fit your parameters, choosing the one with the lowest restriction will provide the longest filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.



ECC DuraLite™ Restriction Curves

When specifying an Air Cleaner..

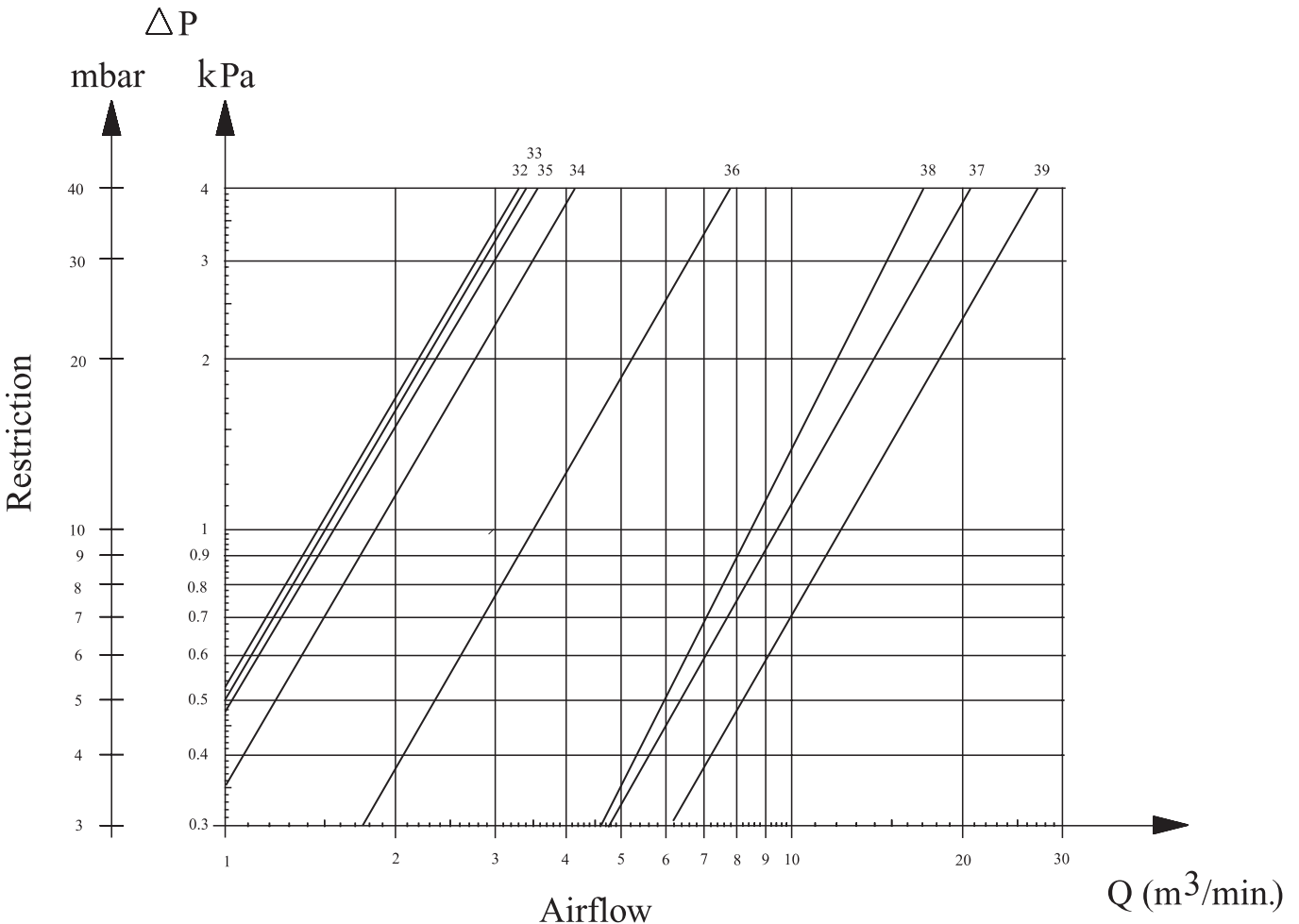
Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the table below. The restriction numbers (shown in kPa) indicate the approximate initial restriction of each model air cleaner at that m³/min. If there are two air cleaner models that fit your parameters, choosing the one with the lowest restriction will provide the longest filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.



ECD DuraLite™ Restriction Curves

When specifying an Air Cleaner...

Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the table below. The restriction numbers (shown in kPa) indicate the approximate initial restriction of each model air cleaner at that m³/min. If there are two air cleaner models that fit your parameters, choosing the one with the lowest restriction will provide the longest filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.



EPB – ERB Primary Dry RadialSeal™ Introduction



The EPB Primary Dry RadialSeal™ Air Cleaner is a one-stage full-plastic air cleaner with RadialSeal™ Sealing Technology.

EPB Primary Dry RadialSeal™ Air Cleaners are used on light-duty applications like on-highway vehicles, stand-by generator sets and all other light-duty applications. Also used on medium- and heavy-duty applications, combined with a Pre-Cleaner.

For more details on EPB Air Cleaners with pre-cleaners see page 30-37.



The ERB Primary Dry RadialSeal™ Air Cleaner is a one-stage hybrid air cleaner with RadialSeal™ Sealing Technology.

ERB Primary Dry RadialSeal™ Air Cleaners are used on light-duty applications like on-highway vehicles, stand-by generator sets and all other light-duty applications. Also used on medium- and heavy-duty applications, combined with a Pre-Cleaner.

For more details on ERB Air Cleaners with pre-cleaners see page 30-37.

EPB – ERB Primary Dry RadialSeal™ Technology

The EPB – ERB Primary Dry RadialSeal™ air cleaner series, incorporating Donaldson's RadialSeal™ Sealing Technology, offers improved reliability and durability, reduced weight and costs, and better serviceability.

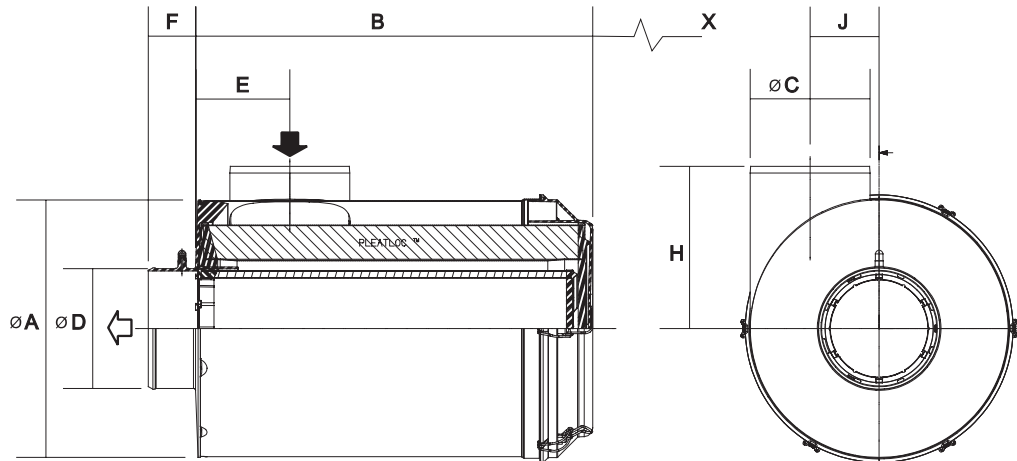
EPB Primary Dry RadialSeal™ air cleaners conquer underhood space limitations, are corrosion-free and lighter in weight than traditional metal units, are more sturdy than ever before, and have a reliable, easy-to service design.

The filter inside the air cleaner is also quite different from filters with metal end caps. The one-piece molded end caps encase the ends of the media and filter liners. The filter fits over the housing outlet tube, creating a reliable seal - with no hassle of separate sealing gaskets.

EPB – ERB Primary Dry RadialSeal™ Features

- Cost effective.
- Compact.
- Flexible installation.
- High tech design.
- Proven RadialSeal™ technology.
- Easy to service.
- Suitable for medium- to heavy-dust conditions.
- Pre-cleaner can be added.
- Tapped for restriction indicator as standard.

EPB – ERB Primary Dry RadialSeal™ Specifications



Curve No.	Style	Air Cleaner Model No.	Airflow m ³ /min.	Range Dimensions (mm)									
				A	B	C	D	E	F	H	J	X°	Z°°
1	EPB	B070005*	2,0 - 4,7	182	334	76	76	45	27	115	145	340	45
2	EPB	B080067*	4,0 - 7,0	210	355	95	89	54	31,5	130	146	355	110
3	ERB	B100120*	8,0 - 14,0	259	430	114	102	143	52	205	0	400	75
4	ERB	B110154*	12,0 - 18,0	279	480	127	114	106	67	190	0	460	75
5	ERB	B130010	18,0 - 30,0	330	530	178	152	180	58	215	0	360	95
6	ERB	B130013*	18,0 - 28,0	330	530	178	152	180	58	215	0	360	95
7	ERB	B150025*	18,0 - 32,0	381	590	178	178	136	70	241	102	540	93
8	ERB	B150028	18,0 - 32,0	381	590	178	178	136	70	241	102	540	93
9	ERB	B180011	32,0 - 65,0	457	650	254	203	282	85	328	0	600	130
10	ERB	B180012*	32,0 - 65,0	457	650	254	203	282	85	328	0	600	130

" 90° elbow outlet
* Includes safety element

° In column X above - free space needed to remove main element
°° In column Z above - free space needed to remove cover

EPB – ERB Primary Dry RadialSeal™ Specifications

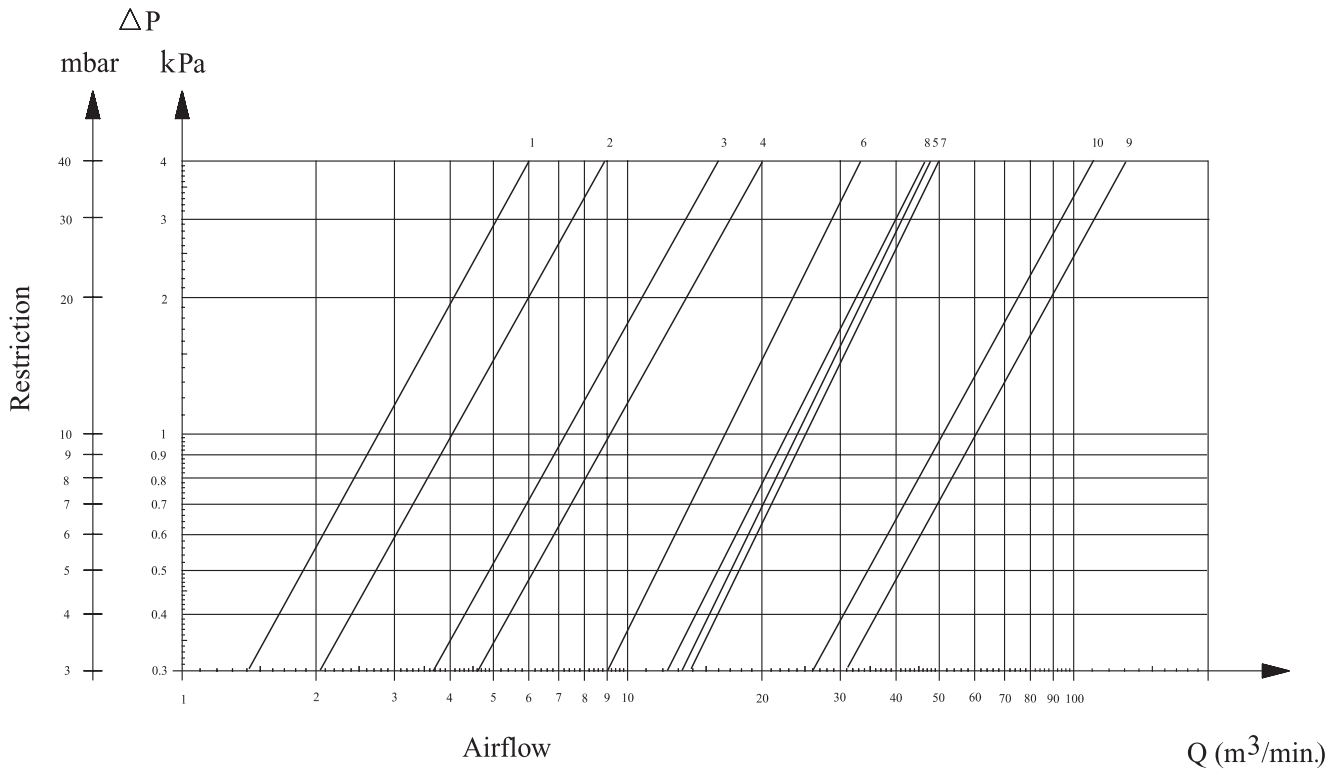
Style	Air Cleaner Model No.	Main Element	Safety Element	Raincap	Dust Cup*	Mounting band**
EPB	B070005	P772579	P775300	H001379	P778758	P777731
EPB	B080067	P772580	P775302	H770010	P775305	P777732
ERB	B100120	P781039	P777639	H770012	P777998	P004076
ERB	B110154	P778905	P778906	H770013	P783014	P004079
ERB	B130010	P777279	N/A	H770089	P777300	P013722
ERB	B130013	P777279	P777414	H770089	P777300	P013722
ERB	B150025	P777871	P777875	H770089	P777861	P016845
ERB	B150028	P777871	N/A	H770089	P777861	P016845
ERB	B180011	P781098	N/A	H770082	P783186	H770037
ERB	B180012	P781098	P781102	H770082	P783186	H770037

* Spare Part only
 ** Only one mounting band needed per Air Cleaner

EPB – ERB Primary Dry RadialSeal™ Restriction Curves

When specifying an Air Cleaner...

Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the table below. The restriction numbers (shown in kPa) indicate the approximate initial restriction of each model air cleaner at that m³/min. If there are two air cleaner models that fit your parameters, choosing the one with the lowest restriction will provide the longest filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.



EPB – ERB Primary Dry RadialSeal™ Service Parts

B070005	Main Element	P772579	B130010	Main Element	P777279
	Safety Element	P775300		Cover Assembly	P777300
	Cover Assembly	P778758			
B080067			B150025	Main Element	P777871
	Main Element	P772580		Safety Element	P777875
	Safety Element	P775302		Cover Assembly	P777861
	Cover Assembly	P775305			
B100120			B150028	Main Element	P777871
	Main Element	P778214		Cover Assembly	P777861
	Safety Element	P777639			
	Cover Assembly	P777998	B180011	Main Element	P781098
B110154				Cover Assembly	P783186
	Main Element	P778905			
	Safety Element	P778906	B180012	Main Element	P781098
	Cover Assembly	P783014		Safety Element	P781102
B130013				Cover Assembly	P783186
	Main Element	P777279			
	Safety Element	P777414			
	Cover Assembly	P777300			

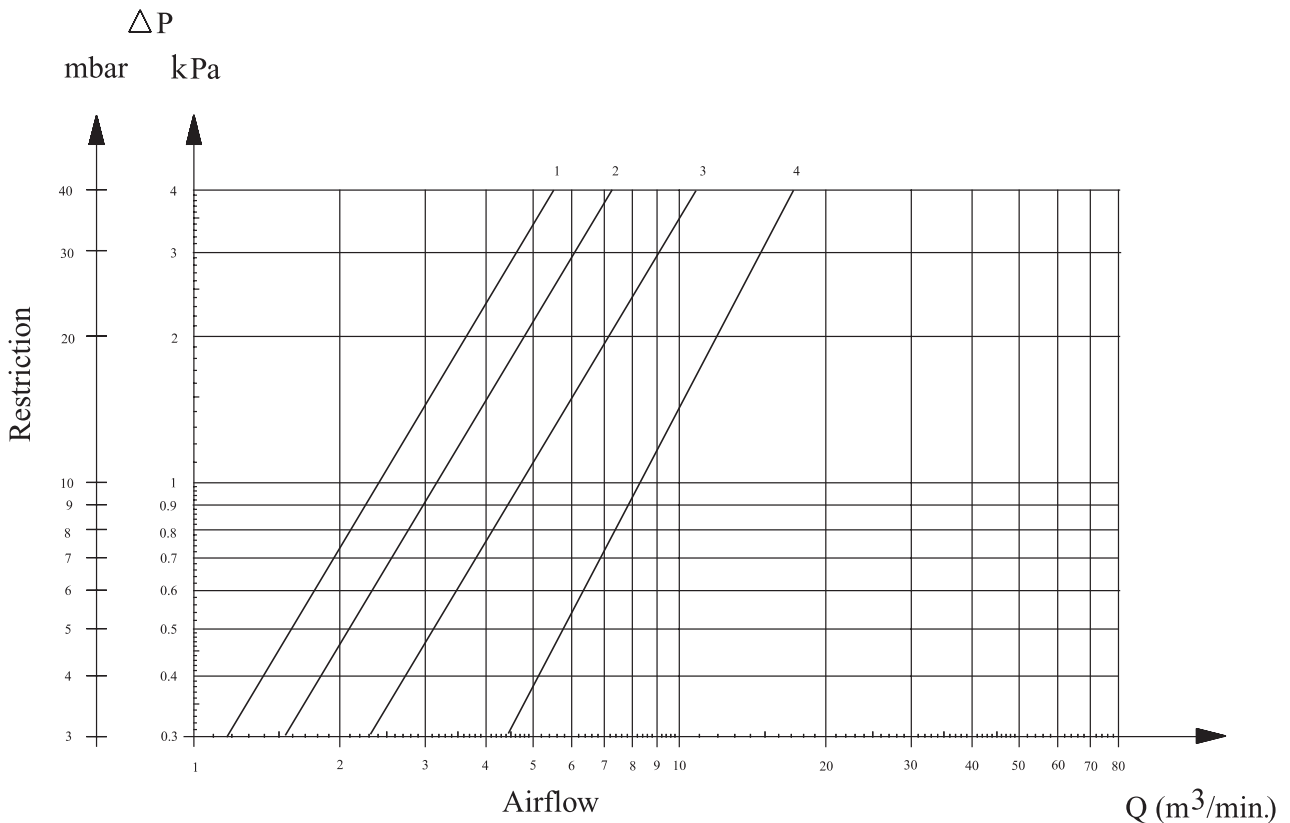
EPB – ERB Primary Dry RadialSeal™ with Donaspin™ Pre-Cleaner (PLH) Introduction

For more details on the Donaspin™ Pre-Cleaner (PLH), see section Accessories page 95.

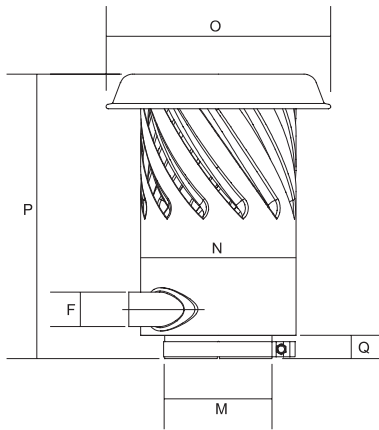


For more details on the EPB – ERB RadialSeal™ Service Parts see page 29.

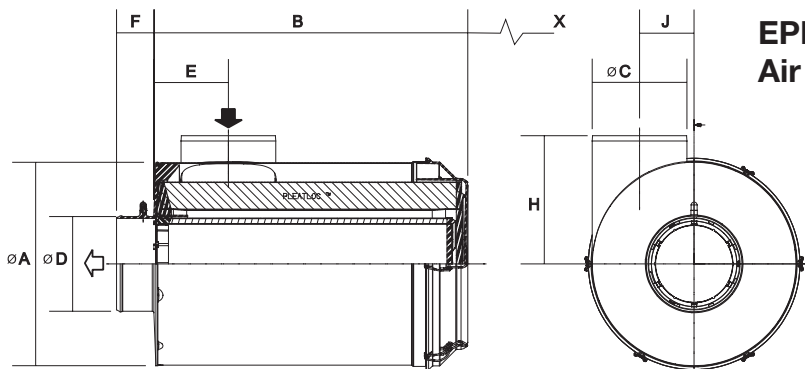
EPB – ERB Primary Dry RadialSeal™ with Donaspin™ Pre-Cleaner (PLH) Restriction Curves



EPB – ERB Primary Dry RadialSeal™ with Donaspin™ Pre-Cleaner (PLH) Specifications



Donaspin™ Pre-Cleaner (PLH)



EPB – ERB RadialSeal™
Air Cleaner

Curve No.	Style	Air Cleaner Model No.	Airflow Range m3/min.	Dimensions (mm)										Pre-Cleaner	M	N	O	P	Q
				A	B	C	D	E	F	H	J	X°							
1	EPB	B070005	2,0 - 4,7	182	334	76	76	45	27	115	145	340	H001212	77	203	305	316	55	
2	EPB	B080067	4,0 - 7,0	210	355	95	89	54	31,5	130	146	355	H001307	95	203	305	304	42	
3	ERB	B100120	7,0 - 12,0	259	430	114	102	143	52	205	0	400	H001215	114	203	305	290	28	
4	ERB	B110154	10,0 - 16,0	279	480	127	114	106	67	190	0	460	H001308	127	203	305	295	33	

° In column X above - free space needed to remove main element

EPB – ERB Primary Dry RadialSeal™
with Full-View Pre-Cleaner (PBH) Introduction

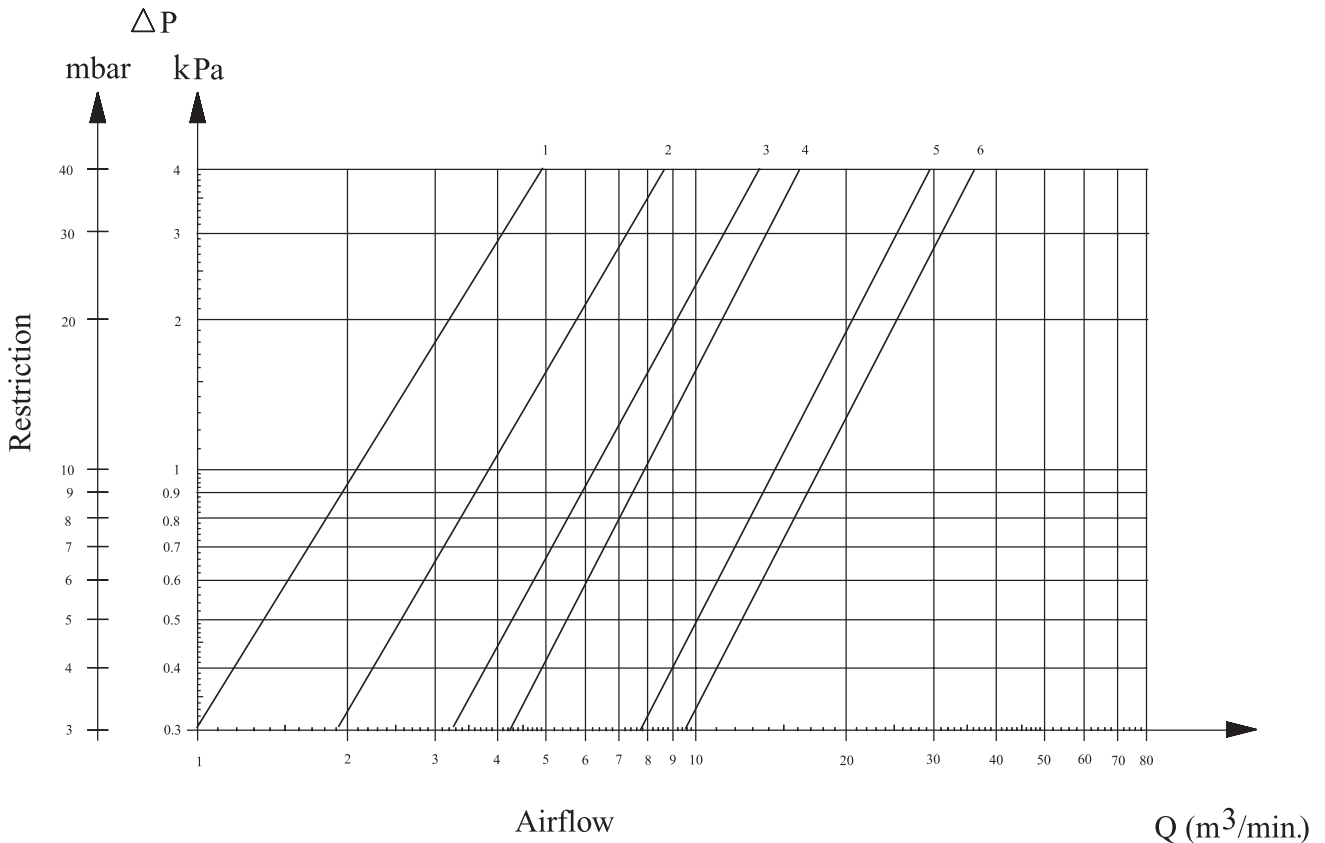
RadialSeal™ Air Cleaners

For more details on the Full-View Pre-Cleaner (PBH), see section Accessories page 98.

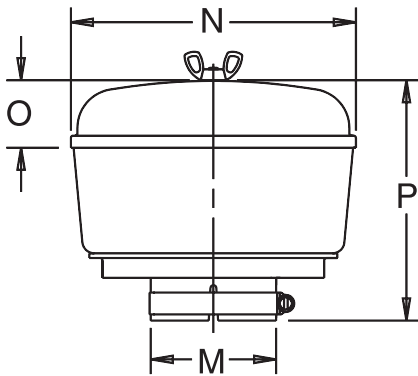


For more details on the EPB – ERB RadialSeal™ Service Parts see page 29.

EPB – ERB Primary Dry RadialSeal™
with Full-View Pre-Cleaner (PBH) Restriction Curves

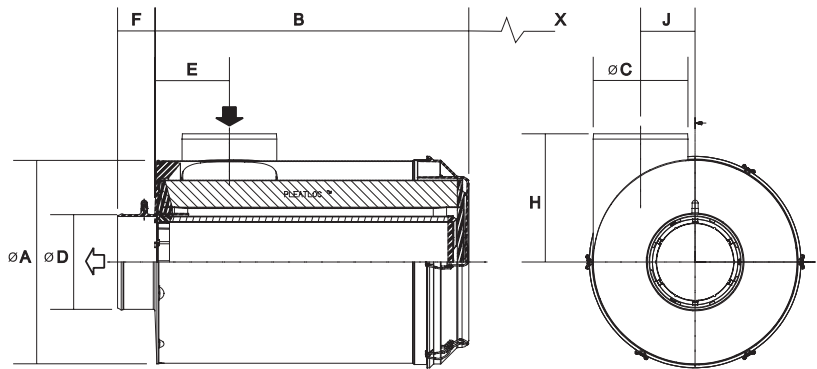


EPB – ERB Primary Dry RadialSeal™ with Full-View Pre-Cleaner (PBH) Specifications



Full-View Pre-Cleaner (PBH)

**EPB – ERB RadialSeal™
Air Cleaner**



Curve No.	Style	Air Cleaner Model No.	Airflow Range m3/min.	Dimensions (mm)										Pre-Cleaner	M	N	O	P
				A	B	C	D	E	F	H	J	X°						
1	EPB	B070005	1,8 - 4,0	182	334	76	76	45	27	115	145	340	H001249	77	187	42	158	
2	EPB	B080067	4,0 - 7,0	210	355	95	89	54	31,5	130	146	355	H000821	96	270	47	188	
3	ERB	B100120	7,0 - 12,0	259	430	114	102	143	52	205	0	400	H000823	115	270	47	188	
4	ERB	B110154	10,0 - 15,0	279	480	127	114	106	67	190	0	460	H002043	128	307	51	204	
5	ERB	B130013	15,0 - 26,0	330	530	178	152	180	58	215	0	360	H002224	179	412	69	258	
6	ERB	B150025	18,0 - 32,0	381	590	178	178	136	70	241	102	540	H002224	179	412	69	258	

° In column X above - free space needed to remove main element

EPB – ERB Primary Dry RadialSeal™ for Light - Medium - Heavy Dust Conditions



EPB – ERB Primary Dry RadialSeal™ with Strata™ Pre-Cleaner (PCH) Introduction

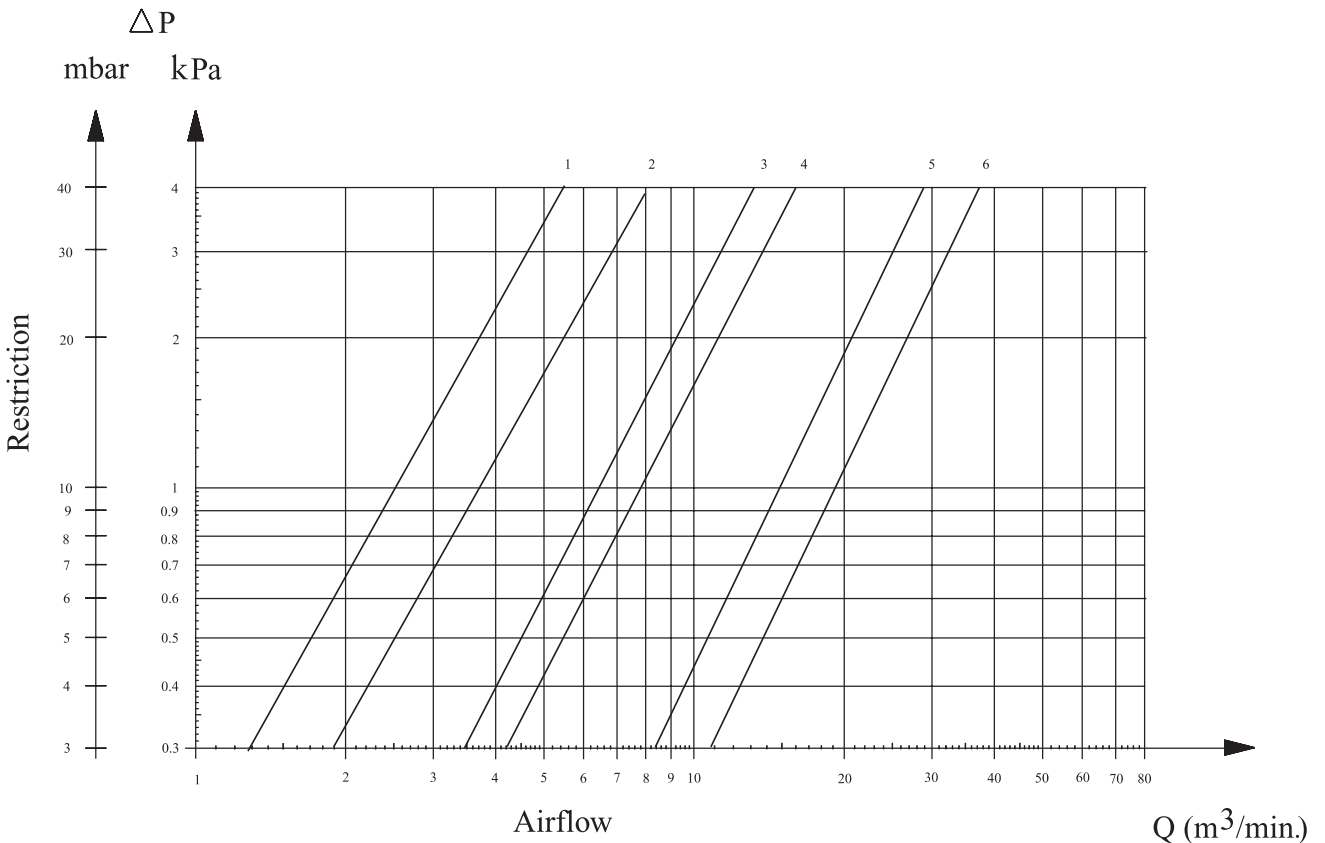


For more details on the Strata™ Pre-Cleaner (PCH), contact Donaldson.

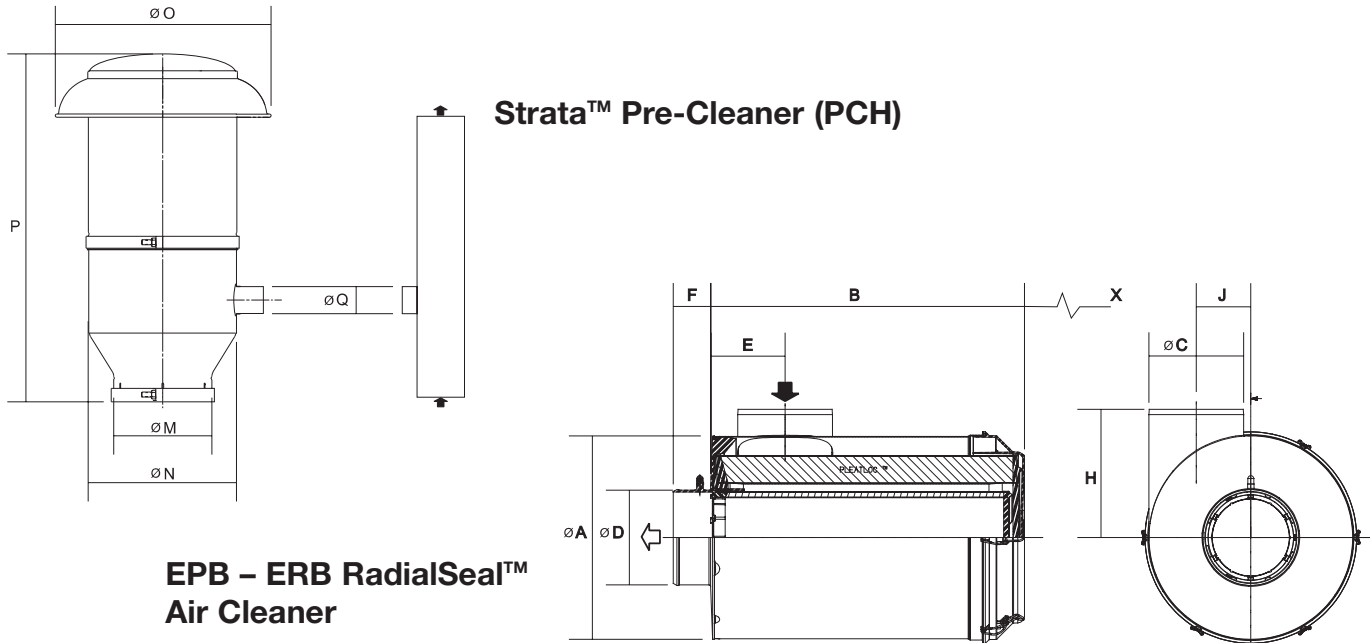


For more details on the EPB – ERB RadialSeal™ Service Parts see page 29.

EPB – ERB Primary Dry RadialSeal™ with Strata™ Pre-Cleaner (PCH) Restriction Curves



EPB – ERB Primary Dry RadialSeal™ with Strata™ Pre-Cleaner (PCH) Specifications



**EPB – ERB RadialSeal™
Air Cleaner**

Curve No.	Style	Air Cleaner Model No.	Airflow Range m ³ /min.	Dimensions (mm)										Pre-Cleaner	M	N	O	P	Q
				A	B	C	D	E	F	H	J	X°							
1	EPB	B070005	1,8 - 4,0	182	334	76	76	45	27	115	145	340	H000975	78	167	281	441	25	
2	EPB	B080067	4,0 - 7,0	210	355	95	89	54	31,5	130	146	355	H000896	97	167	281	447	25	
3	ERB	B100120	7,0 - 12,0	259	430	114	102	143	52	205	0	400	H001510	116	167	281	441	25	
4	ERB	B110154	10,0 - 15,0	279	480	127	114	106	67	190	0	460	H000887	129	229	356	499	32	
5	ERB	B130013	15,0 - 26,0	330	530	178	152	180	58	215	0	360	H001148	179	279	406	465	38	
6	ERB	B150025	18,0 - 32,0	381	590	178	178	136	70	241	102	540	H001148	179	279	406	465	38	

° In column X above - free space needed to remove main element

EPB – ERB Primary Dry RadialSeal™ with TopSpin™ Pre-Cleaner (PTH) Introduction

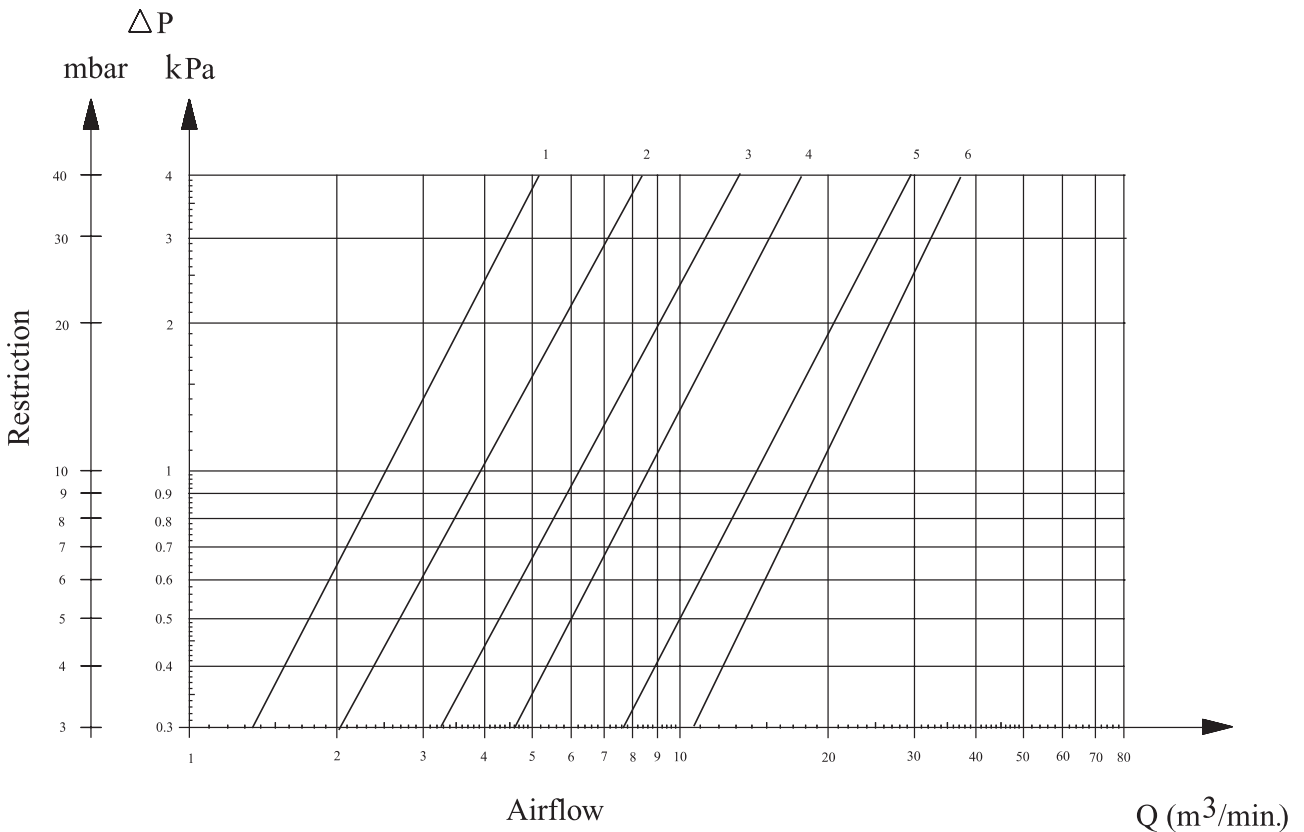


For more details on the TopSpin™ Pre-Cleaner (PTH), see section Accessories page 96-97.



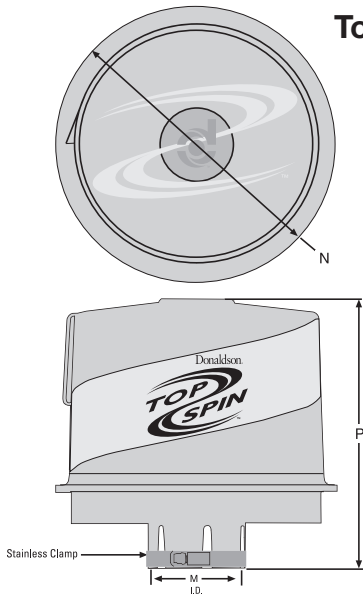
For more details on the EPB – ERB RadialSeal™ Service Parts see page 29.

EPB – ERB Primary Dry RadialSeal™ with TopSpin™ Pre-Cleaner (PTH) Restriction Curves

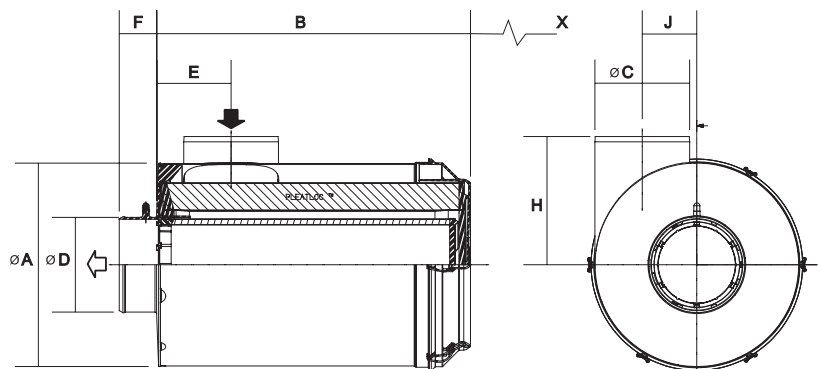


EPB – ERB Primary Dry RadialSeal™ with TopSpin™ Pre-Cleaner (PTH) Specifications

TopSpin™ Pre-Cleaner (PTH)



EPB – ERB RadialSeal™
Air Cleaner



Curve No.	Style	Air Cleaner Model No.	Airflow Range m3/min.	Dimensions (mm)									Pre-Cleaner	M	N	P
				A	B	C	D	E	F	H	J	X°				
1	EPB	B070005	2,0 - 4,7	182	334	76	76	45	27	115	145	340	H002437	77	162	146
2	EPB	B080067	4,0 - 7,0	210	355	95	89	54	31,5	130	146	355	H002426	97	242	238
3	ERB	B100120	7,0 - 12,0	259	430	114	102	143	52	205	0	400	H002427	116	242	238
4	ERB	B110154	10,0 - 15,0	279	480	127	114	106	67	190	0	460	H002433	128	288	287
5	ERB	B130013	15,0 - 26,0	330	530	178	152	180	58	215	0	360	H002439	179	297	345
6	ERB	B150025	18,0 - 32,0	381	590	178	178	136	70	241	102	540	H002439	179	297	345

° In column X above - free space needed to remove main element

FPG RadialSeal™ Introduction



The FPG RadialSeal™ Air Cleaner is a two-stage full-plastic air cleaner with a built-in Pre-Cleaner and RadialSeal™ Sealing Technology.

FPG RadialSeal™ Air Cleaners are used on medium-duty applications like loaders, dozers, compressors, cranes, shovels, power units, skidders, tractors, combines, sweepers, off-highway trucks, city-buses and other agricultural, construction and industrial equipment.

FPG RadialSeal™ Technology

Most Reliable Engine Protection in a Small, Two-Stage Air Cleaner

The FPG RadialSeal™ Air Cleaner series is Donaldson's latest concept in two-stage engine air cleaners operating in medium-dust conditions. The FPG series offers improved reliability and durability with reduced weight and costs.

Ever since Donaldson developed the first air cleaner in 1915, we have worked closely with original equipment manufacturers to provide filtration solutions to meet changing design and specification requirements for diesel engines.

Because they are made of injection molded high-strength plastic, FPG RadialSeal™ Air Cleaners offer the flexibility to overcome space limitations for underhood installation.

Donaldson employs innovative plastic materials and production techniques that result in air cleaners that are corrosion-free and lighter in weight than traditional metal air cleaners – yet without sacrificing sturdiness. Our extensive vibration testing reveals this to be a more durable design than most metal air cleaners.

The filter inside the air cleaner is also quite different from the traditional design: one-piece molded urethane endcaps encase the ends of the media and filter liners, eliminating the metal caps and plastisol potting compound that were traditionally used. The glued-on gasket found on conventional filters is gone – now, the inside surface of the open end is actually the RadialSeal™ Sealing surface.

FPG RadialSeal™ Facts

Small, Durable, and Corrosion-Free The World's Easiest-To-Service Air Cleaner!

Applications

- Provides up to 18m³/min. airflow per air cleaner – double throughput by using two units.
- Installation can be horizontal, vertical, or even at an angle (as long as Vacuator™ Valve points down).
- 4", 5", 7", 8" and 10" diameter sizes.
- Temperature tolerance: 83°C sustained.



(Do not install next to turbocharger, muffler, exhaust pipes, or other high-temperature component.)

Air Cleaner Features

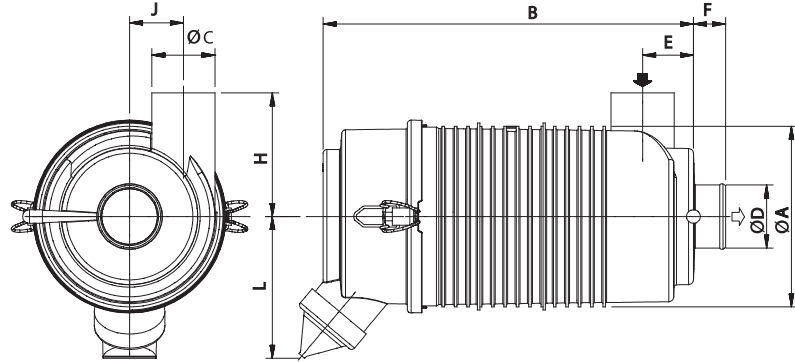
- Easy to service! No tools needed! Usually done in 5 minutes or less!
- Durable plastic housing - corrosion-free and lightweight.
- Two-stage air filtration! Built-in, tangential pre-cleaner ahead of main element removes up to 85% of incoming dust.
- Easy to fasten latches (no bolts!) retain dust cup/cover.
- 45° Vacuator™ Valve orientation permits either vertical or horizontal air cleaner mounting (the dust cup can be incrementally rotated to suit specific application).
- Safety element protects engine during in-field filter changeouts.
- Already tapped to accept filter service indicator (*see the Accessories section page 100-101 for indicator options*).



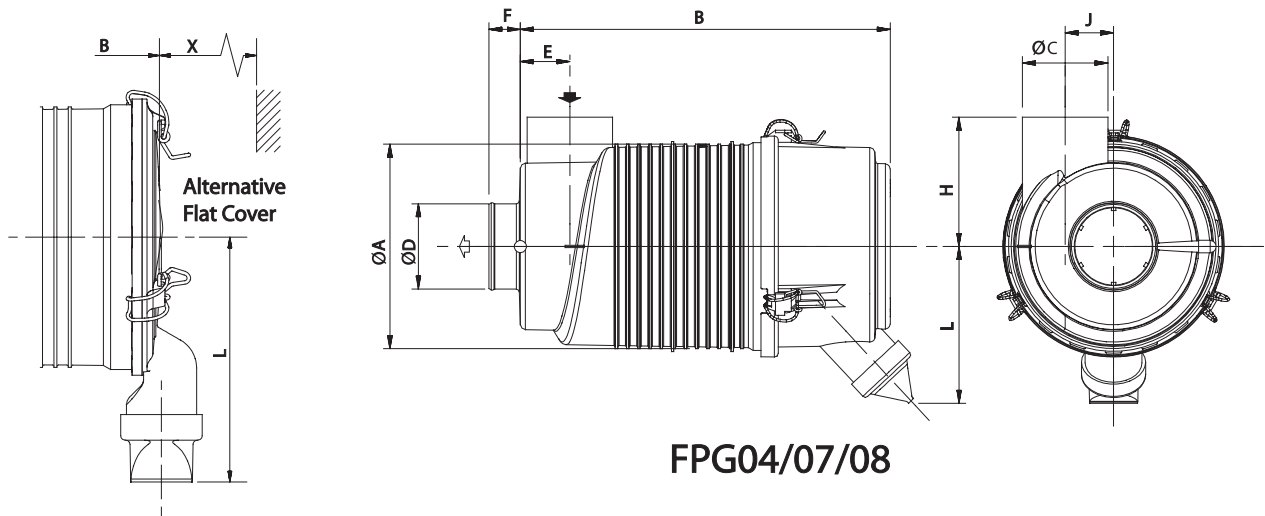
Filter Features

- RadialSeal™ Sealing Technology means reliability and easy service – the filter is self-centering and self-aligning!
- One piece, molded urethane endcaps encase the filter media and liners – reducing components, adding reliability and lowering cost.

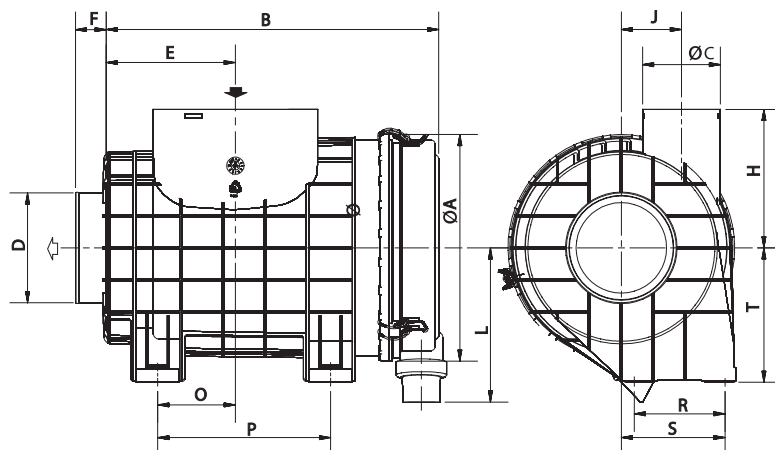
FPG RadialSeal™ Specifications



FPG05



FPG04/07/08



FPG10

FPG RadialSeal™ Specifications

Curve No.	Style	Air Cleaner Model No.	Airflow Range m³/min.	Dimensions (mm)														
				A	B	C	D	E	F	H	J	L	O	P	R	S	T	X°
1	FPG	G042546**	0,5 - 1,1	122	189	45	45	40	25	83	37	105	-	-	-	-	-	137
2	FPG	G042575**	0,5 - 1,0	122	189	45	45	40	25	83	37	105	-	-	-	-	-	137
3	FPG	G057502*	1,0 - 2,75	146	300	51	51	42	25	100	43,5	115	-	-	-	-	-	300
4	FPG	G057504	1,0 - 3,0	146	300	51	51	42	25	100	43,5	115	-	-	-	-	-	300
5	FPG	G057505**	1,0 - 2,75	146	300	51	51	42	25	100	43,5	115	-	-	-	-	-	300
6	FPG	G070006*	2,0 - 4,7	182	330	76	76	45	27	115	43	138	-	-	-	-	-	330
6'	FPG	G070059*	2,0 - 4,7	182	334	76	76	45	27	115	43	171	-	-	-	-	-	340
7	FPG	G070009	2,0 - 5,0	182	330	76	76	45	27	115	43	138	-	-	-	-	-	330
7'	FPG	G070060	2,0 - 5,0	182	334	76	76	45	27	115	43	171	-	-	-	-	-	340
8	FPG	G082503*	4,0 - 8,0	212	355	95	89	54	30	130	48	215	-	-	-	-	-	355
9	FPG	G082505	4,0 - 8,5	212	355	95	89	54	30	130	48	215	-	-	-	-	-	355
10	FPG	G100274	6,0 - 12,0	262	385	190	127	150	35	180	69	180	90	200	105	120	156	-
11	FPG	G100275	8,0 - 16,0	262	530	190	127	150	35	180	69	180	90	200	105	120	156	-
12	FPG	G100280*	6,0 - 11,0	262	385	190	127	150	35	180	69	180	90	200	105	120	156	-
13	FPG	G100285*	8,0 - 14,0	262	530	190	127	150	35	180	69	180	90	200	105	120	156	-

* Includes safety element
 ** High pulsation application
 ° In column X above - free space needed to remove the main element
 ' Flat cover

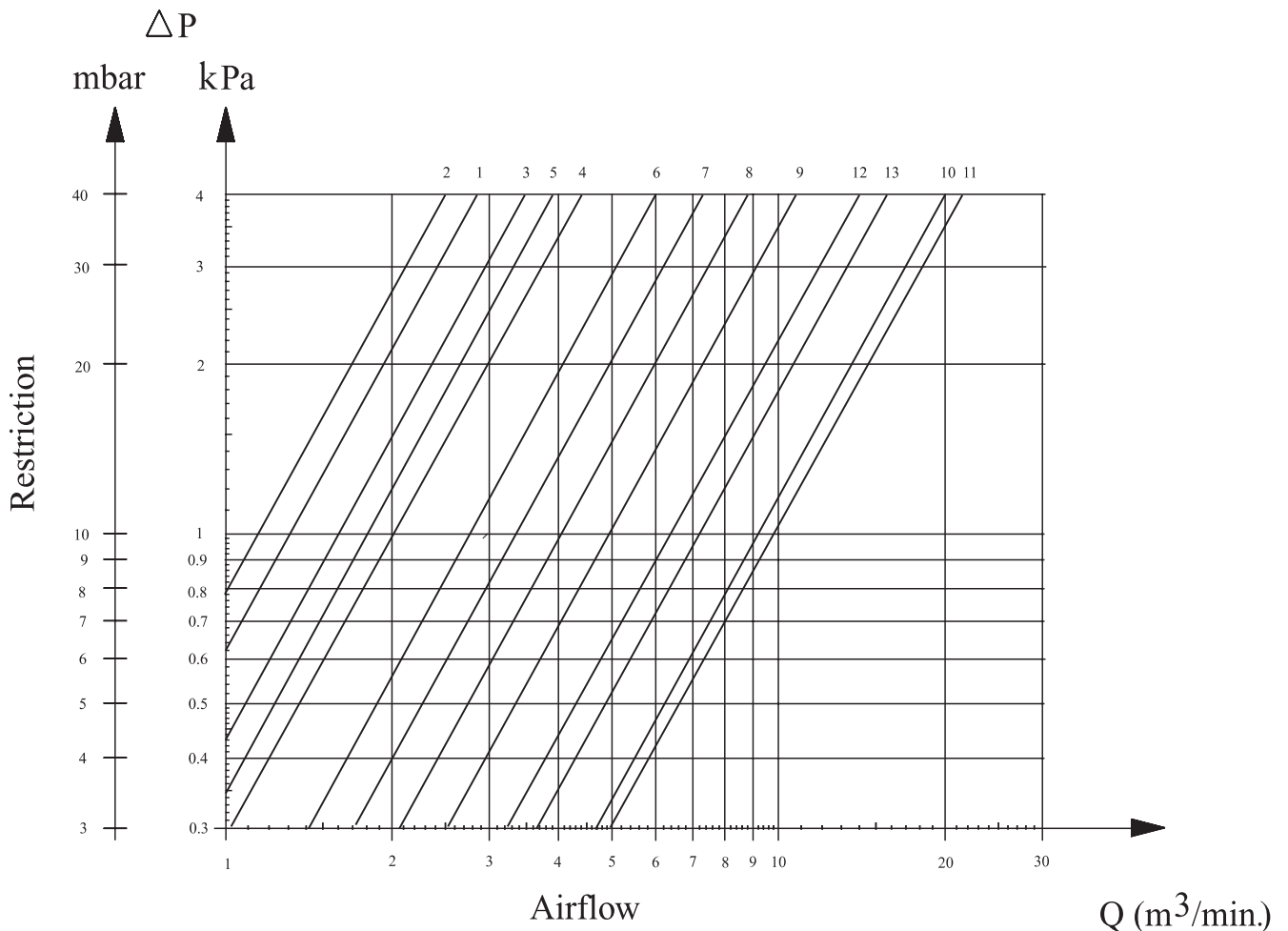
Air Cleaner Model No.	Main Element	Safety Element	Dust Cup*	Vacuator™ valve	Raincap	Plastic Mounting Band**
G042546	P822686	N/A	P777153	P522958	H770066	P777151
G042575	P822686	P535396	P777153	P522958	H770066	P777151
G057502	P772578	P775298	P775308	P522958	H001377	P777730
G057504	P772578	N/A	P775308	P522958	H001377	P777730
G057505	P775631	N/A	P775308	P522958	H001377	P777730
G070006	P772579	P775300	P775311	P522958	H001379	P777731
G070059	P772579	P775300	P778758	P522958	H001379	P777731
G070009	P772579	N/A	P775311	P522958	H001379	P777731
G070060	P772579	N/A	P778758	P522958	H001379	P777731
G082503	P772580	P775302	P775305	P775569	H770010	P777732
G082505	P772580	N/A	P775305	P775569	H770010	P777732
G082508	P772580	P775302	P775305	P522958	H770010	P777732
G100274	P777588	N/A	P777589	P158914	P776343	Integrated
G100275	P777592	N/A	P777593	P158915	P776343	Integrated
G100280	P777588	P777779	P777589	P158916	P776343	Integrated
G100285	P777592	P778776	P777593	P158917	P776343	Integrated

* Spare Part only
 ** Only one mounting band needed per air cleaner

FPG RadialSeal™ Restriction Curves

When specifying an Air Cleaner...

Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the table below. The restriction numbers (shown in kPa) indicate the approximate initial restriction of each model air cleaner at that m³/min. If there are two air cleaner models that fit your parameters, choosing the one with the lowest restriction will provide the longest filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.



FPG RadialSeal™ Service Parts



G042546	Main Element Cover Assembly Vacuator™ Valve	P822686 P777153 P522958	G070060	Main Element Cover Assembly Vacuator™ Valve	P772579 P778758 P522958
G042575	Main Element Safety Element Cover Assembly Vacuator™ Valve	P822686 P535396 P777153 P522958	G082503	Main Element Safety Element Cover Assembly Vacuator™ Valve	P772580 P775302 P775305 P775569
G057502	Main Element Safety Element Cover Assembly Vacuator™ Valve	P772578 P775298 P775308 P522958	G082508	Main Element Safety Element Cover Assembly Vacuator™ Valve	P772580 P775302 P775305 P522958
G057504	Main Element Cover Assembly Vacuator™ Valve	P772578 P775308 P522958	G082505	Main Element Cover Assembly Vacuator™ Valve	P772580 P775305 P775569
G057505	Main Element Cover Assembly Vacuator™ Valve	P775631 P775308 P522958	G100274	Main Element Cover Assembly Vacuator™ Valve	P777588 P777589 P158914
G070006	Main Element Safety Element Cover Assembly Vacuator™ Valve	P772579 P775300 P775311 P522958	G100275	Main Element Cover Assembly Vacuator™ Valve	P777592 P777593 P158914
G070009	Main Element Cover Assembly Vacuator™ Valve	P772579 P775311 P522958	G100280	Main Element Safety Element Cover Assembly Vacuator™ Valve	P777588 P777779 P776182 P158914
G070059	Main Element Safety Element Cover Assembly Vacuator™ Valve	P772579 P775300 P778758 P522958	G100285	Main Element Safety Element Cover Assembly Vacuator™ Valve	P777592 P778776 P777593 P158914

FPG RadialSeal™ Alexin™ Introduction



The FPG RadialSeal™ Alexin™ Air Cleaner is a two-stage full-plastic air cleaner with a built-in Pre-Cleaner and RadialSeal™ Sealing Technology.

FPG RadialSeal™ Alexin™ Air Cleaners are used on medium-duty applications like generator sets, agricultural tractors, bulldozers, drilling equipment, marine engines, trucks, loaders, backhoe, liftruck, construction and industrial equipment.

FPG RadialSeal™ Alexin™ Technology

Since the introduction of the Donaldson RadialSeal™ product line in 1989 with the launch of the FPG Air Cleaner, Donaldson has developed many new versions of these successful products and has continued to invest large sums of money in the further development of this RadialSeal™ filter concept. One of the results of this research is the Alexin™ product line.

The Donaldson Alexin™ mark identifies Donaldson product using the proven, reliable Donaldson RadialSeal™ Technology for the filter elements combined with the ease of use of a Twist and Lock cover, that provides a convenient cover locking system with a design that saves space.

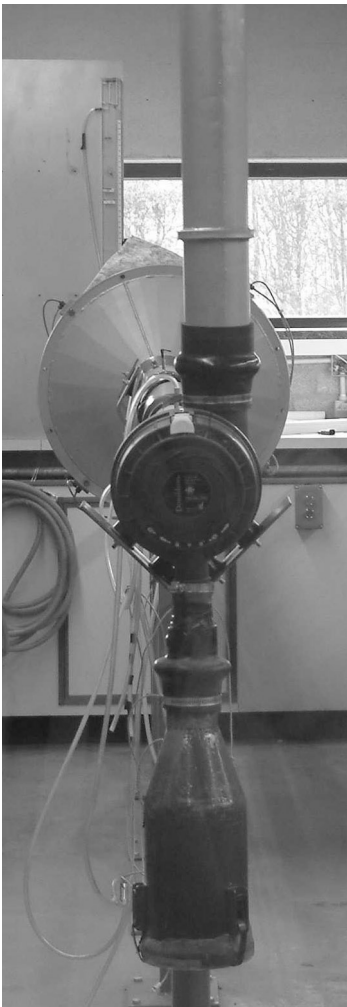
Alexin™ products need less space for servicing, are easily accessible and use RadialSeal™ filter elements for easy replacement. The filter housings are made of plastic, resulting in corrosion free, rugged products able to serve you trouble free for a long time.

The cover is unlocked with a yellow “finger”, twisted to the left and removed from the filter housing. That is all. It is that simple. To fit the cover to the housing, just reverse the sequence.

FPG RadialSeal™ Alexin™ Features

- Light weight.
- Compact.
- Corrosion resistant.
- Two-stage Air Cleaner.
- Black U.V. resistant.
- Easy to service.
- Flexible Installation.
- High tech body design.
- Suitable for medium-duty applications.
- Only one mounting band needed per body size.
- Optical restriction indicators may be fitted.
- High quality security Twist and Lock system.

FPG RadialSeal™ Alexin™ Tests



Life Test

The purpose of this test was to ensure that the filtration performance of the air cleaner assembly had not been degraded by the use of a new cover design. For all tests at various flows the separator efficiency and life exceed the over-center latch FPG air cleaner. There is enough evidence to show that the performance of the air cleaner has not been degraded. The test has been done according to ISO5011 laboratory test procedure.

FPG RadialSeal™ Alexin™ Tests

Vibration Test

Vibration tests were done in all three planes. Vibration testing was done at ambient temperatures, 82,2 °C and -34,4 °C. Inputs for vibration were accumulated in all three planes off an air cleaner in an application that would be considered severe vibration. The worse case for each plane was compiled to develop the Power Spectral Density input used for vibration testing. Vibration tests at ambient air temperature were conducted for 8 hours in each plane. The Twist and Lock mechanism experienced no failures. One or two properly installed mounting bands experienced no failures either.

Static Test at 100 °C for 8 hours

The air cleaner assembly was placed in a chamber at 100 °C. This was done to simulate repeated hot shutdown conditions. The required torque to remove the air cleaner cover decreased slightly with 2,71 Nm. No failures were discovered. The maximum continuous operating temperature should not exceed 82,2 °C.

500 Service Cycle Test

This test was completed to ensure the integrity of the Twist and Lock design after repeated servicing. A new air cleaner with no exposure to contaminants required approximately 16,27 Nm of torque to remove the cover. After exposure to a water/dust slurry, the required torque to remove the cover increased to approximately 32,54 Nm. The torque stayed constant until cleaning of the air cleaner body and cover interface. After 500 cycles of removing and installing the access cover, no failures were discovered.

Rotation of Air Cleaner in Band Assembly

The objective of this test was to ensure adequate support of the air cleaner during the removal and installation of the service cover. No air cleaner rotation were observed with mounting band assembly using appropriate clip to ensure adequate installation. If any band assembly is installed improperly, it could result in inadequate support of the air cleaner.

Backfire Test

A test bench was constructed to test the effects of a 8,62 bar pulse wave would have on the access cover. This was done to simulate the presence of a backfire condition. The air cleaner did not experience any failures under repeated tests with the same air cleaner;

Ice In cover Assembly

The cover and body assembly were exposed to water at room temperatures and then placed in a chamber at - 34,4 °C for 3 hours. In order for the cover to be removed, the cover had to be tapped with a hammer to free up the ice in the finger assembly. Once this was done the cover could be removed from the air cleaner body. Inspection of the air cleaner indicated no failures even after striking the finger and cover assembly.

Shower Test

Check sealing between body and cover.

Test conditions = $Q = 6,5 \text{ m}^3/\text{min}$. flow rate.

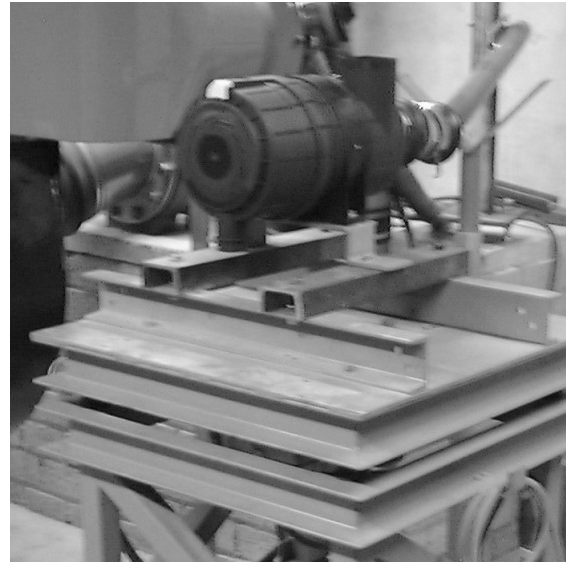
Volume of water = 200 cc/min.

Test time = 30 minutes.

Total volume = 6 kg.

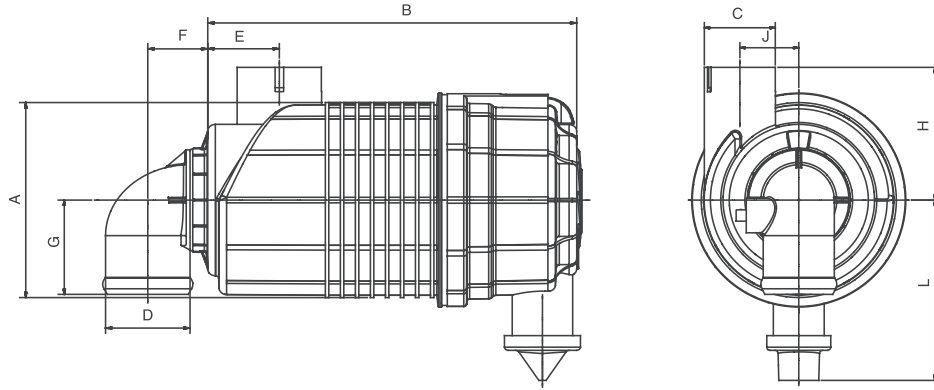
Specifications = $\frac{\text{entered water} \times 100}{\text{total volume of water}} < 0,5 \%$

Results = % of “water entrance” was 0,033 % (2 grams).

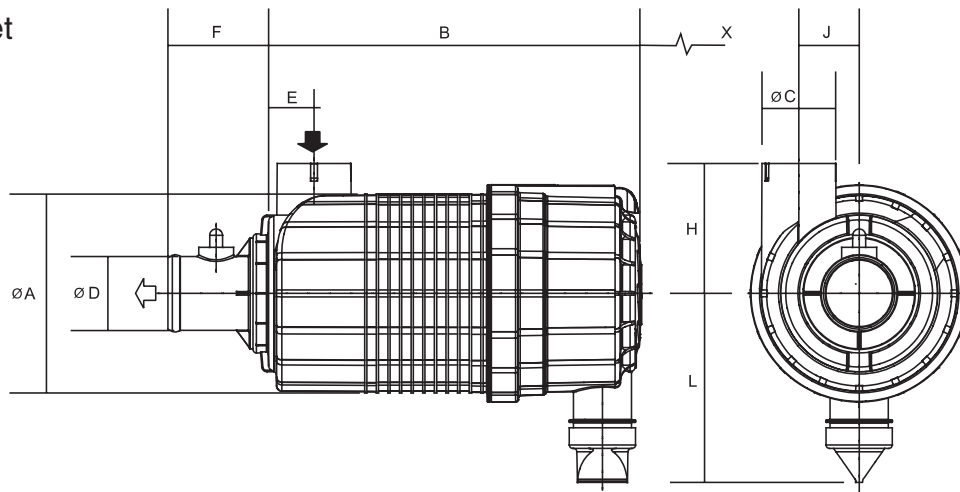


FPG RadialSeal™ Alexin™ Specifications

90° elbow outlet



Straight outlet



Curve No.	Style	Air Cleaner Model No.	Airflow Range m³/min.	Dimensions (mm)										
				A	B	C	D	E	F	G	H	J	L	X°
1	FPG	G065497**	1,5 - 3,8	172	326	63,5	63,5	43,5	40,8	78	112	52	163	300
2	FPG	G065498"	1,5 - 4,1	172	326	63,5	63,5	43,5	40,8	78	112	52	163	300
3	FPG	G065499▲*	1,5 - 3,8	172	326	63,5	63,5	43,5	82,2	-	112	52	163	300
4	FPG	G065500▲	1,5 - 4,1	172	326	63,5	63,5	43,5	82,2	-	112	52	163	300
5	FPG	G082580**	4,0 - 7,5	213	369	95	89	53,4	53,5	105	138	57	183	355
6	FPG	G082581"	4,0 - 8,0	213	369	95	89	53,4	53,5	105	138	57	183	355
7	FPG	G082582▲*	4,0 - 7,5	213	369	95	89	53,4	83	-	138	57	183	355
8	FPG	G082583▲	4,0 - 8,0	213	369	95	89	53,4	83	-	138	57	183	355
9	FPG	G090219**	5,0 - 10,0	242	409	114	89	61,5	53,5	105	170	60	260	370
10	FPG	G090220"	5,0 - 10,0	242	409	114	89	61,5	53,5	105	170	60	260	370
11	FPG	G090225▲*	5,0 - 10,0	242	409	114	101,5	61,5	87	-	170	60	260	370
12	FPG	G090226▲	5,0 - 10,0	242	409	114	101,5	61,5	87	-	170	60	260	370
13	FPG	G100317**	8,0 - 13,0	268	432	114	101,5	70,5	60,2	120	185	72	269	390
14	FPG	G100318"	8,0 - 14,0	268	432	114	101,5	70,5	60,2	120	185	72	269	390
15	FPG	G100319▲*	8,0 - 13,0	268	432	114	101,5	70,5	87,5	-	185	72	269	390
16	FPG	G100320▲	8,0 - 14,0	268	432	114	101,5	70,5	87,5	-	185	72	269	390

" 90° elbow outlet
 ▲ Straight outlet
 * Includes safety element
 ° In column X above - free space needed to remove main element

FPG RadialSeal™ Alexin™ Specifications

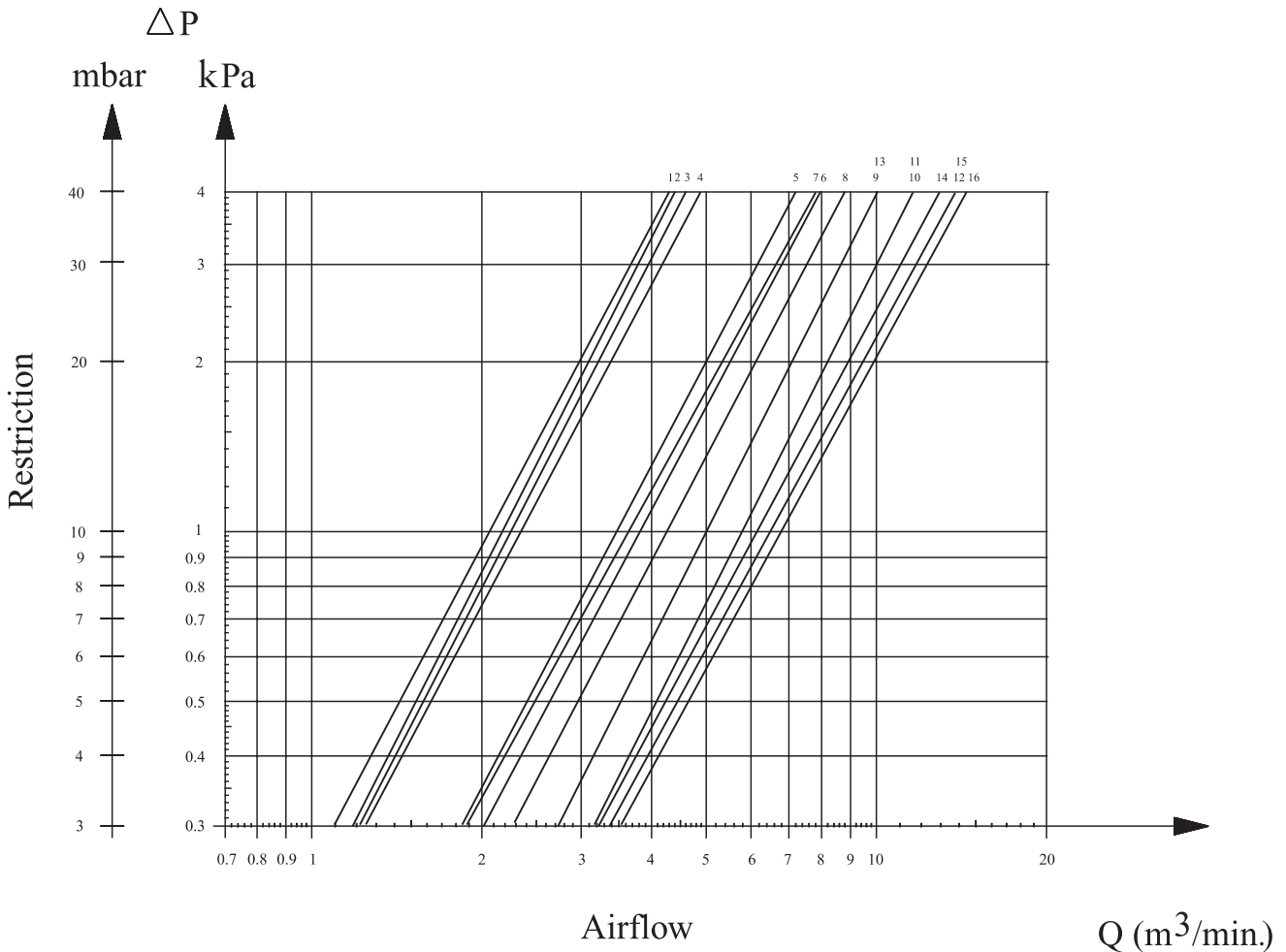
Air Cleaner Model No.	Main Element	Safety Element	Dust Cup*	Vacuator™ valve	Raincap	Plastic Mounting Band**
G065497	P822768	P822769	P780401	P522958	H001378	P778810
G065498	P822768	-	P780401	P522958	H001378	P778810
G065499	P822768	P822769	P780401	P522958	H001378	P778810
G065500	P822768	-	P780401	P522958	H001378	P778810
G082580	P828889	P829333	P780403	P158914	H770010	P777732
G082581	P828889	-	P780403	P158914	H770010	P777732
G082582	P828889	P829333	P780403	P158914	H770010	P777732
G082583	P828889	-	P780403	P158914	H770010	P777732
G090219	P780522	P780523	P780524	P776008	H770012	P780532
G090220	P780522	-	P780524	P776008	H770012	P780532
G090225	P780522	P780523	P780524	P776008	H770012	P780532
G090226	P780522	-	P780524	P776008	H770012	P780532
G100317	P781039	P777639	P780578	P776008	H770012	P780594
G100318	P781039	-	P780578	P776008	H770012	P780594
G100319	P781039	P777639	P780578	P776008	H770012	P780594
G100320	P781039	-	P780578	P776008	H770012	P780594

** Only one mounting band needed per air cleaner

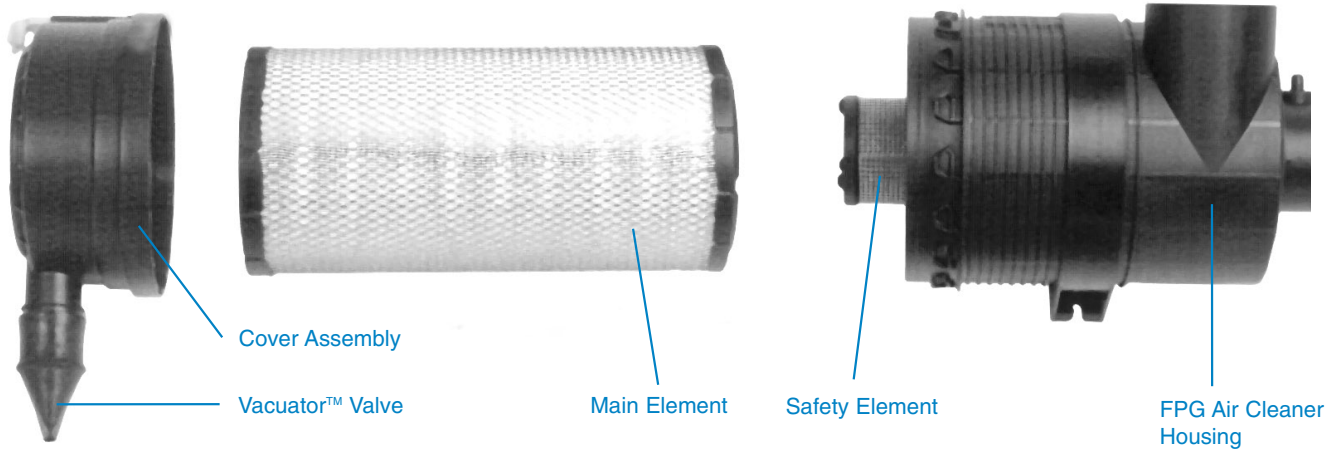
FPG RadialSeal™ Alexin™ Restriction Curves

When specifying an Air Cleaner...

Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the table below. The restriction numbers (shown in kPa) indicate the approximate initial restriction of each model air cleaner at that m³/min. If there are two air cleaner models that fit your parameters, choosing the one with the lowest restriction will provide the longest filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.



FPG RadialSeal™ Alexin™ Service Parts



G065497	Main Element	P822768	G065499	Main Element	P822768
	Safety Element	P822769		Safety Element	P822769
	Cover Assembly	P780401		Cover Assembly	P780401
	Vacuator™ Valve	P522958		Vacuator™ Valve	P522958
G065498	Main Element	P822768	G065500	Main Element	P822768
	Cover Assembly	P780401		Cover Assembly	P780401
	Vacuator™ Valve	P522958		Vacuator™ Valve	P522958

FPG RadialSeal™ Alexin™ Service Parts

G082580	Main Element	P828889	G090225	Main Element	P780522
	Safety Element	P829333		Safety Element	P780523
	Cover Assembly	P780403		Cover Assembly	P780524
	Vacuator™ Valve	P158914		Vacuator™ Valve	P776008
G082581	Main Element	P828889	G090226	Main Element	P780522
	Cover Assembly	P780403		Cover Assembly	P780524
	Vacuator™ Valve	P158914		Vacuator™ Valve	P776008
G082582	Main Element	P828889	G100317	Main Element	P781039
	Safety element	P829333		Safety Element	P777639
	Cover Assembly	P780403		Cover Assembly	P780578
	Vacuator™ Valve	P158914		Vacuator™ Valve	P776008
G082583	Main Element	P828889	G100318	Main Element	P781039
	Cover Assembly	P780403		Cover Assembly	P780578
	Vacuator™ Valve	P158914		Vacuator™ Valve	P776008
G090219	Main Element	P780522	G100319	Main Element	P781039
	Safety Element	P780523		Safety Element	P777639
	Cover Assembly	P780524		Cover Assembly	P780578
	Vacuator™ Valve	P776008		Vacuator™ Valve	P776008
G090220	Main Element	P780522	G100320	Main Element	P781039
	Cover Assembly	P780524		Cover Assembly	P780578
	Vacuator™ Valve	P776008		Vacuator™ Valve	P776008

FRG RadialSeal™

for Medium – Heavy Dust Conditions



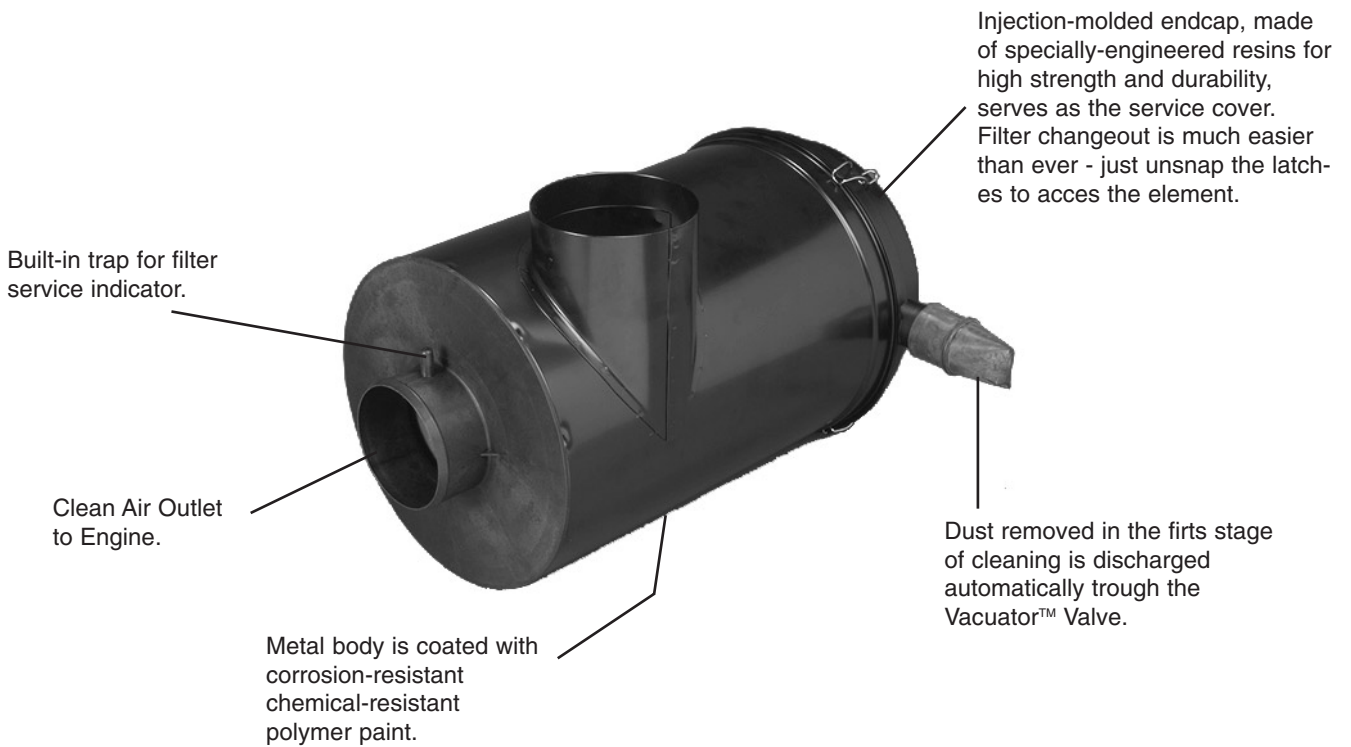
FRG RadialSeal™ Introduction



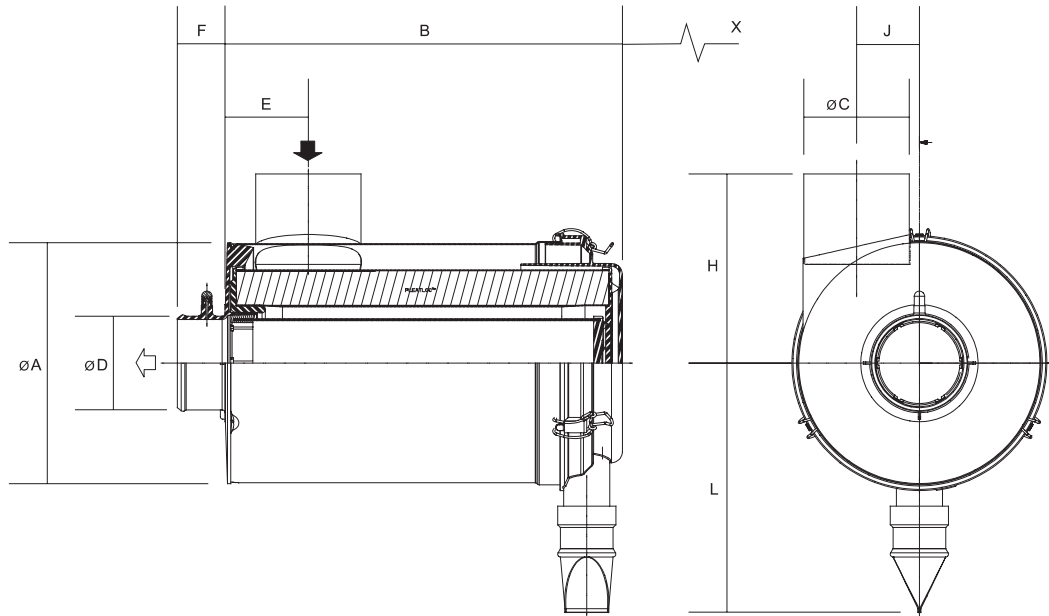
The FRG RadialSeal™ Air Cleaner is a two-stage hybrid air cleaner with RadialSeal™ Sealing Technology.

FRG RadialSeal™ Air Cleaners are used on medium- and heavy-duty applications.

FRG RadialSeal™ Technology



FRG RadialSeal™ Specifications



Curve No.	Style	Air Cleaner Model No.	Airflow Range m ³ /min.	Dimensions (mm)										
				A	B	C	D	E	F	H	J	L	X°	Z°°
1	FRG	G100281*	6,5 - 14,0	259	430	114	101	90	52	205	68	270	373	107
2	FRG	G100284	6,5 - 15,5	259	430	114	101	90	52	205	68	270	373	107
3	FRG	G110211" *	8,0 - 16,0	279	480	127	114	108	67	191	77	275	373	107
3	FRG	G110269*	8,0 - 16,0	279	480	127	114	108	67	191	77	275	373	107
4	FRG	G130120*	10,0 - 18,0	330	425	152	127	132	58	216	90	301	365	93
5	FRG	G130061*	13,0 - 23,5	330	530	152	127	132	58	216	90	301	470	93
5	FRG	G130088" *	13,0 - 23,5	330	530	152	127	132	58	216	90	301	470	93
6	FRG	G130087	13,0 - 25,0	330	530	152	127	132	58	216	90	301	470	93
6	FRG	G130113"	13,0 - 25,0	330	530	152	127	132	58	216	90	301	470	93
7	FRG	G150092*	16,0 - 32,0	381	530	178	152	140	70	242	103	338	480	93
7	FRG	G150112" *	16,0 - 32,0	381	530	178	152	118	70	242	103	338	480	93
8	FRG	G150097	16,0 - 33,0	381	530	178	152	140	70	242	103	338	480	93
9	FRG	G180033*	20,0 - 42,0	457	510	203	178	128	85	290	128	402	460	130
10	FRG	G180035*	22,0 - 46,0	457	650	203	178	128	85	290	128	402	600	130
11	FRG	G180031*	25,0 - 51,0	457	650	203	203	128	85	290	128	402	600	130
11	FRG	G180038" *	25,0 - 51,0	457	650	203	203	128	85	290	128	402	600	130

" Inlet on opposite side
 * Includes safety element

° In column X above - free space needed to remove main element
 °° In column Z above - free space needed to remove cover

FRG RadialSeal™ Specifications

Air Cleaner Model No	Main Element	Safety Element	Vacuator™ Valve	Raincap	Dust Cup*	Mounting band**
G100281	P777638	P777639	P776008	H770012	P777455	P004076
G100284	P777638	N/A	P776008	H770012	P777455	P004076
G110211	P778905	P778906	P158914	H770013	P778366	P004079
G110269	P778905	P778906	P158914	H770013	P778366	P004079
G130061	P777409	P777414	P776008	H770090	P777408	P013722
G130088	P777409	P777414	P776008	H770090	P777408	P013722
G130087	P777409	N/A	P776008	H770090	P777408	P013722
G130113	P777409	N/A	P775569	H770090	P777408	P013722
G130120	P780331	P780332	P776008	H770090	P777408	P013722
G150092	P777868	P777869	P776008	H770089	P777920	P016845
G150112	P777868	P777869	P776008	H770089	P777920	P016845
G150097	P777868	N/A	P776008	H770089	P777920	P016845
G180031	P781098	P781102	P105220	H001053	P783185	H770037
G180033	P781398	P781399	P105220	H001053	P783185	H770037
G180035	P781098	P781102	P105220	H001053	P783185	H770037
G180038	P781098	P781102	P105220	H001053	P781084	H770037

* Spare Part only
** Two mounting bands needed per air cleaner

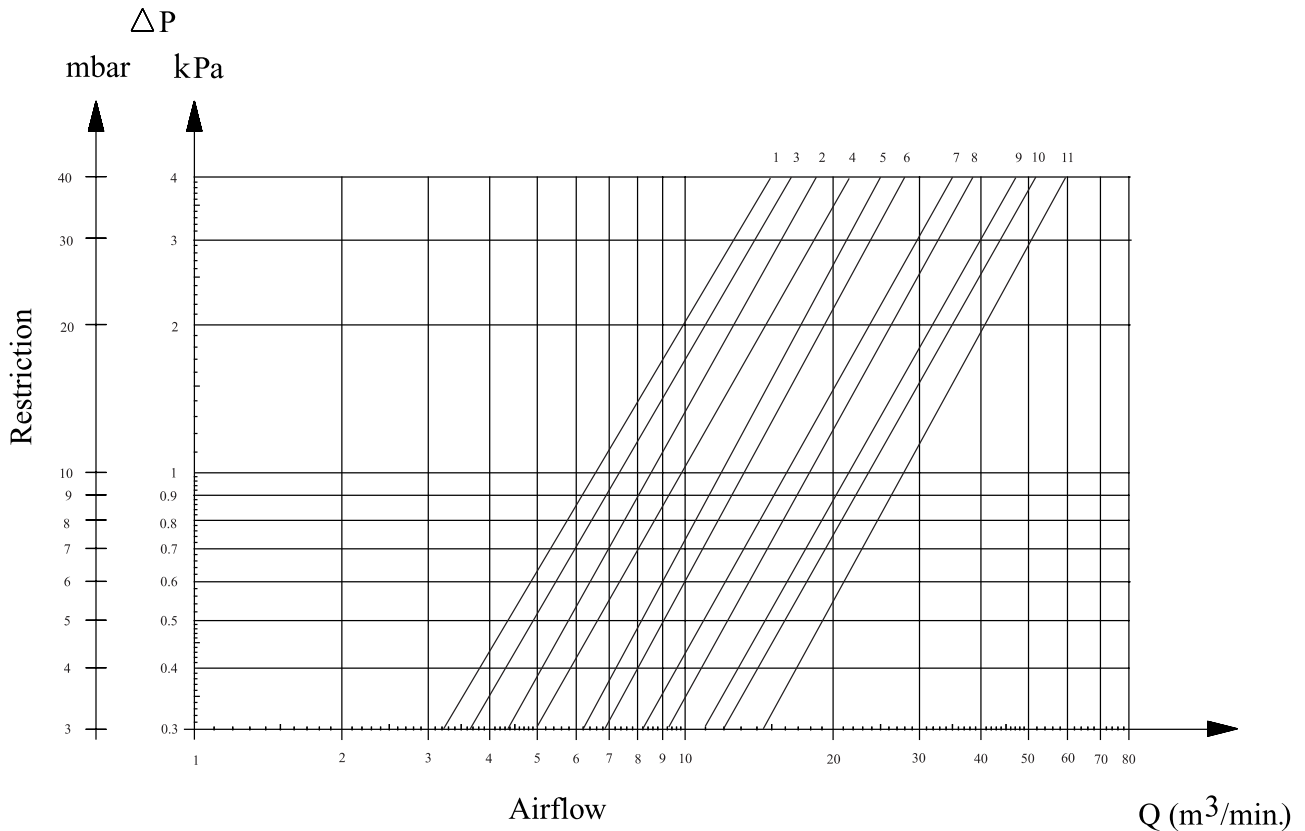
FRG RadialSeal™ Features

- Light weight.
- Compact.
- Flexible installation.
- Two-stage air cleaner.
- High tech design.
- Proven RadialSeal™ technology.
- Restriction indicator tapping point as standard.
- Easy to service.
- Suitable for medium- to heavy-dust conditions.

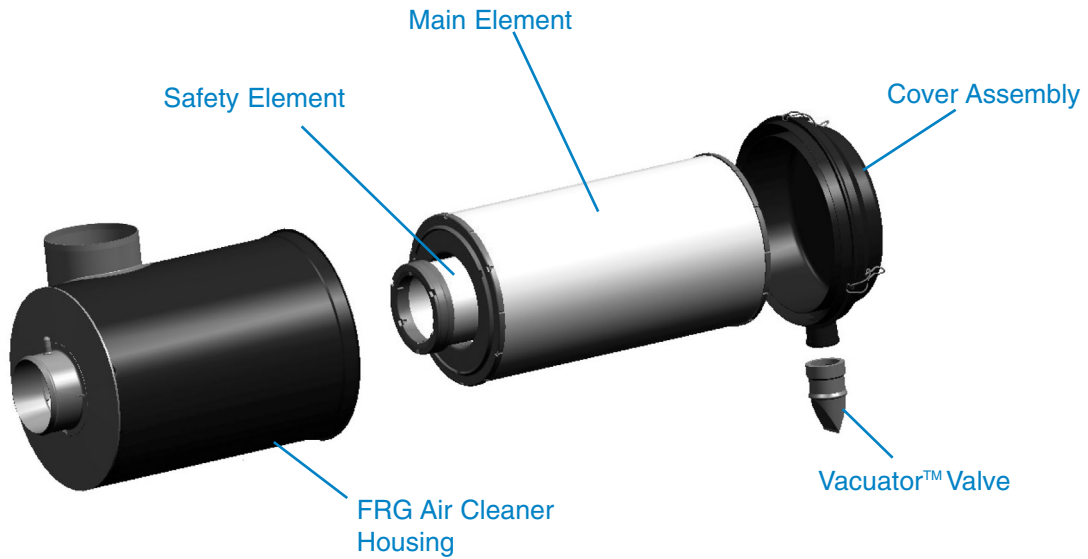
FRG RadialSeal™ Restriction Curves

When specifying an Air Cleaner...

Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the table below. The restriction numbers (shown in kPa) indicate the approximate initial restriction of each model air cleaner at that m³/min. If there are two air cleaner models that fit your parameters, choosing the one with the lowest restriction will provide the longest filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.



FRG RadialSeal™ Service Parts



G100281	Main Element	P777638	G130061	Main Element	P777409
	Safety Element	P777639		Safety Element	P777414
	Cover Assembly	P777455		Cover Assembly	P777408
	Vacuator™ Valve	P776008		Vacuator™ Valve	P776008
G100284	Main Element	P777638	G130087	Main Element	P777409
	Cover Assembly	P777455		Cover Assembly	P777408
	Vacuator™ Valve	P776008		Vacuator™ Valve	P776008
G110211	Main Element	P778905	G130088	Main Element	P777409
	Safety Element	P778906		Safety Element	P777414
	Cover Assembly	P778366		Cover Assembly	P777408
	Vacuator™ Valve	P158914		Vacuator™ Valve	P776008
	O-ring	P782257			
G110269	Main Element	P778905	G130113	Main Element	P777409
	Safety Element	P778906		Cover Assembly	P777408
	Cover Assembly	P778366		Vacuator™ Valve	P775569
	Vacuator™ Valve	P158914	G130120	Main Element	P780331
	O-ring	P782257		Safety Element	P780332
			Cover Assembly	P787408	
			Vacuator™ Valve	P776008	

FRG RadialSeal™ Service Parts

G150092	Main Element	P777868	G180033	Main Element	P781398
	Safety Element	P777869		Safety Element	P781399
	Cover Assembly	P777920		Cover Assembly	P783185
	Vacuator™ Valve	P776008		Vacuator™ Valve	P105220
G150097	Main Element	P777868	G180035	Main Element	P781098
	Cover Assembly	P777920		Safety Element	P781102
	Vacuator™ Valve	P776008		Cover Assembly	P783185
G150112	Main Element	P777868		Vacuator™ Valve	P105220
	Safety Element	P777869	G180038	Main Element	P781098
	Cover Assembly	P777920		Safety Element	P781102
	Vacuator™ Valve	P776008		Cover Assembly	P781084
G180031	Main Element	P781098		Vacuator™ Valve	P105220
	Safety Element	P781102			
	Cover Assembly	P783185			
	Vacuator™ Valve	P105220			

PSD PowerCore™ Introduction



The PSD PowerCore™ Air Cleaner is a two-stage air cleaner with build-in high efficiency pre-cleaner using the new PowerCore™ Filtration Technology.

PSD PowerCore™ Air Cleaners are designed especially for medium- and heavy-duty on and off road equipment operating in severe dust environments. Can be used with Vacuator™ Valve on the pre-cleaner or continuously scavenge of the pre-cleaner by an exhaust ejector or air blower cooling.

Why was PowerCore™ Filtration Technology developed?

Vehicle design is moving from classic to aerodynamic. This means less under-hood space, highly stylized, cost effective designs, greater operator visibility, higher horsepower engines with greater airflow and other emission requirements with hotter engines...

Therefore Donaldson developed a PowerCore™ Filtration Technology, to do more in less space and to allow system optimization.

What is PowerCore™ Filtration Technology?

- Proprietary air filtration technology developed to improve engine protection.
- Revolutionary, fluted media design for improved air filtration.
- PowerCore™ media is visually unique.
- PowerCore™ filters can be designed, based on an approved matrix, in obround (racetrack) and round shapes.
- High density media packaging technology.
- Several features patented and IP protected.
- Backed by extensive lab and field testing

PowerCore™ Filtration Technology Features

- Axial flow.
- High media area.
- High efficiency.
- Ultra-Web® Media Technology (3-5X) optional. *(For more details see page 5).*
- Shape flexibility.
- Non-metal.
- RadialSeal™ Sealing Technology *(For more details see page 6).*

PowerCore™ Filtration Technology Benefits

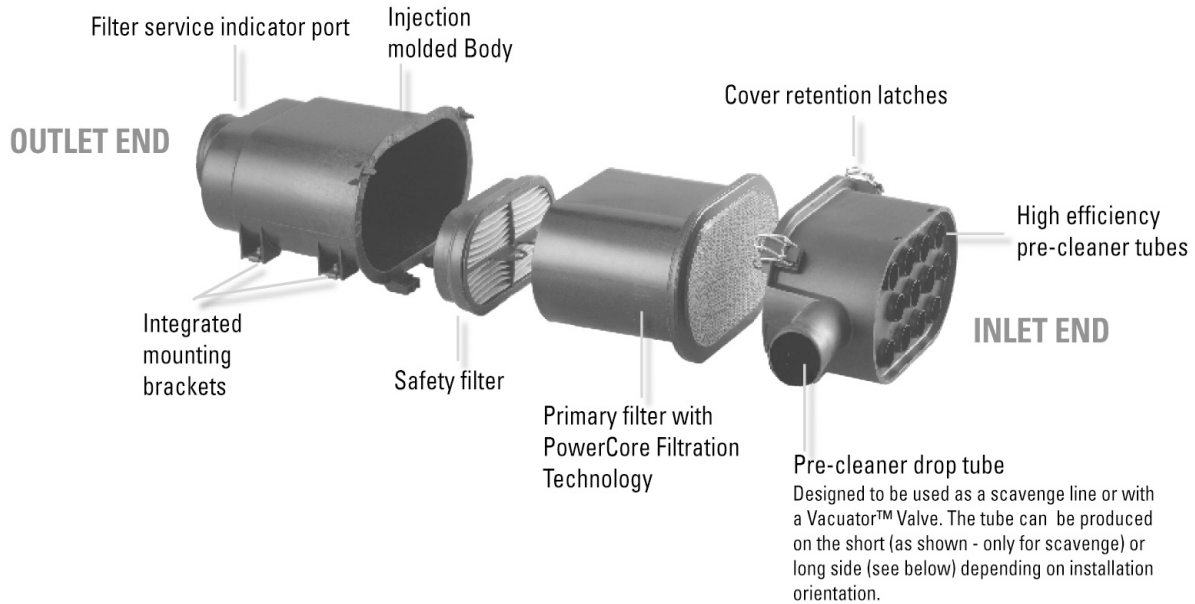
- Low restriction.
- Equal life/smaller size suitable for all environments.
- Better engine protection.
- Environmental friendly.
- Increased dust- and soot-holding capacity.
- System design flexibility.
- Highly efficient Ultra-Web® Media (99.985%+) optional.
- Dust is contained during servicing.
- Rugged construction.
- Lower shipping and inventory costs.
- Design differentiation.
- Metal-free construction (except service cover latches and indicator port).
- Easy to service.
- Compact and lightweight.
- Multiple installation positions.
- Built-in pre-separation and mounting brackets.
- Proven sealing design.

*Introduced for
engine applications
in Europe since 1999!*

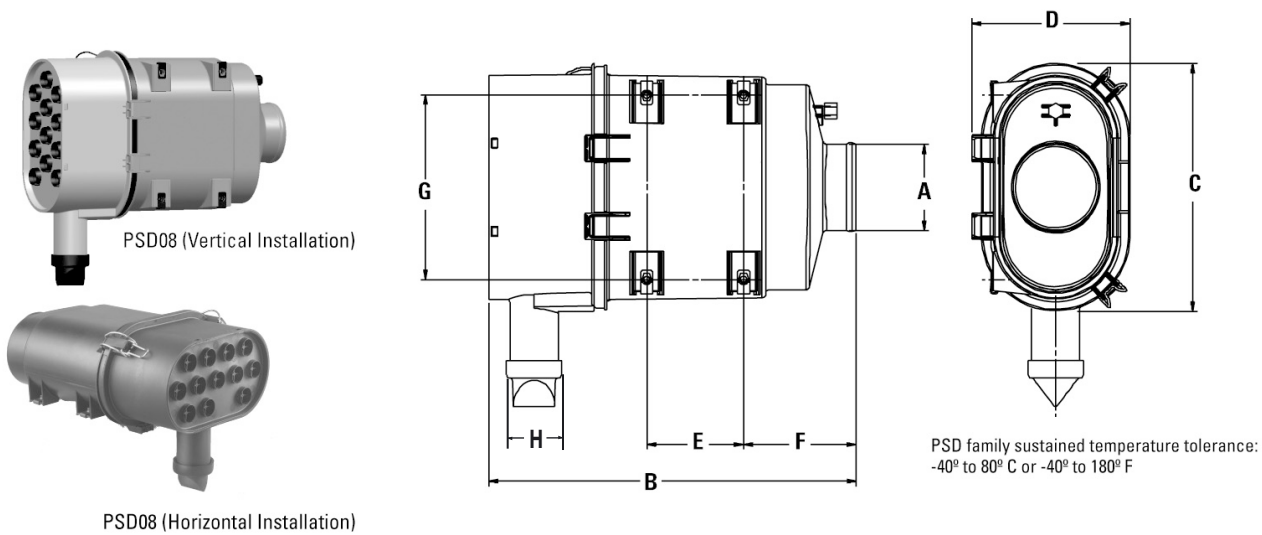
*Already millions of
first fit systems
running in the field!!*



PSD PowerCore™ 08 Service Access on Inlet End

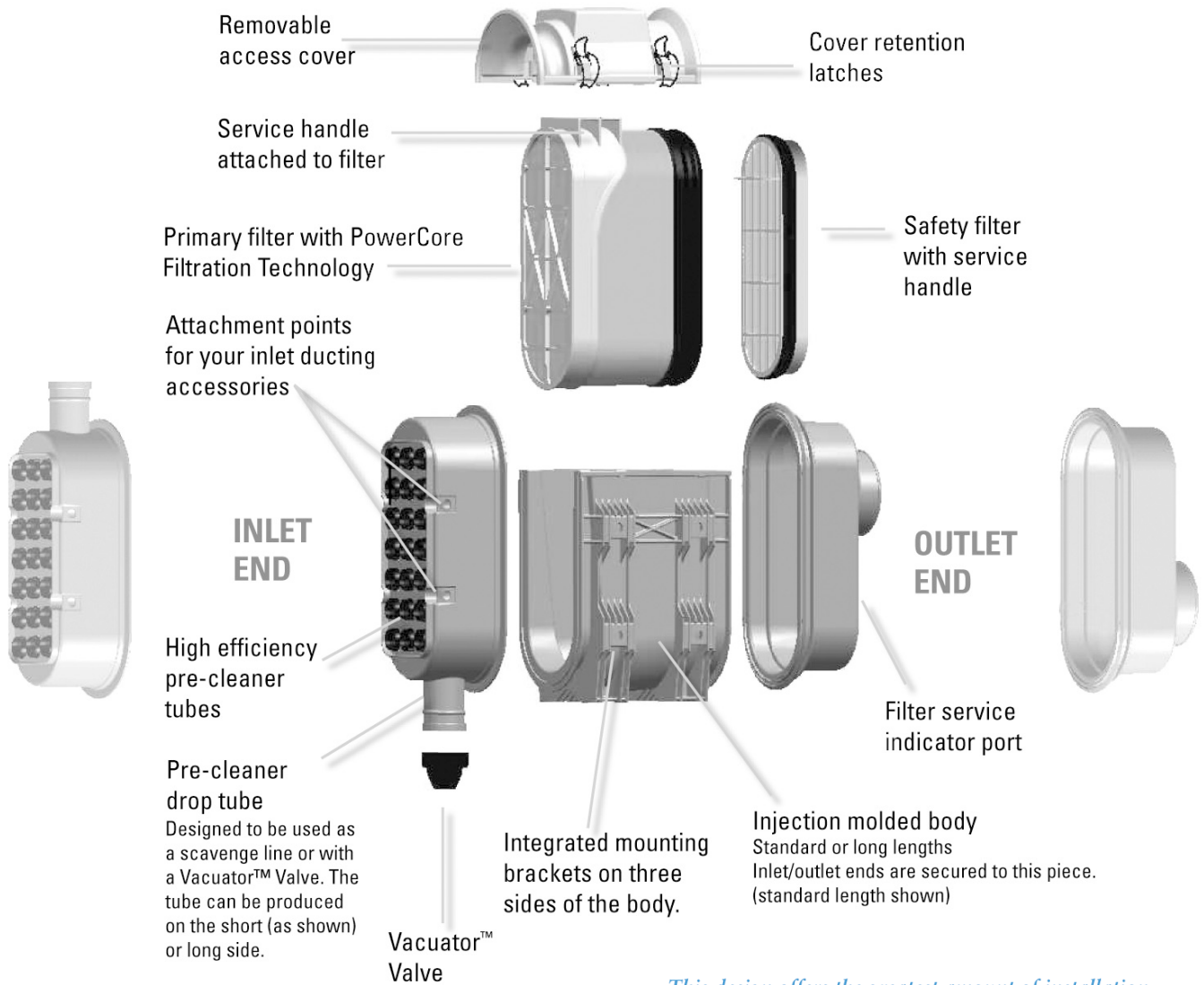


PSD PowerCore™ 08 Specifications



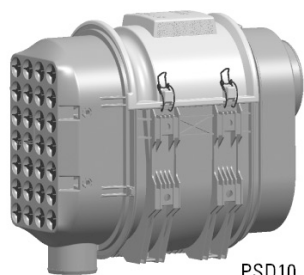
Housing Style	Airflow Range		A		B		C		D		E		F		G		H	
	m³/min	CFM	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
PSD080020 PSD080026 with Vac Valve	up to 6.0	up to 221																
PSD080020 PSD080026 with Scavenge Flow	up to 7.5	up to 265	89	3.51	380	14.97	256	10.09	164	6.46	100	3.94	117	4.61	191	7.53	50	2

PSD PowerCore™ 09 - 10 - 12
Service Access on Side

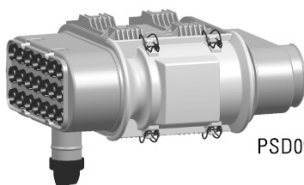


This design offers the greatest amount of installation flexibility for equipment manufacturers. Models can be produced with the inlet and outlet ends rotated 180°.

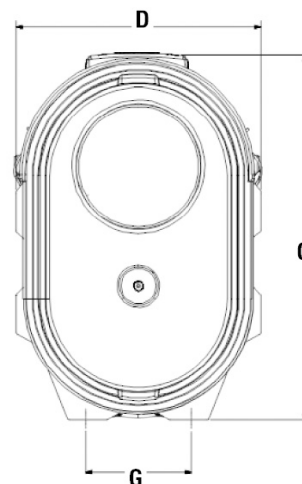
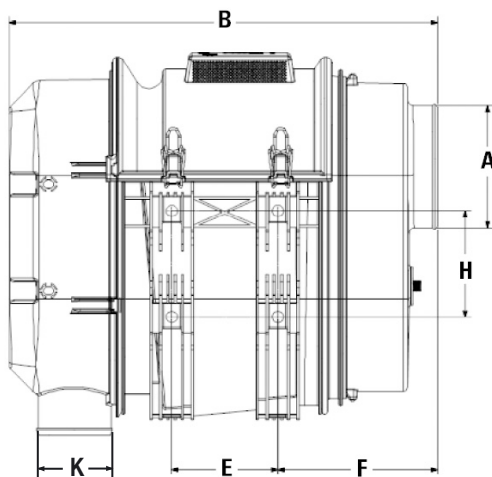
PSD PowerCore™ 09 - 10 - 12 Specifications



PSD10, PSD12



PSD09



Housing Style	Airflow Range *		A		B		C		D		E		F		G		H		K	
	m³/min	CFM	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
PSD090019 (V) PSD090020 (H)	6.0 - 9.0	212 - 318	102	4.02	432	17.02	363	14.30	180	7.09	110	4.33	174	6.86	100	3.94	130	5.12	50	2
PSD090021 (V) PSD090022 (H)	9.0 - 13.5	318 - 477			532	20.96					180	5.20								
PSD100029 (V) PSD100030 (H)	12.0 - 18.0	424 - 635	127	5.00	429	16.90	374	14.74	254	10.01	110	4.33	165	6.50	110	4.33	110	4.33	76	3
PSD100031 (V) PSD100032 (H)	18.0 - 25.0	635 - 883	152	6.00	529	20.84					210	8.17								
PSD120035 (V) PSD120036 (H)	23.0 - 27.0	812 - 953	152	6.00	494	19.46	431	16.98	306	12.06	166	6.54	160	6.30	154	6.07	110	4.33	76	3
PSD120037 (V) PSD120038 (H)	27.0 - 30.0	953 - 1060			595	23.44					268	10.56								

(V) Vertical installation
(H) Horizontal installation
(*) with 10% Scavenge flow

PSD PowerCore™ Standard Product Line

PSD 08		
Air Cleaner Assembly Description	PSD080026 Vertical Installation	PSD080020 Horizontal Installation
Media	White Media, Ultra-Web® Media optional	
Access Cover Assembly Latch (x2)	P601735 P776033	P602985 P776033
U-Clip, Mounting (x4)	P600974	P600974
Element Assembly	P608533	P608533
Safety Assembly	P600975	P600975
Vacuator™ Valve	P158914	P158914

PSD 09				
Air Cleaner Assembly Description	PSD090019 Vert. Install. (short)	PSD090020 Horiz. Install. (short)	PSD090021 Vert. Install. (long)	PSD090022 Horiz. Install. (long)
Media	White Media, Ultra-Web® Media optional			
Access Cover Assembly	P609550	P609550	P609552	P609552
Access Cover Latch (x4)	P609155 P784506	P609533 P784506	P609155 P784506	P609553 P784506
U-Clip, Mounting (x4)	P784289	P784289	P784289	P784289
Element Assembly	P608665	P608665	P608675	P608675
Safety Assembly	P606121	P606121	P606121	P606121
Vacuator™ Valve	P158914	P158914	P158914	P158914

PSD 10				
Air Cleaner Assembly Description	PSD100029 Vert. Install. (short)	PSD100030 Horiz. Install. (short)	PSD100031 Vert. Install. (long)	PSD100032 Horiz. Install. (long)
Media	White Media, Ultra-Web® Media optional			
Access Cover Assembly	P784279	P784279	P784298	P784298
Access Cover Latch (x4)	P784280 P784506	P784280 P784506	P784299 P784506	P784299 P784506
U-Clip, Mounting (x4)	P784289	P784289	P784289	P784289
Element Assembly	P608666	P608666	P608676	P608676
Safety Assembly	P601560	P601560	P601560	P601560
Vacuator™ Valve	P112803	P112803	P112803	P112803
Adapters	3 styles available: ø 32 = P783747 ø 38 = P783746 ø 50 = P783748			
	Check Valve P784790			

PSD 12				
Air Cleaner Assembly Description	PSD120035 Vert. Install. (short)	PSD120036 Horiz. Install. (short)	PSD120037 Vert. Install. (long)	PSD120038 Horiz. Install. (long)
Media	White Media, Ultra-Web® Media optional			
Access Cover Assembly	P608171	P608171	P608180	P608180
Access Cover Latch (x4)	P608173 P784506	P608173 P784506	P608179 P784506	P608179 P784506
U-Clip, Mounting (x4)	P784289	P784289	P784289	P784289
Element Assembly	P608667	P608667	P608677	P608677
Safety Assembly	P607557	P607557	P607557	P607557
Vacuator™ Valve	P112803	P112803	P112803	P112803
Adapters	3 styles available: ø 32 = P783747 ø 38 = P783746 ø 50 = P783748			
	Check Valve P784790			

SPB RadialSeal™ Introduction

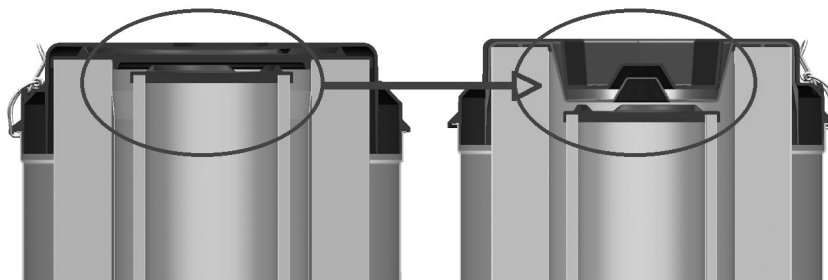


The SPB RadialSeal™ Air Cleaner is a two-stage full plastic air cleaner with built-in high efficiency Pre-Cleaner and RadialSeal™ Sealing Technology.

SPB RadialSeal™ Features

- Proven RadialSeal™ technology.
- Built-in Strata™ Pre-Cleaner with efficiency of 90 – 93 %.
- Light weight.
- Compact.
- Flexible installation.
- Two-stage air cleaner.
- High tech design.
- Restriction indicator tapping point as standard.
- Easy to service.
- Suitable for heavy-dust conditions.
- Airflow Range: 6 - 22 m³/min.
- Dimensions: 9” - 10” – 11 “ - 13”.
- 10% scavenge.
- ISO Coarse / ISO5011 certificate.

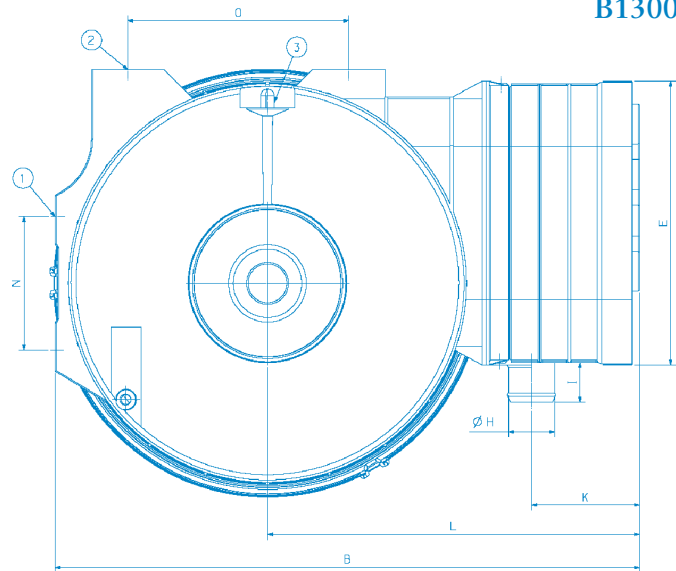
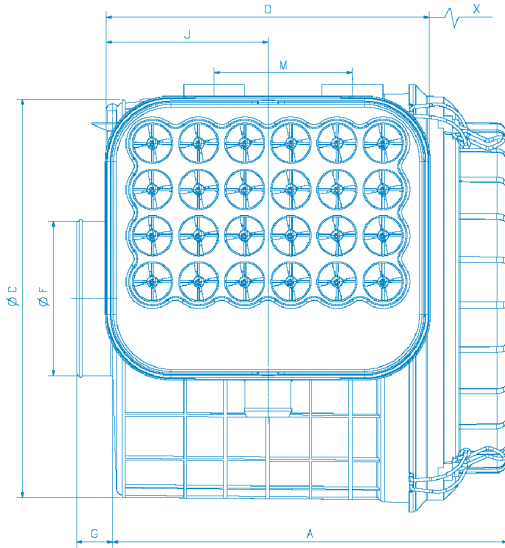
SPB RadialSeal™ Features



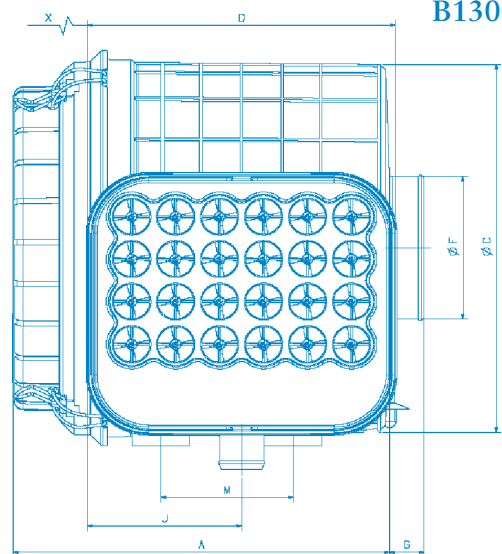
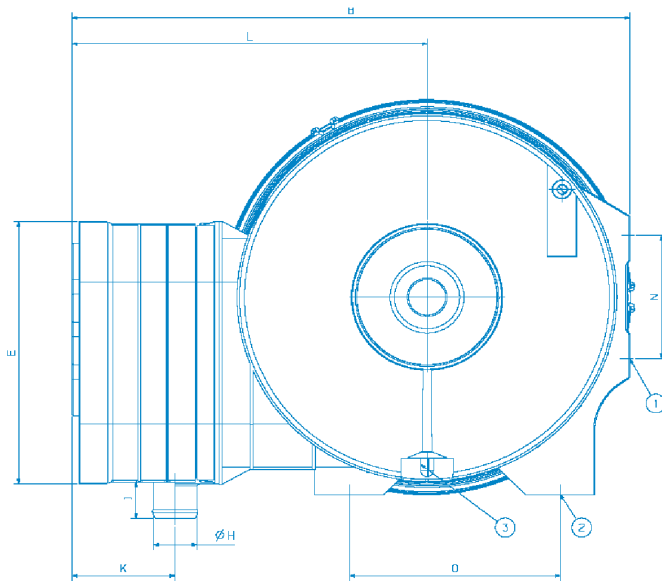
*Primary air element:
Donaldson's current versus
new unique design concept.*

Donaldson's new unique design allows you to protect your engine in the best way. Via a unique fit of the air element into the access cover, the use of original elements is always ensured. Lower quality will-fit elements, can't be fitted into the air cleaner.

SPB RadialSeal™ Specifications



B130048



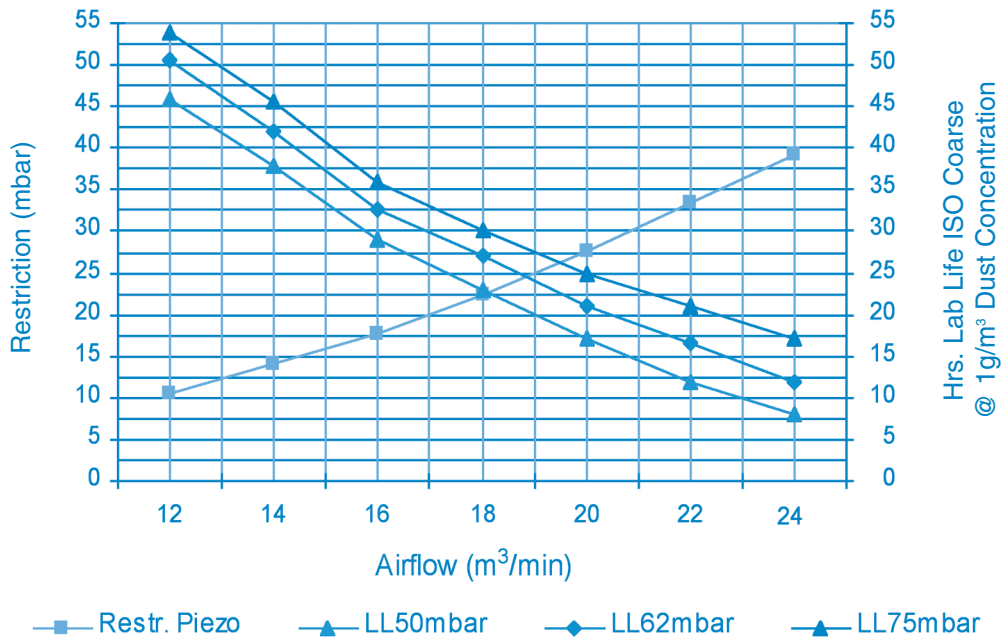
B130060

- ① 4 Clips M8 optional – Reference P784517: Plastic bag with 4 U-Clips
- ② Insert M8
- ③ 1/8 27 NPT

Dimensions (mm)																
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	X	Z
325	481	328	266	234	127	30	38	33	133	89	306	114	110	182	75	280

X Free space needed to remove main element
Z Free space needed to remove cover

SPB RadialSeal™ Curves per ISO 5011*



*Performances with 10 % scavenge flow

SPB RadialSeal™ Service Parts

Air Cleaner Model No.	Main Element	Safety Element	Dust Cup*	Mounting band**	Acces Cover
B130048	P783543	P783544	P783693	Integrated	P777300*
B130060▲	P783543	P783544	P783693	Integrated	P777300

* Spare Part only
 ** Two mounting bands needed per air cleaner
 ▲ Inlet 180° rotated

SRB RadialSeal™ Introduction

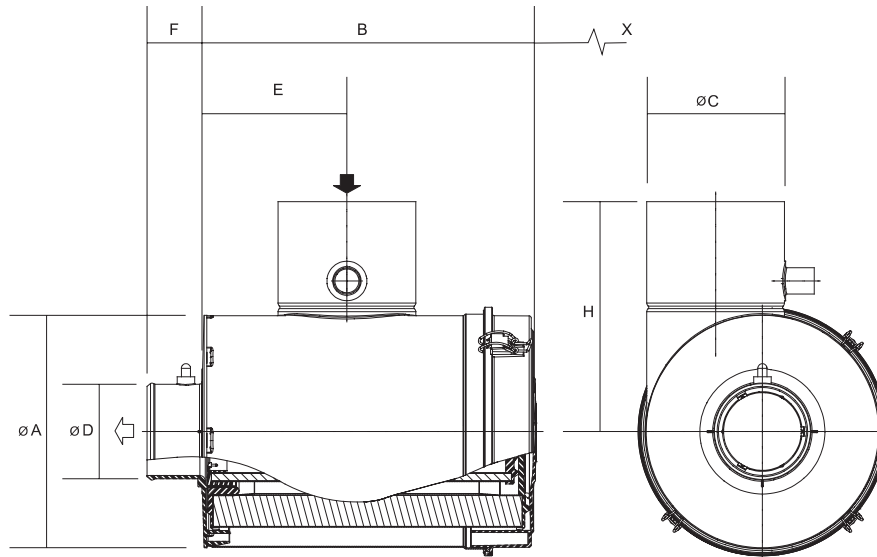


The SRB RadialSeal™ Air Cleaner is a two-stage hybrid air cleaner with built-in high efficiency Pre-Cleaner and RadialSeal™ Sealing Technology.

SRB RadialSeal™ Features

- Proven RadialSeal™ technology.
- Built-in Strata™ Pre-Cleaner with efficiency of 90 – 93 %.
- Light weight.
- Compact.
- Flexible installation.
- Two-stage air cleaner.
- High tech design.
- Restriction indicator tapping point as standard.
- Easy to service.
- Suitable for agricultural and construction equipment operating in severe dust environments.
- Airflow Range: 6 - 22 m³/min.
- Dimensions: 9” - 10” – 11 “ - 13”.
- Minimum with 10% scavenge.
- ISO Coarse Dust / ISO5011 certificate.
- Always to be used with a scavenge system.

SRB RadialSeal™ Specifications



Curve No.	Style	Air Cleaner Model No.	Airflow Range m3/min.	Dimensions (mm)							
				A	B	C	D	E	F	X°	Z°°
1	SRB	B095437"	4,0 - 8,0	229	400	166	102	203	61	75	380
2	SRB	B100121	8,0 - 12,0	259	430	166	102	179	52	75	380
3	SRB	B110155	11,0 - 15,0	279	480	166	114	175	67	75	380
4	SRB	B130046	13,0 - 18,0	330	530	332	127	105	91	60	470

° In column X above - free space needed to remove main element
 °° In column Z above - free space needed to remove cover
 " 90° elbow

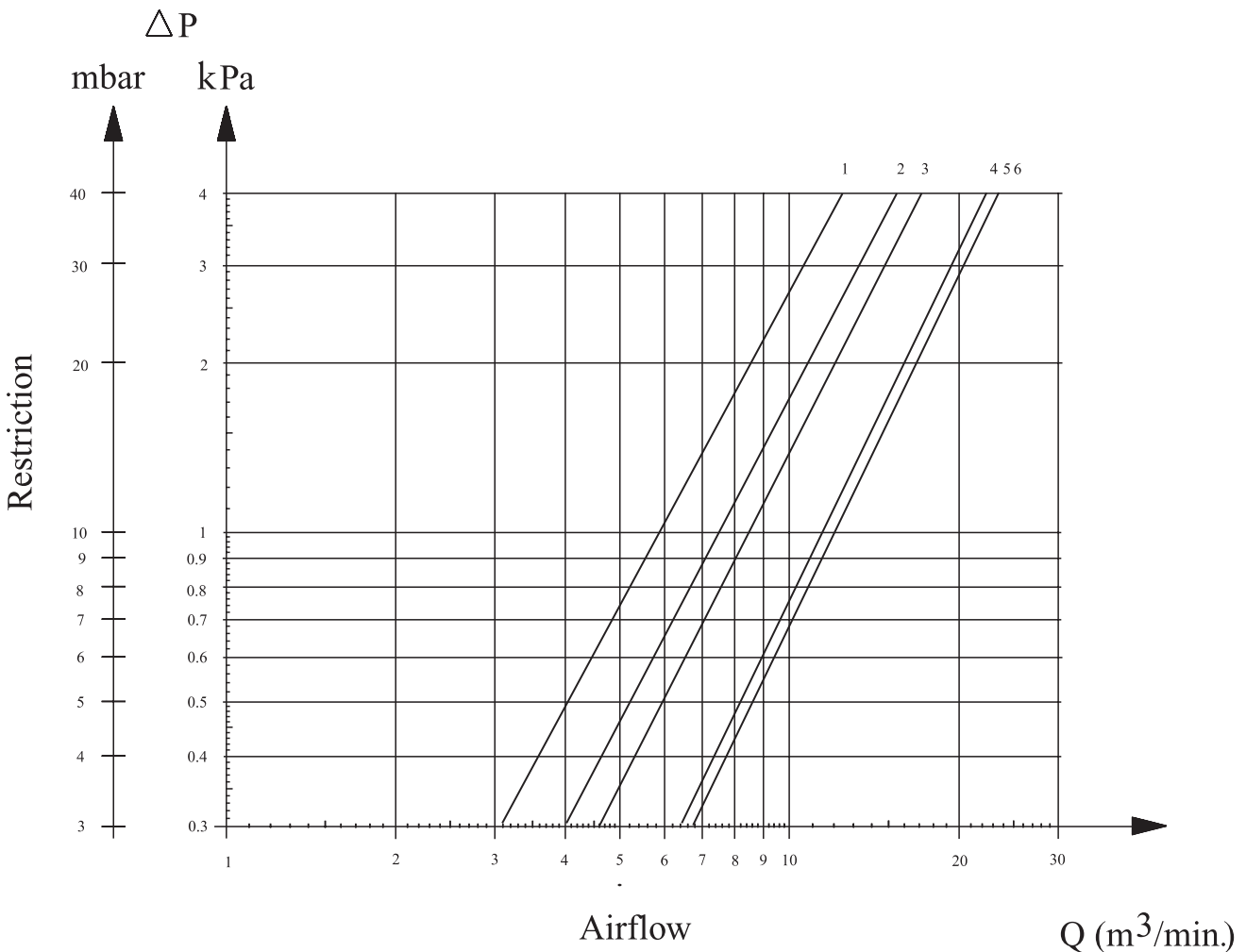
Air Cleaner Model No.	Main Element	Safety Element	Dust Cup*	Mounting band**
B095437	P780522	P780523	P782176	P004073
B100121	P771039	P777639	P777998	P004076
B110155	P778905	P778906	P783014	P004079
B130046	P777279	P777414	P781124	P013722

* Spare Part only
 ** Two mounting bands needed per air cleaner
 ▲ Inlet 180° rotated

SRB RadialSeal™ Restriction Curves

When specifying an Air Cleaner...

Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the table below. The restriction numbers (shown in kPa) indicate the approximate initial restriction of each model air cleaner at that m³/min. If there are two air cleaner models that fit your parameters, choosing the one with the lowest restriction will provide the longest filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.



AxialSeal Air Cleaners

AxialSeal style air cleaners have been around for decades but are being replaced with the new RadialSeal™ style air cleaners.

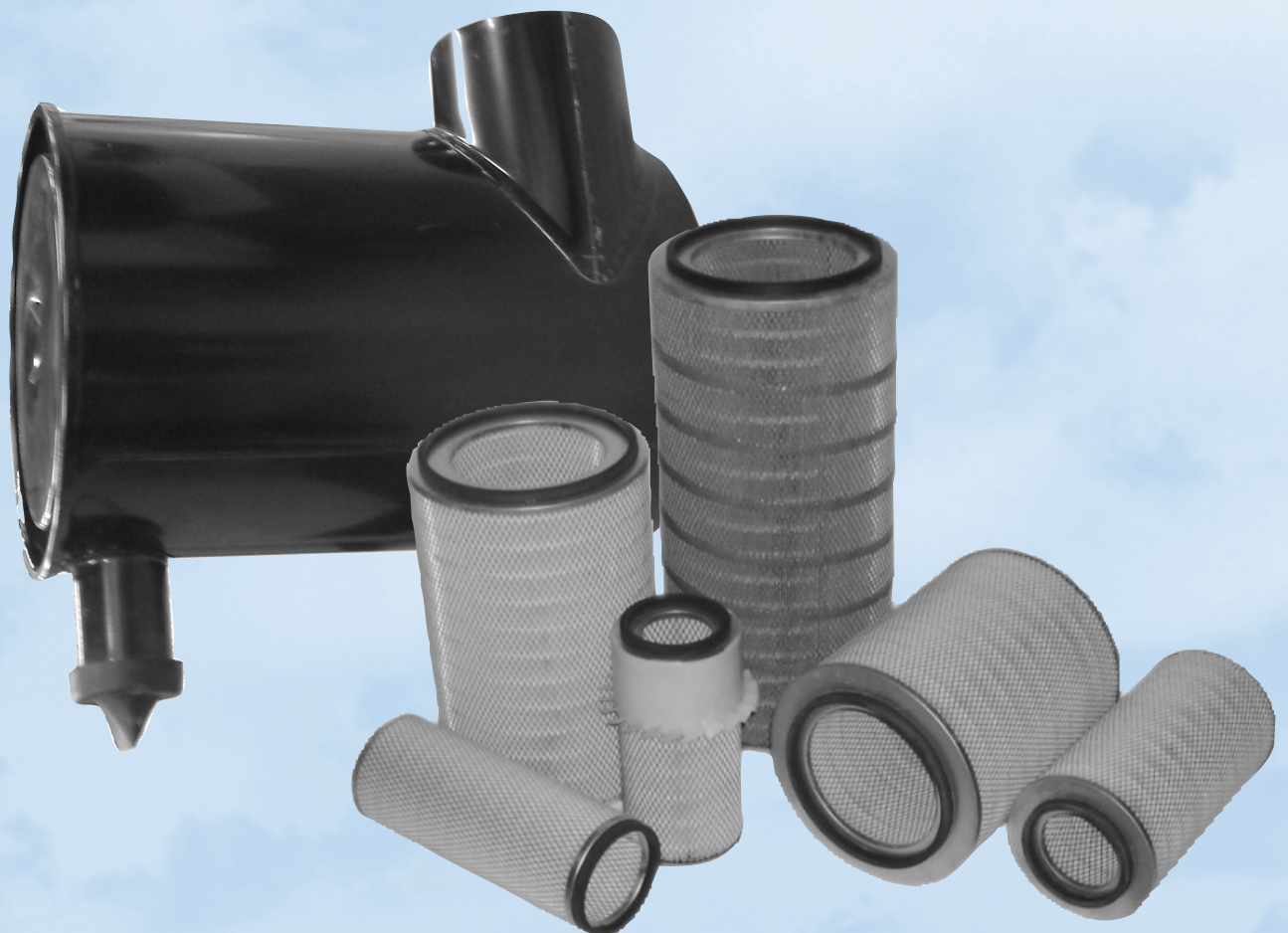
This except for the AxialSeal air cleaners which you will find in the next section.

Nevertheless, if you are selecting a new air cleaner as a replacement or for a new piece of equipment, we recommend you retrofit or install a RadialSeal™ air cleaner.

Replacement parts for the AxialSeal style air cleaners can be found in the “Service Parts” section on page 107-110.

Section Index

FLB - Louvered Body	72-75
FTG Cycloflow™	76-79
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SRG-STG Pictures	88



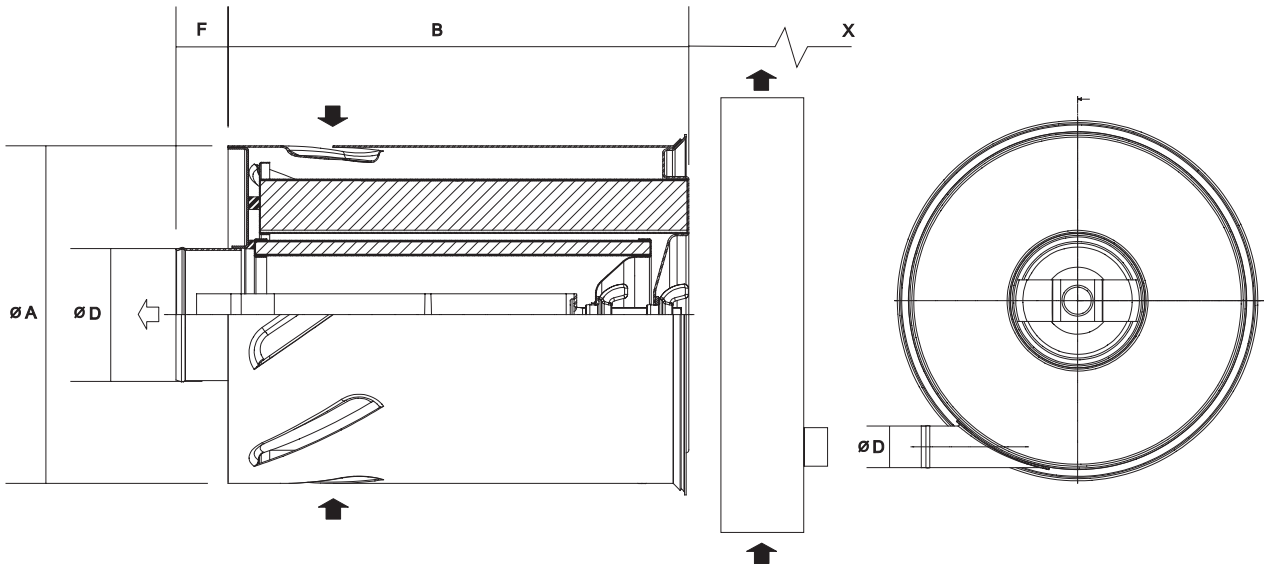
FLB – Louvered Body Introduction



The FLB – Louvered Body Air Cleaner is a two-stage air cleaner with scavenge exhaust system and AxialSeal Sealing Technology.

FLB – Louvered Body Air Cleaners are designed especially for combines and other heavy-duty construction and agricultural equipment operating in severe dust, fibers, lint and shaft environments. To be used with an exhaust ejector.

FLB – Louvered Body Specifications



Curve No.	Style	Air Cleaner Model No	Airflow Range m ³ /min.	Dimensions (mm)						
				A	B	C	D	F	G	X°
1	FLB	B065018	3 - 5	167	360	-	76	28	32	345
2	FLB	B080022	4,5 - 7,2	203	423	-	89	54	32	415
3	FLB	B100067	7 - 12	259	430	-	101	50	32	425
4	FLB	B120260	12 - 17	300	424	-	127	80	32	415

° In column X above - free space needed to remove main element

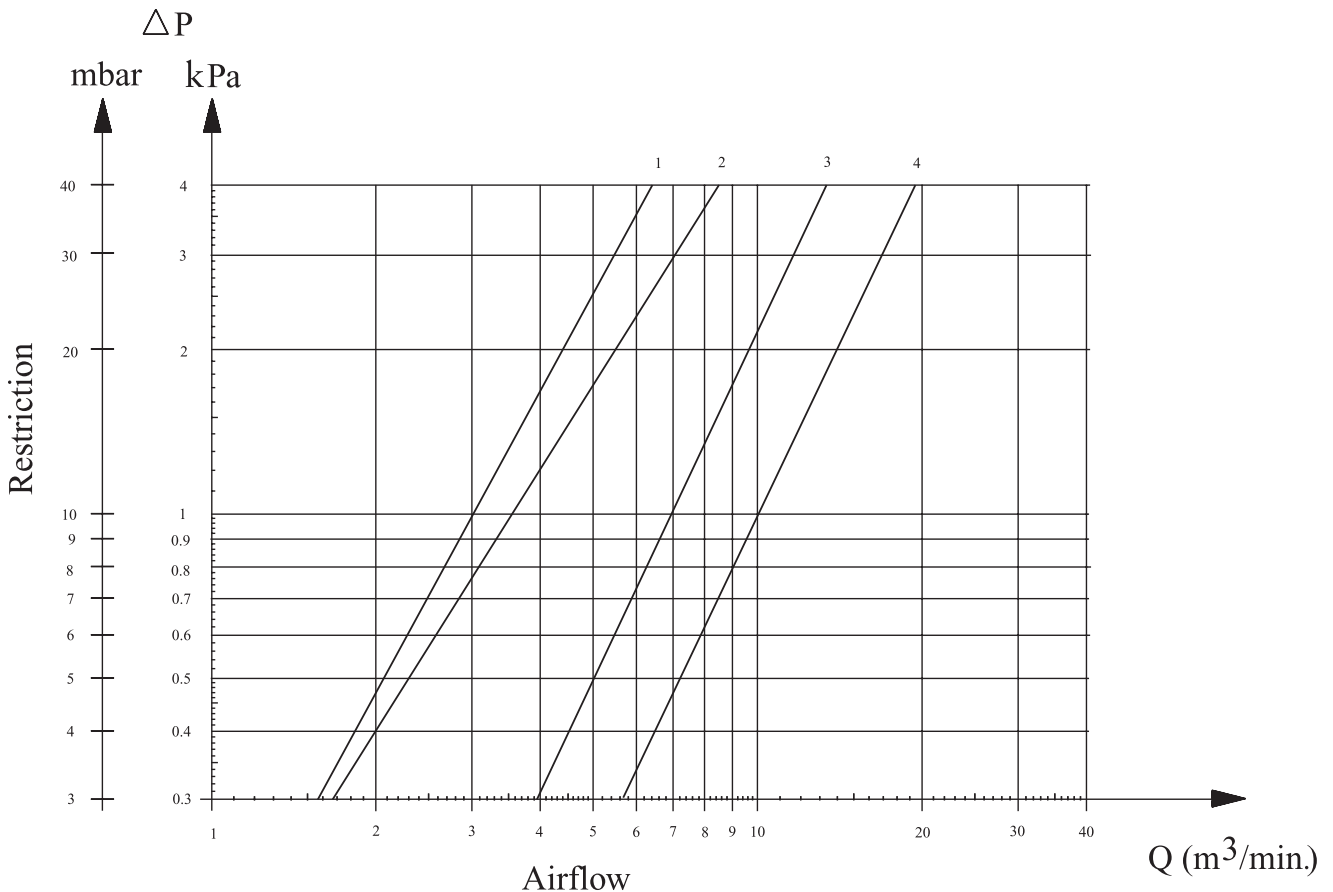
Air Cleaner Model No.	Main Element	Safety Element	Mounting band*
B065018	P772565	P770207	P007191
B080022	P772556	P119410	P004307
B100067	P772530	P133138	P004076
B120260	P772520	P770678	H000349

* Two mounting bands needed per Air Cleaner

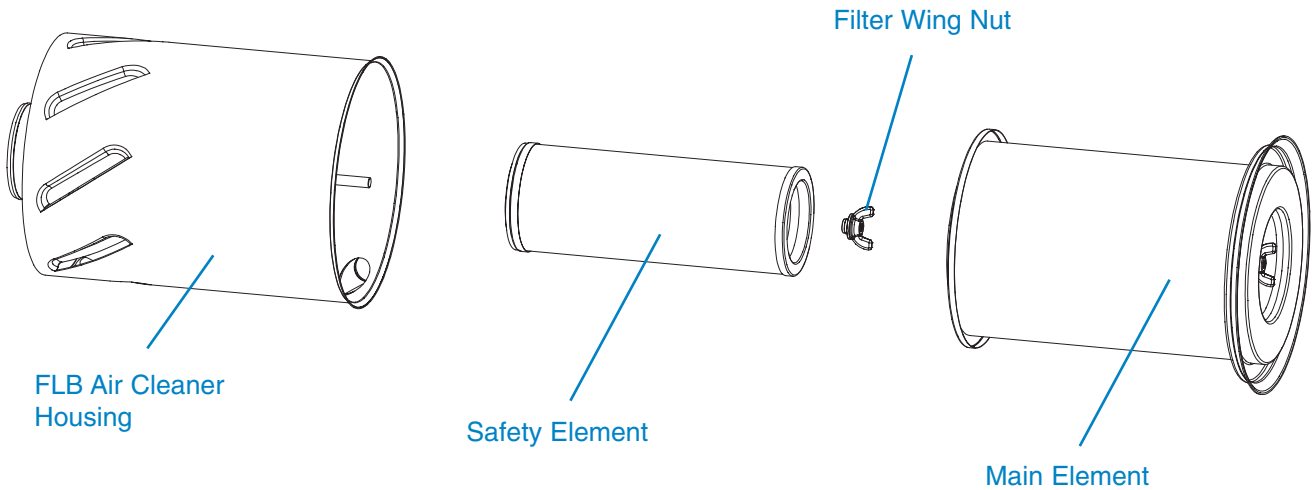
FLB – Louvered Body Airflow Restriction Curves

When specifying an Air Cleaner..

Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the table below. The restriction numbers (shown in kPa) indicate the approximate initial restriction of each model air cleaner at that m³/min. If there are two air cleaner models that fit your parameters, choosing the one with the lowest restriction will provide the longest filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.



FLB – Louvered Body Service Parts



B065018	Main Element	P772565	B100067	Main Element	P772530
	Safety Element	P770207		Safety Element	P133138
	Filter Wing Nut	P138403		Filter Wing Nut	P138403
B080022	Main Element	P772556	B120260	Main Element	P772520
	Safety Element	P119410		Safety Element	P770678
	Filter Wing Nut	P138403		Filter Wing Nut	P138403

FTG Cycloflow™ Introduction

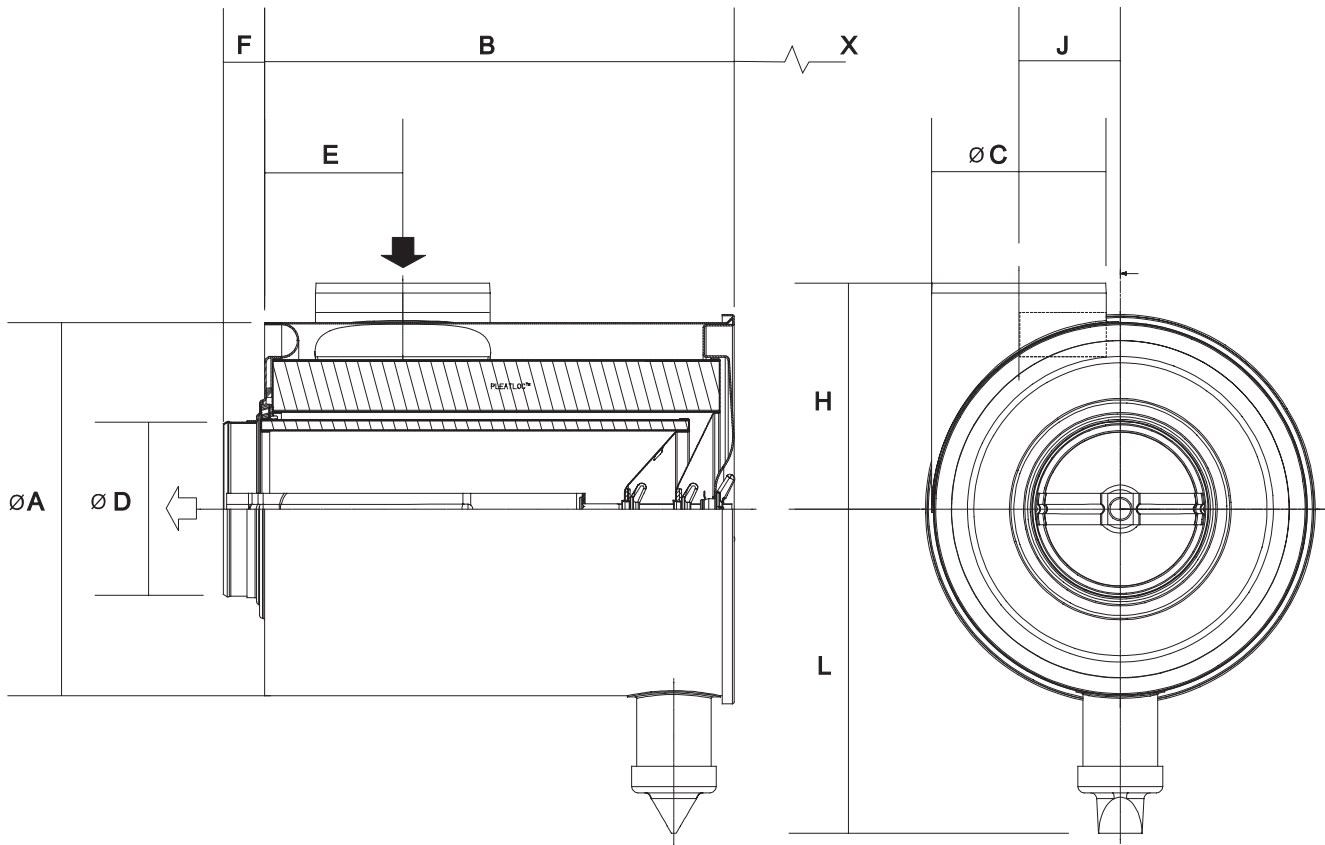


The FTG Cycloflow™ Air Cleaner is a two-stage air cleaner with built in Pre-Cleaner and AxialSeal Sealing Technology.

FTG Cycloflow™ Air Cleaners used in medium- to heavy-duty applications.

The Air Cleaner is mounted underhood with the service cover on the outside and an optional inlet hood on top.

FTG Cycloflow™ Specifications



Curve No.	Style	Air Cleaner Model No.	Airflow Range m ³ /min.	Dimensions (mm)									
				A	B	C	D	E	F	H	J	L	X°
1	FTG	G210007 ^{**}	32 - 59	546	613	254	254	150	90	330	146	442	613
1	FTG	G210010 [*]	32 - 59	546	613	254	254	150	90	330	146	442	613

^{**} Inlet on opposite side

^{*} Includes safety element

^o In column X above - free space needed to remove main element

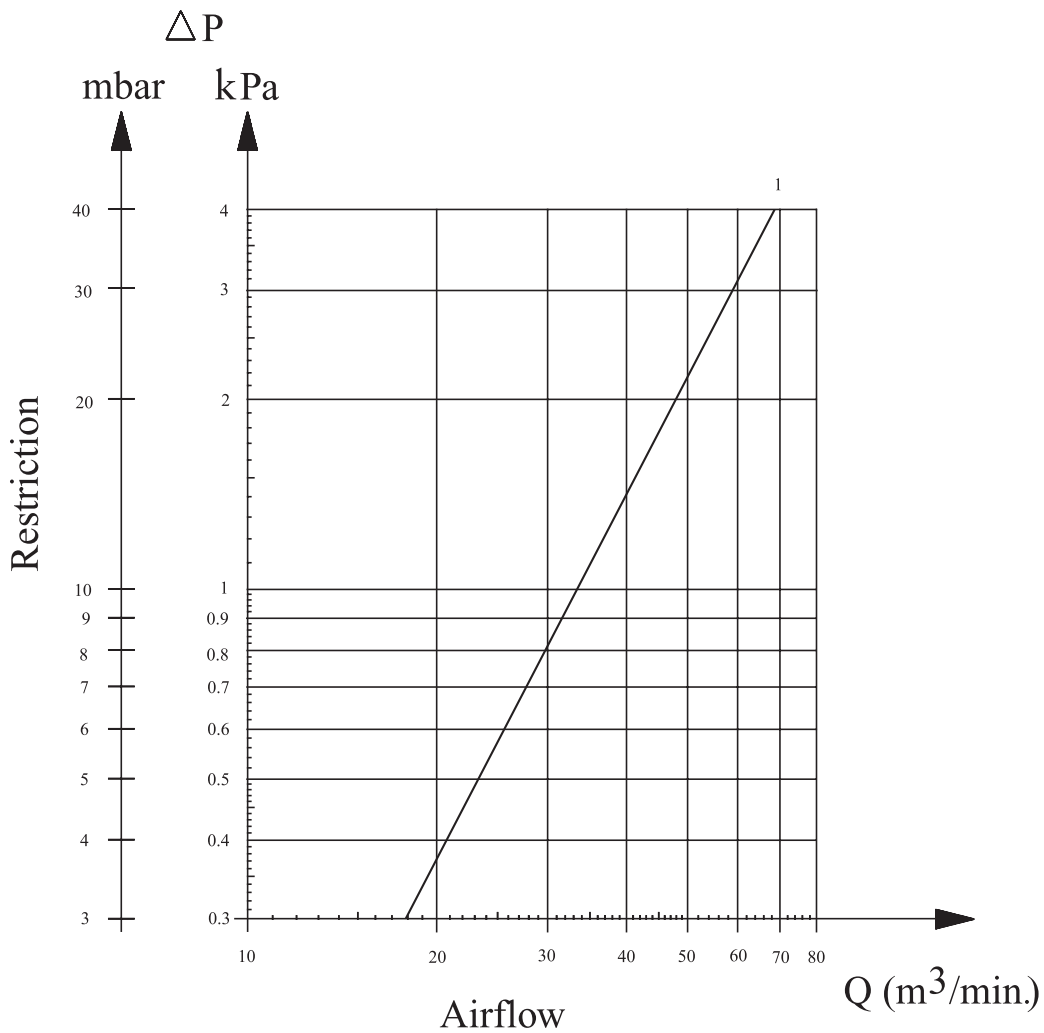
Air Cleaner Model No.	Main Element	Safety Element	Vacuator™ valve	Raincap	Mounting band*
G210007	P182040	P117781	P105220	H770082	H770068
G210010	P182040	P117781	P105220	H770082	H770068

* Two mounting bands needed per Air Cleaner

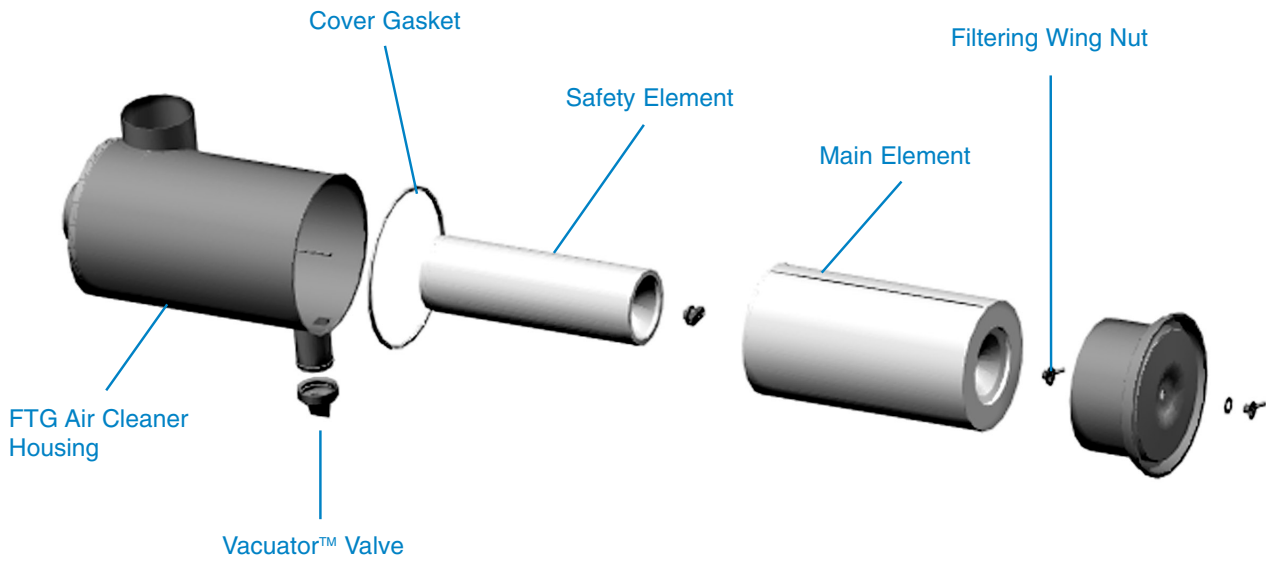
FTG Cycloflow™ Airflow Restriction Curves

When specifying an Air Cleaner...

Determine the Airflow Requirements of your engine, then find the corresponding m³/min. airflow in the table below. The restriction numbers (shown in kPa) indicate the approximate initial restriction of each model air cleaner at that m³/min. If there are two air cleaner models that fit your parameters, choosing the one with the lowest restriction will provide the longest filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.



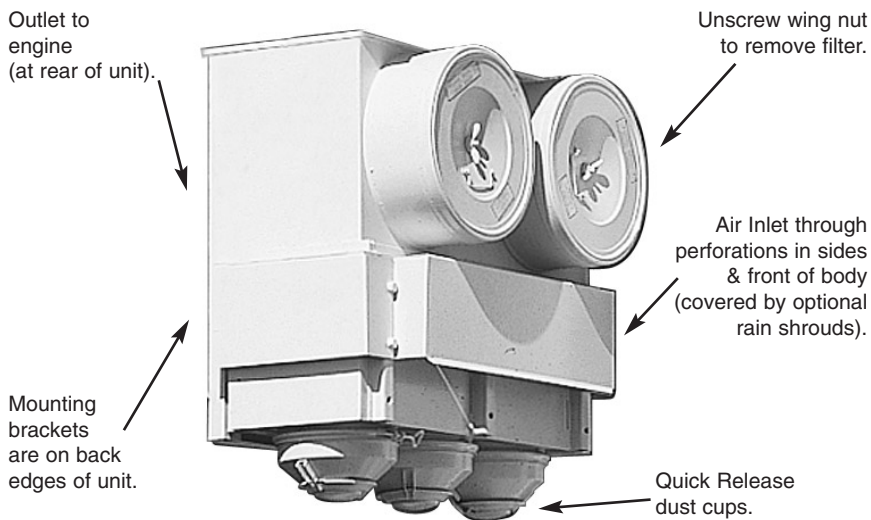
FTG Cycloflow™ Service Parts



G210007	Main Element	P182040
	Safety Element	P117781
	Filter Wing Nut	P116175
	Vacuator™ Valve	P105220
	Gasket Washer	P105740
G210010	Main Element	P182040
	Safety Element	P117781
	Filter Wing Nut	P116175
	Vacuator™ Valve	P105220
	Gasket Washer	P105740

SRG Donaclone™ Introduction

Designed to fight the worst dust conditions.



The SRG Donaclone™ Air Cleaner is a two-stage – high airflow – air cleaner with built-in Donaclone™ tube pre-cleaner and AxialSeal Sealing Technology.

SRG Donaclone™ Air Cleaners are used on heavy-duty construction and mining equipment.

SRG Donaclone™ Facts

Applications

- Allows 48 to 115 m³/min. airflow throughput per air cleaner – use two air cleaners to double airflow throughput.

Air Cleaner Features

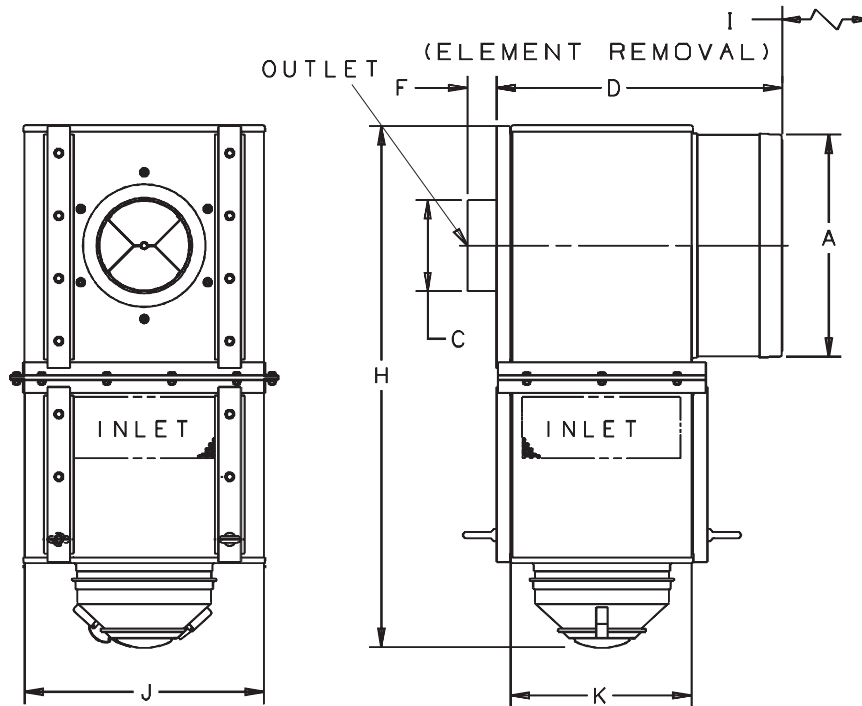
- Single outlet: SRG20 (1 filter).
Dual outlet: SRG29 (2 filters).
- Very reliable! Only one critical element seal! No moving parts!
- Built-in Donaclone™ pre-cleaning (see page 80) tubes separate up to 95% of incoming dust to dust cup before it reaches the filter.
- SRG Donaclone™ air cleaners are finished with a red oxide primer, ready to be painted to match your equipment.
- Dust cup options:
 - Quick-release, for manual dumping (shipped with SRG Donaclone™ initially).
 - Vacuator™ Valve, for automatic dumping (optional replacement style).

- Designed for large, high horsepower off-road equipment.
- For large engines operating in heavy-dust environments.
- Vertical mounting.
- Perforated inlets on all models.
- Heavy metal rain shrouds available optionally.
- Taps for filter service indicators on all models.

Filter Features

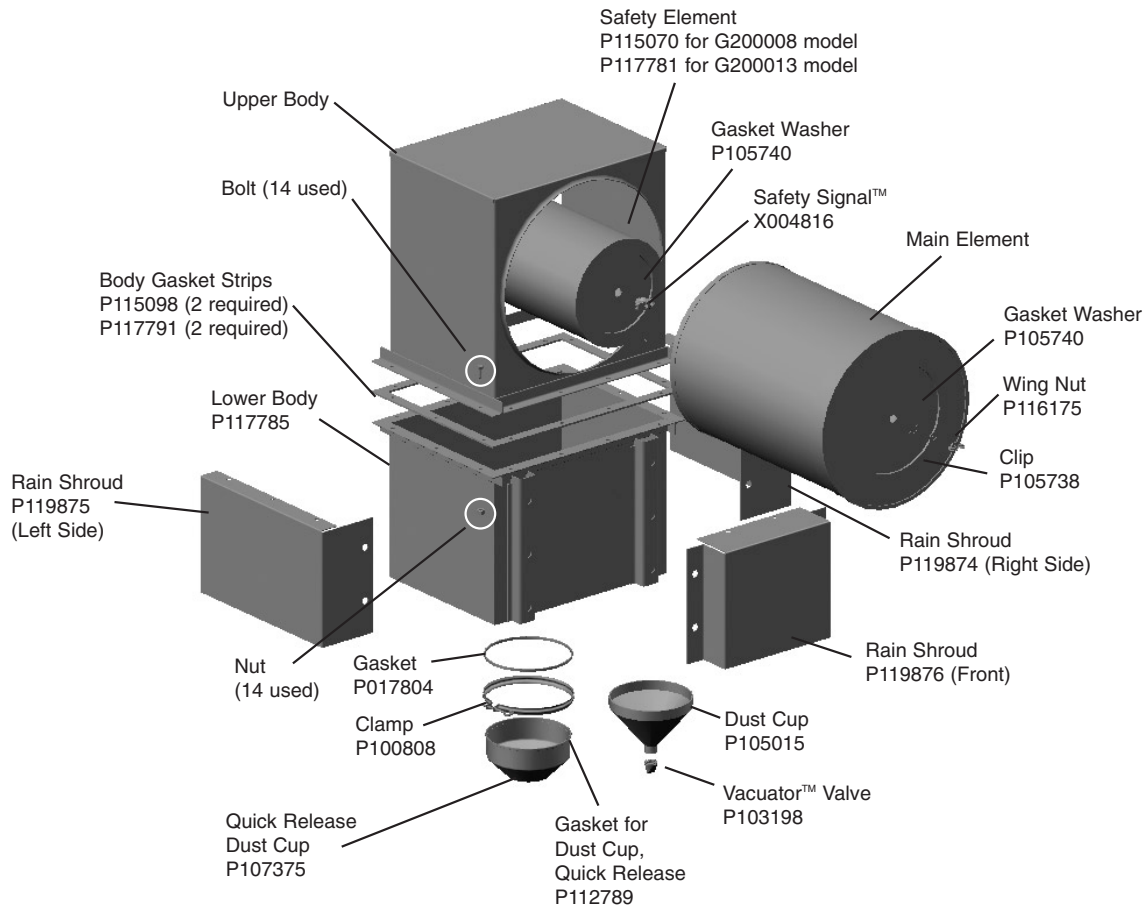
- Replacement main element choices: Standard life filters (for scheduled maintenance) and Donaldson Endurance extended service high efficiency filters.
- Safety element on all models.

SRG Donaclone™ Specifications



Style	Air Cleaner Model No.	Airflow Range m ³ /min. @		Dimensions (mm)								Service Indicator Tap	Weight (kg)
		150 mm H ₂ O	200 mm H ₂ O	A	C	D	F	H	I	J	K		
Single Outlet Models													
SRG	G200008	48,1	56,1	495	203	636	65	1172	603	533	400	Yes	102
SRG	G200013	50,4	58,3	495	254	636	65	1172	603	533	400	Yes	91
Dual Outlet Models													
SRG	G290000	73,1	85,0	495	203	636	65	1150	603	1092	400	Yes	154
SRG	G290012	94,6	107,6	495	254	636	65	1150	603	1092	400	Yes	154
SRG	G290023	101,9	115,5	495	203	636	65	1150	603	1092	400	Yes	154

SRG Donaclone™ Service Parts Single Outlet Models

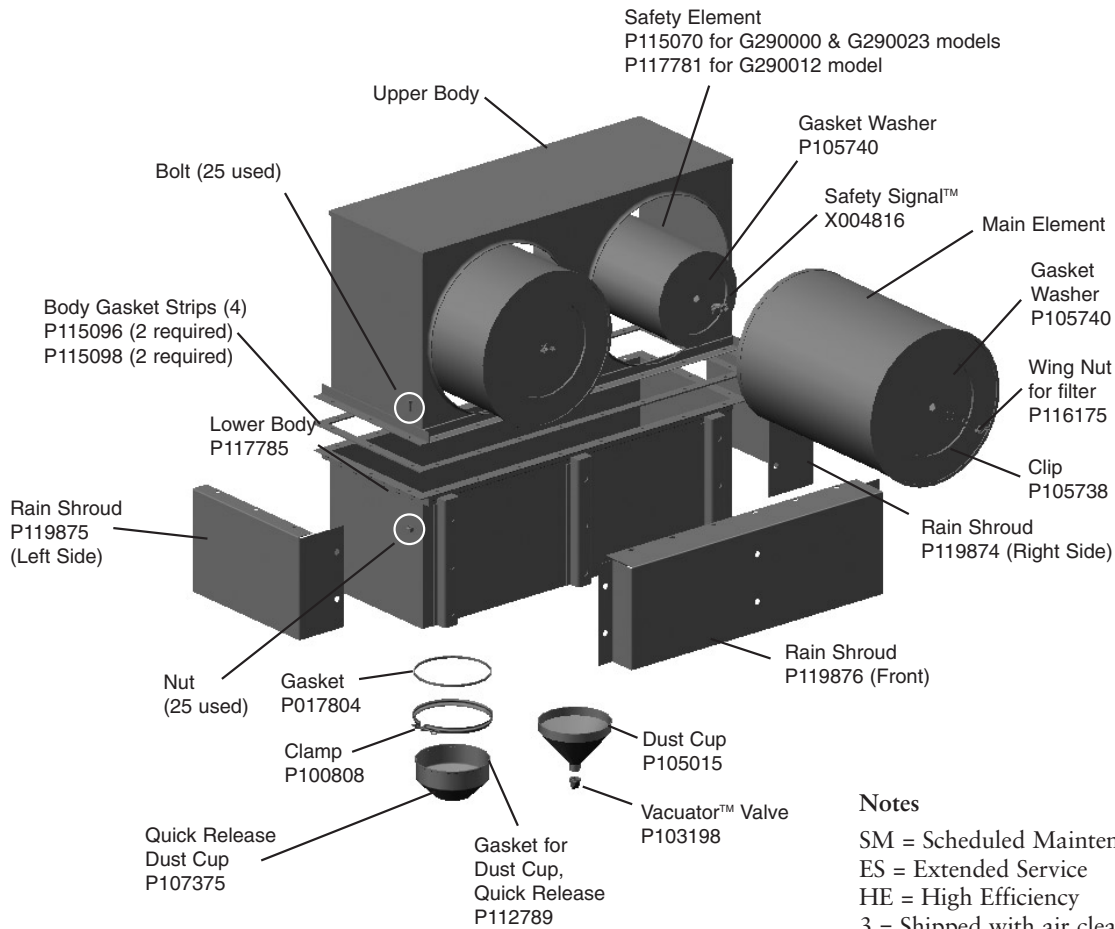


G200008		G200013	
Lower Body	P117785	Lower Body	P117785
Clamp	P100808	Clamp	P100808
Clip	P105738	Clip	P105738
Dust Cup, Quick Release	P107375	Dust Cup, Quick Release	P107375
Main Element - SM	P181038	Main Element - SM	P181040
Main Element - ES & HE	P185038	Main Element - ES & HE	P185040
Main Element	P182038	Main Element	P182040
Safety Element	P115070	Safety Element	P117781
Gasket, Body	P117791	Gasket, Body	P117791
Gasket, Body	P115098	Gasket Washer	P105740
Gasket, Body or Cup	P017804	Gasket, Body	P115098
Gasket, QR Cup	P112789	Gasket, Body or Cup	P017804
Gasket Washer	P105740	Gasket, QR Cup	P112789
Rain Shroud, Front	P119876	Rain Shroud, Front	P119876
Rain Shroud, Right Side	P119874	Rain Shroud, Right Side	P119874
Rain Shroud, Left Side	P119875	Rain Shroud, Left Side	P119875
SafetySignal Indicator	X004816	SafetySignal Indicator	X004816
Vacuator™ Valve	P103198	Vacuator™ Valve	P103198
Wing Nut, Filter	P116175	Wing Nut, Filter	P116175

Notes

- SM = Scheduled Maintenance
- ES = Extended Service
- HE = High Efficiency
- 3 = Shipped with air cleaner initially

SRG Donaclone™ Service Parts Dual Outlet Models



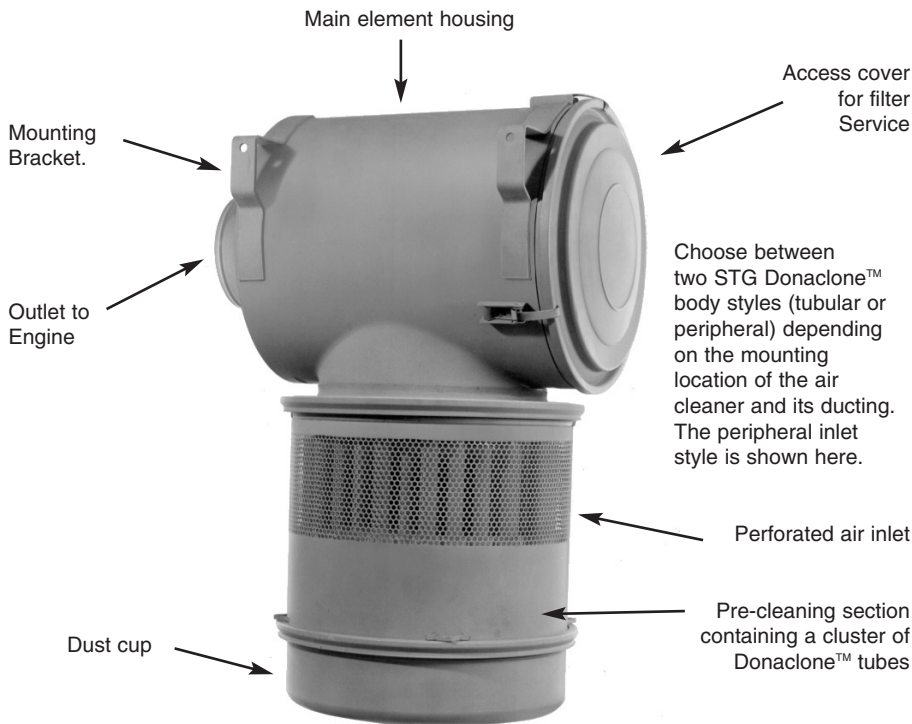
Notes

- SM = Scheduled Maintenance
- ES = Extended Service
- HE = High Efficiency
- 3 = Shipped with air cleaner initially

G290000		G290012		G290023	
Lower Body	P115110	Clamp	P100808	Clamp	P100808
Clamp	P100808	Clip	P105738	Clip	P105738
Clip	P105738	Dust Cup, Quick Release	P107375	Dust Cup, Quick Release	P107375
Dust Cup, Quick Release	P107375	Main Element - SM	P181040	Main Element - SM	P181038
Main Element - SM	P181038	Main Element - ES & HE	P185040	Main Element - ES & HE	P185038
Main Element - ES & HE	P185038	Main Element	P182040	Main Element	P182038
Main Element	P182038	Safety Element	P117781	Safety Element	P115070
Safety Element	P115070	Gasket Washer	P105740	Gasket Washer	P105740
Gasket Washer	P105740	Gasket, Body	P115096	Gasket, Body	P115096
Gasket, Body	P115096	Gasket, Body	P115098	Gasket, Body	P115098
Gasket, Body	P115098	Gasket, Body or Cup	P017804	Gasket, Body or Cup	P017804
Gasket, Body or Cup	P017804	Gasket, QR Cup	P112789	Gasket, QR Cup	P112789
Gasket, QR Cup	P112789	Rain Shroud, Front	P119877	Rain Shroud, Front	P119877
Rain Shroud, Front	P119877	Rain Shroud, Right Side	P119874	Rain Shroud, Right Side	P119874
Rain Shroud, Right Side	P119874	Rain Shroud, Left Side	P119875	Rain Shroud, Left Side	P119875
Rain Shroud, Left Side	P119875	SafetySignal Indicator	X004816	SafetySignal Indicator	X004816
SafetySignal Indicator	X004816	Vacuator™ Valve	P103198	Vacuator™ Valve	P103198
Vacuator™ Valve	P103198	Wing Nut, Filter	P116175	Wing Nut, Filter	P116175
Wing Nut, Filter	P116175				

STG Donaclone™ Introduction

Designed to fight the worst dust conditions.



The STG Donaclone™ Air Cleaner is a two-stage – high airflow - air cleaner with built-in Donaclone™ tube pre-cleaner and AxialSeal Sealing Technology.

STG Donaclone™ Air Cleaners are used on heavy-duty applications such as scrapers, crawlers, dumpers and haul trucks.

STG Donaclone™ Facts

Applications

- Allows 11 to 50 m³/min. airflow throughput per air cleaner.
- Horizontal or vertical installation.

Air Cleaner Features

- Very reliable! Only one critical filter seal!
- Airflow throughput can be doubled by using two air cleaners.
- Two body styles (peripheral inlet and tubular inlet) to accommodate location & ducting.
- Optional inlet shroud available for peripheral style.
- When the air cleaner is mounted directly on the engine and there is clearance around it for airflow, choose the peripheral inlet style.
- When the air cleaner is mounted above the cab or somewhere far from the engine to get above the dust cloud, choose the tubular inlet style, which will accept ducting into the inlet.
- Built-in Donaclone™ pre-cleaning tubes separate up to 95% of incoming dust to dust cup before it reaches the filter, resulting in more thorough cleaning & fewer filter changes!

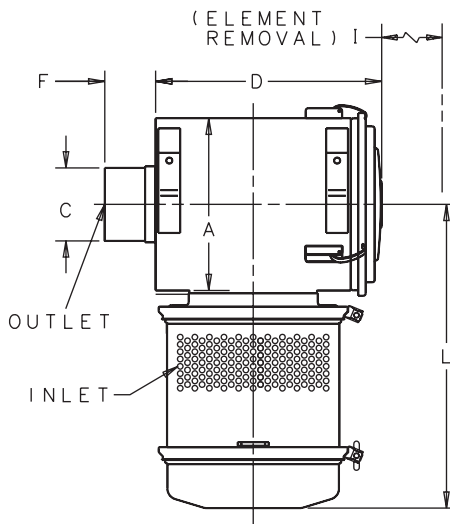
- Off-road, high dust conditions
- Ideal for scrapers, earth movers, graders
- Choose the dust cup best suited to your maintenance practices:
 - (1) the quick-release style for easy, manual emptying,
 - or (2) a dust cup with a Donaldson Vacuator™ Valve that expels the dust automatically.
- All models include a fitting for a filter service indicator.

Filter Features

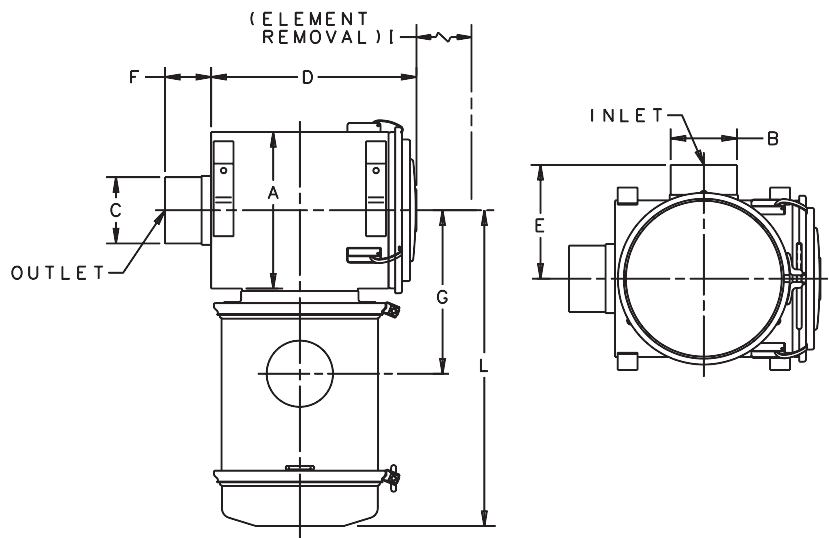
- Replacement main element choices: Standard life filters (for scheduled maintenance) and Donaldson Endurance extended service high efficiency filters.
- Safety element on all models.

STG Donacclone™ Specifications

With Peripheral Inlet



With Tubular Inlet



Style	Air Cleaner Model No.	Airflow Range m ³ /min. @			Dimensions (mm)									Weight (kg)
		150 mm H ₂ O	200 mm H ₂ O	255 mm H ₂ O	A	B	C	D	E	F	G	I	L	
STG with Peripheral Inlet														
STG	G140076	20,1	23,8	26,9	356	N/A	152	441	N/A	99	393	387	614	34
STG	G160077	28,7	33,3	37,4	406	N/A	178	500	N/A	99	439	432	664	41
STG	G161006	38,5	44,5	49,8	406	N/A	203	662	N/A	89	439	594	684	52
STG with Tubular Inlet														
STG	G120332	11,1	12,9	12,9	300	127	127	392	200	100	293	335	560	24
STG	G140445	16,7	19,4	21,8	356	152	152	441	254	99	334	387	614	35
STG	G160445	25,9	30,2	30,2	406	178	178	498	279	98	376	438	668	42
STG	G161020*	31,9	37,0	37,0	406	152	203	662	255	89	257	594	668	55

* G161020 has two inlets, each 152 mm in diameter.
 Note: All STG models are tapped to accept a filter service indicator.

STG Donaclone™ Service Parts with Peripheral Inlet

G140076

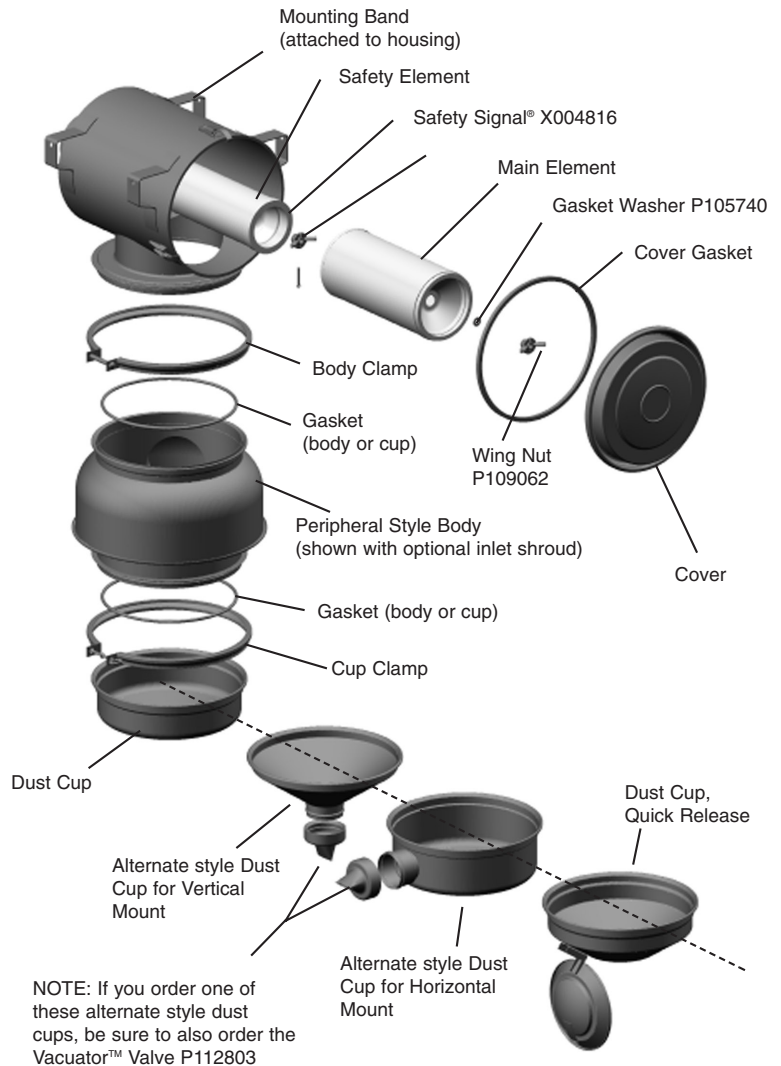
Cup Clamp	P100866	
Cover Latch Assembly	P017617	
Dust Cup	P100860	3
Main Element - SM	P181041	
Main Element - ES & HE	P185041	
Main Element	P182041	3
Safety Element	P119370	
Gasket (body or cup)	P017335	
Cover Gasket	P016972	
Gasket Kit	X003538	9
Inlet Shroud (optional)	P102870	
Mounting Band	H000350	2
Spring Clip & Pin	X005555	

G160077

Lower Body	P115023	
Body Clamp	P100780	
Cup Clamp	P100789	
Cover	P109153	
Cover Latch Assembly	P017617	
Dust Cup	P100794	3
Dust Cup, Quick Release	P107377	
Dust Cup, Vacuator™ Valve, Horz.	P103530	
Dust Cup, Vacuator™ Valve, Vert.	P104973	
Main Element - SM	P181039	
Main Element - ES & HE	P185039	
Main Element	P182039	3
Safety Element	P114931	
Gasket (body or cup)	P017336	
Cover Gasket	P017367	
Gasket Kit	X003539	9
Inlet Shroud (optional)	P101759	
Mounting Band	H000351	2
Spring Clip & Pin	X005555	

G161006

Body Clamp	P100780	
Cup Clamp	P100789	
Dust Cup	P100794	3
Dust Cup, Quick Release	P107377	
Dust Cup, Vacuator™ Valve, Horz.	P103530	
Dust Cup, Vacuator™ Valve, Vert.	P104973	
Main Element - SM	P181042	
Main Element - ES & HE	P185042	
Main Element	P182042	3
Safety Element	P128408	
Gasket (body or cup)	P017336	
Cover Gasket	P017367	
Gasket Kit	X003539	9
Inlet Shroud (optional)	P101759	
Mounting Band	H000351	2



Spring Clip & Pin Repair Kit: X005555
(Use it to repair the P017617 Cover Latch Assembly)

Notes

- 2 = Two required for proper installation
- 3 = Shipped with air cleaner initially
- 9 = Gasket Kit includes all gaskets listed
- ES = Extended Service
- HE = High Efficiency
- SM= Scheduled Maintenance

STG Donaclone™ Service Parts with Tubular Inlet

G120332

Lower Body	P110875	
Dust Cup, Quick Release	P107375	
Main Element - SM	P181044	
Main Element - ES & HE	P185044	
Main Element	P182044	3
Safety Element	P119371	
Gasket (body or cup)	P017804	
Cover Gasket	P017365	
Mounting Band	H000349	2
Spring Clip & Pin	X005555	

G140445

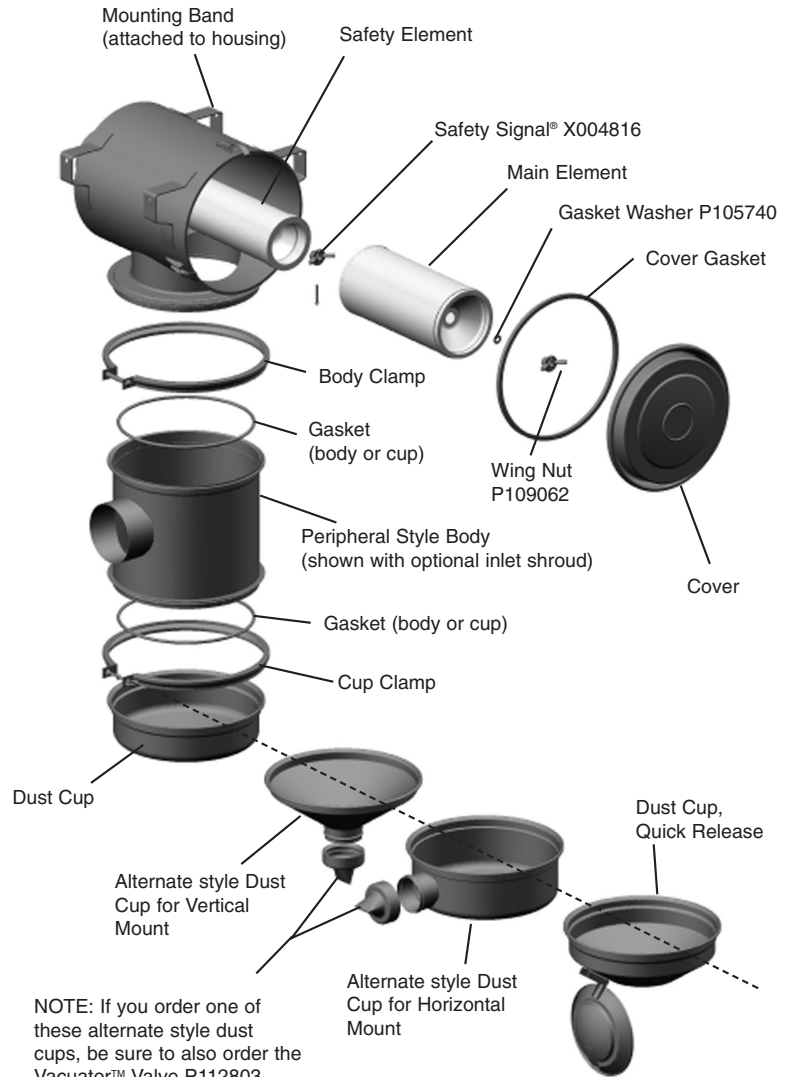
Air Inlet Hood	H000606	
Lower Body	P114100	
Cover Latch Assembly	P017617	
Dust Cup	P100860	3
Dust Cup,		
Vacuator™ Valve, Horz.	P103746	
Dust Cup,		
Vacuator™ Valve, Vert.	P105016	
Main Element – SM	P181041	
Main Element – ES & HE	P185041	
Main Element	P182041	3
Safety Element	P119370	
Gasket Kit	X003538	9
Gasket Washer	P105740	
Gasket (body or cup)	P017335	
Cover Gasket	P016972	
Mounting Band	H000350	
Spring Clip & Pin	X005555	

G160445

Cover	P109153	
Cover Latch Assembly	P017617	
Dust Cup	P100794	3
Dust Cup, Quick Release	P107377	
Dust Cup, Vacuator™ Valve, Horz.	P103530	
Dust Cup, Vacuator™ Valve, Vert.	P104973	
Main Element – SM	P181039	
Main Element - ES & HE	P185039	
Main Element	P182039	3
Safety Element	P114931	
Gasket (body or cup)	P017336	
Cover Gasket	P017367	
Gasket Kit	X003539	9
Mounting Band	H000351	2
Spring Clip & Pin	X005555	

G161020

Dust Cup	P100794	3
Dust Cup, Quick Release	P107377	
Dust Cup, Vacuator™ Valve, Horz.	P103530	
Dust Cup, Vacuator™ Valve, Vert.	P104973	
Main Element – SM	P181042	
Main Element - ES & HE	P185042	
Main Element	P182042	3



NOTE: If you order one of these alternate style dust cups, be sure to also order the Vacuator™ Valve P112803

Notes

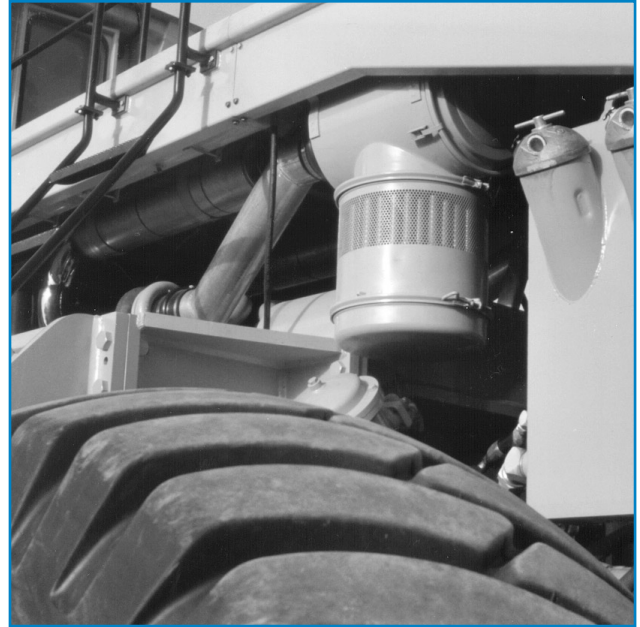
- 2 = Two required for proper installation
- 3 = Shipped with air cleaner initially
- 9 = Gasket Kit includes all gaskets listed
- ES = Extended Service
- HE = High Efficiency
- SM= Scheduled Maintenance

Safety Element	P128408	
Gasket (body or cup)	P017336	
Cover Gasket	P017367	
Gasket Kit	X003539	9
Mounting Band	H000351	2

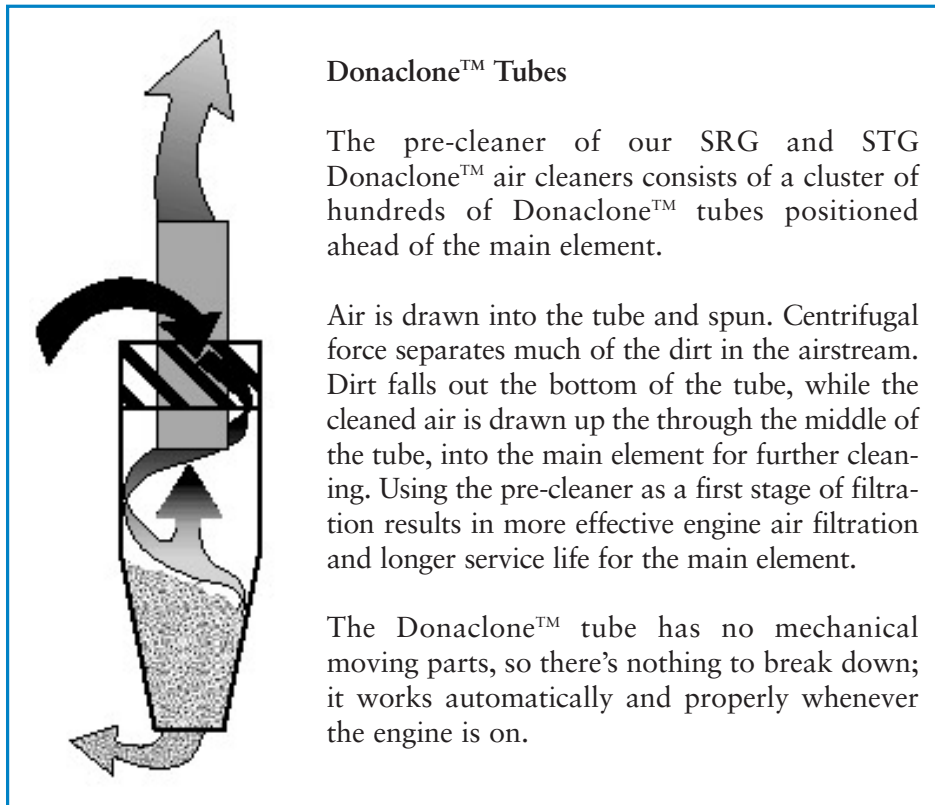
Pictures



A huge double-unit SRG29 Donaclone™, our largest engine air cleaner, protects this haul truck under severely dusty operating conditions. The SRG29 Donaclone™ has 3 dust cups on the bottom of the unit.



This STG Donaclone™, mounted on a large mining machine, is protecting the engine from harmful dirt in this severe dusty environment.



Donaldson Intake Accessories

... help you solve problems and maintain your system

The accessories in this catalogue have been designed to solve specific problems such as excessive moisture in the air intake, leaves/debris clogging the air inlet, excessive intake system noise. Some - such as filter service indicators, rubber reducers/adaptors and Vacuator™ Valves - simply help you maintain your system more easily.

Section Index

Clamps, Worm-Drive Hose	90
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For more details on TopSpin™ pre-cleaners see page 96-97.

Worm-Drive Hose Clamps

- Versatile clamps for wide size range of hose connections.
- Made of strong, durable, noncorrosive stainless steel.
- Inside of clamp is lined so that hose doesn't bulge through clamp holes.
- Narrow band enables easy installation in confined areas.



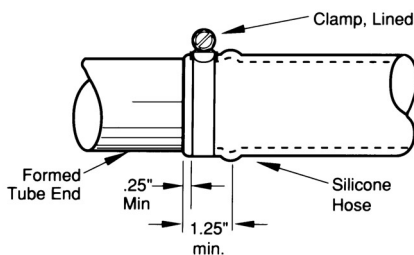
Lined Hose Clamps	
Part Number	Size mm
P532919	14-21
P532920	17-24
P532921	21-27
P532923	21-38
P532924	21-44
P532922	29-32
P115200	40-62
P115201	52-76
P143422	71-95
P115202	84-108
P115203	109-133

Constant Torque Clamps	
Part Number	Size mm
P532925	57-79
P532926	70-92
P532927	83-105
P532928	95-117
P532929	108-130

High Torque Clamps	
Part Number	Size mm
P115204	108-130
P115205	133-156
P115206	159-181
P115207	184-206
P115208	210-232
P115209	260-286

Recommended application up to 4.6 kg.m torque

Donaldson lined hose clamps seal silicone and other soft hoses without damage. The inner liner extends under the perforations to protect the hose and prevents extrusions through the worm-gear perforations.



Initial torque on lined hose clamp should be 4.6 kg.m. If retorquing is required, limit to 2.3 kg.m.

Recommended application up to 10.4 kg.m torque

Donaldson Constant Torque lined clamps are the best choice for systems where clamps cannot be retightened and have difficult access. Perfect for applications requiring higher torque, large diameters, temperature extremes, or where expansions and contractions within the system are common. This clamp is a good choice for critical coolant and charge-air connections.

Recommended application up to 17.3 kg.m torque

This extra heavy-duty clamp ensures total protection against leakage.....eliminates the need for double clamping.

T-Bolt Clamps



T-Bolt Clamps		
Part Number	Nominal I.D.	Size mm
P148337	51,00	57-64
P148338	57,00	63-70
P148339	64,00	71-78
P148340	70,00	78-85
P148341	76,00	84-91
P148342	89,00	98-104
P148343	102,00	109-116
P148344	114,00	122-129
P148345	127,00	135-142
P148346	140,00	151-158
P148347	152,00	162-169
P148348	178,00	187-198
P148349	203,00	216-226
P148350	254,00	267-277

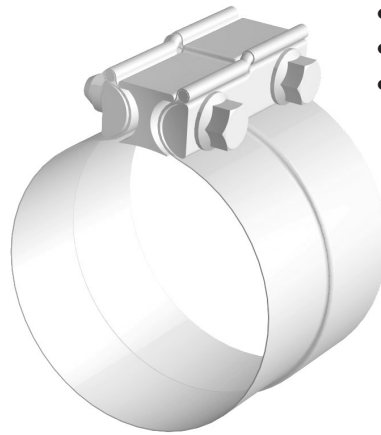
SealClamps™

Preformed & Flat Styles

Used to seal muffler inlets, outlets, elbow joints, flex pipes, and other system connections. Also minimizes noise and exhaust gas leaks.

SealClamps™ are easy to install! There's no need to weld or disconnect your exhaust system.

When installed, the wide band conforms to the shape of straight or flex pipe, and seals without distorting the pipe.

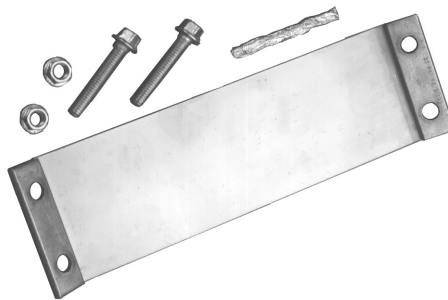


Stepped Preformed SealClamp™

- Full 360° preformed
- No flex pipe pinching
- Available in stainless and aluminized

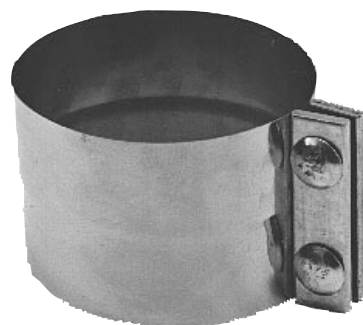
Stepped Preformed SealClamps™		
Stainless	Aluminized	Pipe mm
X007829	X007832	64
X007830	X007833	76
X007831	X007834	89
X007784	X007824	102
X007785	X007805	127

- For overlapping I.D. to O.D. slotted joints and flex tube.
- Nuts and bolts fit both 9/16" and 14mm wrenches.
- Reduces noise and exhaust leaks.
- Installs easily – no disconnecting or welding necessary.
- Available in aluminized and stainless steels.
- Stainless models have improved corrosion resistance and high temperature strength compared to aluminized.



Flat Band SealClamp™

Flat Band SealClamps™		
Stainless	Aluminized	Pipe mm
X004536		51
X004537		57
X004476		64
X004538		70
X004478	X005921	76
X004480	X006204	89
X004482	X006203	102
X004962		114
X004484	X006202	127
X004539		152



Preformed SealClamp™

Preformed SealClamps™	
Stainless	Pipe mm
X005265	64,00
X005921	76,00
X005164	89,00
X007057	152,00

Exhaust Ejectors Introduction

A Donaldson exhaust ejector removes dirt and debris from the air intake pre-cleaner through a scavenge hose that is routed out through the exhaust flow of your equipment.

It mounts as a stack at the end of exhaust system; stack caps or extension tubes may be added. There are three styles available – expanded, standard, compact – depending on the space and design of your equipment. Ejectors require no service and have no moving parts. A Donaldson T-Bolt Clamp, as show on page 86, is recommended for installation.

All ejectors are constructed of heavy-gauge, aluminised steel.

Select the appropriate ejector by the intake airflow (m³/min.) of your engine.



Expanded I.D. End Style

- Simplifies installation - requires less parts to install.
- No need for separate connector!
- Fits over most standard muffler outlet tubes.
- Adds only 1000 – 2000 Pa to exhaust backpressure.

Standard Style

- Can be used with any pre-cleaner style.
- Adds only 1000 – 2000 Pa to exhaust backpressure.

Compact Style

- Used primarily on agricultural equipment.
- Adds 2500 – 3800 Pa to exhaust backpressure.

Exhaust Ejectors Introduction

Expanded inlet end style ejectors								
Part Number	Intake m ³ /min.	Inlet ID mm	Scavenge tube ID mm	Length mm	Exhaust m ³ /min.		3-ply silicone scavenge hose*	Lined Hose clamp
					min	max		
H002129	14,2 - 20,2	131	38	749	36,0	51,0	P171378	P115200
H002132	29,5 - 41,8	157	51	826	74,3	105,2	P171381	P115200

Standard style ejectors								
Part Number	Intake m ³ /min.	Inlet ID mm	Scavenge tube ID mm	Length mm	Exhaust m ³ /min.		3-ply silicone scavenge hose*	Lined Hose clamp
					min	max		
H001032	6,6 - 9,9	77	38	445	17,6	24,7	P171378	P115200
H001033	8,8 - 12,5	102	38	610	22,2	31,4	P171378	P115200
H001034	10,9 - 15,4	102	38	610	27,5	38,9	P171378	P115200
H001035	14,2 - 20,2	128	38	749	36,0	51,0	P171378	P115200
H001039	36,4 - 51,5	153	51	826	91,6	129,7	P171381	P115200

Compact style ejectors								
Part Number	Intake m ³ /min.	Inlet ID mm	Scavenge tube ID mm	Length mm	Exhaust m ³ /min.		3-ply silicone scavenge hose*	Lined Hose clamp
					min	max		
H001282*	1,25 - 2,0	51	32	178	3,1	3,9	P171376	P532924
H001277*	2,5 - 3,5	57,5	32	202	6,3	8,8	P171376	P532924
H001283*	3,2 - 4,5	64	32	226	8,1	11,3	P171376	P532924
H001278*	4,7 - 6,1	70	32	248	11,7	15,4	P171376	P532924
H001280*	6,4 - 9,5	89	32	318	16,1	24,1	P171376	P532924
H001279*	8,5 - 11,0	77	32	274	21,5	28,0	P171376	P532924
H001281*	10,5 - 13,6	102	32	365	26,5	34,4	P171376	P532924
H001284*	12,7 - 16,7	102	32	365	32,3	42,5	P171376	P532924

* Do not use in fibrous environment, e.g. Combine Harvestors

In-Line Separators Create Two-stage Cleaning

Great for Unexpected Heavier Dust/Water

When your truck is being used in heavier-than-anticipated dust or moisture conditions, you may not have to replace the entire air cleaner. The problem may be solved by adding a Donaldson In-Line separator.

Installing this unit on your one-stage system creates a two-stage air filtration system. This enables an over-highway vehicle, which usually sees only light-dust, to be easily and economically adapted to off-road conditions, where medium- to heavy-dust is encountered.

Applications

- **Vertical model:** On/off road, mounted on inlet tubing or cowl mounted directly to air cleaner.
 - Compatible with engine airflows of 14 to 42.5 m³/min.
- **Horizontal model:** On/off road, typically mounted underhood.
 - Compatible with engine airflows of 2.8 to 39.5 m³/min.

Features

- 80% water removal efficiency.
- 70% dust removal efficiency.

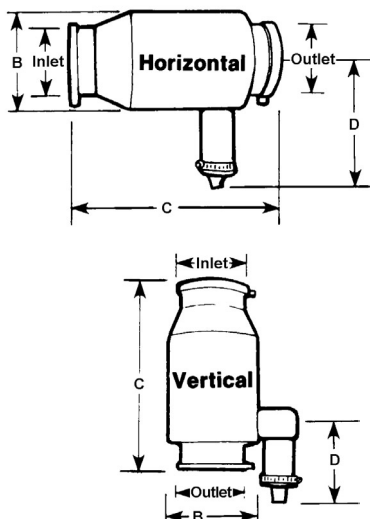
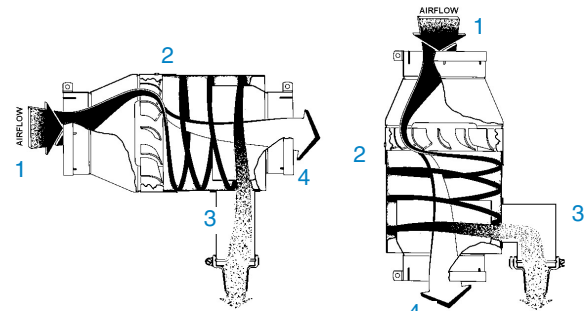
Horizontal model, for airflow of 2,8 to 39,5 m³/min. Mounts underhood.

Vertical model, for airflow of 14 to 42,5 m³/min. Mounts on stack top.



How They Work

- (1) When moisture – and/or dust-filled air – enters at one end, the built-in, stationary vanes cause the air to spin.
- (2) This spin creates centrifugal force, which pushes all moisture and dust to the outside wall where it separates from the air.
- (3) Moisture and dust are thrown into the Vacuator Valve™ tubing, then automatically released by the Vacuator Valve™.
- (4) Clean air (acceptable for maximum filter life and engine performance) passes to the air cleaner.



In-Line separators

Part Number	Airflow Range	Inlet mm	Diameter Outlet mm	Length (B) mm	(C) mm	(D) mm
Horizontal Style						
H001474	2.8-11.3	102 OD2	102 OD	140	292	182
H000875	14.0-28.3	152 ID3	152 ID	217	438	294
H001906	19.8-39.5	178 ID	178 ID	244	432	305
Vertical Style						
H000878	14.0-31.0	152 ID	152 ID	217	438	198
H000886	21.2-31.0	178 ID	178 ID	217	438	198
H001220	25.5-42.5	203 OD	203 OD	244	432	116

- 1 Lightweight aluminium construction
- 2 OD = Outer Diameter
- 3 ID = Inner Diameter

Horizontal, In Line Moisture Skimmer

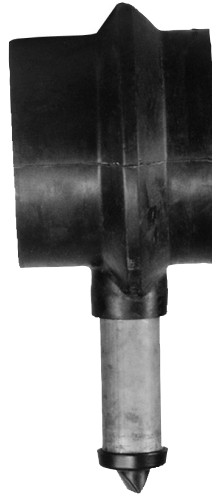
Removes Water from Intake System

Applications

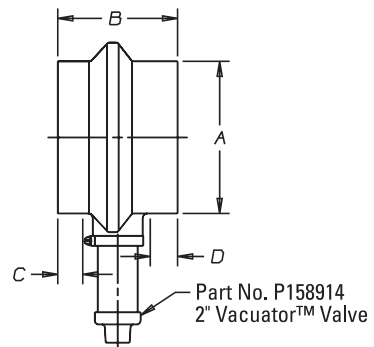
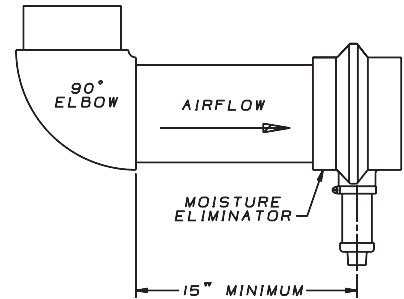
- Allows 17 to 34 m³/min. airflow.
- Horizontal mount in engine air intake ducting.

Features

- Removes over 80% of water before it can reach and damage the filter.
- No service needed!
- Made of durable rubber.
- Collected water is automatically released by Vacuator™ Valve.
- Adds little or no restriction to airflow.
- Common inlet sizes fit most installations.



Mounting Position



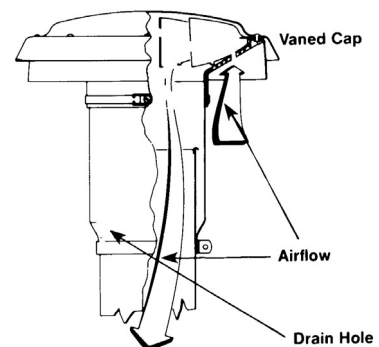
Moisture Skimmer					
Part Number	Flow m ³ /min	Inner Dia. (A) mm	length (B) mm	Tube (C) mm	Stops (D) mm
X005822	17-28	152,0	152,0	32	35
X005900	22.5-34	178,0	152,0	32	35
X005901*	22.5-34	178,0	152,0	32	35

* Angled Spout

Stack-Top Moisture Eliminator

Prevents Water Problems in Air Intake System

- For cabover trucks, on/off road, mounted on top of 7" (178mm) O.D. intake stack.
- For airflow range of 17 to 34 m³/min.
- Over 80% water removal efficiency.
- Includes clamp for installation.



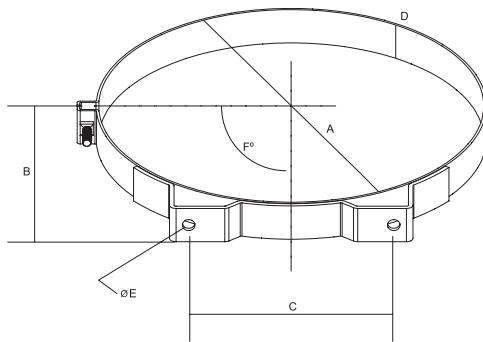
How They Work

- (1) Moisture-filled air enters the moisture eliminator cap.
- (2) Built-in, stationary vanes cause the air to spin.
- (3) Moisture is forced to the outside wall, where it separates from the air and collects.
- (4) Water drains out through the drain hole.
- (5) As a result, drier air (acceptable for maximum filter life and engine performance) passes to the air cleaner.

Metal Mounting Bands for AxialSeal Air Cleaners

- Durable, corrosion resistant, steel construction.
- Fully engineered and tested to resist the adverse effects of vibration.
- Mounting band feet are designed to ensure maximum torque pressure, continuously.
- Gauge of steel increases as diameter of mounting band increases.
- Bright stainless models available.
- Bolt and nut included with mounting band.

Most of our AxialSeal Air Cleaners with metal housings require two mounting bands.



Metal Mounting Bands

Part Number	Dimensions (mm)					
	A	B	C	D	E	F
P004055	111	68	82,5	19	9,0	90
P002348	134	81	82	22	9,0	90
P002351	153	91	83	26	9,0	90
P007191	165	99	95	22	10.5 X 15.5	90
P004906	178	105	111	22	10.0 X 13.0	90
E500206	203	114	108	25	12.0 X 17.0	90
P004307	203	114	108	25	9,0	90
P004073	229	130	114	32	11,5	90
P004076	259	146	127	32	11,5	90
H770025*	259	146	127	32	11,5	90
P004079	279	156	127	32	11,0	90
H000349	300	175	152	38	10,5	90
P013722	330	184	152	38	10,0	90
H770065	330	206	203	38	12,0	90
H770059	345	191,5	142	38	10	90
H000350	356	206	203	38	12,0	90
P016845	381	203	203	38	12,0	90
H000351	407	231	254	38	12,0	90
H770037	457	234	400	50	14,0	105
H770068	546	279	490	48	14,0	105

* With cage nut

Plastic Mounting Bands

Designed Exclusively for the FPG Air Cleaners

Through continuous research for improvements, Donaldson introduced a new design of the plastic mounting bands used on FPG Air Cleaners.

The new bracket is fitted tightly around the air cleaner body by means of springloaded screws.

Benefits of the new design

Over 600 hours of intensive vibration testing under high temperature showed that:

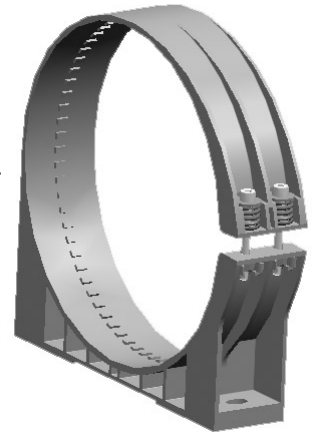
- Tight fit between body and mounting band enhances components durability.
- The springs compensate for dimensional changes due to temperature fluctuations, maintaining a tight fit.
- Critical functions, i.e. Twist and Lock mechanism, remain unaffected.

Other benefits

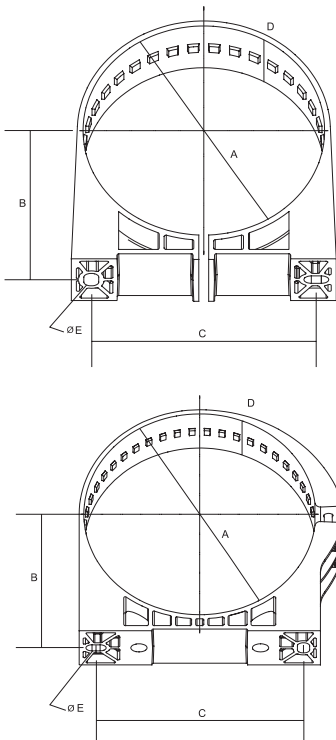
- Fool proof installation: bolts are tightened to predetermined height. The band is under tension at all times. More user friendly as the base is no longer split.



4" and 5" Plastic Mounting Bands for FPG Air Cleaners.



6", 7", 8", 9" and 10" Plastic Mounting Bands for FPG Air Cleaners with springloaded screws.



Plastic Mounting Bands						
Part Number	Diameter	Dimensions (mm)				
		A	B	C	D	E
4" and 5" Mounting Bands for FPG Air Cleaners						
P777151	4"	122,0	79,0	116,0	40,0	9,0
P777730	5"	146,0	90,0	136,0	50,5	9,0
6", 7", 8", 9" and 10" Mounting Bands for FPG Air Cleaners with springloaded screws						
P778810	6"	171,5	99,5	153,5	50,5	9,0
P778901*	6"	171,5	99,5	90,0	50,5	9,0
P781831*	6"	171,5	99,5	93,0	50,5	9,0
P777731	7"	182,0	104,5	163,0	50,5	9,0
P777732	8"	211,5	119,5	190,0	50,5	9,0
P780580*	8"	211,5	119,5	110,0	50,5	9,0
P780378**	8"	212,0	119,5	110,0	85,0	9,0
P780532	9"	241,0	136,0	143,0	50,5	9,0
P780594	10"	268,0	149,5	143,0	80,0	11,0

* With insert M8

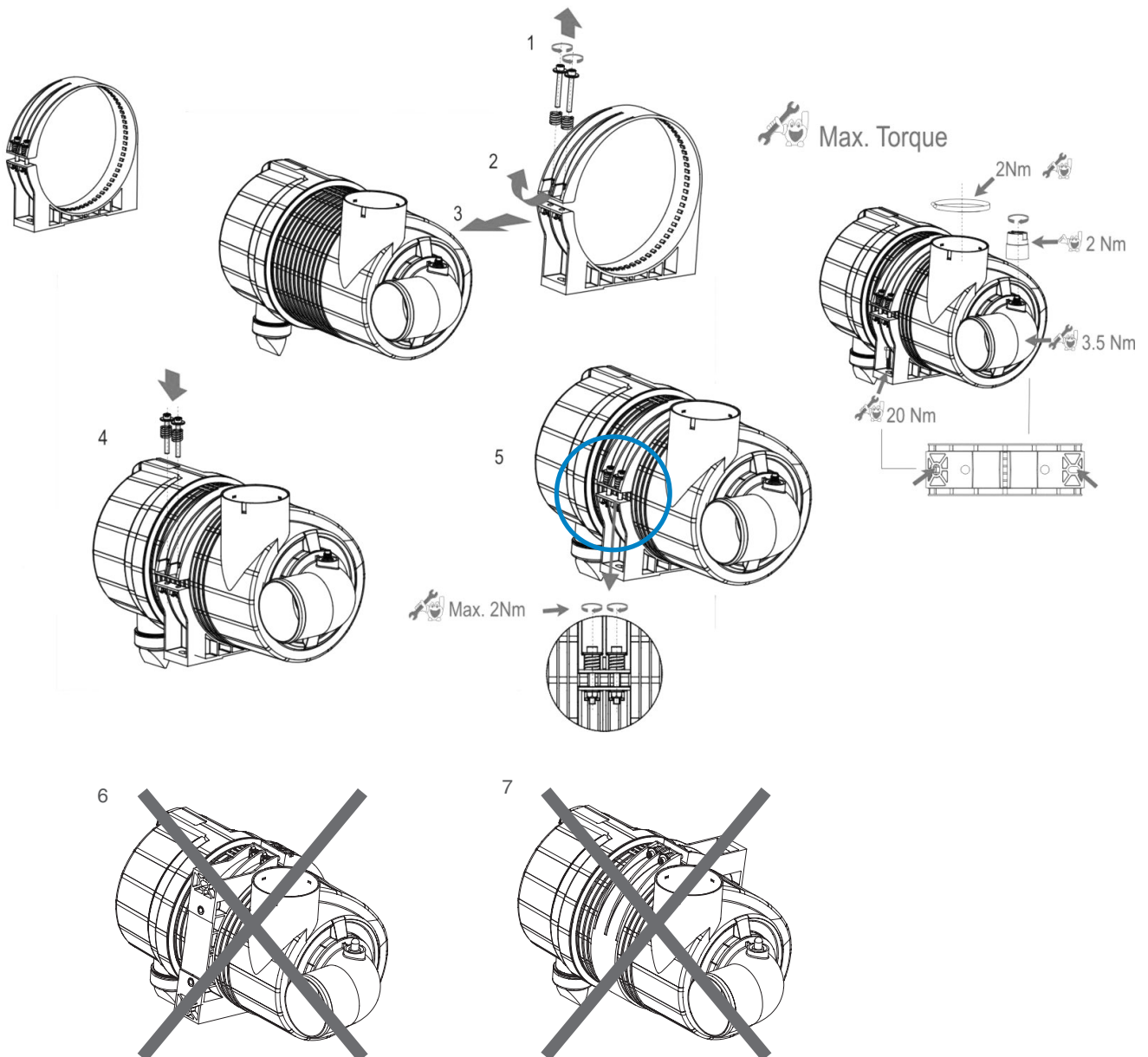
** Double 8" Mounting Band needed

Plastic Mounting Bands

Designed Exclusively for the FPG Air Cleaners

Installation Specifications for 6", 7", 8", 9" and 10" Plastic Mounting Bands for FPG Air Cleaners with springloaded screws.

- Vibration: Up to 6g Peak.
 - Maximum operating temperature: 82 °C continuous.
- Tightening torque for clamps and bolts: see picture below.



Donaspin™ Pre-Cleaner (PLH)

Extends Filter Life in Extremely Heavy Dust Conditions



The Donaspin™ pre-cleaner extends the life your air filter by removing up to 90% of the dirt and contaminant before it reaches the filter and ejecting it automatically via the exhaust.

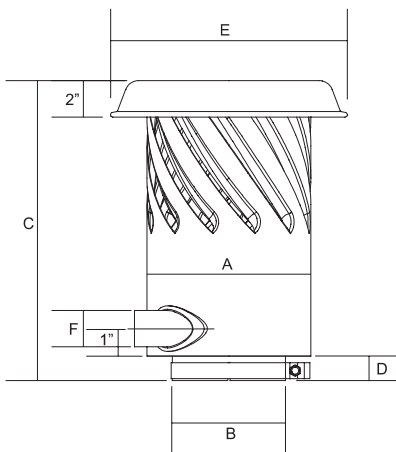
Donaspin™ pre-cleaner is designed especially for equipment operating in very heavy dust/debris environments such as garbage trucks, agricultural vehicles, and mining equipment.

Application

- For engine airflows of 8,6 - 21,8m³/min.
- Recommended mounting: on top of the air inlet stack.
- Vehicles: agricultural equipment, construction and waste haul vehicles.

Features

- Built-in louvers spin air to separate up to 90% of incoming dirt and debris from the air intake system.
- Works as part of a scavenged flow system to continuously expel pre-cleaned contaminants through the exhaust flow.
- Durable, corrosion-resistant steel construction.
- High efficiency with low restriction.
- No maintenance! Self-cleaning. No moving parts.



Donaspin Pre-cleaners							
Part Number	Rated Airflow (m ³ /min) @ 12,5 mbar added	Dimensions					
		A mm	B(ID) mm	C mm	D mm	E mm	F mm
H001212	8,6	203	76	304	55	305	32
H001307	10,8	203	96	292	42	305	32
H001215	13,2	203	115	284	28	305	32
H001308	15	203	128	283	33	305	32
H001375	21,8	229	154	373	34	330	32

TopSpin™ Pre-Cleaner

Can Maximize Your Intake System Extends Filter Life in Extremely Heavy Dust Conditions

Donaldson TopSpin™ will extend main element life, boost system efficiency and extend engine life!

The see-through unit lets you view Donaldson TopSpin™ in operation.

Features

Separates up to 85% of incoming contaminant per ISO 5011/SAE J726

- Greatly extends air filter life.
- Reduces air filter usage.
- Lowers cost per operating hour.
- Automatically ejects mixed debris.
- Separates more than 99% of 20 micron and above particles.

Operates at a lower RPM

- Less noise.
- Longer bearing life.
- Lower restriction.

Self-cleaning/self-scavenging

- No maintenance to clean bowl.
- No exhaust ejector required.

Easy installation

- Quick installation.
- One clamp to tighten.
- No wires or power requirements.

Dual mounted bearings

- More robust design.
- Extends bearing life.

Lighter Weight

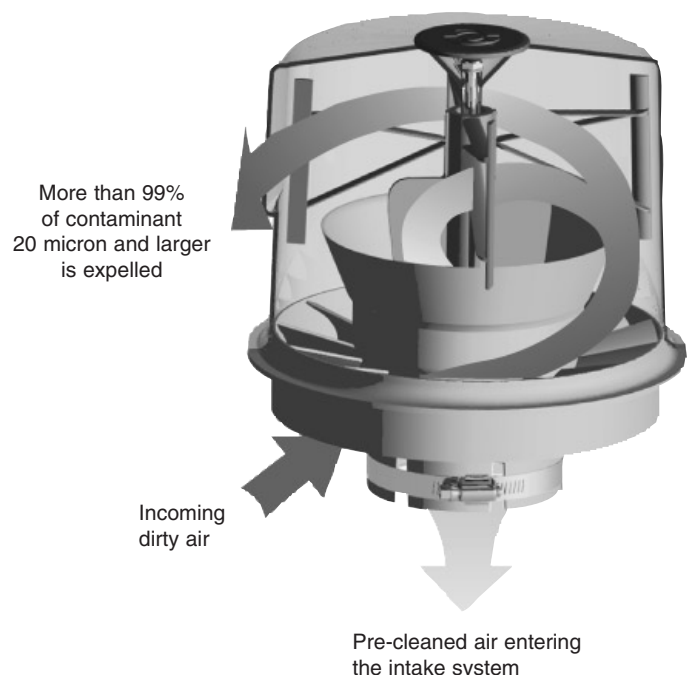
- Lighter than competitive pre-cleaners.
- Lighter than Donaldson full-view pre-cleaner.

Application

- For engine airflows of 2,2 to 42,5 m³/min.
- Primarily used in medium- to heavy-dust environments.
- Great for off-road vehicles & equipment from crawler tractors to farm tractors to skid steer loaders.
- Recommended mounting:
on top of the engine intake stack.



Donaldson TopSpin™ mounted on a grader. The aerodynamically designed TopSpin™ is made of a light-weight, durable, non-corroding material which makes it tolerant to all weather and operating conditions.



Incoming dirty air

More than 99% of contaminant 20 micron and larger is expelled

Pre-cleaned air entering the intake system

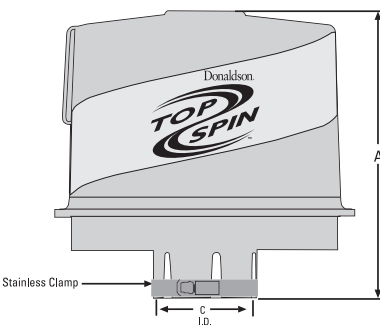
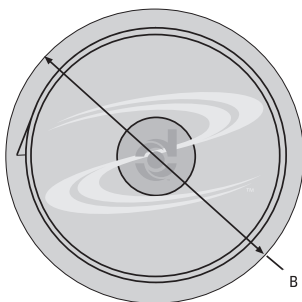
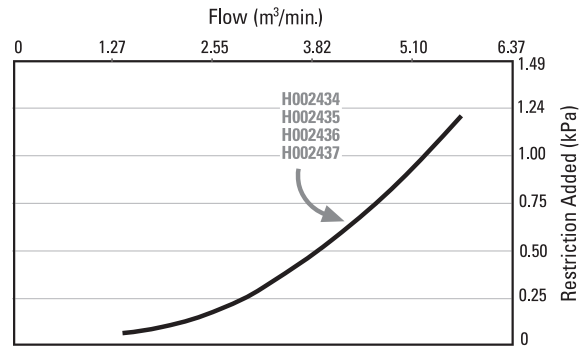
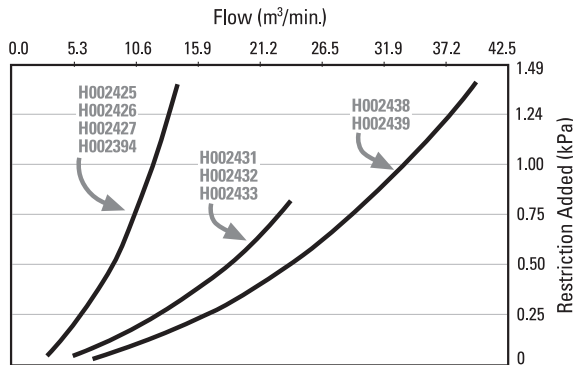
- Donaldson TopSpin™ can be mounted horizontally or vertically.
- Installation instructions, stainless clamp and warranty are included.
- Operating temperature range: -40°C to 82°C.

TopSpin™ Pre-Cleaner

Performance Curves

Test conducted per ISO 5011/SAE J726.

Performance test results are an average from testing several units.



TopSpin Pre-Cleaner					
Part Number	Outlet I.D. (C) mm	Overall Height (A) mm	Body Dia. (B) mm	Weight kg	Operating Flow Range m³/min.
H002434	51,5	146	162	0,4	2,5 - 5,7
H002435	58	146	162	0,4	2,5 - 5,7
H002436	64	146	162	0,4	2,5 - 5,7
H002437	77	146	162	0,4	2,5 - 5,7
H002425	78	238	242	1,0	5,7 - 12,7
H002426	97	238	242	1,0	5,7 - 12,7
H002394	103	238	242	1,0	5,7 - 12,7
H002431	103	287	288	1,2	12,7 - 21,2
H002427	116	238	242	1,0	5,7 - 12,7
H002432	116	287	288	1,2	12,7 - 21,2
H002433	128	287	288	1,2	12,7 - 21,2
H002438	153	345	397	2,7	21,2 - 42,5
H002439	179	345	397	2,7	21,2 - 42,5



Cross References from Full View Pre-Cleaner to TopSpin™ Pre-Cleaner can be found on page 95.

Full-View Pre-Cleaner

Extends Filter Life on Agricultural & Construction Equipment

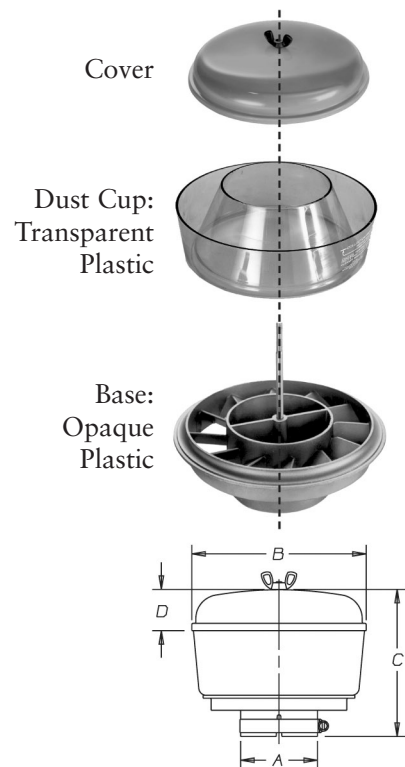
Donaldson has a new Pre-Cleaner called TopSpin™. Before you consider replacing your Full-View Pre-Cleaner with another one, check out the TopSpin™ models on page 96 and 97.



Full-View Pre-Cleaners	TopSpin™ Pre-Cleaners
H000820	H002425
H000821	H002426
H000822	H002394
H000823	H002427
H001250	H002435
H001251	H002436
H001249	H002437
H001823	H002434
H002043	H002433
H002044	H002432
H002045	H002431
H002223	H002438
H002224	H002439

Features

- Recommended mounting: on top of the engine intake stack.
- Centrifugal force in bowl separates up to 75% of incoming dust before it enters the engine air intake system.
- Low maintenance!
- Durable, lightweight, noncorrosive construction.
- Full-View plastic bowl lets operator easily see when service is needed.
- One-bolt cover retention for service when dirt reaches the level of the arrow, remove top nut and plastic body then empty – no tools required.
- Mounting clamp included.

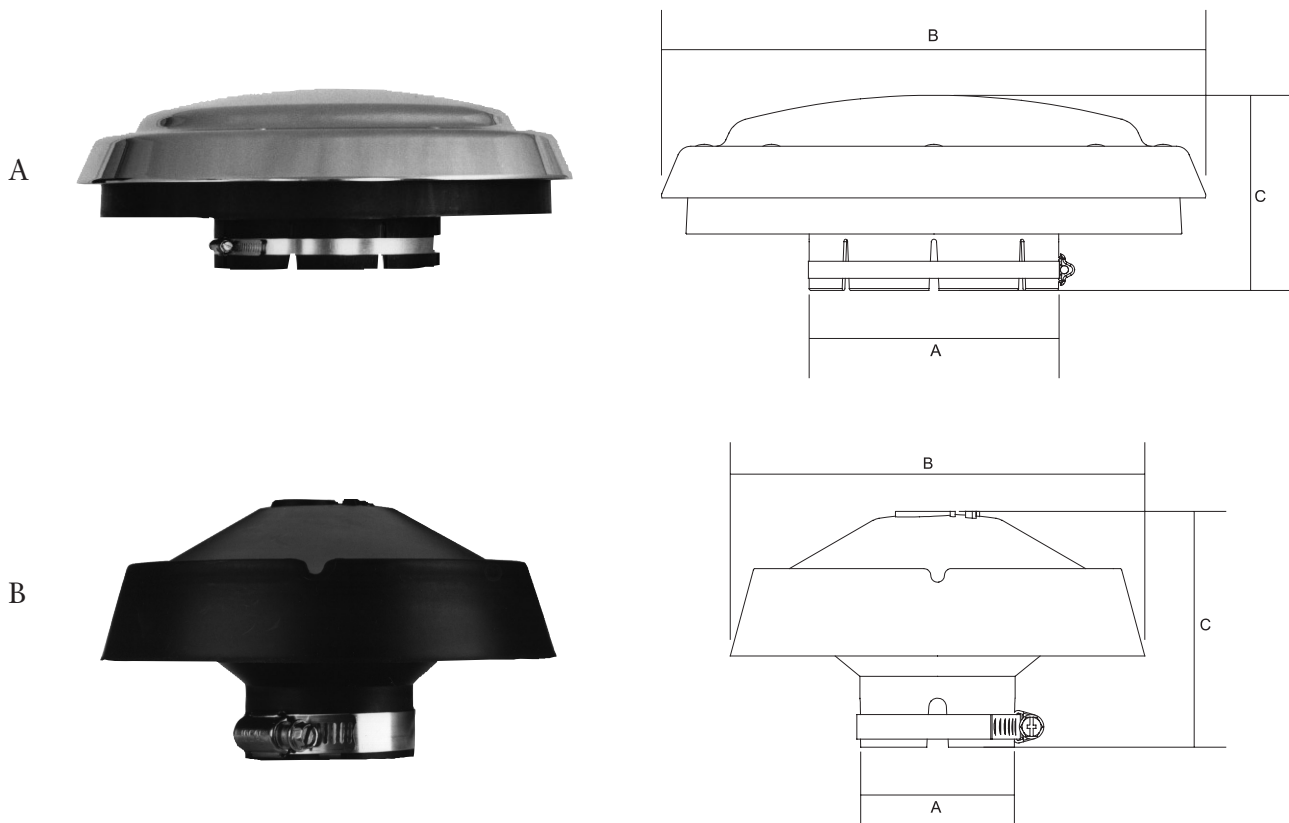


Full-View Pre-Cleaners								
Full-View Pre-Cleaner	Replacement Parts			Max Airflow (m³/min.)	Inlet OD			
	Cover	Bowl	Clamp		A mm	B mm	C mm	D mm
H002041	P020116	P020115	P532924	2,0	35	142	142,5	44
H002042	P020116	P020115	P115200	2,3	44	142	142,5	44
H002040	P020116	P020115	P115200	2,5	51	142	142,5	44
H001250	P020116	P020227	P115201	3,7	57	186	157	44
H001251	P020648	P020227	P115201	4,2	64	186	157	44
H001249	P020648	P020227	P143422	4,8	77	186	157	44
H000820	P020648	P020227	P143422	9,1	77	270	190	47
H000821	P020648	P016330	P115202	9,3	96	270	188	47
H000822	P020648	P016330	P115202	9,5	102	270	189	47
H000823	P020648	P016330	P115203	9,6	115	270	188	47
H002043	P020345	P020344	P115203	21,0	127	306	195	51
H002223	P104691	P158324	N/A	36,8	152	412	258	70
H002224	P104691	P158324	N/A	42,5	178	412	258	70

Rain Caps Protect Against Large Debris Ingestion

Mount on Stack Top or Directly to Air Cleaner

- Protects engine air intake from rain, snow, birds, and other large contaminants.
- Mounts on stack or directly to air cleaner for on-road and off-road equipment.
- Two styles in a wide variety of sizes.
- Installs easily with one clamp which is included.



Rain Caps				
	Part Number	Dimensions (mm)		
		A	B	C
A	H770066	45	110	56
B	H001377	52	152	86
B	H001378	64	152	86
B	H001379	77	152	86
B	H770010	96	266	132
B	H770081	96,5	200	140
B	H770011	102	266	130
B	H770012	115	266	126
B	H770013	128	266	123
B	H770090	154	405	144
B	H770089	179	405	144
A	H001053	207	405	157
A	H770082	254	406	189

Restriction Indicators

Use a Filter Service Indicator for Maximum Filter Life

Replacing filters based on restriction readings can reduce your maintenance costs significantly. Visual inspection of air filters is not adequate and should not dictate service life. Filters that appear very dirty may still contain a great amount of service life.

Over-servicing and excessive handling of the filter can result in serious consequences: filter damage, improper installation, intake contamination from ambient dust, and/or increased service cost, time and material. In contrast, filter service based on restriction readings can enable you to obtain.

- The longest life possible from the filter.
- The best engine protection.

Restriction Readings, Where & When

Restriction readings are normally taken at the air cleaner on the clean side of the air filter element. If the air cleaner does not have a restriction tap, readings can be taken anywhere in the system between the air cleaner and the engine. To measure restriction of a naturally aspirated diesel engine, the reading is taken at full-governed RPM with no load.

Two methods are used to measure the restriction of turbo-charged engines. The *first method* is to take the reading with the truck on a dynamometer under full load. This result is actual restriction. A locking step gauge is the *second method*. This popular method will give actual, on-the-road peak readings.

Maximum Restriction Limits for Engines

Maximum allowable restriction limits are set by the engine manufacturers. If your maximum limit is unknown, contact your engine manufacturer for the maximum limits. Maximum levels are measured at high idle with no

load for naturally aspirated and super-charged diesel engines. Turbo-charged diesel, gasoline and carbureted engines are measured at full load with a wide open throttle.

Choose Restriction Measurement Tools that Best Fit Your Applications

Donaldson offers a variety of restriction measuring devices that help you get maximum filter utilization. Typical measure unit is kilopascal (kPa). All are resistant to vibration, breakage, weather, corrosion, dust and dirt to assure reliable filter restriction readings.

Types of indicators

For continuous reading devices that show how much life is left in the filter:

- Mechanical Indicator - The Informer™.
- Mechanical Indicator - ServiSignal™ Mini Indicator.
- Electrical Indicators.
- Electrical Indicators with AMP connector.

For more info on the indicators above, see page 101.



Filter service indicators are very effective when mounted on the outlet tube of the air cleaner, as is The Informer™ above. This gives the operator constant & accurate visibility of filter life.

Restriction Indicators

Mechanical Indicators				
Part Number	Restriction Limits			Fitting
	mbar	Pa	mm H ₂ O	
ServiSignal™ Mini Indicators				
X002250	37	3700	380	1/8"-27 NPT
X002251	50	5000	508	1/8"-27 NPT
X002252	62	6200	635	1/8"-27 NPT
X002254	75	7500	762	1/8"-27 NPT
Informer™ Indicators				
X002278	50	5000	508	1/8"-27 NPT
X002277	62	6200	635	1/8"-27 NPT
X002275	75	7500	762	1/8"-27 NPT

ServiSignal™ Mini Indicator

Small enough to fit just about anywhere (only 42 mm high), the Donaldson ServiSignal™ shows a highly visible, bright red flag in the full-view window when restriction limit is reached. Resets manually via top button after air cleaner service. Kit includes 1/8" NPT threaded brass fitting for mounting on the air cleaner. For remote mount, also order P105168 flange. Hoses are not included.



The Informer™ for Graduated, Continuous Readings

The Informer, when mounted on the air cleaner or the dashboard, provides a continuous reading whether the engine is running or is shut down. Reset button is on top. Kit includes full installation instructions and a P100089 safety filter fitting. For remote mounting, order a P105168 flange and a P105622 90° elbow.



Electrical Indicators

Connects to Light, Buzzer, or Computer

- Designed for a variety of on- and off-highway applications.
- Should be screwed on the air cleaner nipple by hand.
- Operating temperatures of -10°C to +100°C.
- When restriction level reaches the maximum recommended limit, an electrical signal activates a light, a buzzer, or a computer, as you choose.
- The indicator automatically resets itself after the filter is serviced.
- 12-24 Volts.
- Maximum load: 6 watts (light or buzzer).
- Contacts have no polarity.
- Switch contacts are normally in the open position.
- If inductive load can occur, appropriate protection must be provided.
- Quick connectors and light, buzzer, or computer must be purchased separately.



Electrical Indicators				
Part Number	Restriction Limits			Fitting
	mbar	Pa	mm H ₂ O	
Electrical Indicators				
X770037	37	3700	380	1/8"-27 NPT
X770050	50	5000	508	1/8"-27 NPT
X770052	50	5000	508	M10 X 1
X770061	62	6200	635	M10 X 1
X770062	62	6200	635	1/8"-27 NPT
X770075	75	7500	762	1/8"-27 NPT
Electrical Indicators with AMP connectors				
X770225	64	6400	627	M10 X 1
X770301	54	5400	530	M10 X 1
X770316	54	5400	530	1/8"-27 NPT
X770317	64	6400	627	1/8"-27 NPT
X770526	75	7500	762	1/8"-27 NPT

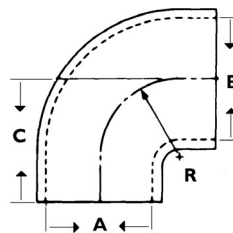
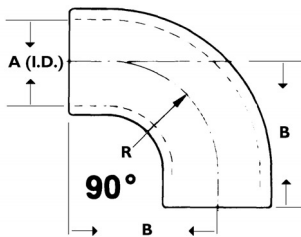
General

Flexible rubber adapters and elbows have smooth radii and inside surfaces to minimize flow resistance within the air intake system.

Specifications

- EPDM rubber construction for improved heat resistance and low temperature flexibility (-40°C to 100 °C).
 - Non corrosive construction resists tears, punctures, and vacuum collapse under severe conditions.
 - Ideal for light-, medium- and heavy-duty applications.
 - Elbows ribbed or compounded for extra strength and durability.
- Rubber adapters help to absorb vibrations and reduce intake noise level.

90° Rubber Elbows & Reducing Elbows

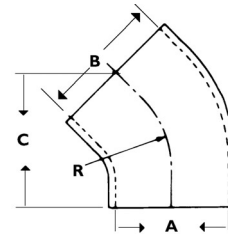
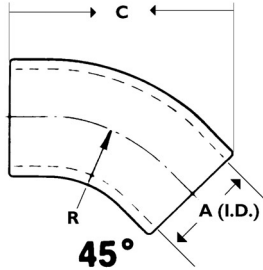


90° Elbows				
Part Number	Dimension (mm)			Outer Dia mm
	A	B	R	
P781509	45,0	80	51	51,0
P105529	50,0	89,0	51,0	61,0
P105530	57,0	95,0	57,0	66,5
P105531	63,0	101,5	63,5	76,3
P105532	76,0	127,0	82,5	89,0
P114318	89,0	140,0	102,0	101,7
P105533	102,0	146,0	105,0	113,5
P113733	114,0	140,0	89,0	127,0
P107844	127,0	156,0	115,0	139,8
P105534	140,0	165,0	120,5	152,5
P105535	152,0	171,0	127,0	165,2
P105536	178,0	192,0	141,0	193,6
P112605	203,0	216,0	165,0	222,5
P114314	254,0	267,0	216,0	273,0

90° Elbow Reducers					
Part Number	Dimension (mm)				Outer Dia mm
	A	B	C	R	
P781510	40,0	45,0	80	45,0	46 - 51
P778565	76,0	60,0	65	70,0	71 - 87
P775228	76,0	70,0	113	60,0	82 - 88
P123462	76,0	89,0	88,9	57,0	88,9 - 101,6
P121482	127,0	101,6	146	95,0	114,4 - 139,8
P143895	152,4	127,0	177,7	108,0	139,6 - 165,0
P159820	178,0	127,0	177,8	108,0	139,6 - 190,4
P128990	178,0	140,0	146	111,0	155,5 - 193,5
P117724	152,4	140,0	170,2	127,0	152,3 - 165,0



45° Rubber Elbows & Reducing Elbows



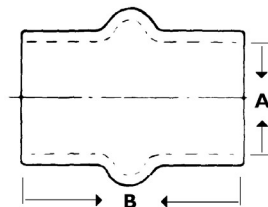
45° Elbows				
Part Number	Dimension (mm)			Outer Dia mm
	A	C	R	
P105541	50,0	101,6	51,0	61,0
P105542	56,0	104,6	57,0	67,3
P105543	63,5	109,5	63,5	73,7
P105544	76,0	140,0	95,0	89,0
P109331	89,0	127,0	89,0	101,7
P105545	101,5	140,0	108,0	114,4
P114316	114,0	128,5	89,0	127,1
P109021	127,0	142,7	114,5	139,8
P105546	140,0	159,0	120,5	152,5
P105547	152,5	165,0	127,0	165,2
P105548	178,0	203,0	141,0	194,0
P112606	203,0	203,2	165,0	222,2
P114313	254,0	241,3	216,0	273,0

45° Elbow Reducers					
Part Number	Dimension (mm)				Outer Dia mm
	A	B	C	R	
P133338	152,4	140,0	163,5	124	152,5 - 165,2
P133339	152,5	178,0	184,0	135	168,2 - 193,6



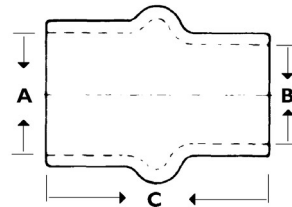
Rubber Straight Humps

Rubber Straight Humps			
Part Number	Dimension (mm)		Outer Dia mm
	A	B	
P781511	45,0	50,0	51,0
P105608	76,0	134,5	89,0
P114319	89,0	134,0	101,6
P105609	101,5	133,5	114,5
P114317	114,0	152,5	127,1
P105610	127,0	152,5	139,8
P105611	140,0	152,5	152,5
P105612	152,5	177,8	165,2
P105613	178,0	177,8	190,6
P112608	203,0	127,0	215,9
P111414	254,0	152,5	266,7



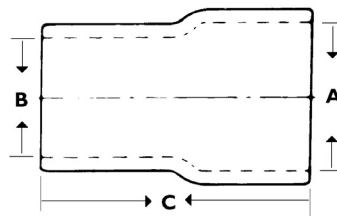
Rubber Hump Reducers

Rubber Hump Reducers				
Part Number	Dimension (mm)			Outer Dia mm
	A	B	C	
P102820	76,0	63,5	114,0	75,2 - 88,9
P520883	76,0	70,0	89,0	82,5 - 88,9
P520882	89,0	70,0	101,5	79,5 - 98,5
P101290	89,0	76,0	127,0	88,9 - 101,6
P520884	101,5	70,0	101,5	79,5 - 111,2
P101291	101,5	76,0	133,5	89,0 - 114,4
P101292	101,5	89,0	133,5	101,7 - 114,4
P101293	127,0	101,5	152,5	114,4 - 139,8
P101891	140,0	101,5	152,5	114,4 - 152,5
P103516	140,0	127,0	152,5	139,8 - 152,5
P112611	152,5	127,0	152,5	139,8 - 165,2
P101294	152,5	140,0	152,5	152,5 - 165,2
P126530	178,0	140,0	178,0	152,5 - 190,6
P112610	178,0	152,5	152,5	165,2 - 190,6
P136494	178,0	127,0	178,0	139,8 - 190,6
P129660	203,0	140,0	178,0	152,4 - 215,9
P114315	203,0	152,5	152,5	165,1 - 215,9
P112609	203,0	178,0	152,5	190,5 - 215,9
P112607	254,0	203,0	152,5	215,9 - 266,7



Reducers

Reducers				
Part Number	Dimension (mm)			Outer Dia mm
	A	B	C	
P114411	38,0	25,5	63,5	36,0 - 48,8
P114412	38,0	32,0	63,5	42,4 - 48,8
P104087	51,0	38,0	63,5	48,7 - 61,4
P102948	51,0	44,5	63,5	55,0 - 61,4
P104088	57,0	51,0	63,5	61,4 - 67,8
P104089	63,5	51,0	63,5	61,8 - 74,5
P104090	63,5	58,0	63,5	67,8 - 74,1

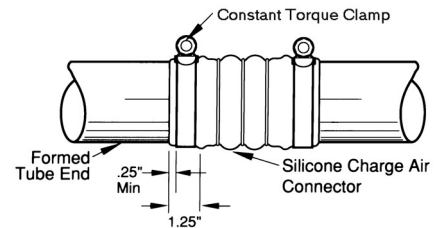
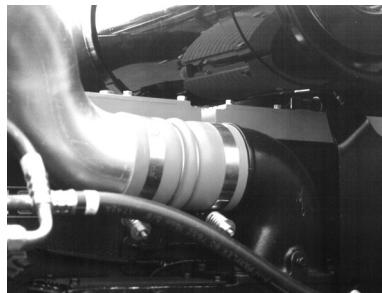
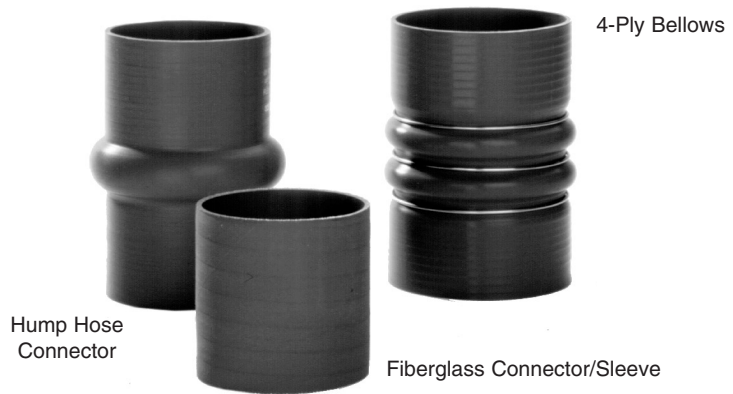


Silicone Charge Connectors

Isolate Intake Piping Vibration

Our three styles of charge air connectors are designed to ease connections in air intake system piping: they compensate for slight misalignment and isolate vibration between hose connections. The silicone elastomer material resists chemicals, steam, ozone, coolants and aging conditions normally found in any engine operating environment.

All three charge air connectors are for installation on the pressure side with maximum operating temperatures up to 260°C. They are orange in color to be easily identifiable as tolerant of high temperatures.



Use the illustration as a guide for installing your Silicone Charge Connector.

Connectors/Sleeves			
Part Number	Inner Dia mm	Outer Dia mm	Length mm
P532946	32	38	914
P532947	38	44	914
P532948	51	57	914
P532949	57	63	914
P532950	64	69	914
P532951	76	82	914
P532952	86	92	89
P532953	86	92	152
P532954	86	92	914
P532956	89	95	89
P532957	89	95	114
P532958	89	95	914
P532959	102	107	914

Hump Hose Connectors			
Part Number	Inner Dia mm	Outer Dia mm	Length mm
P532960	66	72,0	140
P532961	70	78,4	108
P532962	76	84,7	111

4-Ply Bellows				
Part Number	Inner Dia mm	Outer Dia mm	Length mm	No of rings
P535572	89	94,7	152	3
P532943	102	107,4	152	0
P535571	102	107,4	152	2
P532944	102	107,4	152	3
P532945	102	107,4	191	3
P535573	102	107,4	203	3

Replacement Vacuator™ Valves

Replace Damaged or Missing VacValves Immediately!

The Vacuator™ Valve, standard on the majority of Donaldson air cleaners, is an important part of the functionality of the air cleaner. It is an integral part of the pre-cleaning stage on two-stage air cleaners.

The dust cup, where pre-cleaned dust is collected, is normally under a slight vacuum when the engine is running. The normal engine pulsing of the vacuum causes the Vacuator™ Valve to open and close. This action automatically expels any collected dust and water. The Vacuator™ Valve also unloads when the engine is stopped.

Application Notes

- For proper operation, the Vacuator™ Valve should be located at the lowest point on the air cleaner or dust cup pointing down.
- Never paint the Vacuator™ Valve. Solvents and chemicals will shorten the usable life.
- If the Vacuator™ Valve is torn, shredded or turned inside out, its durometer may be too soft for the application. Choose a model with a harder durometer (higher number). Conversely, if the Vacuator™ Valve doesn't empty itself properly, the durometer may be too hard. Choose one with a softer durometer (lower number).



The Donaldson Vacuator™ Valve, also known as VacValve, is made in a variety of sizes and shapes to fit various applications. The Donaldson part number is molded into each part for easy identification.

Vacuator™ Valves			
Part Number	Diameter	Durometer	Used on Air Cleaner Styles
P103198	76	40	FRG 10", 12", 14" and 16" FHG 10", 12", 14" and 16" FWG 4"-16" / FWA 5"-16" / SRG
P105220	76	60	FRG 18" / FHG08 / FVG160587 / FTG
P106593	76	60	FHG 6"-8" / High Pulsation Models
P112803	76	40	FHG 6"-8" / SBG 14"-16" SDG / STG 12"-16"
P149099	25	60	ERA / EBA / EBB / ECG
P158914	51	50	FPG 6" and 8" / FRG 11" / FHG 5" / FWG FWA / In-Line Water Separators & Moisture Skimmers
P522958	51	60	FPG 4"-5" / FHG
P525956	25	60	EPG 11", 13" and 15"
P775569 *	51	60	FPG 4", 5", 6" and 8" / FRG 10" and 13"
P776008	51	60	FRG 10", 13" and 15"

* 45° Vacuator™ Valve

For the longest filter service life, replace damaged or missing Vacuator™ Valves immediately!

If your valve is cracked, torn, remains open or is missing, dust particles that are normally expelled can deposit themselves onto the filter and will shorten air filter service life. Replace it!

Missing?



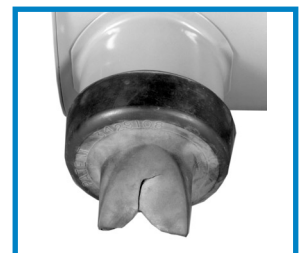
Open?



Torn?



Cracked?



Service Parts

Style	Air Cleaner Model No.	Main Element	Safety Element	Cover Assembly	Vacuator™ Valve	Gasket	Wing Nut Assy	Mounting Band	Rain Cap	Status
EBA	A092029	P129472		P141787		P120597		P004073		Production
EBA	A092040	P140822				P120597		P004073		Cancelled
EBA	A110029	P772512								Cancelled
EBA	A130071	P182007						P013722		Cancelled
FWA	A140003	P181000		P118808		P017335	P018464	H000350	H770013	Cancelled
FWA	A140033	P181000		P118807	P103198	P017335	P018464	H000350	H770013	Cancelled
FWA	A140206	P181000		P118807	P103198	P017335	P018464	H000350	H770013	Cancelled
FWA	A140208	P181000								Cancelled
FGA	A144800	P016688								Cancelled
FGA	A144900	P016688		P016996						Cancelled
FGA	A161500	P782261		P782268						Production
ELB	B065011	P772552						P007191	H001379	Production
ELB	B065012	P772552	P770181					P007191	H001379	Production
FLB	B065018	P772565	P770207				P138403	P007191		Production
EPB	B070005	P772579	P775300	P778758				P777731	H001379	Production
ELB	B080009	P772529						P004307	H770010	Production
ELB	B080010	P772529	P119410					P004307	H770010	Production
ELB	B080017	P774517	P771363							Cancelled
ERB	B080018	P770829	P770735				P101870			Cancelled
ERB	B080019	P770828	P127787				P101870	E500206	H770010	Cancelled
FLB	B080022	P772556	P119410				P138403	P004307		Production
ELB	B080024	P774517	P771363				P101870		H001379	Production
ELB	B080031	P772529						E500206	H770011	Cancelled
ELB	B080033	P772529	P119410				P101870	P004307		Cancelled
ELB	B080039	P776146	P776147				P181070	E500206	H770010	Cancelled
ELB	B080040	P774517	P771363				P101870		H770010	Production
FLB	B080046	P778702	P775457				P138403	E500206		Production
EPB	B080067	P772580	P775302	P775305				P777732	H770010	Production
ERB	B090010	P182092	P119778	P134945			P101870	P004073	H770012	Cancelled
ERB	B090019	P182092		P134945			P101870	P004073	H770012	Cancelled
ERB	B090023	P182092	P119778	P134945		P137368	P101870	P004073	H770012	Cancelled
ELB	B090047	P777230	P777247				P101870	P004073	H770011	Cancelled
SRB	B095437	P780522	P780523	P782176				P004073		Production
ERB	B100035	P182090	P119375	P128443		P128707	P101870	P004076	H770012	Production
ERB	B100037	P182090	P119375							Cancelled
ERB	B100041	P117439	P123828	P128443			P101870	P004076	H770012	Cancelled
ERB	B100044	P182090	P119375	P128443		P128707	P101870	P004076	H770012	Production
ERB	B100046	P182090	P119375							Cancelled
ELB	B100057	P772522	P133138				P138403	P004076	H770012	Production
FLB	B100067	P772530	P133138				P138403	P004076		Production
ELB	B100068	P772522						P004076	H770012	Production
ELB	B100071	P772522	P133138				P138403	P004076	H770012	Production
ELB	B100072	P772527	P123828				P775455	P004076	H770013	Production
ELB	B100075	P774538	P775005				P138403	P004076	H770012	Production
ELB	B100078	P774547	P775035				P138403	P004076	H770012	Cancelled
ERB	B100120	P778214	P777639	P777998				P004076	H770012	Production
SRB	B100121	P778214	P777639	P777998				P004076		Production
ERB	B110154	P778905	P778906	P783014				P004079	H770013	Production
SRB	B110155	P778905	P778906	P783014				P004079		Production
ERB	B120153	P182091	P130772				P130501	H000349	H770013	Cancelled
ERB	B120190	P182091	P130772				P130501	H000349	H770013	Cancelled
ERB	B120246	P182091								Cancelled
FLB	B120260	P772520	P770678				P138403	H000349		Production
ELB	B120265	P772524	P770678				P138403	H000349	H770013	Production
ELB	B120268	P772524						H000349	H770013	Production
ELB	B120290	P772524	P770678				P138403	H000349	H770013	Production
STB	B120319	P772524	P770678				P138403	H000349		Production
ERB	B120395	P536315	P529286	P529798						Cancelled
ERB	B130010	P777279		P777300				P013722	H770089	Production
ERB	B130013	P777279	P777414	P777300				P013722	H770089	Production
ERB	B130028	P781768		P781784	P533226			P013722	H770089	Production
SRB	B130046	P777409	P777414	P781124				P013722		Production
SPB	B130048	P783543	P783544	P783693				Integrated		Production
SPB	B130060	P783543	P783544	P783693				Integrated		Production
ERB	B140139	P182002	P119373	P770605		P017335	P775455	H000350	H000606	Production
EGB	B140159	P772523		P776172		P017335		H000350	H000606	Production
EGB	B140167	P772523	P119373	P776172		P017335	P775455	H000350	H000606	Production
EGB	B140175	P772521		P776172		P017335		H000350	H000606	Production
EGB	B140176	P772521	P119373	P776172		P017335	P775455	H000350	H000606	Production
EGB	B140317	P775026	P776102	P782130		P017335	P770920	H000350	H770089	Production
ERB	B150025	P777871	P777875	P777861				P016845	H770089	Production
ERB	B150028	P777871		P777861				P016845	H770089	Production
ERB	B150030	P777871		P777920	P158914			P016845	H770089	Production
ETB	B180002	P182042	P128408	P780042			P109062	H770037	H001053	Production

Service Parts

by Air Cleaner Model



Style	Air Cleaner Model No.	Main Element	Safety Element	Cover Assembly	Vacuator™ Valve	Gasket	Wing Nut Assy	Mounting Band	Rain Cap	Status
ERB	B180011	P781098		P783186				H770037	H770082	Production
ERB	B180012	P781098	P781102	P783186				H770037	H770082	Production
PSD	D080020	P608533	P600975	P602985	P158914					Production
PSD	D080026	P608533	P600975	P601735	P158914					Production
PSD	D090019	P608665	P606121	P609550	P158914					Production
PSD	D090020	P608665	P606121	P609550	P158914					Production
PSD	D090021	P608675	P606121	P609552	P158914					Production
PSD	D090022	P608675	P606121	P609552	P158914					Production
PSD	D100029	P608666	P601560	P784279	P112803					Production
PSD	D100030	P608666	P601560	P784279	P112803					Production
PSD	D100031	P608676	P601560	P784298	P112803					Production
PSD	D100032	P608676	P601560	P784298	P112803					Production
PSD	D120035	P608667	P607557	P608171	P112803					Coming soon
PSD	D120036	P608667	P607557	P608171	P112803					Coming soon
PSD	D120037	P608677	P607557	P608180	P112803					Coming soon
PSD	D120038	P608677	P607557	P608180	P112803					Coming soon
HFD	D770065	P772506	P139293	L012244			P126054			Production
HFD	D770098	P772506	P139293				P126054			Cancelled
HFD	D770099	P772506	P139293				P126054			Cancelled
HFD	D770100	P770035								Cancelled
HFD	D770105	P770991								Cancelled
HFD	D770106	P772506	P139293							Cancelled
HFD	D770108	P182041	P119370							Cancelled
HFD	D770109	P772506	P139293							Cancelled
HFD	D770112	P772506	P139293							Cancelled
HFD	D770117	P772506	P139293	L016193			P126054			Production
HFD	D770121	P772506	P139293							Cancelled
FWA	G042503	P102745		P102755			P102783	P004055	H770066	Production
FPG	G042546	P822686		P777153	P522958			P777151	H770066	Production
FPG	G042575	P822686	P535396	P777153	P522958			P777151	H770066	Production
FHG	G050003	P182050		P129355			P101870	P002348	H001377	Production
FHG	G052567	P108736	P118745							Cancelled
FHG	G052568	P108736	P120949	E500171	P522958		P101870	P002348		Production
FHG	G052595	P182050		P129355			P101870	P002904	H001377	Production
FHG	G052596	P182050	P120949	P129355			P101870	P002904	H001377	Production
FHG	G052667	P182050	P120949	P129355			P181070	P002904	H001377	Cancelled
FPG	G057502	P772578	P775298	P775308	P522958			P777730	H771377	Production
FPG	G057504	P772578		P775308	P522958			P777730	H001377	Production
FPG	G057505	P775631		P775308	P522958			P777730	H001377	Production
FWA	G065008	P181052		P102805			P101870	P007191	H001378	Production
FWA	G065055	P101222								Cancelled
FHG	G065100	P119135	P114500	P111857	P522958		P101870	P007191	H001379	Cancelled
FHG	G065101	P119135	P114500	P102805			P101870	P002940	H001379	Production
FWA	G065110	P182052		P102805			P101870	P002940	H001378	Cancelled
FHG	G065124	P119135		P102805			P101870	P002940	H001379	Cancelled
FHG	G065188	P119135	P114500	P103836	P105220		P101870	P002940	H001379	Cancelled
FHG	G065207	P130760	P126984	P111857	P522958		P101870	P002940	H001379	Cancelled
FHG	G065211	P130760		P111857	P522958		P101870	P002940	H001379	Cancelled
FHG	G065221	P774510	P770049	P111857	P522958		P181070	P002940		Cancelled
FKG	G065222	P137293	P137285							Cancelled
FKG	G065223	P137293								Cancelled
FHG	G065228	P100760		P111857	P522958		P181070	P002940		Cancelled
FKG	G065229	P137293								Cancelled
FHG	G065251	P774510	P770049							Cancelled
FLB	G065259	P772549	P770181		P522958		P138403	P002940	H001379	Production
FLB	G065260	P772549			P522958					Production
FHG	G065310	P130760	P126984	P111857	P522958		P101870	P002940	H001379	Cancelled
FLB	G065311	P772549	P770181							Cancelled
FHG	G065322	P130760	P126984	P111857	P522958		P101870	P002940	H001379	Cancelled
FLB	G065337	P771250	P771270		P522958		P130501			Production
FLB	G065346	P771549			P522958			P002940		Production
FKG	G065350	P771459	P771460		P522958		P138403	P002940		Production
FTG	G065357	P775140	P121643				P138403			Cancelled
FWA	G065390	P182052		P102805			P101870	P002940		Cancelled
FWA	G065401	P132978		P527908	P522958		P101870			Cancelled
FLB	G065425	P776675	P776676		P522958		P138403	P002940	H001379	Cancelled
FPG	G065497	P822768	P822769	P780401	P522958			P778810	H001378	Production
FPG	G065498	P822768		P780401	P522958			P778810	H001378	Production
FPG	G065499	P822768	P822769	P780401	P522958			P778810	H001378	Production
FPG	G065500	P822768		P780401	P522958			P778810	H001378	Production
FPG	G065539	P532410		P780466	P522958			P778810	H001378	Production
FPG	G070006	P772579	P775300	P775311	P522958			P777731	H001379	Production
FPG	G070009	P772579		P775311	P522958			P777731	H771379	Production
FPG	G070015	P776156		P775311	P522958			P777731	H771379	Cancelled
FPG	G070059	P772579	P775300	P778758	P522958			P777731	H001379	Production
FPG	G070060	P772579		P778758	P522958			P777731	H001379	Production
FPG	G070135	P783498	P775300	P778758	P522958			P777731	H001379	Production
FWA	G080026	P182054			P112803			P004307	H001379	Cancelled
FWA	G080119	P182054								Cancelled
FHG	G080195	P182059		P103113			P101870	P003951	H770010	Cancelled
FHG	G080200	P182059	P119410	P103113			P101870	P003951	H770010	Production
FHG	G080227	P182059	P119410							Cancelled

Service Parts

Style	Air Cleaner Model No.	Main Element	Safety Element	Cover Assembly	Vacuator™ Valve	Gasket	Wing Nut Assy	Mounting Band	Rain Cap	Status
FHG	G080307	P182059	P119410							Cancelled
FHG	G080308	P182059	P119410							Cancelled
FHG	G080322	P772564	P127787	P119711	P158914		P101870	P004307		Cancelled
FHG	G080364	P774572	P775284	P103840	P112803		P101870	P004307		Cancelled
FHG	G080365	P774572	P775284	P103113			P101870	P004307	H770010	Cancelled
FLB	G080377	P772550	P119410		P158914		P101870	P004307	H770010	Production
FHG	G080394	P182059	P119410							Cancelled
FHG	G080395	P772564	P127787		P158914		P101870	P004307		Cancelled
FLB	G080430	P772550			P158914			P004307	H770010	Production
FLB	G080433	P772553	P127787							Cancelled
FHG	G080440	P182059								Cancelled
FLB	G080442	P772554								Production
FHG	G080458	P772564	P127787							Cancelled
FLB	G080459	P772550								Cancelled
FHG	G080463	P182059	P119410	P103837	P112803		P101870	P004307	H770010	Cancelled
FWA	G080466	P181054								Cancelled
FWA	G080467	P181054		P781341						Cancelled
FHG	G080513	P182059	P119410	P103840	P112803		P101870	P004307		Cancelled
FLB	G080516	P772550			P158914			P004307		Production
FLB	G080536	P772550	P119410		P158914		P101870	P004307	H770010	Production
FLB	G080538	P776677	P776678		P158914		P101870	P004307	H770010	Cancelled
FPG	G082503	P772580	P775302	P775305	P775569			P777732	H770010	Production
FPG	G082505	P772580		P775305	P775569			P777732	H770010	Production
FPG	G082508	P772580	P775302	P775305	P522958			P777732	H770010	Production
FPG	G082511	P772580		P775305	P522958			P777732	H770010	Cancelled
FPG	G082580	P828889	P829333	P780403	P158914			P780580	H770010	Production
FPG	G082581	P828889		P780403	P158914			P780580	H770010	Production
FPG	G082582	P828889	P829333	P780403	P158914			P780580	H770010	Production
FPG	G082583	P828889		P780403	P158914			P780580	H770010	Production
FPG	G082671	P828889		P782865	P775569			P777732	H770010	Production
FPG	G082677	P828889		P782865	P775569			P777732	H770010	Production
FHG	G090022	P182063	P119778	P112667			P101870	P102025	H770012	Production
FHG	G090024	P182063		P112667			P101870	P102025	H770012	Production
FHG	G090031	P182063	P119778							Cancelled
FHG	G090046	P182063	P119778	P128968			P101870	P004073		Cancelled
EKG	G090148	P138428			P149099	P137368		P004073	H770090	Cancelled
FHG	G090185	P774569	P775283	P112667			P101870	P004073	H770012	Cancelled
FHG	G090190	P182063	P119778	P775725	P112803		P101870	P004073		Cancelled
FHG	G090203	P182063	P119778	P112667			P101870	P004073		Cancelled
FPG	G090219	P780522	P780523	P780524	P776008			P780532	H770012	Production
FPG	G090220	P780522		P780524	P776008			P780532	H770012	Production
FPG	G090225	P780522	P780523	P780524	P776008			P780532	H770012	Production
FPG	G090226	P780522		P780524	P776008			P780532	H770012	Production
FWA	G100003	P182045		P103519		P101401		P004076	H770011	Cancelled
FWA	G100004	P182045		P103827	P103198	P101401		P004076	H770011	Production
FHG	G100028	P182064		P103519		E500589	P101870	P106071	H770012	Cancelled
FHG	G100029	P182064	P119375	P103519		E500589	P101870	P106071	H770012	Cancelled
FHG	G100035	P182064		P103827	P105220	E500589	P101870	P004076	H770012	Cancelled
FHG	G100036	P182064	P119375	P103827	P103198	P101401	P111852	P004076	H770012	Cancelled
STB	G100129	P182090	P119375	P128443		E500589	P101870	P002940		Cancelled
FHG	G100143	P772545	P133138	P133141	P103198	P128707	P101870	P004076	H770012	Cancelled
STB	G100154	P182090	P119375	P128443		E500589	P101870	P002940		Cancelled
STB	G100180	P182090	P119375							Cancelled
FWA	G100184	P772503		P103827	P105220	E500589	P101870	P004076	H770012	Cancelled
FHG	G100185	P182064	P133138	P103519		E500589	P101870	P004076	H770012	Cancelled
FLB	G100220	P772555	P133138		P103198		P138403	P004076	H770012	Production
FLB	G100221	P772555			P103198			P004076	H770012	Production
FLB	G100254	P776301	P133138		P103198		P138403	P004076	H770012	Cancelled
FLB	G100257	P772555	P133138		P103198		P138403	P004076	H770012	Production
FLB	G100258	P776679	P776680		P103198		P138403	P004076	H770012	Cancelled
FRG	G100271	P777389	P777388	P777455	P776008			P004076	H770012	Cancelled
FPG	G100274	P777588		P777589	P158914			INTEGRA	P776343	Production
FPG	G100275	P777592		P777593	P158914			INTEGRA	P776343	Production
FPG	G100280	P777588	P777779	P776182	P158914			INTEGRA	P776343	Production
FRG	G100281	P777638	P777639	P777455	P776008			P004076	H770012	Production
FRG	G100284	P777638		P777455	P776008			P004076	H770012	Production
FPG	G100285	P777592	P777776	P777593	P158914			INTEGRA	P776343	Cancelled
FLB	G100315	P772555	P133138		P103198		P138403	P004076	H770012	Cancelled
FPG	G100317	P781039	P777639	P780578	P776008			P780594	H770012	Production
FPG	G100318	P781039		P780578	P776008			P780594	H770012	Production
FPG	G100319	P781039	P777639	P780578	P776008			P780594	H770012	Production
FPG	G100320	P781039		P780578	P776008			P780594	H770012	Production
FLB	G100362	P780067	P780068							Production
FPG	G100378	P781039	P777639	P780578	P775569			P780594	H770012	Production
FRG	G110211	P778905	P778906	P778366	P158914			P004079	H770013	Production
FRG	G110269	P778905	P778906	P778366	P158914	P782257		P004079	H770013	Production
FRG	G118329	P821938	P821963	P821825	P806891	P830922		P004079		Cancelled
FHG	G120012	P182034		P106589		P017804	P111852	P100808	H770013	Production
FHG	G120014	P182034	P119374	P106589		P017804	P111852	P100808	H770013	Production
FHG	G120036	P182034	P119374	P109296	P103198	P017804	P111852	H000349	H770013	Cancelled
FHG	G120037	P182034		P109296	P105220	P017804	P111852	H000349	H770013	Cancelled
FHG	G120269	P182034	P119374	P106589		P017804	P111852	P100808	H770013	Production

Service Parts

by Air Cleaner Model



Style	Air Cleaner Model No.	Main Element	Safety Element	Cover Assembly	Vacuator™ Valve	Gasket	Wing Nut Assy	Mounting Band	Rain Cap	Status
FWA	G120305	P772504								Cancelled
FLB	G120309	P772531	P770678		P105220		P138403	H000349	H770013	Production
FLB	G120310	P772531			P105220			H000349	H770013	Production
FLB	G120359	P772531	P770678							Production
FLB	G120368	P772531	P770678		P105220		P138403	H000349	H770013	Cancelled
STB	G120369	P182044	P119371	P109194		P017804	X004816			Cancelled
FLB	G120386	P781301	P781302		P105220		P138403	H000349	H770013	Production
FRG	G130061	P777409	P777414	P777408	P776008			P013722	H770090	Production
FRG	G130087	P777409		P777408	P776008			P013722	H770090	Production
FRG	G130088	P777409	P777414	P777408	P776008			P013722	H770090	Production
FRG	G130113	P777409		P777408	P775569			P013722	H770090	Production
FRG	G130120	P780331	P780332	P777408	P776008			P013722	H770090	Production
FRG	G130164	P781822	P781826	P777408	P776008			P013722	H770090	Production
ERG	G132034	P777579		P776947	P158914					Cancelled
ERG	G132036	P532503	P532504	P780533		P778220		P013722	H770013	Production
FTG	G138217	P777776	P777777	P777709	P806891		P126054	P013722		Cancelled
FHG	G140022	P182046	P119373	P106773		P017335	P775455	P100866	H770090	Production
FHG	G140023	P182046		P106773		P017335	P111852	P100866	H770090	Cancelled
FHG	G140054	P182046	P119373	P109297	P105220	P017335	P775455	P100866	H770090	Production
FHG	G140055	P182046		P109297	P103198	P017335	P111852	H000350	H770090	Cancelled
STB	G140059	P182041	P119370	P109084		P017335	X004816			Production
FWA	G140181	P117331								Cancelled
FHG	G140393	P182046								Cancelled
EBA	G140420	P772523		P770597						Cancelled
FHG	G140435	P182046								Cancelled
FHG	G140436	P182046	P119373	P118784		P017335	P775455	H000350	H770090	Cancelled
FHG	G140442	P182046	P119373							Cancelled
EBA	G140494	P772523	P119373	P775240		P017335	P775455	H000350	H770090	Cancelled
EBA	G140496	P772523	P119373	P775240		P017335	P775455	H000350	H770090	Production
FTG	G140570	P182046		P771385	P105220	P017335	P111852			Cancelled
FTG	G150029	P772536	P771073	P771178	P103198		P111852	P016845	H770089	Production
FTG	G150032	P774537		P771178	P103198	P771179	P111852	P016845	H770089	Production
FTG	G150033	P772567		P771178	P103198	P771179	P111852	P016845	H770089	Production
FTG	G150034	P772567		P771178	P103198	P771179	P111852	P016845	H770089	Cancelled
FTG	G150035	P772536	P771073	P771178	P103198		P111852	P016845	H770089	Production
FTG	G150037	P772536		P771178	P103198		P111852	P016845	H770089	Production
FTG	G150043	P772581	P775339	P771178	P103198	P771179	P111852	P016845	H770089	Production
FTG	G150076	P772567		P771178	P103198	P771179	P111852	P016845		Cancelled
FRG	G150092	P777868	P777869	P777920	P776008			P016845	H770089	Production
FTG	G150096	P772567	P777938	P771178	P103198	P771179	P111852	P016845	H770089	Cancelled
FRG	G150097	P777868		P777920	P776008			P016845	H770089	Production
SSG	G150104	P777871	P777875	P777861	P112803	P017336				Production
FRG	G150111	P777868	P777869	P777920	P776008			P016845	H770089	Production
FRG	G150112	P777868	P777869	P777920	P776008			P016845	H770089	Production
FRG	G150117	P778764	P778765							Cancelled
FTG	G150165	P772536		P771178	P103198	P771179	P111852	P016845	H770089	Cancelled
FRG	G150168	P781187	P777875	P777861				P016845	H770089	Production
FRG	G150169	P781187	P777875	P777861				P016845	H770089	Production
FRG	G150207	P781909		P777920	P776008			P016845	H770089	Production
FRG	G150215	P778674	P777875	P777920	P158914			P016845	H770089	Production
FHG	G160048	P182002	P119372	P106639		P017336	P111852	P100789	H770089	Production
FHG	G160057	P182002		P106621		P017336	P111852	H000351	H770089	Cancelled
FHG	G160078	P182002	P119372	P106952	P103198	P017336	P111852	H000351	H770089	Cancelled
FHG	G160609	P182002		P106621		P017336	P111852	H000351	H770089	Cancelled
FTG	G180011	P182042	P128408	P775715	P105220		P116175	H770037	H001053	Production
FTG	G180013	P182042		P775715	P105220		P116175	H770037	H001053	Cancelled
FTG	G180014	P182042	P128408	P775715	P105220	P105740	P116175	H770037	H001053	Cancelled
FTG	G180015	P182042			P105220	P105740	P116175	H770037	H001053	Cancelled
FTG	G180019	P182042	P128408	P775715	P105220	P105740	P116175	H770037		Cancelled
FRG	G180026	P531988	P531995		P112803					Cancelled
FRG	G180031	P781098	P781102	P783185	P105220			H770037	H001053	Production
FRG	G180033	P781398	P781399	P783185	P105220			H770037	H001053	Production
FRG	G180035	P781098	P781102	P783185	P105220			H770037	H001053	Production
FRG	G180038	P781098	P781102	P781084	P105220			H770037	H001053	Production
FTG	G210007	P182040	P117781		P105220		P116175	H770068	H770082	Production
FTG	G210010	P182040	P117781		P105220		P116175	H770068	H770082	Production
FTG	G210009	P182040	P117781	P777862	P105220		P116175	H770068		Production
FTG	G210012	P182040	P117781	P781411	P105220		P116175	H770068		Production
STB	G770001	P182039	P114931							Cancelled
SRG	G772001	P182040	P117781	L015444		P105740	P116175			Production
SRG	G772002	P182038	P115070			P105740	P116175			Cancelled
SRG	G772003	P184040	P136659							Cancelled
SRG	G772004	P182048	P120879							Cancelled
SRG	G772006	P182038	P115070							Cancelled
SRG	G772901	P182040	P117781							Production
SRG	G772902	P182038	P115070			P105740	P116175			Production
SRG	G772906	P182038	P115070			P105740	P116175			Production
SRG	G772910	P182038	P115070							Cancelled
SRG	G772911	P182040	P117781			P105740	P116175			Production
SRG	G772912	P182040	P117781			P105740	P116175			Production

Proper Air Cleaner Service is Essential

Proper air cleaner servicing results in maximum engine protection against the ravages of dust. Proper servicing can also save you time and money by maximizing filter life and air cleaning efficiency.

Two of the most common problems are:

- **Over Servicing.**

New filters increase in dust cleaning efficiency as dust builds up on the media. Don't be fooled by filter appearance! A used filter should look dirty. By using proper filter measurement tools, you will use the full life of the filter at maximum efficiency.

- **Improper Servicing.**

Your engine is vulnerable to abrasive dust contaminants during the servicing process. The most common cause of engine damage is improper servicing procedures.

By following the steps listed in this section, you can avoid unnecessary risk to the engine.

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Donaldson recommends...

...servicing air filters by monitoring the airflow restriction levels in the intake system.

Some vehicle owners and maintenance supervisors, concerned with lowering their operating costs, clean and reuse their heavy-duty air filter.

Factors to consider before you decide whether cleaning or washing of air filters is appropriate for your vehicle or fleet:

- Heavy-duty air filter manufacturers do not recommend any type of cleaning process be used on their products. Donaldson, like other heavy-duty air filter manufacturers, does not warrant the air filter once it has been cleaned.
- Damaged filters should not be cleaned or reused. If the filter is damaged in service, investigate the source of damage and make corrections to avoid future damage.
- Never attempt to clean a safety element. Replace it after three main element services.
- Rather than cleaning or reusing filters, consider upgrading to an extended service filter and service the filter by restriction indicators. Donaldson recommends, when the specified maximum service limits are reached, to follow the proper service procedures and replace the used filter with a new Donaldson filter. Dispose of the used filter in a responsible manner.



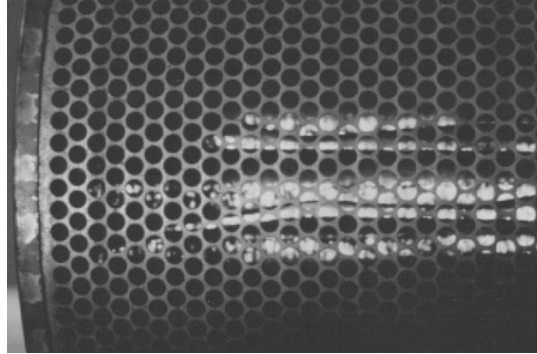
Filter dirt holding capacity is reduced 20-40% with each cleaning.

There is a risk of dirt reaching the clean side of the filter while cleaning, plus possible filter damage from high pressure water or compressed air, makes cleaning or washing a gamble. Add the cost of cleaning to the danger of filter damage when determining the risk versus the value of filter cleaning process.

Reuse of cleaned heavy duty filters increases the likelihood of improper air cleaner servicing because of the shortened service life. Each time the air intake system is serviced, it is exposed to the possibility of contamination.

What is a Hole and What is a False Alarm?

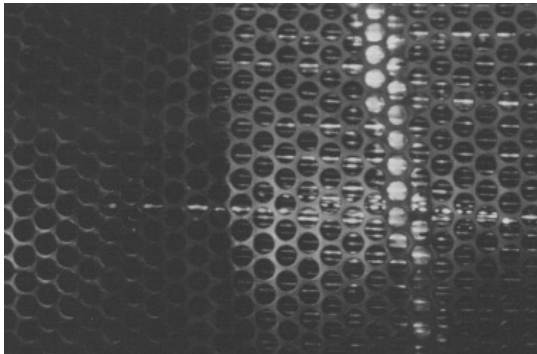
Donaldson receives filters for inspection each year that customers believe have developed holes. Upon inspection and testing in our labs, most of these suspect filters prove to have no holes or leaks. Most often these filters have areas with low dust buildup where light comes through the media when inspected with a light inside the filter, but in fact the filter functions perfectly.



On this photo, it is apparent that the filter has low dust buildup on the pleats or folds, but is functioning efficiently - no holes, no leaks.

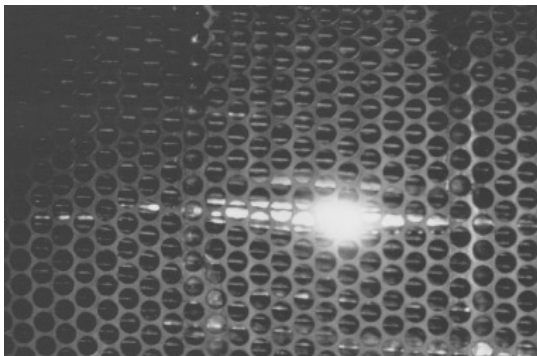
How do you tell the difference between a hole and low dust buildup?

The problem is that normal dust buildup shuts out light completely, while low dust buildup permits light to shine through the media. The contrast is significant and therefore looks like a crack or hole in the media. The contrast between a leak and low dust buildup is not as pronounced, which accounts for mis-identifications.



Here, light is coming through the adhesive beaded area as well as at the folds. Again no holes, no leaks.

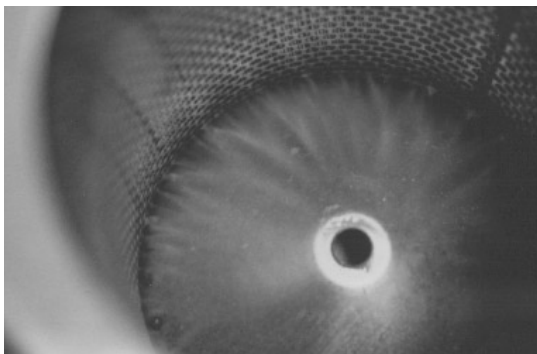
The deceiving low dust areas appear most often at the fold or at the adhesive beading present on some filters.



As you look at the photo on the left, you can see it shows a hole in the media. The other light areas are not holes, but rather more low dust areas on the adhesive beading, which is used for pleat spacing.

The secret to identifying a hole in the filter is to realize that when a hole is present you actually see the bright lamp filament shining through the hole, while low dust buildup is merely a bright area where the media is folded and not covered with dust.

Another basic sign of a hole is dust on the liner or endcap of the clean air side of the filter. If there is no sign of dust on the clean-side liner of the filter you can be quite sure that there is no leak in the filter.



In this last example, there are obvious dust trails on the liner or endcap of the clean air side of the filter. A dust trail usually indicates a leak.

1 Don't remove filter for inspection.

Such a check will always do more harm than good. Ridges of dirt on the gasket sealing surface can drop on the clean filter side when the gasket is released. Stick with the regular maintenance schedule, or, if you service by restriction, believe the gauge or restriction indicator.

Get a new indicator if you don't trust your current one.



2 Never rap a filter to clean it.

Rapping hard enough to knock off dust damages the filter and destroys your engine protection. Deeply embedded dirt is never released by tapping. It is always safer to keep operating until you can change to a new filter.



3 Never judge the filter's life by looking at it. Measure the airflow restriction.

A dirty-looking filter may still have plenty of life left, while carbon contamination may not be visible to the eye. You can't see the dirt that's embedded deep within the filter paper. Your best bet for lowest filter maintenance costs and best engine protection is to follow a restriction indicator. It's a smart, low-cost investment.



4 Never leave an air cleaner open longer than necessary.

Your open air cleaner is a direct entry to the engine! Keep it protected during filter changes. Contaminants smaller than we can see will cause damage to a diesel engine. If the housing is not going to be reassembled immediately, cover the opening. The only way to be sure nothing got in, is to make sure nothing can get in!



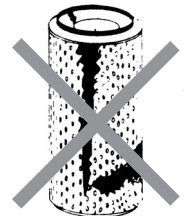
5 Don't ignore a worn or damaged gasket in the housing.

If your air cleaner has a cover gasket, replace it with a new one. Always check to be sure that no piece of the old gasket remains in the housing and that the gasket is not worn. If your filter model calls for a new gasket with each use, never reuse the old one.



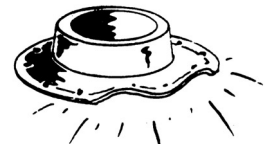
6 Don't use a damaged or bunched filter.

Never install a dented or punctured filter because it cannot protect properly against contamination. A dent can make a firm seal impossible or can indicate damaged media. A filter with bunched pleats saps engine power and fuel euros.



7 Replace missing or damaged parts.

Check to ensure that there is no damage to the air cleaner housing that could cause a leak. Replace any missing or damaged Vacuator Valves and air cleaner fasteners. Never attempt to repair a damaged filter.



8 Never substitute an incorrect filter model number.

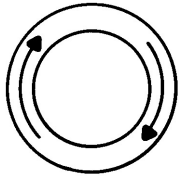
Filters may look almost identical, but even a fraction of a mm difference in size can prevent a good seal or affect airflow. Selecting a filter by size may give you the wrong media area and grade and therefore affect service life and filter efficiency.



EPB-ERB, FPG, FRG, SPB-SRB

1 Remove the filter

Unfasten or unlatch the service cover. Because the filter fits tightly over the outlet tube to create the critical seal, there will be some initial resistance, similar to breaking the seal on a jar. Gently move the end of

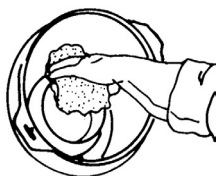


Closed filter end view

the filter back and forth to break the seal. Avoid knocking the filter against the housing. If your air cleaner has a safety filter, replace it every third main element change. Remove the safety element as you would the main element. Make sure you cover the air cleaner outlet tube to avoid any unfiltered contaminant dropping into the engine.

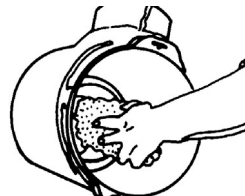
2 Clean both surfaces of the outlet tube and empty the dust cup

Use a clean cloth to wipe the filter sealing surface and the inside of the outlet tube. Contaminant on the sealing surface could hinder an effective seal and cause leakage. Make sure that all contaminant is removed before the new filter is inserted. Dirt accidentally transferred to the inside of the outlet tube will reach the engine and cause wear. Engine manufacturers say that it takes only a few grams of dirt to “dust” an engine! Be careful not to damage the sealing area on the tube.



Outer edge of the outlet tube.

Wipe both sides of the outlet tube clean.

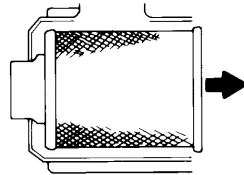


Inner edge of the outlet tube.

If your air cleaner is equipped with a dust cup.



Empty the dust cup. Dust should not be allowed to build up closer than 25 mm from the baffle. On models equipped with a Vacuator™ Valve, visually check and make sure the valve is not inverted, damaged or plugged.



3 Inspect the old filter

Inspect the old filter for any signs of leaks. A streak of dust on the clean side of the filter is a telltale sign. Remove any cause of leaks before installing new filter.

4 Inspect the new filter for damage

Inspect the new filter carefully, paying attention to the inside of the open end, which is the sealing area. NEVER install a damaged filter. A new Donaldson RadialSeal™ filter may have a dry lubricant on the seal to aid installation.

5 Insert the new RadialSeal™ filter properly

If you're servicing the safety element, this should be seated into position before installing the main element.

Insert the new filter carefully. Seat the filter by hand, making certain it is completely into the air cleaner housing before securing the cover in place.

The critical sealing area will stretch slightly, adjust itself and distribute the sealing pressure evenly. To complete a tight seal, apply pressure by hand at the outer rim of the filter, not the flexible center. (Avoid pushing on the center of the urethane end cap.) No cover pressure is required to hold the seal.

Again, NEVER use the service cover to push the filter into place! Using the cover to push the filter in could cause damage to the housing and will void the warranty.

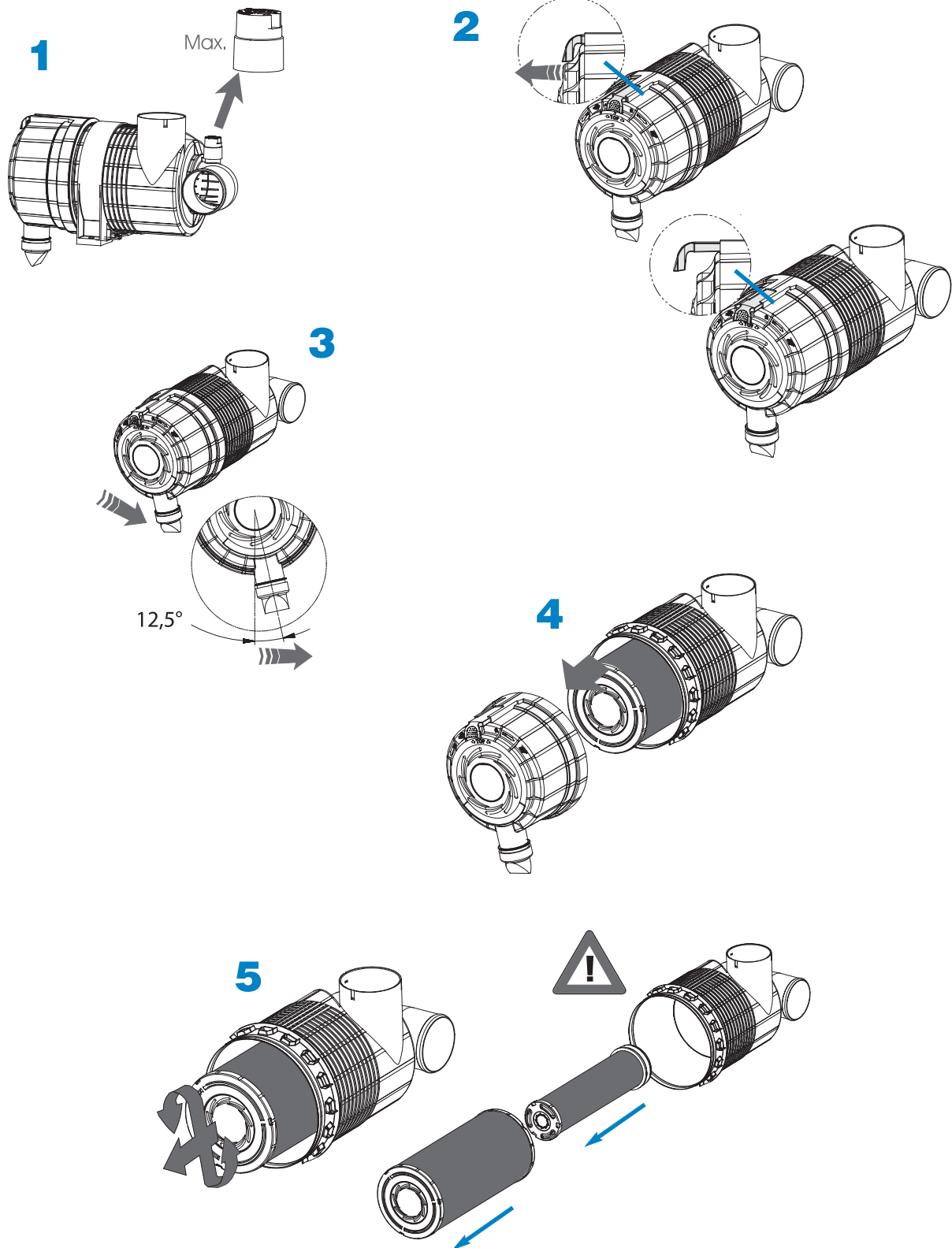
If the service cover hits the filter before it is fully in place, remove the cover and push the filter (by hand) further into the air cleaner and try again. The cover should go on with no extra force.

Once the filter is in place, secure the service cover or dust cup.

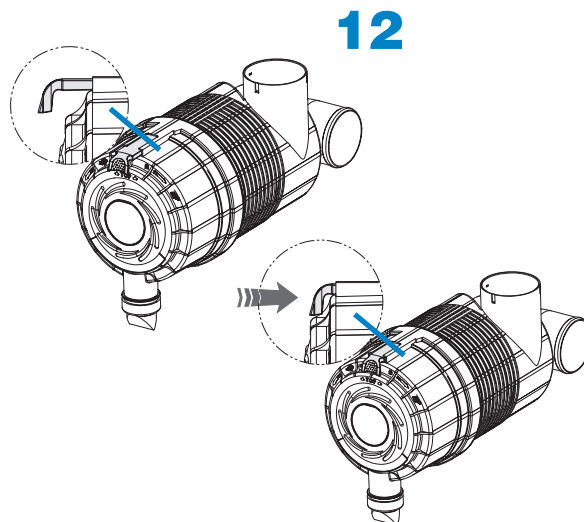
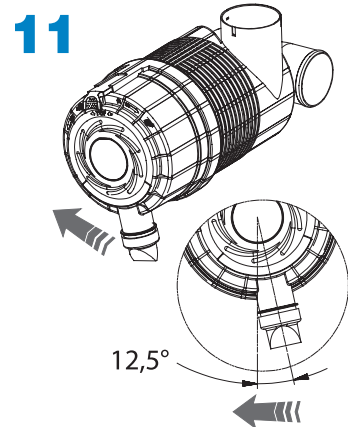
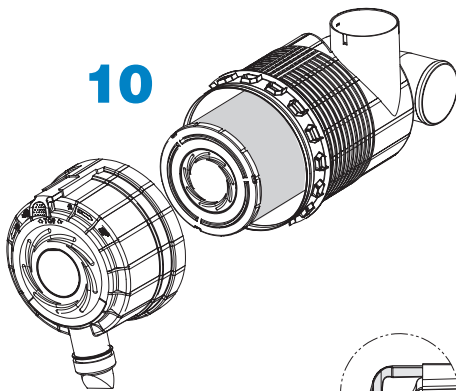
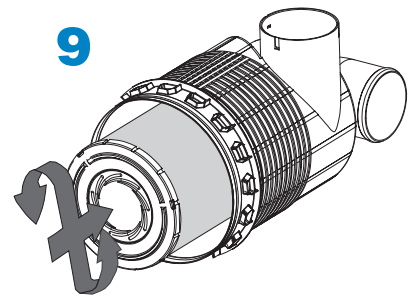
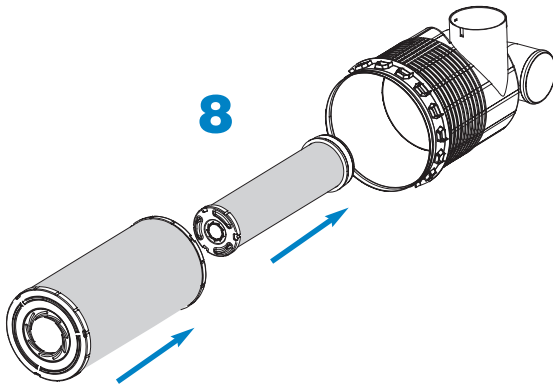
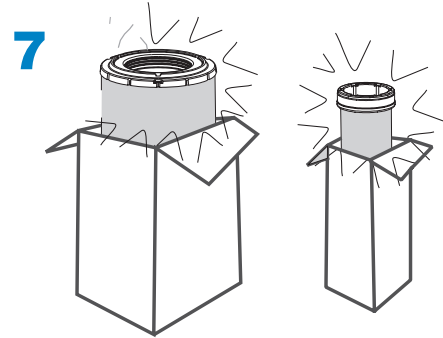
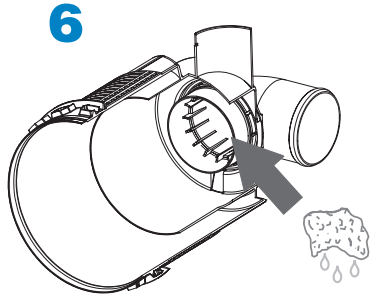
6 Check connections for tight fit

Make sure that all mounting bands, clamps, bolts, and connections in the entire air cleaner system are tight. Check for holes in piping and repair if needed. Any leaks in your intake piping will send dust directly to the engine!

FPG Alexin™



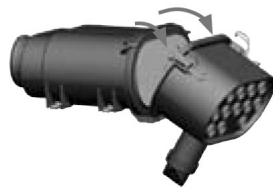
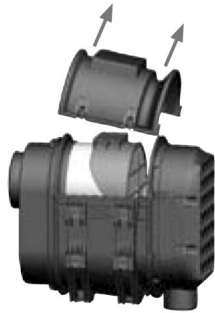
FPG Alexin™



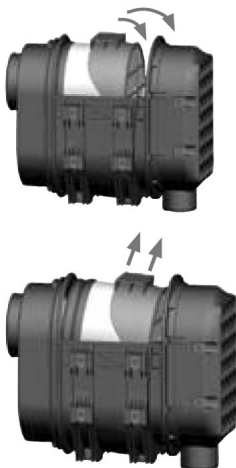
PowerCore™ PSD

PSD09, PSD10, or
PSD12 Style

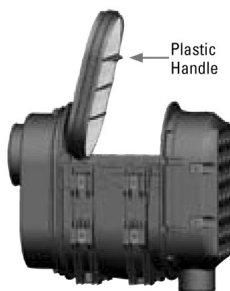
PSD08 Style



1 Shut off engine. Unlatch and remove the housing service cover.



2 Remove primary filter. Pull the filter out of housing. On PSD09, 10 and 12, you must first loosen the filter gasket seal. Using the handle, push down on the filter to loosen the seal, tilting the filter to a 5° angle.



3 Remove safety filter.
Note: A safety filter only needs to be replaced on every third primary air filter change. Using the plastic handle on the face of the safety filter, pull the filter toward the center of the housing and remove.



4 Inspect the new filter(s) before installing. Visually check for cuts, tears, or indentations on the sealing surfaces before installation. If any damage is visible, do not install.

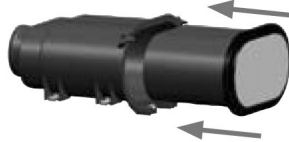
PowerCore™ PSD

PSD09, PSD10, or PSD12 Style

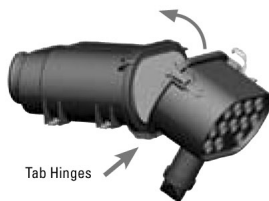
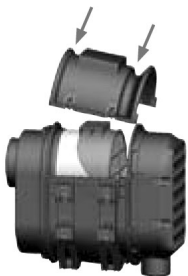
PSD08 Style



5 **If replacing safety**, using the plastic handle on the safety filter, slide the filter at an angle into the outlet side and push in place until the filter seats firmly and evenly within the housing. *Note: On PSD10 and 12 models, insert the safety filter tab into the positioning slot before pushing the filter in place.*



6 **Insert the primary filter.** For PSD08, slide the filter into the housing until the gasket seats against the housing. For PSD09, 10 and 12, slide the filter down at a 5° angle until it hits the end of the housing. Push the filter toward the outlet section to complete the seal.



7 **Replace the service cover.** On PSD08, insert the hinge tabs into the housing and tilt up the service cover up and secure latches. For the PSD09, 10, 12, placed the service cover in position and fasten the latches. *Note: If the cover doesn't seat, remove and re-check the filter position. Cover will be difficult to install if filter isn't installed correctly.*



8 **Visually inspect your inlet and outlet connections.** If your air cleaner has a Vacuator Valve, inspect the valve. Replace if any signs of wear or damage are visible.

Note: Your aircleaner service cover may be in a different position than shown.

ECB, ECC, ECD Duralite™

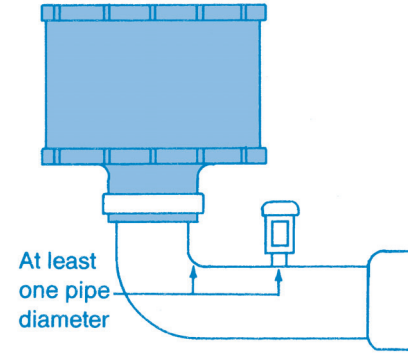
Servicing Intervals

Choose either of two types:

- Scheduled maintenance.
DuraLite service intervals can be integrated into any existing maintenance program.
- Restriction Maintenance.
This method offers the most accurate filter maintenance program, delivering maximum filter life at 99.9% efficiency, less machine downtime, and reduced maintenance costs.
- Washing, cleaning or servicing the filter in any way voids the warranty.

Service Indicator Location

For proper restriction readings, a restriction fitting tap must be located between the engine intake and DuraLite outlet neck. The tap should be located in a straight section of the intake pipe at least one pipe diameter away from the manifold or any bends, elbows or reducers.



Servicing Tips

- Do NOT judge the filter on the basis of visual inspection! If it's doing its job, it should look dirty.
DuraLite filter life is longer than you may think. Change the filter only when restriction readings indicate.
- Do NOT leave the inlet ducting exposed any longer than necessary (a few minutes) during service.

Disposal

Normal trash pick up is acceptable –never burn.

Installation Instructions

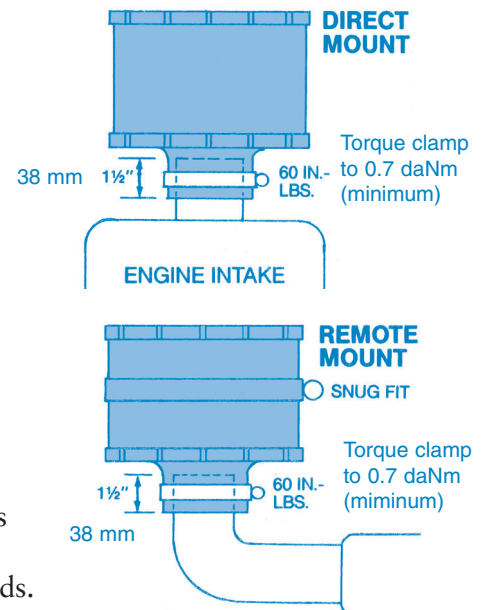
Installation

DuraLite air cleaners can be mounted in two ways:

1. Direct Mount: mounted directly on the intake manifold.
2. Remote Mount: mounted away from engine and connected to engine with inlet piping.

Installation Tips

- Engage outlet neck of the DuraLite™ over intake piping for a full 38 mm to insure a secure, lasting seal.
- Tighten clamp around outlet neck to 0.7 daNm minimum. A Donaldson high torque hose clamp is recommended.
- On remote mount style, avoid crushing the body with body clamps. A snug fit is best, and body clamps are not always required.
- Keep away from engine manifold and other very hot components (DuraLite™ is rated at 83°C maximum sustained temperature).
- Keep away from battery acids, brake fluid, and other caustic fluids.



FLB – Louvered Body, FTG

1 Remove the old filter gently

“Baby” that dirty filter, until you get it clear of the housing.

Accidentally bumping it while still inside means dropped dirt and dust that will contaminate the clean side of your filter housing, before the new filter element has a chance to do its job.



2 Always clean the inside of the housing carefully

Dirt left in the air cleaner housing spells death for your engine. Use a clean, damp cloth to wipe every surface clean. Check it visually to make sure it's clean before putting in a new filter.



3 Always clean the gasket sealing surfaces

An improper gasket seal is one of the most common causes of engine contamination. Make sure that all hardened dirt ridges are completely removed, both on the bottom and top of the air cleaner housing.



4 Check for uneven dirt patterns

Your old filter has valuable clues to dust leakage or gasket sealing problems. A pattern on the filter clean side is a sign that the old filter was not firmly sealed or that a dust leak exists. Identify the cause of that leak and rectify it before installing a new filter.



5 Press your fresh gasket to see that it springs back

Make sure your new filter is made with a highly compressible gasket that springs back (promptly) when finger pressure is released.

A high quality gasket is one of the most important parts of the filter.



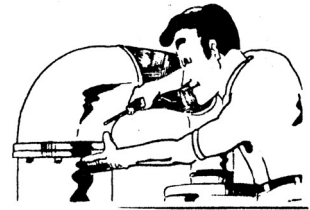
6 Make sure the gasket seats evenly

If you don't feel the gasket seating evenly for a perfect seal, you don't have protection. Re-check to see if the sealing surface in the housing is clean, and ensure that the filter is the correct model. It may be the wrong size for the housing.



7 Ensure air-tight fit on all connections and ducts

Check that all clamps and flange joints are tight, as well as the air cleaner mounting bolts. Seal any leaks immediately – leaks mean dirt is directly entering your engine.



SRG-STG Donaclo[™]

1 Measure restriction

Measure the restriction of the air cleaner with a Donaldson restriction indicator, such as The Informer[™], a service gauge, or water manometer at the restriction tap provided in the air cleaner or the transfer pipe.



One of two conditions will exist:

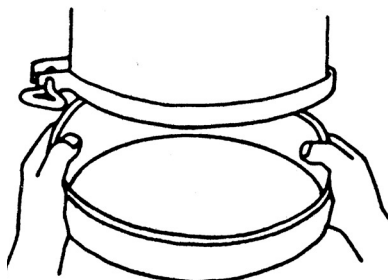
- (1) If the reading indicates the maximum restriction (per engine manufacturer's recommendations), change out the filter.
- (2) If the reading shows below the maximum, the filter still has life left and should not be serviced.

2 Empty the dust cup



Dust should not be allowed to build up closer than 25 mm from the baffle. On models equipped with a Donaldson

Vacuator[™] Valve, dust cup service is cut to a minimum; all that is necessary is a quick check to see that the Vacuator[™] Valve is not inverted, damaged, or plugged.



3 Change the filter

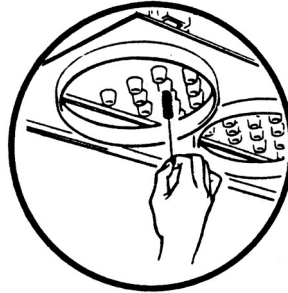
When restriction indicates that filter servicing is required, loosen the wing nut and remove the primary filter.

Before installing the new filter,

inspect the filter and gasket for shipping or storage damage. Wipe out the housing with a clean cloth.

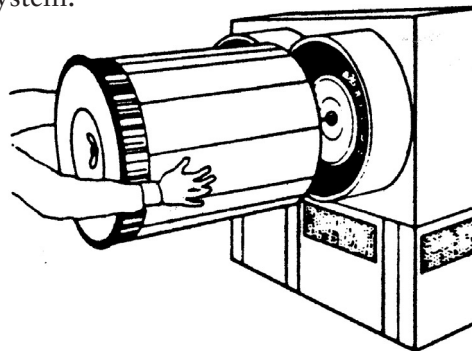
Carefully install new filter, wing nut and sealing washer.

Always use Donaldson replacement filters, which have been engineered to fit the air cleaner and engine intake system exactly.



4 Cover the inlet

Don't leave the air inlet exposed! If the new filter won't be installed immediately, cover the opening to prevent stray contaminant from entering the induction system.



5 Safety element service

For maximum engine protection and air cleaner service life, replace the safety element every third main element filter change.

6 Reinstall the dust cup

Be sure the dust cup is sealed 360° around the air cleaner body.

Reset the restriction indicator to green.

7 Check connections

Ensure that all connections between the air cleaner and the engine are tight and leak-free.

Listing

Part Number	Product Description	Page Number
B065018	FLB AxialSeal, Metal	Air Cleaner 68-71
B070005	EPB RadialSeal™, Plastic	Air Cleaner 24-37
B080022	FLB AxialSeal, Metal	Air Cleaner 68-71
B080067	EPB RadialSeal™, Plastic	Air Cleaner 24-37
B085001	ECB Duralite™, RadialSeal™	Air Cleaner 18-23
B085011	ECB Duralite™ RadialSeal™	Air Cleaner 18-23
B085046	ECB Duralite™, RadialSeal™	Air Cleaner 18-23
B085048	ECB Duralite™, RadialSeal™	Air Cleaner 18-23
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