

## Powerful Two-Stage Filtration for Diesel Engines Operating in Medium to Heavy Dust Conditions

The air cleaners featured in this section offer reliable two-stage filtration designs that have been proven by years of service in medium dust environments such as light construction, mining, agriculture, trucks, gen sets, compressors and industrial applications.



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### Looking for FHG or FWG Air Cleaner Families?

These old air cleaner families are being phased out of our product offering. To help you transition from these older air cleaner designs to newer designs with improved filtration technology, the upgrade tables below will guide you to a newer air cleaner housing (or family) that is a close match to the older model. See the service parts section for available parts for older air cleaner housings. If you need help to upgrade, contact Donaldson. See back cover for contact information.

#### Upgrade FHG to FPG or FRG

Older FHG	FPG Model	--- FRG Model --- Style A Style B
G052558	G065424	G052686
G052559	G065424	G052686
G052560	G057511	G052685
G052561	G057511	G052685
G065104	G070019	G065551
G065113	G065432	G065541
G065212	G065432	G065541
G065360	G065432	G065551
G080147	G070019	G080582
G080195	G082528	G080585
G080200	G082527	G080582
G080490	G082527	G080582
G090022	G090225	G090245 G100297
G090024	G090225	G090250 G110206
G090182	G090225	G090245 G100297
G090183	G090225	G090250 G100297
G100035	G100319	G100398 G110206
G100036	G100319	G100395 G100297
G120012		G120417 G110206
G120014		G120415 G110206
G120036		G120415 G110206
G120037		G120417 G110206
G140022		G140523 G130097
G140054		G140523 G130097
G140055		G140526 G130097
G160078		G160679 G150092

#### Upgrade FWG to FPG or FRG

Older FWG	Upgrade	Style
G042503	G042544	FPG
G042529	G042544	FPG
G052510	G057511	FPG
G052512	G057511	FPG
G065266	G070017	FPG
G080023	G082528	FPG
G080026	G082528	FPG
G120365	G100297	FRG
G100003	G100297	FRG
G100004	G100297	FRG
G120059	G110206	FRG
G120063	G110206	FRG
G140077	G130097	FRG
G140083	G130097	FRG
G160104	G150092	FRG
G160107	G150092	FRG

PSD Air Cleaners with PowerCore® Filtration Technology offer improved filtration performance compared to our older F-Series axial or RadialSeal™ air cleaners.

If you're looking for  
a new two-stage air  
cleaner, check out the  
**PowerCore** Air cleaner  
section first!



**PowerCore**  
A Donaldson Filtration Technology



## Smaller, Lightweight Alternative Two-Stage Air Cleaner

### Designed for horizontal installation

The FKB series is a family of two-stage air cleaners for medium dust conditions.

Compared to other air cleaner styles, this new air cleaner family delivers the performance of competitive larger air cleaners in a compact, rugged design.

With heavy-duty plastic construction and non-metal filters, the air cleaner is lighter, more efficient, and easier to install and replace than competing products.

Another key design feature is the built-in mounting brackets. There's no need for additional mounting support.

The two-stage design features a built-in pre-cleaner that separates up to 85% of airborne contaminants.



*FKB air cleaners are smaller in diameter compared to competitive brands with similar airflow.*

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Mann+Hummel is a registered trademark of Mann+Hummel GMBH

The FKB's plastic housing and durable construction enables installation in all types of operating environments and temperature ranges from -40 °C to 82 °C, operating in medium-dust conditions with engine air flow from 70 to 207 cfm (2 to 5.9 m<sup>3</sup>/min).

FKB air cleaners effectively reduce contaminants flowing into the air intake system, provide a high level of engine protection from harmful contaminants and increase engine performance and fuel efficiency.

The air cleaner models ship with both the primary and safety filters.



## Built-in Mounting Brackets and Filter Indicator Port

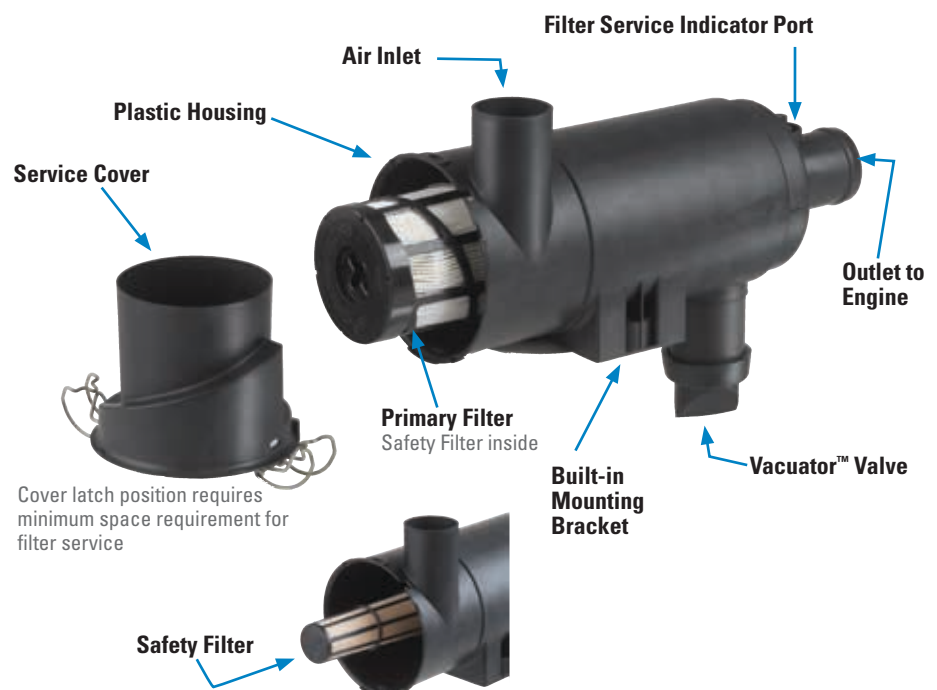
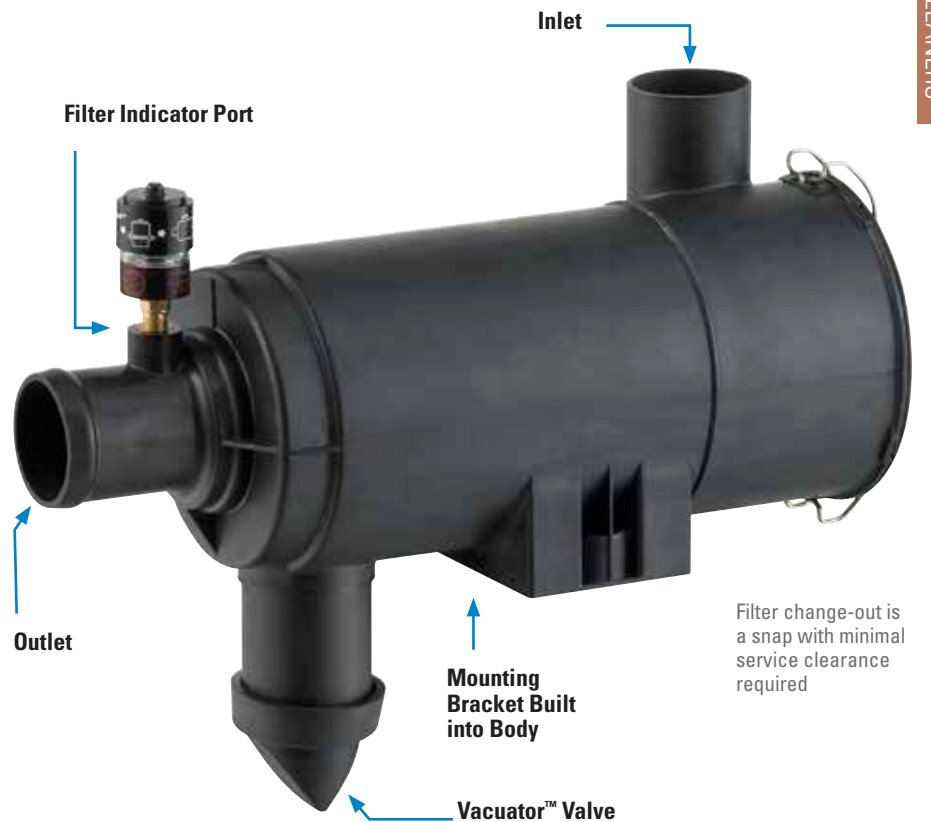
### Easy to service with non-metal filters

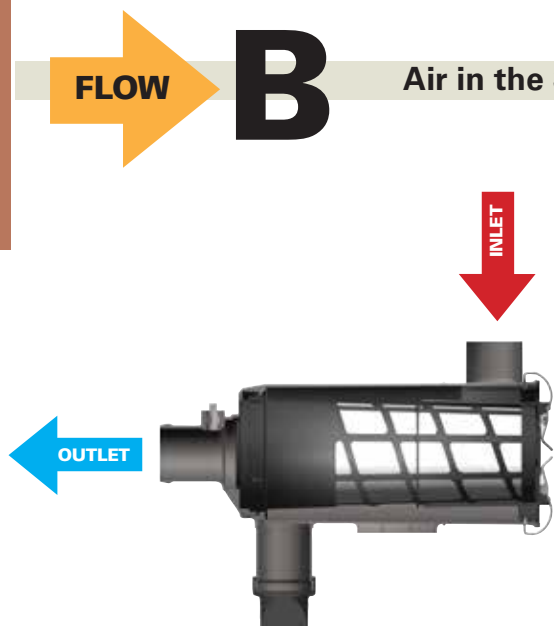
#### Applications

- Off-road equipment operating in medium-dust conditions with engine airflow range of 70 to 207 cfm (2 to 5.9 m<sup>3</sup>/min)
- Installs horizontally. Mounting the air cleaner directly to the engine is not recommended; excessive engine vibration can cause premature air cleaner structural failure
- Sustained temperature tolerance: -40 °F to 180 °F / -40 °C to 82 °C. Do not install next to components that exceed the maximum temperature (180 °F / 82 °C); like a turbocharger, muffler, exhaust pipe or other high temperature component

#### Air Cleaner Features

- Smaller in diameter compared to competitive brands with similar airflow
- Improved handling and maintenance — lighter and smaller, changing filters is a snap
- Product design includes:
  - primary filter
  - safety filter
  - filter service indicator port
- Improved filter disposal ease — no metal
- Cover latch position allows for minimum service clearance and eases filter service
- Built-in mounting brackets in air cleaner body eliminate need for mounting bands





**Air in the Side, out the End** (standard flow filters)

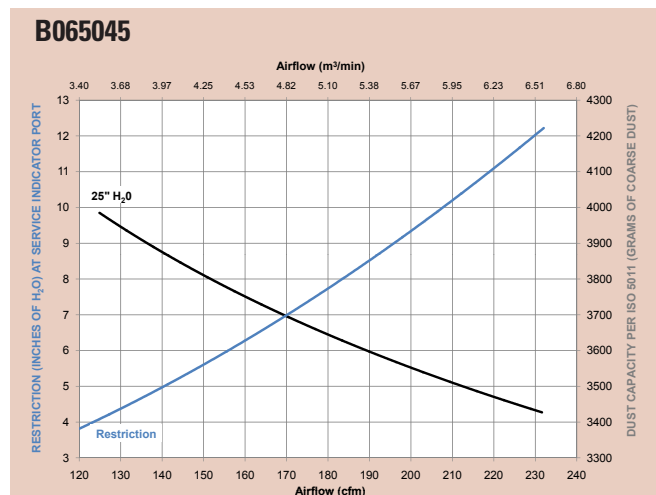
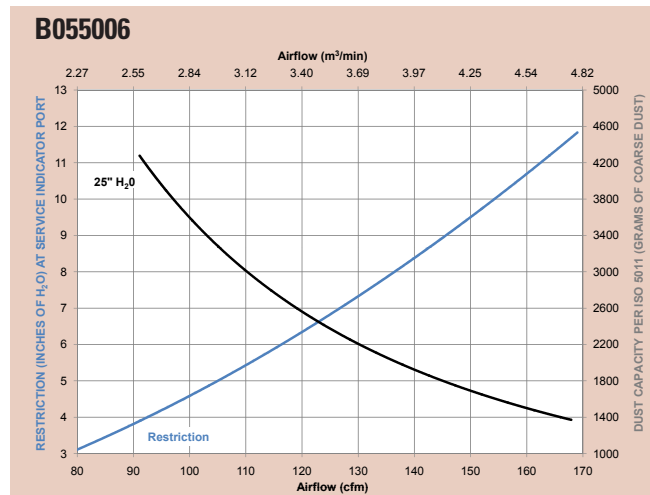
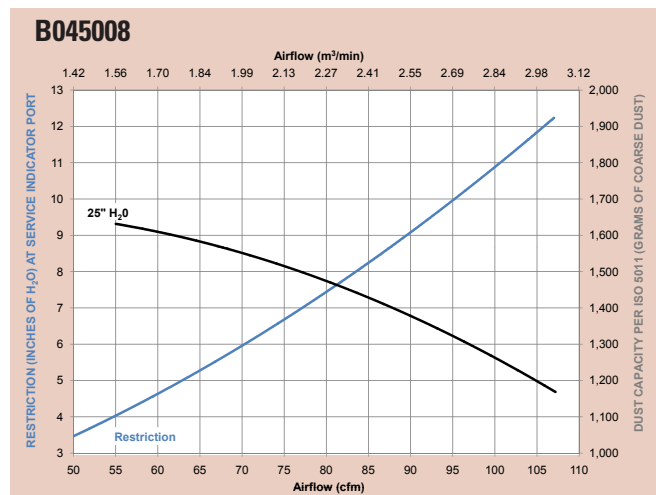
## When spec'ing an Air Cleaner . . .

Determine the airflow requirements of your engine, then find the corresponding cfm airflow in the table at right. The restriction numbers (shown in inches of water) indicate the approximate initial restriction of each model air cleaner at that cfm. If there are two air cleaner models that fit your parameters, choosing the one with the lower restriction will provide longer filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc.

## Initial Airflow Restriction

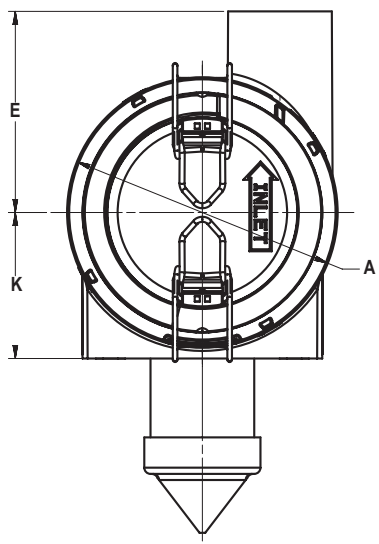
CFM@ H <sub>2</sub> O			Air Cleaner Model
6"	8"	10"	
70	84	95	B045008
116	137	154	B055006
155	185	207	B065045

## FKB Air Cleaner Performance Curves (Restriction & Dust Capacity)

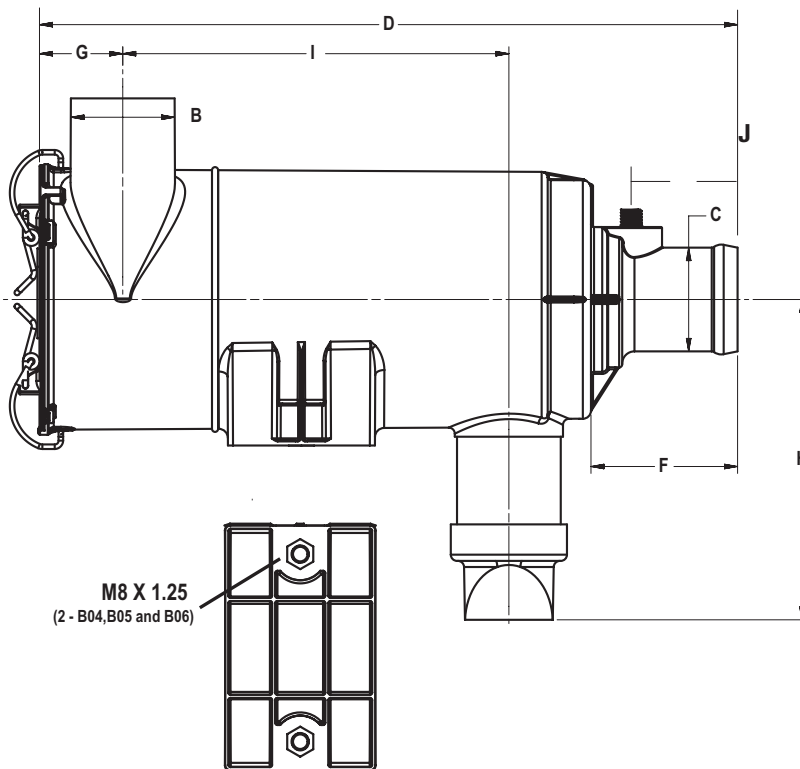


## FKB Specification Illustrations

Cover End View for B04, B05, and B06



Side View

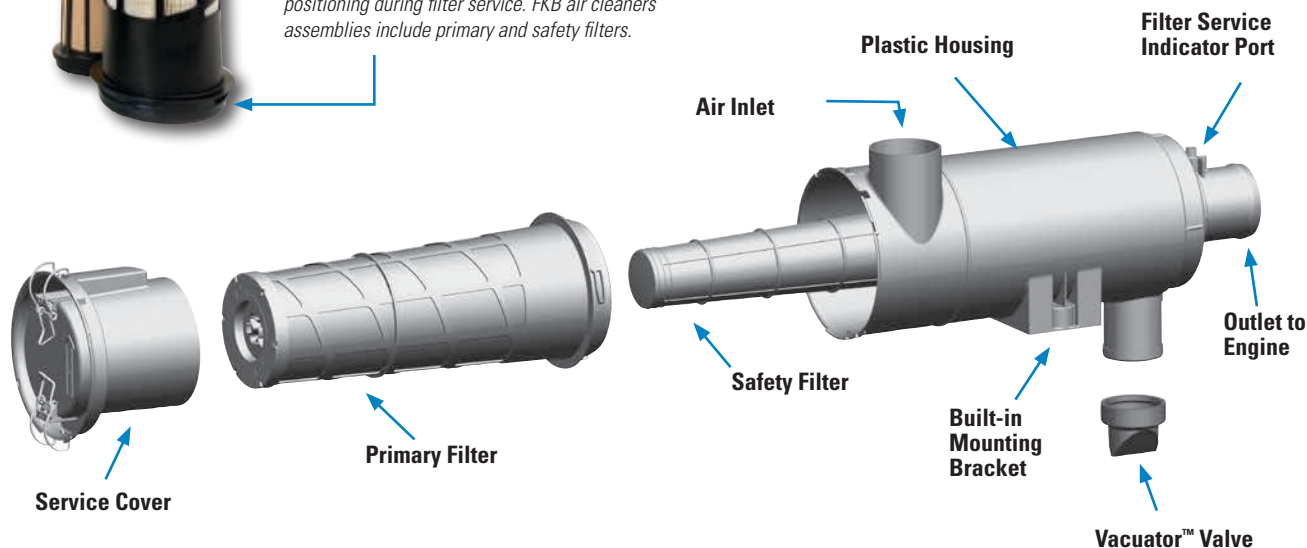


## FKB Specifications

Air Cleaner Models	Body Dia. (A)	Inlet Dia. (B)	Outlet Dia. (C)	Housing Length (D)	Inlet Height (E)	Outlet Length (F)	Inlet Location (G)	Center Line to Valve (H)	Service Clear. (I)	Weight	Restr. Tap Loc. (J)	Mounting Bracket Height (K)
B045008	5.22" 133mm	2.00" 51mm	2.00" 51mm	13.46" 342mm	3.88" 99mm	2.83" 72mm	1.60" 41mm	6.18" 157mm	7.44" 189mm	2.1 lb 1.0 kg	2.02" 52mm	2.82" 72mm
B055006	5.97" 152mm	2.50" 64mm	2.50" 64mm	15.89" 404mm	3.88" 99mm	2.88" 73mm	1.93" 49mm	6.18" 157mm	9.61" 244mm	3.2 lb 1.4 kg	2.05" 52mm	3.03" 77mm
B065045	7.09" 180mm	3.00" 76mm	3.00" 76mm	16.06" 408mm	4.72" 120mm	2.87" 73mm	2.07" 53mm	7.41" 188mm	9.50" 241mm	3.7 lb 1.7 kg	2.05" 52mm	3.54" 90mm



Unique twist and lock filters ensure proper positioning during filter service. FKB air cleaner assemblies include primary and safety filters.



## FKB Service Parts & Accessories

### B045008 FKB

Cover .....	P606497
Filter, primary .....	P604457 .....3
Filter, safety .....	P603729 .....3
Vacuator™ Valve .....	P158914
Elbow, 45° .....	P105541
Elbow, 90° .....	P105529
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001377
Outlet band clamp .....	P148337

### B055006 FKB

Cover .....	P609219
Filter, primary .....	P609218 .....3
Filter, safety .....	P602427 .....3
Vacuator™ Valve .....	P158914
Elbow, 45° .....	P105543
Elbow, 90° .....	P105531
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001378
Outlet band clamp .....	P148339

### B065045 FKB

Cover .....	P608592
Elbow, 45° .....	P105544
Elbow, 90° .....	P105532
Elbow, 90° reducing .....	P123462
Filter, primary .....	P609221 .....3
Filter, safety .....	P608599 .....3
Hump hose .....	P105608
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001379
Outlet band clamp .....	P148341
Vacuator™ Valve .....	P158914

#### NOTES:

3 = Shipped with air cleaner initially

## Installation Recommendations

- Shut off your engine.
- Air cleaner orientation is horizontal, with the drop tube pointing down — within +/- 15°. For service clearance, allow the entire length of the filter for removal and 35mm for service cover latches.
- Mounting is M8 x 1.25, with a maximum torque of 15 ft•lb.
- Connections: Inlet/Outlet maximum torque 40 in•lb. Indicator port maximum torque 1.5 ft•lb.
- **Inlet accessory note:** The air cleaner housing can accommodate a lightweight inlet hood, but not a pre-cleaner or any other accessory. Use of an unapproved intake accessory will void your Donaldson warranty.

**This servicing information is provided as a best practices guide. It is not intended to replace or supersede the service instructions supplied by your engine or vehicle manufacturer.**

### 1 Check the Restriction

Measure the restriction of the air cleaner with a Donaldson filter service indicator, service gauge, or a water manometer. Replace the filter only when the restriction level has reached the maximum recommended by the engine or equipment manufacturer or on a regular service schedule.



### 2 Clean out the Vacuator™ Valve

Remove the Vacuator Valve and clean out any dust found in the drop tube. Reinstall Vacuator Valve or replace it if it is worn or damaged.



### 3 Remove the Primary Filter

Unlatch and remove the service cover on the FKB air cleaner.

To remove the primary filter, press and rotate the filter counter-clockwise until free. Then extract the primary filter by slowly pulling it out of the housing.



*Note: Avoid dislodging contaminant from the filter as it is removed from the air cleaner housing.*



*Continued on next page*



### 4 Remove the Safety Filter or Liner

Next remove the safety filter (replace at every third primary filter change) or support liner by pulling it straight out. This allows necessary access to properly clean the primary filter's seal surface.

Inspect the seal surface and housing for any damage. Replace the complete air cleaner if damage is present.

It is not necessary to replace the support liner unless it is damaged. If you are reusing the safety filter keep it clean while servicing the housing to avoid contamination.



*Note: If a safety filter or liner is not present, check to see if it has attached itself to the inside of the primary filter during removal.*

*To properly service this small diameter air cleaner, you will need to remove the safety filter or liner upon each filter service.*

### 5 Clean the Inside Surface

Block the outlet tube of the air cleaner using a small dampened towel prior to cleaning the seal and locking surfaces to avoid contaminating the induction system.

With a clean damp cloth, thoroughly clean the inside surface of the housing, seal and lock surfaces.



*Note: Failure to clean the inside surface may cause contaminants to be introduced to the outlet tube or onto the seal area of the primary filter during reinstallation resulting in a leak for dirty air.*

### 6 Inspect the New Filters

Inspect the new primary and safety filters for any damage, voids, cuts, tears, or indentations in the media or urethane sealing surfaces.



### 7 Install the Safety Filter

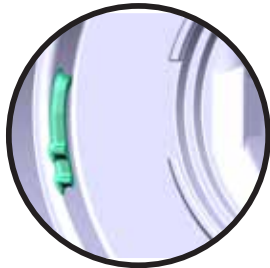
Remove the dampened towel from the outlet tube that was used to protect the induction system during servicing. Install the safety filter or support liner by pressing it firmly in place until seated. When properly fitted, it should fit snugly inside the outlet tube.



## 8

### Install the Primary Filter

Install the new primary filter by pressing and rotating the filter clockwise until fully fitted against the stop.



Close-up of Filter Stop



*Note: If you perform filter maintenance service on a schedule vs. using service indicators, you may want to write the service date on the filter end cap.*



## 9

### Fasten the Service Cover

The "INLET" arrow on the cover should line up with the air cleaner inlet.

Do not force the cover onto the air cleaner. It should go on easily with no extra force.



Re-fasten the latches which secure the cover. Make sure that latches penetrate the slots in both the body and the cover.



*Note: If the cover does not fit flush to the body, the primary filter is not properly seated in the housing. Recheck the primary and safety filter installation following the proper installation procedure so they become fully seated.*

## 10

### Reset the Filter Indicator and Inspect the Air Cleaner System

If your system has a restriction indicator, reset the device.

Inspect and torque all clamps, bolts and connections in the entire air intake system. Check for holes in piping, and repair if needed.





## Compact, RadialSeal™, Medium-Duty Air Cleaner

### Designed for Horizontal Installation



*Donaldson XRB air cleaners are built with Donaldson technologies.*

The XRB air cleaner family is smaller in size compared to competitive models with similar airflow operating ranges.

XRB air cleaners effectively reduce contaminants flowing into the air intake system, provide a high level of engine protection from harmful contaminants and increase engine performance and fuel efficiency.

The XRB's plastic housing and durable construction enables installation in all types of operating environments and temperature ranges from -40 °F to 180 °F / -40 °C to 82 °C, operating in medium-dust conditions with engine airflow from 265 to 630 cfm.

The B080080 has non-metal primary and safety filters. The primary filters for the B100127 and B120420 have metal outer liners. The air cleaner models ship with both the primary and safety filters.

Like our FKB and PSD models, these air cleaners feature built-in mounting brackets. There's no need for additional mounting support.



*Built-in mounting brackets on air cleaner body eliminate the need for mounting bands.*



*Cover latch position allows for minimum service clearance and eases filter service.*



*Air cleaners are equipped with the Donaldson Vacuator™ Valve.*

## Built-in Mounting Brackets and Filter Indicator Port Easy to Service with Non-metal Filters

### Applications

- On- and off-road equipment operating in medium-dust conditions with engine airflow range of 255 to 630 cfm (7.5 to 17.8 m<sup>3</sup>/min)
- Installs horizontally. Mounting the air cleaner directly to the engine is not recommended; excessive engine vibration can cause premature air cleaner structural failure.
- Sustained temperature tolerance: -40 °F to 180 °F / -40 °C to 82 °C. Do not install next to components that exceed the maximum temperature (180 °F / 82 °C) like a turbocharger, muffler, exhaust pipe or other high temperature component

### Air Cleaner Features

- Smaller in diameter compared to competitive brands with similar airflow
- Improved handling and maintenance — lighter and smaller, changing filters is a snap
- Product design includes:
  - primary filter
  - safety filter
  - filter service indicator port
- Cover latch position allows for minimum service clearance and eases filter service
- Built-in mounting brackets on air cleaner body eliminate the need for mounting bands



Primary and safety filters for XRB housings.



### Installation Recommendations

- Air cleaner orientation is horizontal, with the drop tube pointing down — within +/- 15°. For service clearance, allow the entire length of the filter for removal and 1.38" (35mm) for service cover latches.
- Mounting is M8 x 1.25, with a maximum torque of 15 ft•lb.
- Connections: Inlet/Outlet maximum torque 40 in•lb.
- **Inlet accessory note:** The air cleaner housing can accommodate a lightweight inlet hood, but not a pre-cleaner or any other accessory. Use of an unapproved intake accessory will void your Donaldson warranty.
- Filter Service Indicator port arrives with plug/cap. Order filter service indicator separately. See accessories section. Indicator port maximum torque 1.5 ft•lb.



**FLOW**

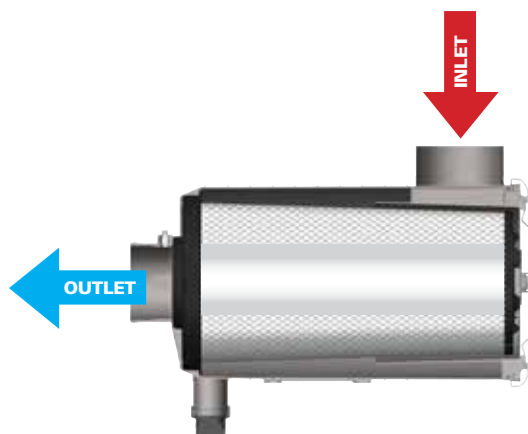
**Air in the Side, out the End** (standard flow filters)

## When Selecting an Air Cleaner . . .

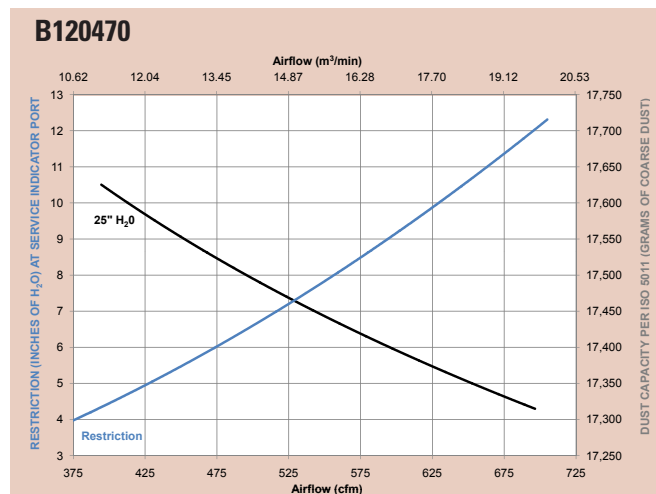
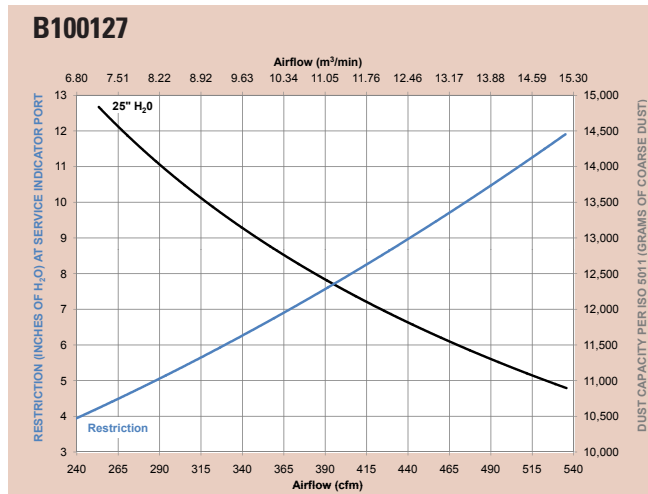
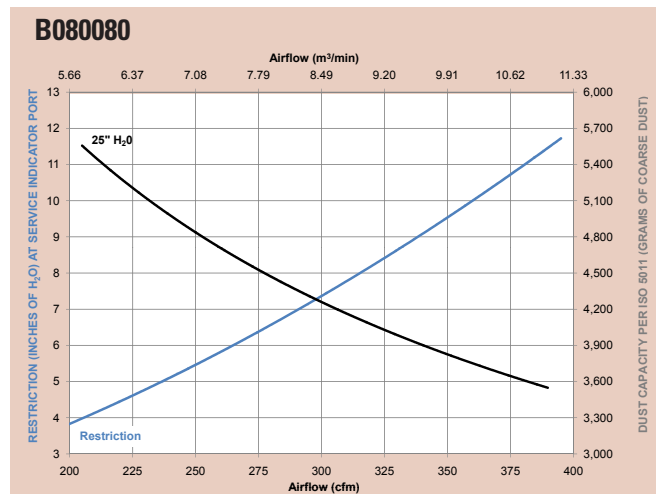
Determine the airflow requirements of your engine, then find the corresponding cfm airflow in the table at right. The restriction numbers (shown in inches of water) indicate the approximate initial restriction of each model air cleaner at that cfm. If there are two air cleaner models that fit your parameters, choosing the one with the lower restriction will provide longer filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, and pre-cleaners.

## Initial Airflow Restriction

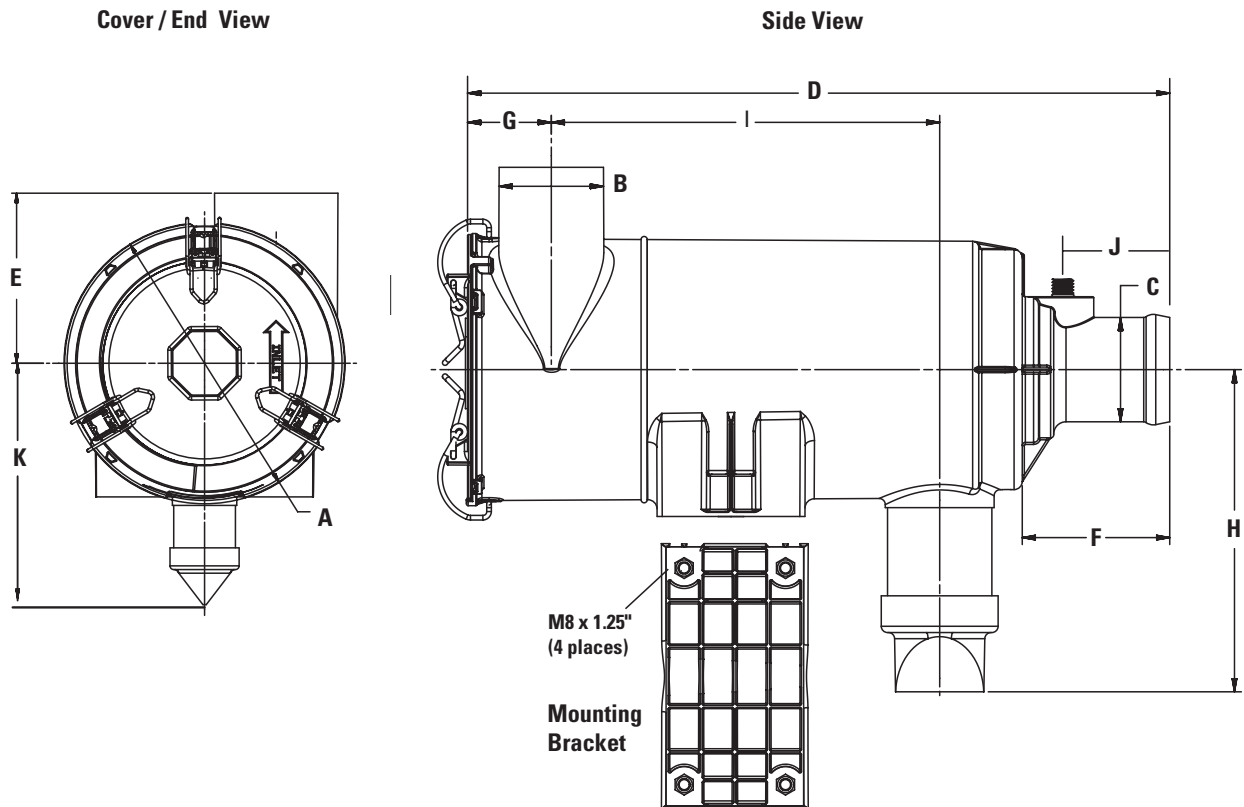
CFM @ H <sub>2</sub> O			Air Cleaner Model
6"	8"	10"	
265	315	360	B080080
330	405	475	B100127
475	555	630	B120470



## XRB Air Cleaner Performance Curves (Restriction & Dust Capacity)



## XRB Specification Illustration



## XRB Specifications

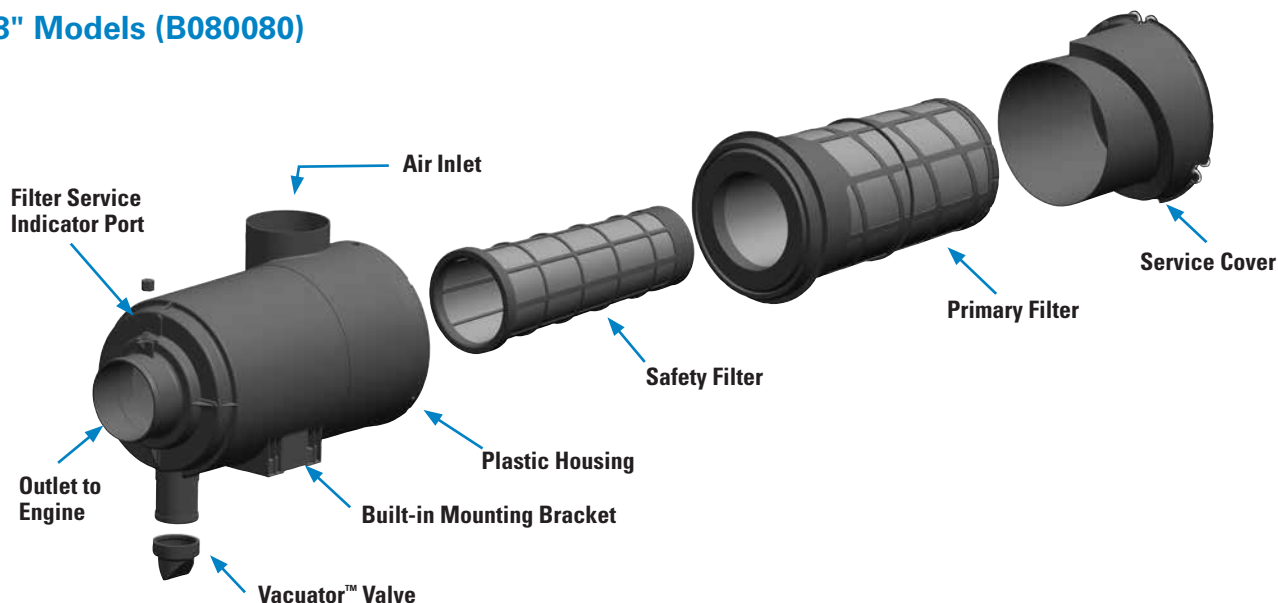
Air Cleaner Models	Body Dia. (A)	Inlet Dia. (B)	Outlet Dia. (C)	Housing Length (D)	Inlet Height (E)	Outlet Length (F)	Inlet Location (G)	Center Line to Valve (H)	Service Clear. (I)	Weight	Restr. Tap Loc. (J)	Mounting Bracket Height (K)
B080080	9.11" 231.3mm	4.00" 102mm	4.00" 102mm	16.75" 425mm	5.50" 140mm	2.40" 61mm	3.14" 80mm	7.78" 198mm	14.76" 375mm	5.52lb 2.5kg	1.57" 40mm	4.33" 110mm
B100127	11.31" 287mm	5.00" 127mm	4.50" 114mm	22.25" 565mm	7.80" 198mm	2.82" 72mm	3.47" 88mm	8.85" 225mm	19.41" 493mm	13.00lb 5.95kg	1.97" 50mm	5.71" 145mm
B120470	13.00" 330mm	6.00" 152mm	5.00" 128mm	23.68" 601mm	8.58" 218mm	2.81" 71mm	3.95" 100mm	9.63" 245mm	20.71" 526mm	20.00lb 9.07kg	1.97" 50mm	6.50" 165mm



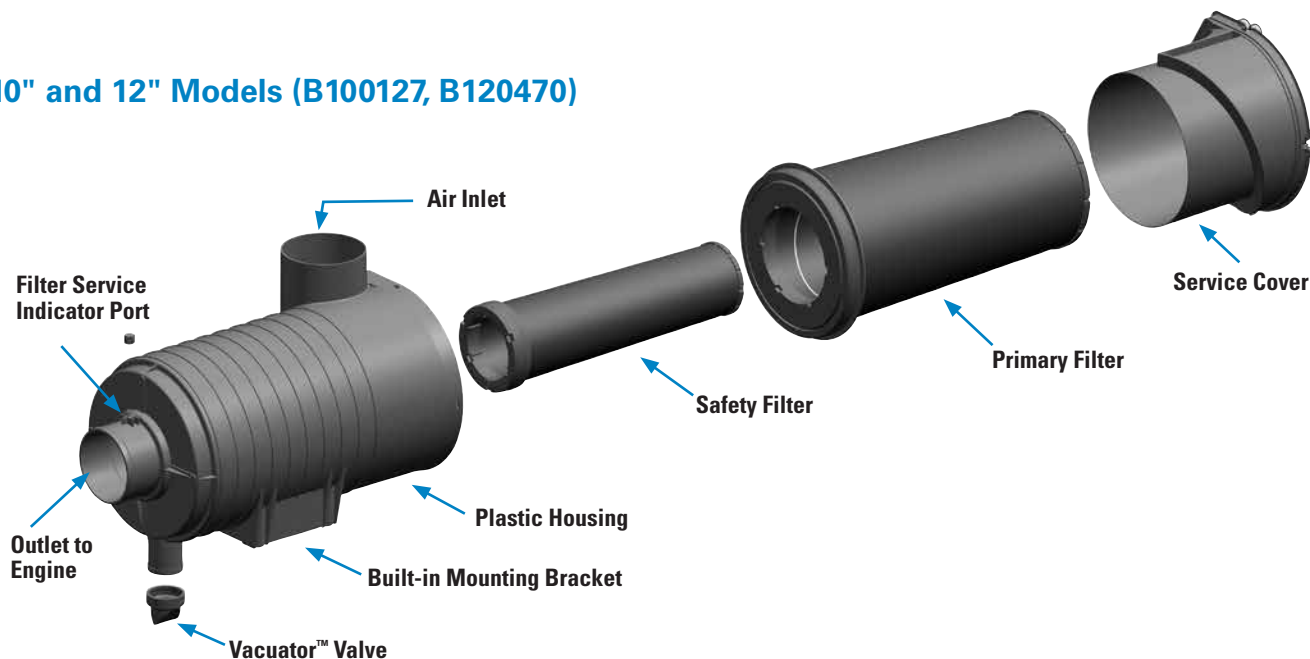
# XRB Air Cleaners Exploded View / Service Parts



## 8" Models (B080080)



## 10" and 12" Models (B100127, B120470)



## Service Parts & Accessories

### B080080 XRB

Cover .....	P605731
Elbow, 45° .....	P105545
Elbow, 90° .....	P105533
Elbow, 90° reducing .....	P121482
Filter, primary (non metal) .....	P611190.....3
Filter, safety .....	P611189.....3
Hump hose .....	P105609
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H000467
Outlet band clamp .....	P148343
Vacuator™ Valve .....	P158914

### B100127 XRB

Cover .....	P609942
Elbow, 45° .....	P114316
Elbow, 90° .....	P113733
Filter, primary (metal liner) .....	P611539.....3
Filter, safety .....	P611540.....3
Hump hose .....	P114317
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000165
Inlet hood, plastic .....	H000469
Outlet band clamp .....	P148344
Vacuator™ Valve .....	P158914

### B120470 XRB

Cover .....	P608117
Elbow, 45° .....	P109021
Elbow, 90° .....	P107844
Elbow, 90° reducing .....	P143895
Filter, primary (metal liner) .....	P608116.....3
Filter, safety .....	P608391.....3
Hump hose .....	P105610
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000275
Inlet hood, plastic .....	H000606
Outlet band clamp .....	P148345
Vacuator™ Valve .....	P158914

### NOTES:

3 = Shipped with air cleaner initially

This servicing information is provided as a best practices guide. It is not intended to replace or supersede the service instructions supplied by your engine or vehicle manufacturer.

### 1 Check the Restriction

Replace the filter only when the restriction level has reached the maximum recommended by the engine or equipment manufacturer or on a regular service schedule.



### 2 Clean out the Vacuator™ Valve

Remove the Vacuator Valve and clean out any dust found in the drop tube. Reinstall Vacuator Valve or replace if it is worn or damaged.



### 3 Remove Service Cover

Unlatch and remove the service cover on the air cleaner to access the filters.



### 4 Remove the Primary Filter

The primary filter makes such a tight seal, that you will encounter some initial resistance, similar to breaking the seal on a jar. To break the seal, grab the end of the filter and gently move the filter from side-to-side and pull it out of the housing.

*Application Note: Avoid dislodging contaminant from the filter when it is removed from the air cleaner housing.*



Continued on next page



## 5 Remove the Safety Filter

Replace the safety filter with every third primary filter change unless excessive dust has settled on it during servicing. If you are reusing the safety filter keep it clean while servicing the housing to avoid contamination.

Remove the safety filter by pulling it straight out — giving you easy access to properly clean the primary filter's seal surface.

Block the outlet tube of the air cleaner, using a small dampened towel, prior to cleaning the seal surface to avoid contaminating the induction system.



*If a safety filter is not present, check to see it has attached itself to the inside of the primary filter during removal. Inspect the seal surface and housing for any damage. Replace the complete air cleaner if damage is present.*

## 6 Clean the Inside Surface

With a second clean damp cloth, thoroughly clean the inside of the housing and seal surface.



*Failure to clean the surface may cause contaminants to be introduced to the outlet tube or onto the seal area of the primary filter during reinstallation, resulting in a dirty air leaks.*

## 7 Inspect the Primary and Safety Filters

Inspect new filters for any damage, voids, cuts, tears or indentations in the media or urethane sealing surface. If the filter is damaged, do not install.



## 8 Install the Safety Filter

Remove the dampened towel from the outlet tube that was used to protect the induction system during servicing.

Install the safety filter by pressing it firmly in place until seated. When properly fitted it should fit snugly inside the outlet tube.



## 9 Install the Primary Filter

Install the new primary filter by gently sliding it over the safety filter and pressing it into place until fully seated. When installing, apply pressure by hand at the outer rim of the filter, not in the center, to complete a tight seal. Continue pushing the filter into the outlet tube until it stops. The critical sealing area will compress slightly, adjust itself, and distribute the sealing pressure evenly.



*If you perform filter maintenance service on a schedule versus using service indicators, you may want to write the service date on the filter end cap.*

## 10 Fasten the Service Cover

Replace the service cover, with the "INLET" arrow lined up with the air cleaner inlet. Do not force the cover onto the air cleaner or use the service cover to push the filter into place.

Refasten latches to secure the cover and make sure that the latches penetrate the slots in both the body and the cover.



*If the cover does not fit flush to the body, the primary filter is not properly seated in the housing. Recheck the primary and safety filter installation, following the proper installation procedure so they become fully seated. The cover will then go on easily. Using the cover to push the filters could cause damage to the housing and will void the warranty.*

## 11 Inspect the Air Cleaner System

Inspect and torque all clamps, bolts and connections in the entire air intake system. Check for holes in piping and repair if needed.

Reset the filter service indicator if applicable.





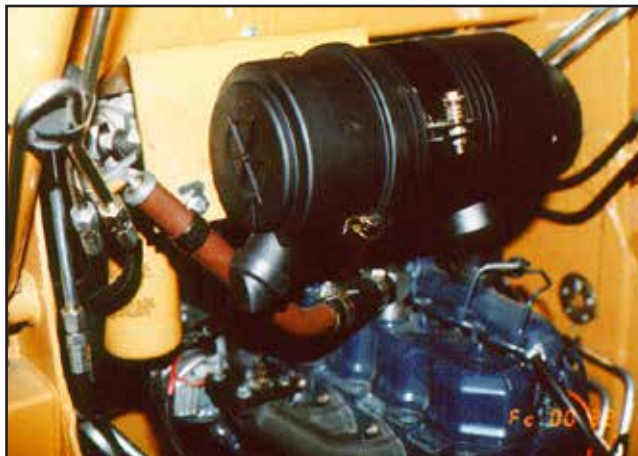
## Advanced Sealing Technology in Compact Two-Stage Design For the Most Reliable Engine Protection

The FPG Air Cleaner series is a two-stage engine air cleaner operating in medium to heavy 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 air cleaners offer the flexibility to overcome space limitations for underhood air cleaners. 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 Axial filters is gone — now, the inside surface of the open end is actually the RadialSeal™ sealing surface.



*Despite its compact size, the FPG Air Cleaner offers complete engine air protection — removing 99.9% of the dust and dirt particulate that enters the engine airstream.*



*FPG and FPG Alexin™ Air Cleaners, with RadialSeal™ Sealing Technology, provide thorough two-stage cleaning of incoming engine air on industrial and construction vehicles operating in medium to heavy dust environments.*

## Small, Durable and Corrosion-Free The Easiest Air Cleaner to Service!

### Applications

- Provides up to 346 cfm 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)
- Temperature tolerance:  
180 °F / 83 °C sustained  
(Do not install next to turbocharger, muffler, exhaust pipes, or other high-temp component.)

### Ideal for

- Compressors and generator sets
- Construction and in-plant vehicles
- On- and off-highway vehicles
- Marine and offshore equipment

### 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 primary filter removes up to 85% of incoming dust.
- Choose 90° or straight outlet to fit your application.
- Easy-to-fasten latches retain dust cup/cover. Four (larger) models have twist-off cover.
- Tapped to accept filter service indicator.
- A plastic inlet hood and stack (up to 18" / 457mm tall) may be added.

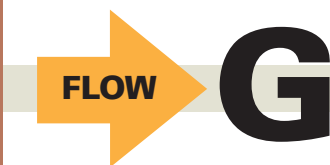
### Filter Features

- Filters have RadialSeal™ Sealing Technology that creates a reliable, critical seal and makes servicing easy.
- One piece, molded urethane endcaps encase the filter media and liners.
- Safety filter protects engine during in-field filter change outs. All FPG models can accept safety filters. Specification table shows which air cleaner models ship with a safety filter installed.



**FPG Alexin™ 9" / 242 mm and 10" / 262mm dia. models available with the twist-off cover design**





**Air in the Side, Out the End** (standard flow filters)

## When Selecting an Air Cleaner . . .

Determine the airflow requirements of your engine, then find the corresponding cfm airflow in the table at right. The restriction numbers (shown in inches of water) indicate the approximate initial restriction of each model air cleaner at that cfm. If there are two air cleaner models that fit your parameters, choosing the one with the lower restriction will provide longer filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, and pre-cleaners.

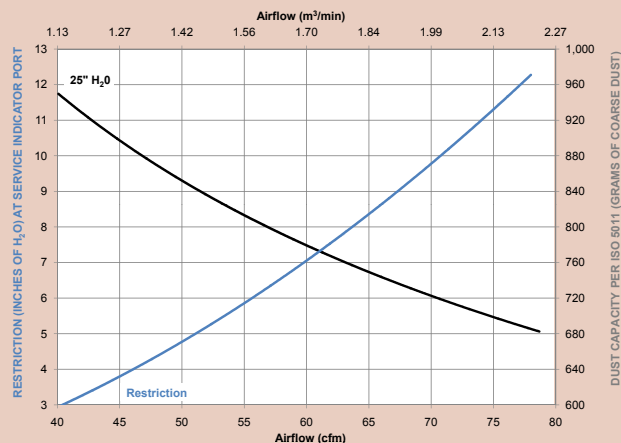
## Initial Airflow Restriction

Airflow CFM @ H <sub>2</sub> O			Air Cleaner Model	
6"	8"	10"	90°	Straight
<b>MODELS WITH PRIMARY FILTER ONLY</b>				
55	65	70	G042545	G042544
80	95	105	G057514	G057513
120	135	155	G065433	G065432
150	170	190	G070020	G070019
205	245	275	G082528	G082527
<b>MODELS WITH PRIMARY &amp; SAFETY FILTER</b>				
65	80	90	G057512	G057511
110	125	145	G065411	G065424
125	145	165	G070018	G070017
165	190	215	G082526	G082525
247	282	314	G100317 <sup>1</sup>	
259	297	328		G100319 <sup>1</sup>
265	300	335		G090225 <sup>1</sup>
256	317	346	G090219 <sup>1</sup>	

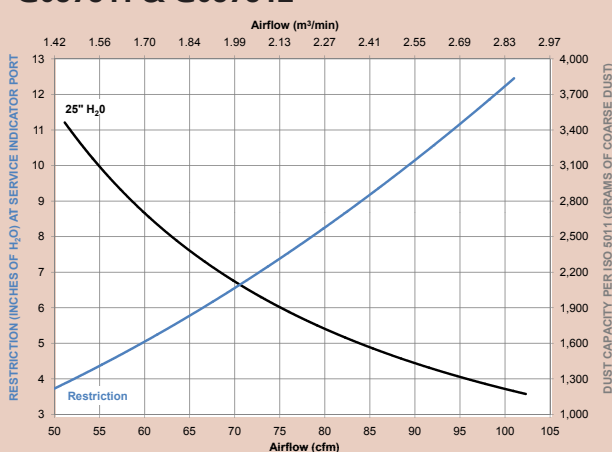
1 - Models with twist-off cover design (no latches)

## FPG Air Cleaner Performance Curves

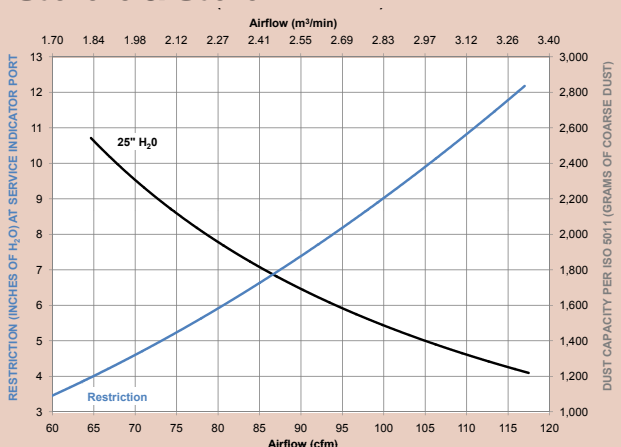
### G042544 & G042545



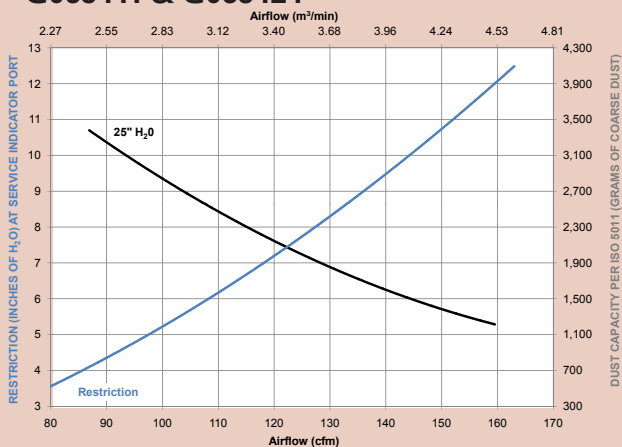
### G057511 & G057512



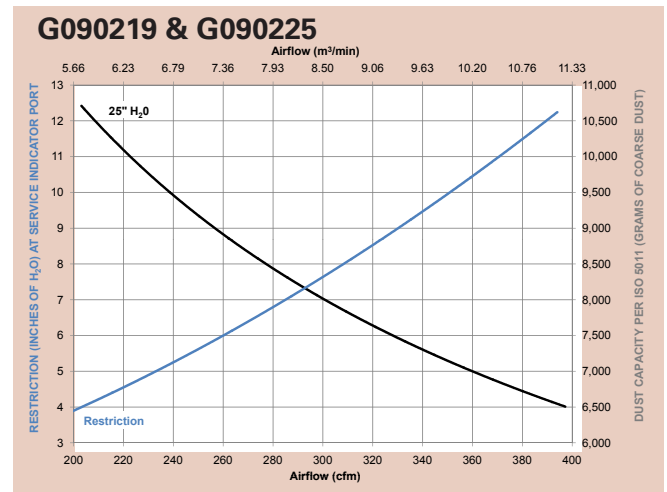
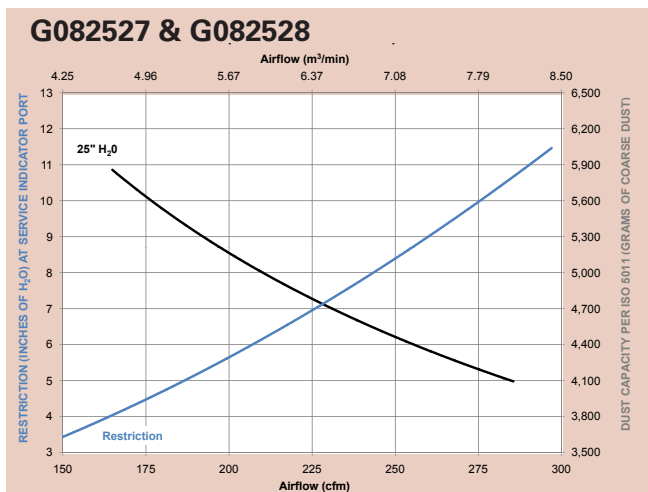
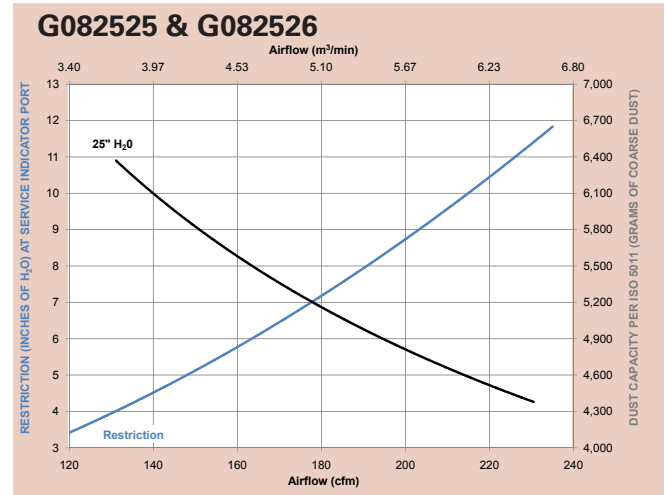
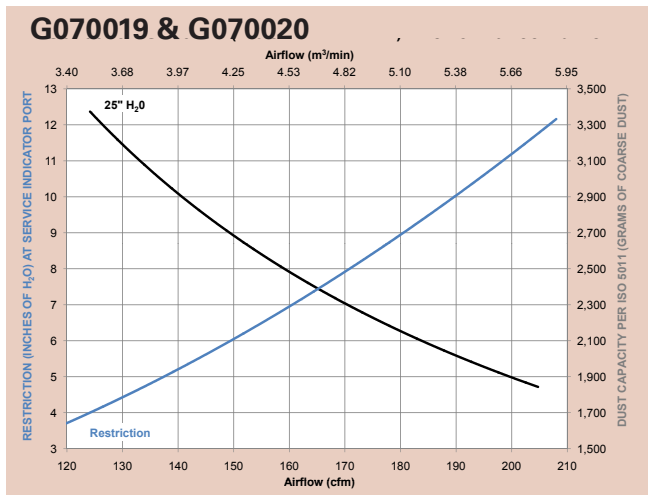
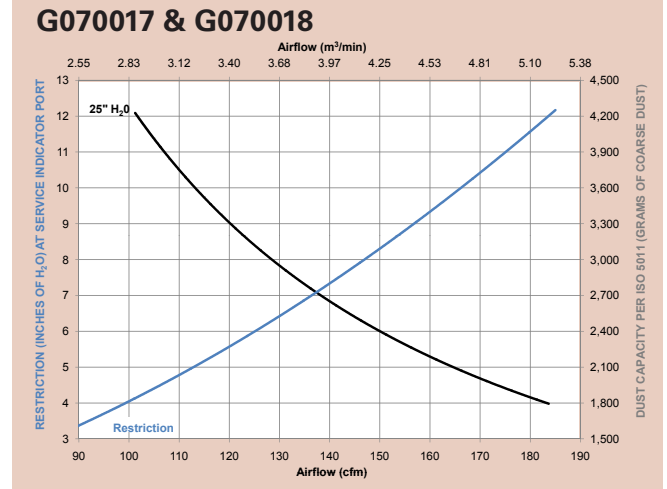
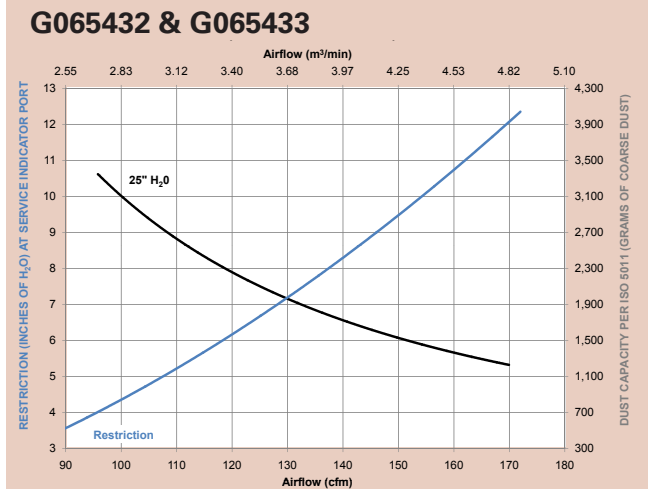
### G057513 & G057514



### G065411 & G065424

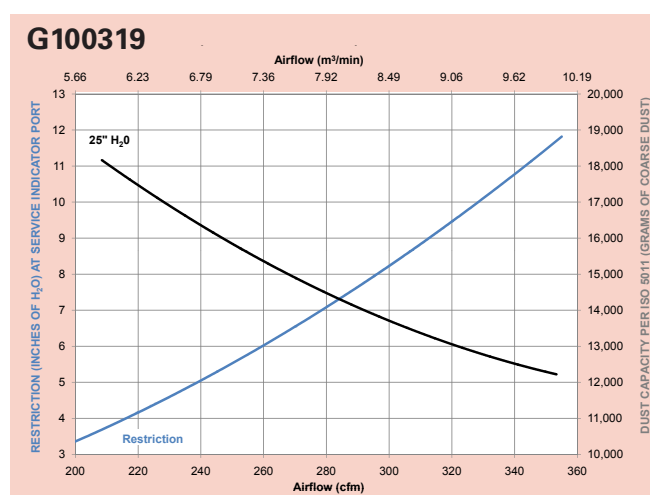
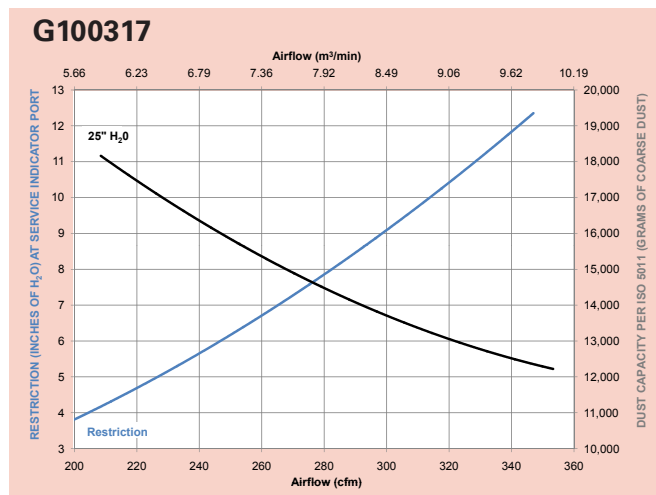


continued — FPG Air Cleaner Performance Curves (Restriction & Dust Capacity)



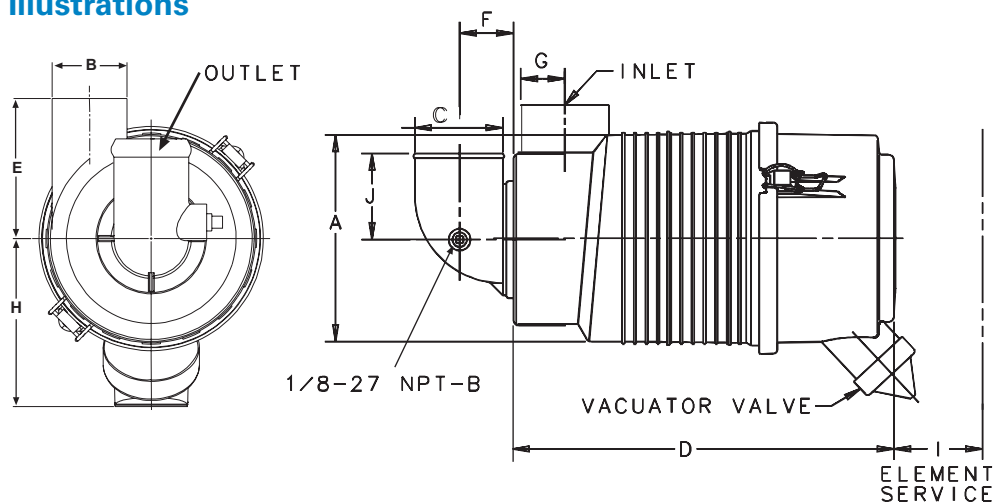


## continued — FPG Air Cleaner Performance Curves (Restriction & Dust Capacity)

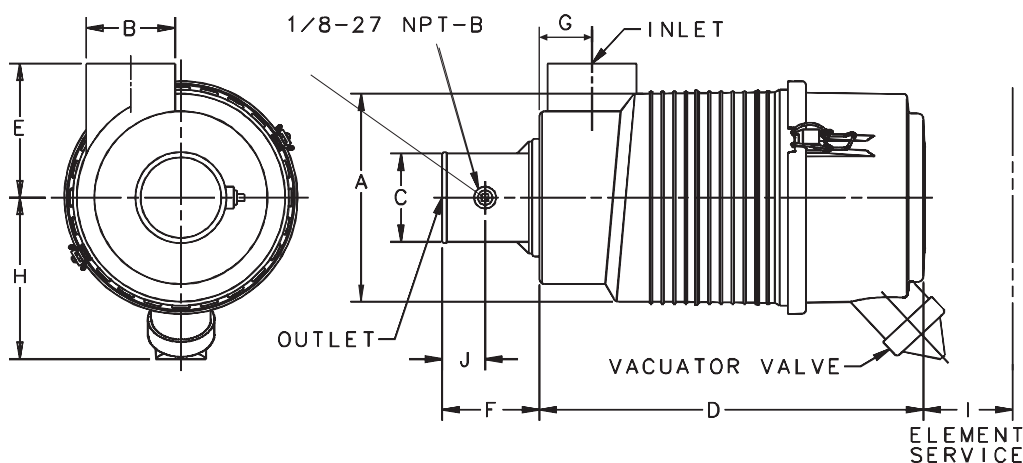


## FPG Specification Illustrations

90° Elbow  
Outlet Model



Straight  
Outlet Tube  
Model



## Application Notes

- 1) Safety filters: All FPG models can accept safety filters. This table shows which air cleaner models are shipped with a safety filter installed. If you want to add a safety filter to an existing model that did not originally have one, order the safety filter listed in the Service Parts table.
- 2) Mounting band specifications and ordering information are on next page.
- 3) Inlet Hoods: A plastic inlet stack up to 18" (457mm) tall may be added, supporting a plastic inlet hood. See the Accessories section for information on optional inlet hoods and filter service indicators. Warning: Do not add a pre-cleaner or any intake accessory other than a lightweight inlet hood. Use of unapproved intake accessories will void your Donaldson warranty.
- 4) Service Indicators. See the Accessories section for information on filter service indicators.

## FPG Specifications

Air Cleaner Models	with Safety Filter?	Body Dia. (A)	Inlet Dia. (B)	Outlet Dia. (C)	Housing Length (D)	Inlet Height (E)	Outlet Length (F)	Inlet Location (G)	Center Line to Valve(H)	Service Clear. (I)	Weight lbs kg	Restr. Tap Loc. (J)
<b>MODELS WITH 90° ELBOW OUTLET TUBE</b>												
G042545	no	4.80" 122mm	1.75" 44mm	1.75" 44mm	7.45" 189mm	3.27" 83mm	1.23" 31mm	1.48" 38mm	3.96" 101mm	5.39" 137mm	1.3 lbs 0.6 kg	1.94" 48mm
G057512	yes	5.75" 146mm	2.00" 51mm	2.00" 51mm	10.96" 278mm	3.82" 97mm	1.36" 35mm	1.65" 42mm	4.66" 118mm	10.68" 271mm	2.5 lbs 1.1 kg	2.60" 66mm
G057514	no	5.75" 146mm	2.00" 51mm	2.00" 51mm	10.96" 278mm	3.82" 97mm	1.36" 35mm	1.65" 42mm	4.66" 118mm	7.95" 202mm	2.2 lbs 1.0 kg	2.60" 66mm
G065411	yes	6.74" 171mm	2.50" 64mm	2.50" 64mm	12.61" 320mm	4.41" 112mm	1.60" 41mm	1.70" 43mm	5.35" 136mm	12.24" 311mm	3.9 lbs 1.8 kg	3.06" 78mm
G065433	no	6.74" 171mm	2.50" 64mm	2.50" 64mm	12.61" 320mm	4.41" 112mm	1.60" 41mm	1.70" 43mm	5.35" 136mm	8.50" 216mm	3.5 lbs 1.6 kg	3.06" 78mm
G070018	yes	7.19" 183mm	3.00" 76mm	3.00" 76mm	13.09" 332mm	4.88" 124mm	1.88" 48mm	1.72" 44mm	5.45" 137mm	12.50" 318mm	4.3 lbs 1.9 kg	3.62" 92mm
G070020	no	7.19" 183mm	3.00" 76mm	3.00" 76mm	13.09" 332mm	4.88" 124mm	1.88" 48mm	1.72" 44mm	5.45" 137mm	8.87" 225mm	3.8 lbs 1.7 kg	3.62" 92mm
G082526	yes	8.35" 212mm	3.75" 95mm	3.50" 89mm	14.23" 361mm	5.43" 138mm	2.11" 54mm	2.11" 54mm	6.01" 153mm	13.91" 353mm	5.8 lbs 2.6 kg	4.13" 105mm
G082528	no	8.35" 212mm	3.75" 95mm	3.50" 89mm	14.23" 361mm	5.43" 138mm	2.11" 54mm	2.10" 53mm	6.01" 153mm	9.57" 243mm	5.2 lbs 2.3 kg	4.13" 105mm
<b>MODELS WITH STRAIGHT OUTLET TUBE</b>												
G042544	no	4.80" 122mm	1.75" 44mm	1.75" 44mm	7.45" 189mm	3.27" 83mm	3.24" 82mm	1.48" 38mm	3.96" 101mm	5.39" 137mm	1.3 lbs 0.6 kg	1.88"
G057511	yes	5.75" 146mm	2.00" 51mm	2.00" 51mm	10.87" 276mm	3.82" 97mm	3.25" 83mm	1.65" 42mm	4.66" 118mm	10.68" 271mm	2.5 lbs 1.1 kg	1.88"
G057513	no	5.75" 146mm	2.00" 51mm	2.00" 51mm	10.87" 276mm	3.82" 97mm	3.25" 83mm	1.65" 42mm	4.66" 118mm	7.95" 202mm	2.2 lbs 1.0 kg	1.88"
G065424	yes	6.74" 171mm	2.50" 64mm	2.50" 64mm	12.61" 320mm	4.41" 112mm	3.23" 82mm	1.70" 43mm	5.35" 136mm	12.24" 311mm	3.9 lbs 1.8 kg	1.63"
G065432	no	6.74" 171mm	2.50" 64mm	2.50" 64mm	12.61" 320mm	4.41" 112mm	3.23" 82mm	1.70" 43mm	5.35" 136mm	8.48" 216mm	3.5 lbs 1.6 kg	1.63"
G070017	yes	7.19" 183mm	3.00" 76mm	3.00" 76mm	13.09" 332mm	4.88" 124mm	3.26" 83mm	1.72" 44mm	5.45" 138mm	12.50" 318mm	4.3 lbs 1.9 kg	1.88"
G070019	no	7.19" 183mm	3.00" 76mm	3.00" 76mm	13.09" 332mm	4.88" 124mm	3.26" 83mm	1.72" 44mm	5.45" 138mm	8.87" 225mm	3.8 lbs 1.7 kg	1.88"
G082525	yes	8.35" 212mm	3.75" 95mm	3.50" 89mm	14.23" 361mm	5.43" 138mm	3.27" 83mm	2.10" 53mm	6.01" 153mm	13.91" 353mm	5.8 lbs 2.6 kg	1.91"
G082527	no	8.35" 212mm	3.75" 95mm	3.50" 89mm	14.23" 361mm	5.43" 138mm	3.27" 83mm	2.10" 53mm	6.01" 153mm	9.57" 243mm	5.2 lbs 2.3 kg	1.91"



## Mounting Bands Designed Exclusively for the FPG Series

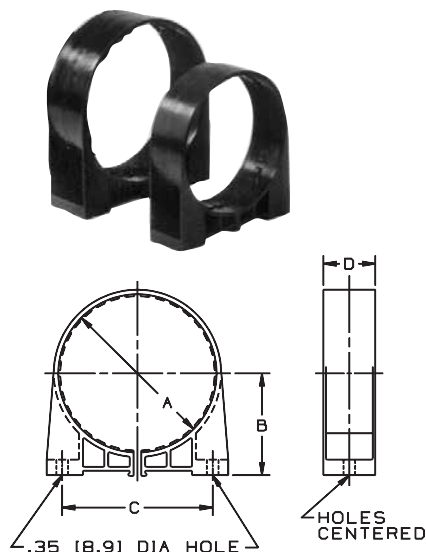
**WARNING:** Do not use any other mounting bands or straps with FPG air cleaners. Use of an unapproved mounting band voids warranty.

### Polymer Mounting Band

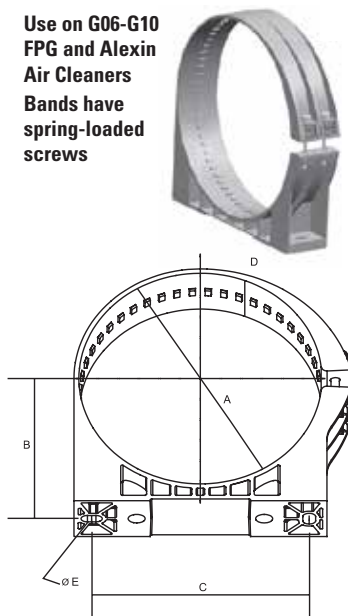
The one-piece, high tech polymer mounting band will securely hold the housing in position. The band has tabs on the inside circumference which fit exactly into notches on the FPG housing. Donaldson polymer bands are completely non-corrosive, lightweight, easy to install, and economical.

The band tightens around the air cleaner when the base of the band is bolted to a support, providing a fixed, stable mounting — even in high vibration applications.

Use on G04 and G05 FPG Air Cleaners.

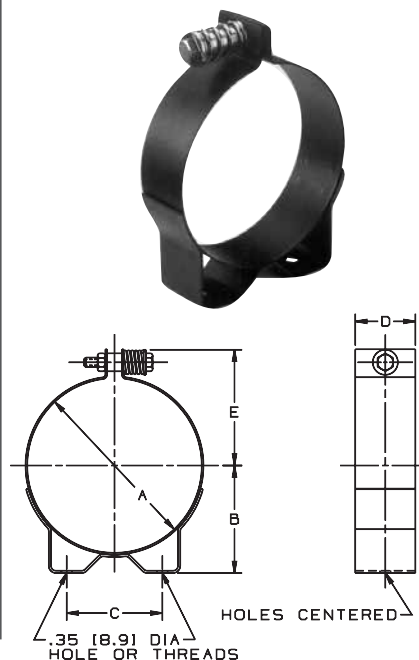


Use on G06-G10 FPG and Alexin Air Cleaners  
Bands have spring-loaded screws



### Metal Mounting Band

The metal mounting band has a spring-loaded bolt at the top to maintain a constant hold on the housing throughout high and low temperature extremes.



### Maximum Torque

Polymer Bands:  
11 lbs-ft / 14.8 N•m

Metal Bands:  
12 lbs-ft / 16.2 N•m

### Application Note:

To accommodate even hard-to-fit applications, polymer bands allow the air cleaner housings to be rotated and positioned at various increments, depending upon the size:

Housing Diameter	Increment
4.80" (122mm)	11°
5.75" (146mm)	10°
6.74" (171mm)	7.5°
7.19" (183mm)	7°
8.35" (212mm)	5°

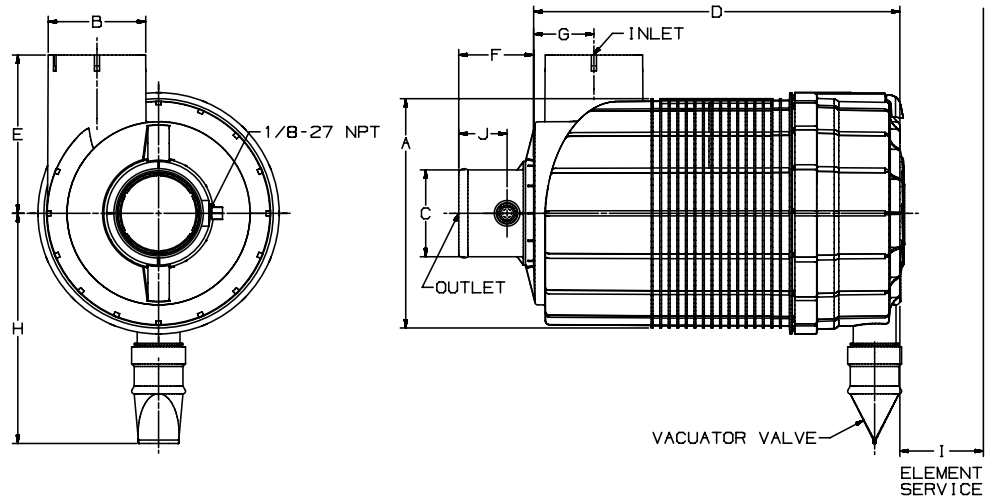
### FPG Mounting Bands (Order one band per FPG air cleaner)

Part Number	A in	A mm	B in	B mm	C in	C mm	D in	D mm	E in	E mm	Weight lbs	kgm
<b>POLYMER BANDS</b>												
P777151	4.80	122	3.09	79	4.56	116	1.57	40	n/a		0.26	118
P777730	5.75	146	3.52	90	5.35	136	1.99	51	n/a		0.37	167
P778810	6.79	173	3.94	100	6.00	154	1.99	51	n/a		0.40	182
P777731	7.17	182	4.11	105	6.50	165	1.99	51	n/a		0.45	206
P777732	8.35	212	4.70	120	7.48	190	1.99	51	n/a		0.56	253
P780532 <sup>1</sup>	9.48	241	5.47	136	5.63	143	1.99	51	n/a			
P780594 <sup>1</sup>	10.55	268	5.90	150	5.63	143	3.15	80	n/a			
<b>METAL BANDS</b>												
H008442	4.80	122	3.07	78	2.76	70	1.57	40	3.34	85	0.70	317
H008443	5.75	146	3.54	90	3.15	80	1.99	51	3.83	97	1.30	590
H008441 <sup>2</sup>	6.79	173	3.94	100	3.54	90	1.99	51	4.35	111	1.40	635
H008444	6.79	173	3.94	100	3.54	90	1.99	51	4.35	111	1.40	635
H002070	7.19	183	4.09	104	3.74	95	1.99	51	4.55	116	1.50	680
H002023	8.35	212	4.72	120	4.33	110	1.99	51	5.14	131	1.60	726

1 - Mounting bands (with spring-loaded screws) for FPG09 and FPG10 models with twist-off cover

2 - Model H008441 has 8mm threads

## Alexin™ Twist-Off Cover Model



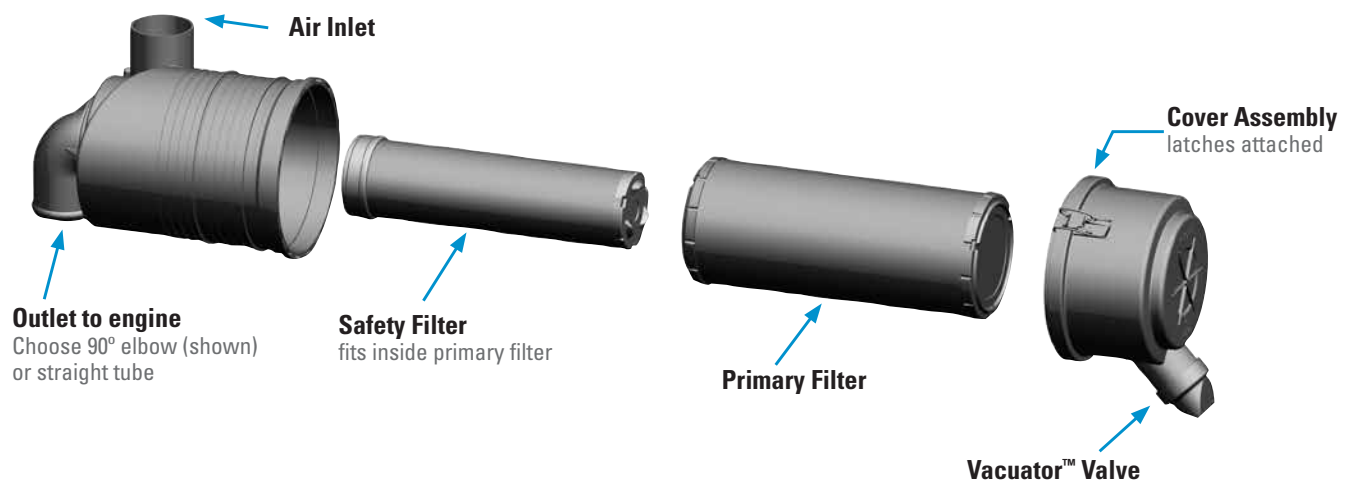
### FPG ALEXIN™

Air Cleaner Models	with Safety Filter?	Body Dia. (A)	Inlet Dia. (B)	Outlet Dia. (C)	Housing Length (D)	Inlet Height (E)	Outlet Length (F)	Inlet Location (G)	Center Line to Valve (H)	Service Clear. (I)	Weight lbs kg	Restr. Tap Loc. (J)
<b>FPG ALEXIN™ MODELS WITH TWIST-OFF COVER (90° AND STRAIGHT OUTLET TUBES)</b>												
G090219 <sup>1</sup>	yes	9.53" 242mm	4.50" 114mm	3.50" 89mm	15.75" 400mm	6.69" 170mm	2.11" 54mm	2.42" 62mm	10.44" 260mm	12.79" 325mm	8.8 lbs 4.0 kg	4.13" 105mm
G100317 <sup>1</sup>	yes	10.55" 268mm	4.50" 114mm	4.00" 102mm	16.85" 428mm	7.28" 185mm	2.37" 60mm	2.85" 73mm	10.60" 269mm	13.98" 355mm	11.1 lbs 5.1 kg	4.72" 120mm
G090225 <sup>2</sup>	yes	9.53" 242mm	4.50" 114mm	4.00" 102mm	15.75" 400mm	6.69" 170mm	3.43" 87mm	2.42" 62mm	10.04" 260mm	12.79" 325mm	8.7 lbs 3.9 kg	2.22" 57mm
G100319 <sup>2</sup>	yes	10.55" 268mm	4.50" 114mm	4.00" 102mm	16.85" 428mm	7.28" 185mm	3.45" 88mm	2.85" 73mm	10.60" 269mm	13.98" 355mm	10.9 lbs 4.9 kg	2.22" 57mm

1 - FPG Alexin Models with 90° outlet tube

2 - FPG Alexin models with straight outlet tube

### FPG Service Parts





## FPG Service Parts & Accessories

### G042544 & G042545

#### FPG

Cover .....	P533685 ....8
Filter, primary .....	P822686 ....3
Filter, safety .....	P535396 ....4
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H002068
Latch .....	P538928
Mounting bands, metal .....	H008442
Mounting Bands, plastic .....	P777151
Outlet band clamp .....	P115200
Vacuator™ Valve .....	P522958

### G057511 & G057512

#### FPG

Cover .....	P533761 ....8
Elbow, 45° .....	P105541
Elbow, 90° .....	P105529
Filter, primary .....	P821575 ....3
Filter, safety .....	P822858 ....3
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001377
Latch .....	P538928
Mounting bands, metal .....	H008443
Mounting Bands, plastic .....	P777730
Outlet band clamp .....	P148337
Vacuator™ Valve .....	P522958

### G057513 & G057514

#### FPG

Cover .....	P533761 ....8
Elbow, 45° .....	P105541
Elbow, 90° .....	P105529
Filter, primary .....	P821575 ....3
Filter, safety .....	P822858 ....4
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001377
Latch .....	P538928
Mounting bands, metal .....	H008443
Mounting Bands, plastic .....	P777730
Outlet band clamp .....	P148337
Vacuator™ Valve .....	P522958

### G065411 & G065424

#### FPG

Cover .....	P539422 ....8
Elbow, 45° .....	P105543
Elbow, 90° .....	P105531
Filter, primary .....	P822768 ....3
Filter, safety .....	P822769 ....3
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001378
Latch .....	P538928
Mounting bands, metal .....	H008441
.....	or H008444
Mounting Bands, plastic .....	P778810
Outlet band clamp .....	P148339
Vacuator™ Valve .....	P158914

### G065432 & G065433

#### FPG

Cover .....	P539422 ....8
Elbow, 45° .....	P105543
Elbow, 90° .....	P105531
Filter, primary .....	P822768 ....3
Filter, safety .....	P822769 ....4
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001378
Latch .....	P538928
Mounting bands, metal .....	H008441
.....	or H008444
Mounting Bands, plastic .....	P778810
Outlet band clamp .....	P148339
Vacuator™ Valve .....	P158914

### G070017 & G070018

#### FPG

Cover .....	P536202 ....8
Elbow, 45° .....	P105544
Elbow, 90° .....	P105532
Elbow, 90° reducing .....	P123462
Filter, primary .....	P827653 ....3
Filter, safety .....	P829332 ....3
Hump hose .....	P105608
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001379
Latch .....	P538928
Mounting bands, metal .....	H002070
Mounting Bands, plastic .....	P777731
Outlet band clamp .....	P148341
Vacuator™ Valve .....	P158914

### G070019 & G070020

#### FPG

Clamp .....	P003951
Cover .....	P536202 ....8
Elbow, 45° .....	P105544
Elbow, 90° .....	P105532
Elbow, 90° reducing .....	P123462
Filter, primary .....	P827653 ....3
Filter, safety .....	P829332 ....4
Hump hose .....	P105608
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001379
Latch .....	P538928
Mounting bands, metal .....	H002070
Mounting Bands, plastic .....	P777731
Outlet band clamp .....	P148341
Vacuator™ Valve .....	P158914

### G082525 & G082526

#### FPG

Cover .....	P534048 ....8
Elbow, 45° .....	P109331
Elbow, 90° .....	P114318
Filter, primary .....	P828889 ....3
Filter, safety .....	P829333 ....3
Hump hose .....	P114319
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H000466
Latch .....	P538928
Mounting bands, metal .....	H002023
Mounting Bands, plastic .....	P777732
Outlet band clamp .....	P148342
Vacuator™ Valve .....	P158914



### G082527 & G082528

#### FPG

Clamp .....	P102025
Cover .....	P534048 ....8
Elbow, 45° .....	P109331
Elbow, 90° .....	P114318
Filter, primary .....	P828889 ....3
Filter, safety .....	P829333 ....4
Hump hose .....	P114319
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H000466
Latch .....	P538928
Mounting bands, metal .....	H002023
Mounting Bands, plastic .....	P777732
Outlet band clamp .....	P148342
Vacuator™ Valve .....	P158914

### G090219 & G090225\*

#### FPG

Cover .....	P780524
Elbow, 45° .....	P105545
Elbow, 90° .....	P105533
Elbow, 90° reducing .....	P121482
Filter, primary .....	P780522
Filter, safety .....	P780523
Hump hose .....	P105609
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000170
Inlet hood, plastic .....	H000468
Mounting Bands, plastic .....	P780532
Outlet band clamp .....	P148343
Vacuator™ Valve .....	P776008

### G100317 & G100319\*

#### FPG

Cover .....	P780578
Elbow, 45° .....	P105545
Elbow, 90° .....	P105533
Elbow, 90° reducing .....	P121482
Filter, primary .....	P781039
Filter, safety .....	P777639
Hump hose .....	P105609
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000170
Inlet hood, plastic .....	H000468
Mounting Bands, plastic .....	P780594
Outlet band clamp .....	P148343
Vacuator™ Valve .....	P776008

#### NOTES:

- 3 = Shipped with air cleaner initially
- 4 = Safety filter is designed to fit this air cleaner, but was not originally shipped with it (note that adding a safety filter will decrease the maximum airflow throughput)
- 8 = Cover assembly includes latches but no Vacuator™ Valve

\* = FPG Alexen models with twist off cover design (no latches)

This servicing information is provided as a best practices guide. It is not intended to replace or supersede the service instructions supplied by your engine or vehicle manufacturer.

### 1 Check the Restriction

Replace the filter only when the restriction level has reached the maximum recommended by the engine or equipment manufacturer or on a regular service schedule.



### 2 Clean Out the Vacuator™ Valve

If your air cleaner is equipped with a Vacuator™ Valve, visually check and physically squeeze it. Make sure the valve is flexible and not inverted, damaged or plugged.



### 3 Remove the Primary filter

Shut off the engine. Unfasten or unlatch the service cover. For the FPG Alexin™ models, the cover is unlocked with a yellow "finger," twisted to the left and removed from the filter housing.

The RadialSeal™ filter fits tightly over the outlet tube and there will be some initial resistance, similar to breaking the seal on a jar. Gently move the end of the filter back and forth to break the seal, then rotate while pulling straight out. Avoid knocking the filter against the housing.



### 4 Visually Check the Safety Filter and Clean Both Surfaces of the Outlet Tube

If your air cleaner has a safety filter, visually check it while in place for signs of damage. Do not remove the safety filter unless it is damaged or due for replacement. Also verify that the safety filter is properly seated in the housing.

The safety filter should be replaced every three primary filter changes. Use a clean damp cloth to wipe both the filter sealing surface and the inside of the outlet tube. Ensure that the outlet tube sealing area is undamaged.

Contaminant on the sealing surface could hinder an effective seal and cause leakage. If the safety filter is to be replaced, avoid leaving the outlet tube exposed to the air. If there is to be a delay in installing the new safety filter, cover the air cleaner outlet tube to avoid admitting any dust.



*Continued on next page*



### 5 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. Eliminate any source of air leaks before installing the new primary filter.

### 6 Inspect the New Filter

Inspect the new filter for any damage that may have occurred through mishandling. NEVER install a damaged filter. Visually check the inside of the open end, which is the sealing area.

Do not wipe the filter RadialSeal™ sealing area. Donaldson RadialSeal™ filters have an invisible dry lubricant on the seal to aid installation.



### 7 Insert the New Filter

First, if you're servicing the safety filter at this change-out, seat it properly into position before installing the primary filter. Insert new filters carefully. Seat the primary filter by hand, making certain it is inserted completely into the air cleaner housing. To complete a tight seal, apply pressure by hand at the outer rim of the filter, not the flexible center.

No cover pressure is required to hold the seal in place and you should NEVER use the service cover to apply pressure. This could damage the housing and fasteners and void the warranty. If the service cover presses against the filter before the cover is fully in place, remove the cover. With the cover off, push the filter farther into the air cleaner by hand and then the cover will go on with no extra force. Once the filter is in place, secure the service cover.

For FPG Alexin™ models, twist the cover to the right until it stops, then push the yellow "finger" in to lock.



*If you perform filter maintenance service on a schedule versus using service indicators, you may want to write the service date on the end cap of both filters.*

### 8 Check Connectors for Tight Fit

Make sure service indicators are reset and in proper working order. Check that all mounting bands, clamps, bolts, and connections in the entire air cleaner system are tight. Check for holes in piping and repair or replace as needed. Any leaks in the intake piping will admit dust directly to the engine. Reset the filter service indicator.



## Superior Protection for Larger Engines

### RadialSeal™ Sealing Technology Means Reliable Filtration and Quicker Service

The Donaldson two-stage FRG RadialSeal™ air cleaners provide improved reliability, better durability and reduced weight compared to axial seal style air cleaner designs. Choose from more than 20 air cleaners that work in airflow ranges of 82 to 1600 cfm.

### Two-Stage Filtration

Both Style A and B have an integral pre-cleaning stage that separates up to 85% of the incoming dust. The primary filter stops the rest, resulting in engine air that is 99.99% free of dust.



Donaldson FRG Air Cleaners and Duramax hydraulics filters deliver superior filtration to pump-and-engine rigs used in the oil and gas industry.



The two-stage FRG Air Cleaner in operation on a Prentice 490 Skidder.



The FRG Air Cleaner on this Tyler Ag Sprayer eliminates 99.99% of the dirt from the engine airstream, while providing up to 945 cfm airflow to the engine.



## Durable, Vibration Resistant Variety of Sizes in Two Separate Housing Styles

### Applications

- Horizontal installation
- Medium and heavy dust environments
- **Style A** — From 82 to 795 cfm airflow throughput per air cleaner in body diameters ranging from 5" to 16" (127 – 406mm)
- **Style B** — From 270 to 1390 cfm airflow throughput per air cleaner in body diameters ranging from 10" to 18" (254 – 457mm)

### Ideal for

- Construction equipment
- Agricultural machinery
- Mining equipment
- Off-highway vehicles

### Air Cleaner Features

- Two-stage filter system: the first stage removes up to 85% of incoming dust
  - The first stage in the Style A uses the angled vanes on the primary filter
  - The first stage in the Style B has a tangential air inlet
- Inlet on side, outlet on end (G flow)
- Already tapped to accept filter service indicator
- Vacuator™ Valve automatically releases the pre-cleaned dust
- Durable, long-lasting finish
  - Style A housing is metal and coated with a black, corrosion- and chemical-resistant polymer paint (service cover is accessed with clamp and bolt)
  - Style B is comprised of two materials: injection molded, high strength polymer service cover and a metal body (the service cover is accessed by latches)
- Mounting the unit directly to the engine is not recommended; excessive engine vibration can cause premature air cleaner structural failure

#### FRG Style A

The FRG Style A series replaces Donaldson's obsolete FHG series in size and airflow capacity.



*While it looks like an axial seal air cleaner on the outside, this new style housing is equipped with a RadialSeal™ style primary filter and an optional safety filter. Easy to service; one wing-bolt clamp to undo to access filter(s).*

#### FRG Style B

The FRG Style B series replaces Donaldson's obsolete FTG series in size and airflow capacity.



*Injection-molded endcap, made of specially-engineered resins for high strength and durability, serves as the service cover. Filter change out is easier than ever — just unsnap the latches to access the filter.*

### Filter Features

The RadialSeal™ filter inside the air cleaner is also quite different from Axial filters. Its one-piece, molded urethane endcaps encase the filter media and liners, thereby reducing the number of components and increasing sealing reliability.



The inside surface of the filter's open end is the sealing surface, which eliminates the glued-on gasket found on the metal end cap of Axial filters. For added engine protection during filter service, consider a model with a safety filter.

### Accessories

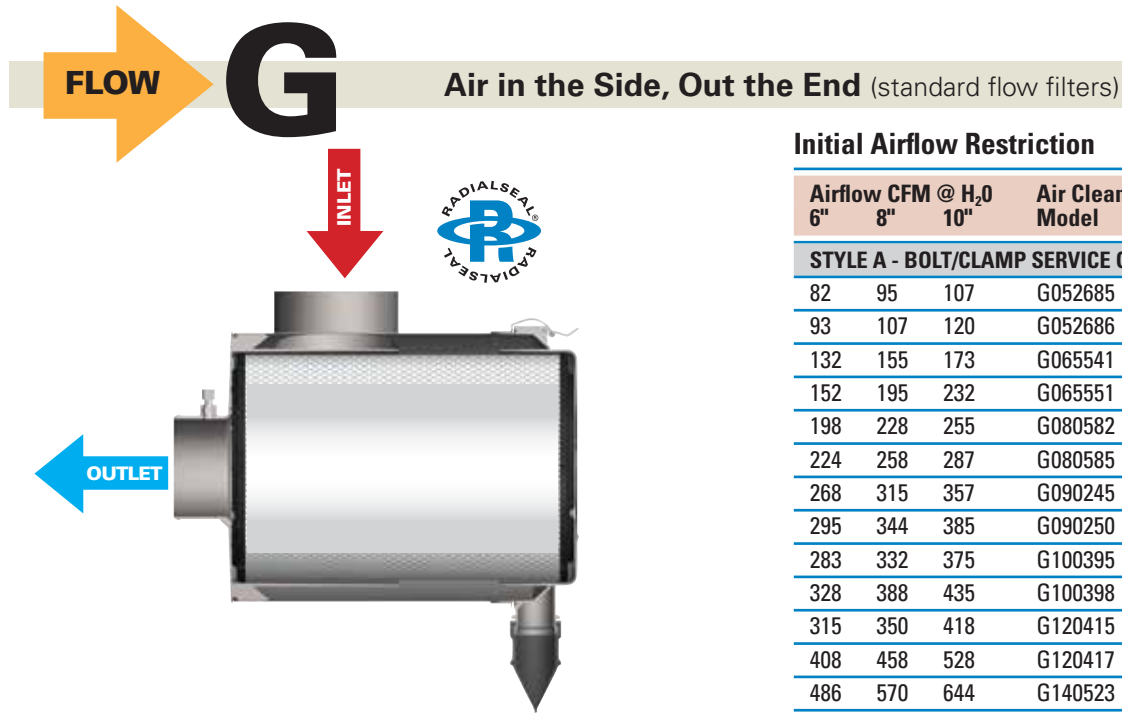
Donaldson intake accessories for your FRG Air Cleaner can help overcome or prevent various problems. For instance:

- If the installed air cleaner will be exposed to rain, snow or debris, an **inlet cap** can prevent moisture ingestion.
- A **filter service indicator** measures the airflow restriction across the filter and indicates when to replace the filter (see Accessories section of this catalog).
- **Mounting bands** for FRGs must be ordered separately.

### FRG Mounting Bands

- Two mounting bands are required for proper FRG installation (see service parts listing in this section).
- Durable, corrosion resistant, galvanized steel construction.
- Engineered and tested to resist the adverse effects of vibration.
- Mounting band feet are designed to continuously ensure maximum torque pressure.
- Dimensional information for mounting bands can be found in the accessories section.





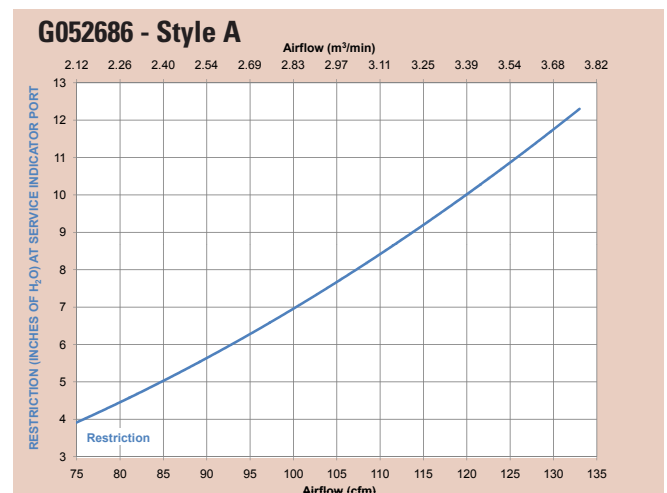
## Initial Airflow Restriction

Airflow CFM @ H <sub>2</sub> O			Air Cleaner Model	Weight	
6"	8"	10"		lbs	kg
STYLE A - BOLT/CLAMP SERVICE COVER					
82	95	107	G052685	5.5	2.5
93	107	120	G052686	5.2	2.4
132	155	173	G065541	7.6	3.4
152	195	232	G065551	7.1	3.2
198	228	255	G080582	11.0	5.0
224	258	287	G080585	10.5	4.8
268	315	357	G090245	13.1	5.9
295	344	385	G090250	12.1	5.5
283	332	375	G100395	30.1	13.7
328	388	435	G100398	28.6	13.0
315	350	418	G120415	26.5	12.0
408	458	528	G120417	28.1	12.7
486	570	644	G140523	34.9	15.8
560	657	742	G140526	33.3	15.1
590	700	795	G160679	41.7	18.9
STYLE B - LATCH SERVICE COVER					
270	305	340	G100297	12.0	5.4
300	360	400	G110214	13.1	5.9
370	430	490	G110206	17.5	8.0
440	510	570	G130107	20.6	9.3
520	590	655	G130097	25.0	11.4
715	805	945	G150092	30.0	13.6
1040	1230	1390	G180031	44.0	20.0

## When Selecting an Air Cleaner . . .

Determine the airflow requirements of your engine, then find the corresponding cfm airflow in the table at right. The restriction numbers (shown in inches of water) indicate the approximate initial restriction of each model air cleaner at that cfm. If there are two air cleaner models that fit your parameters, choosing the one with the lower restriction will provide longer filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, and pre-cleaners.

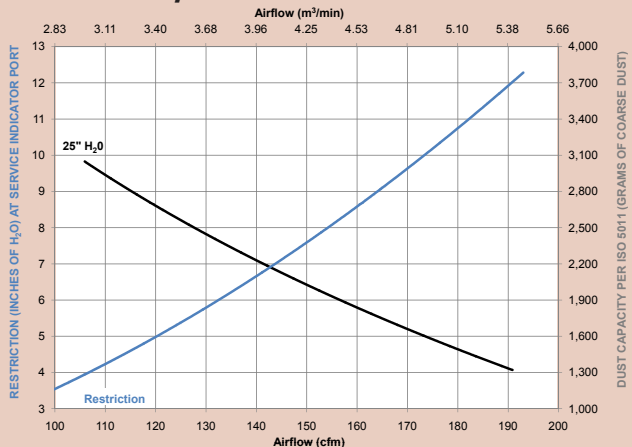
## FRG Air Cleaner Performance Curves (Restriction & Dust Capacity)



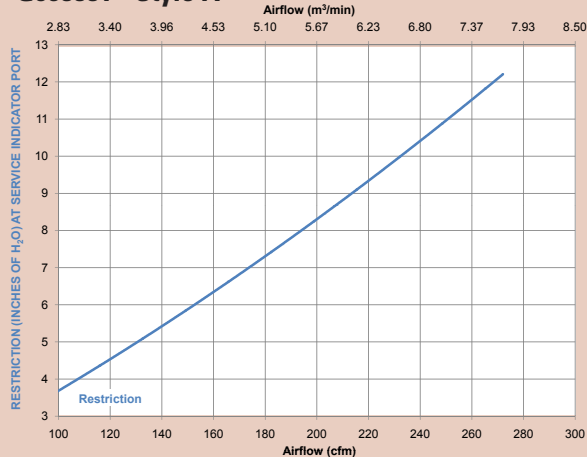


## continued — FRG Air Cleaner Performance Curves (Restriction & Dust Capacity)

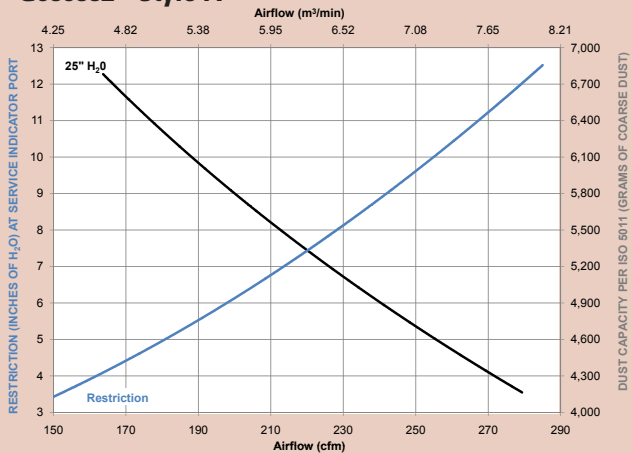
### G065541 - Style A



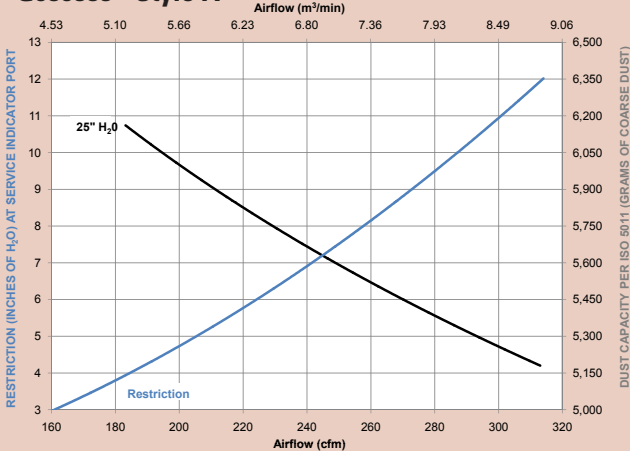
### G065551 - Style A



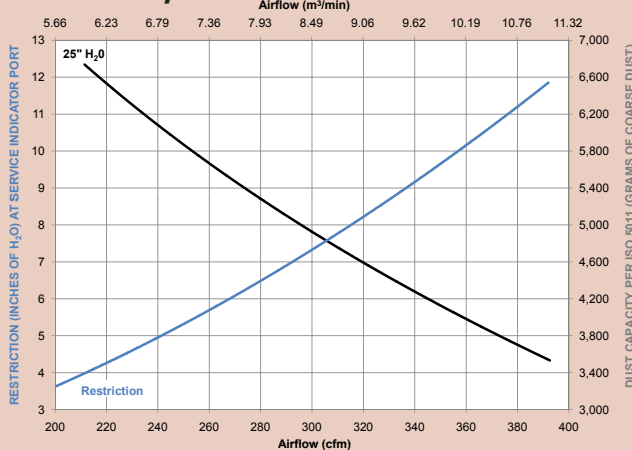
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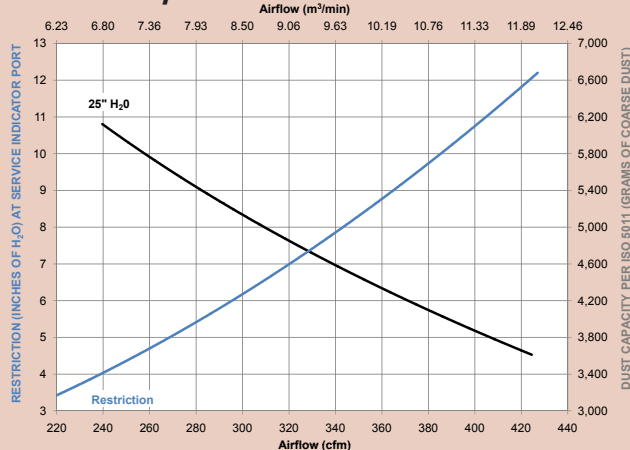
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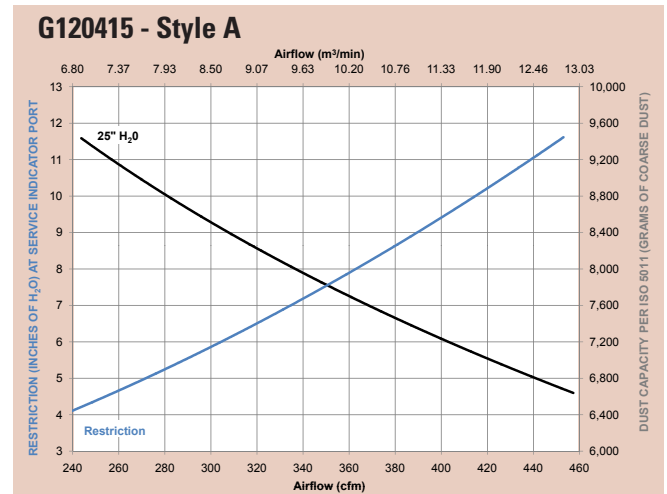
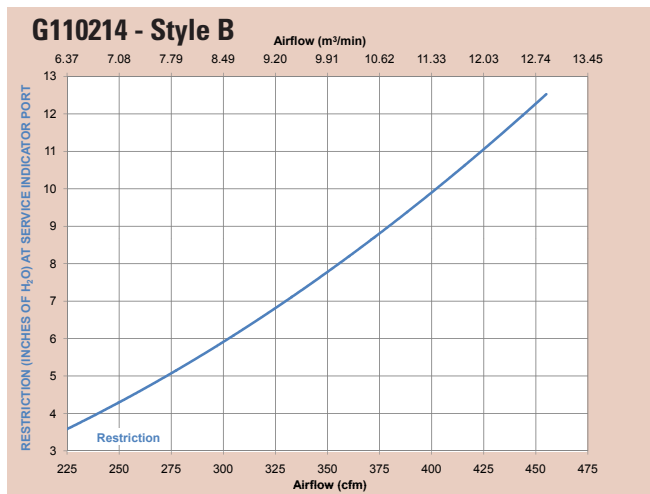
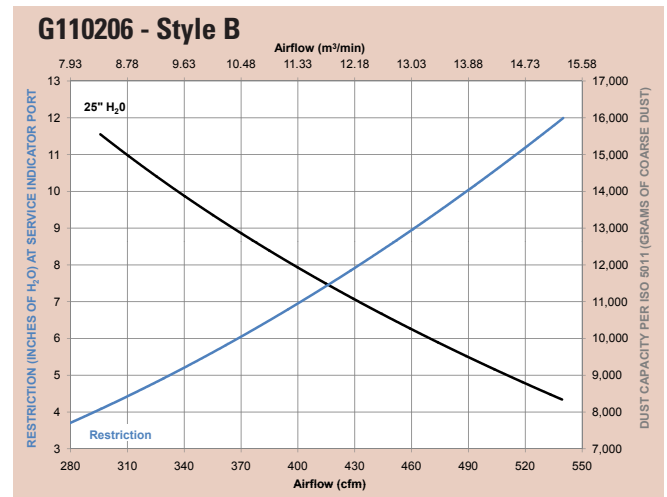
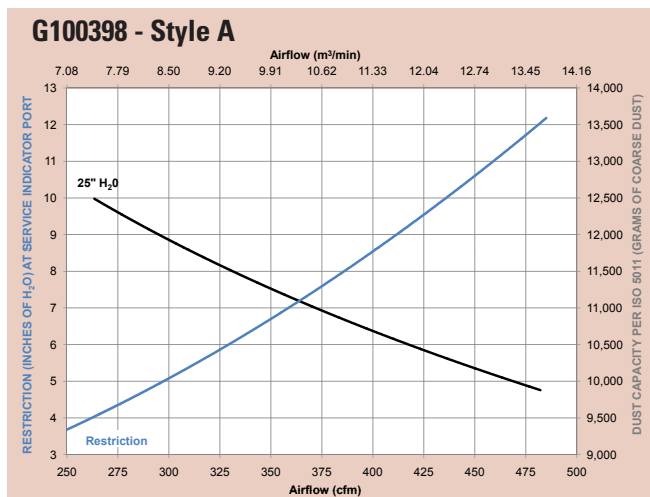
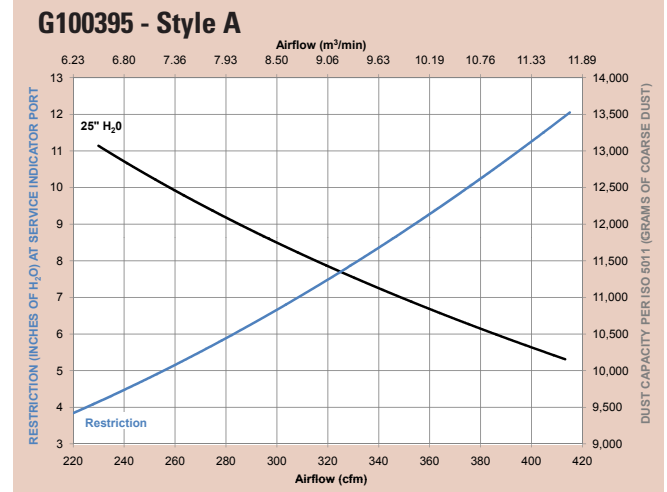
### G090245 - Style A



### G090250 - Style A



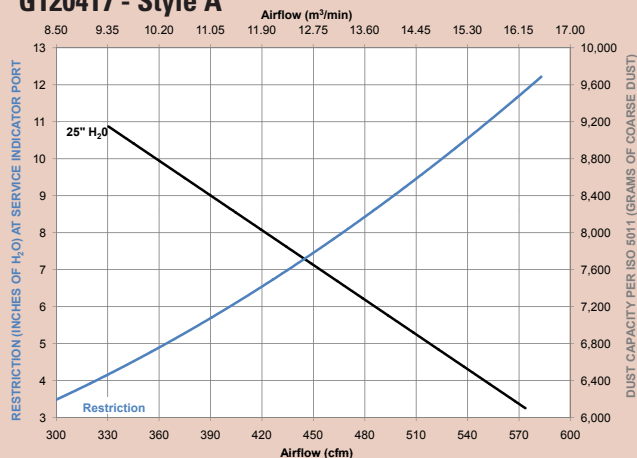
continued — FRG Air Cleaner Performance Curves (Restriction & Dust Capacity)



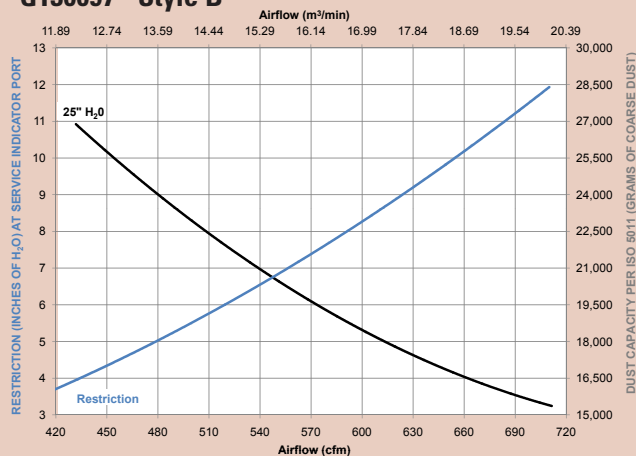


continued — FRG Air Cleaner Performance Curves (Restriction & Dust Capacity)

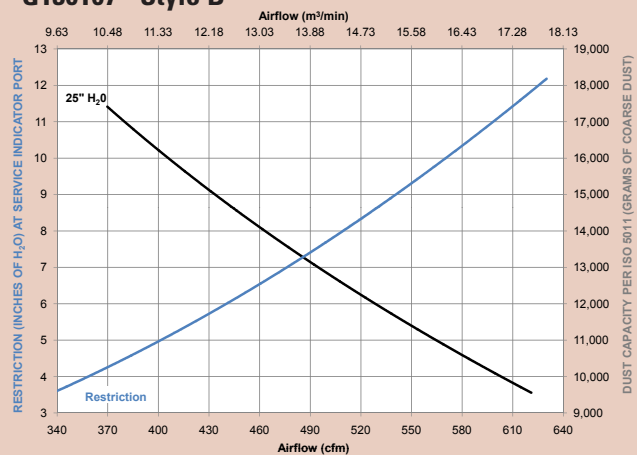
G120417 - Style A



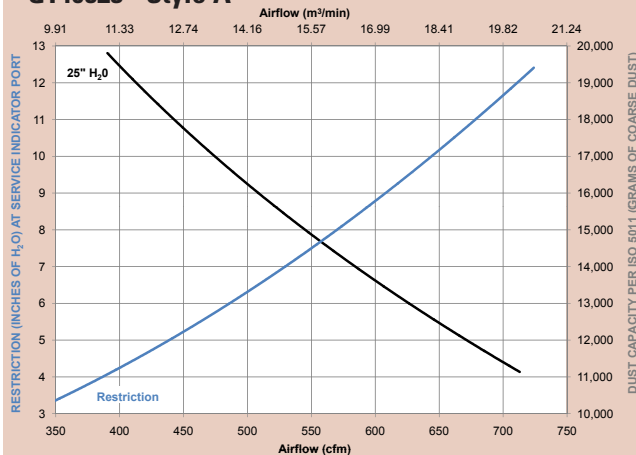
G130097 - Style B



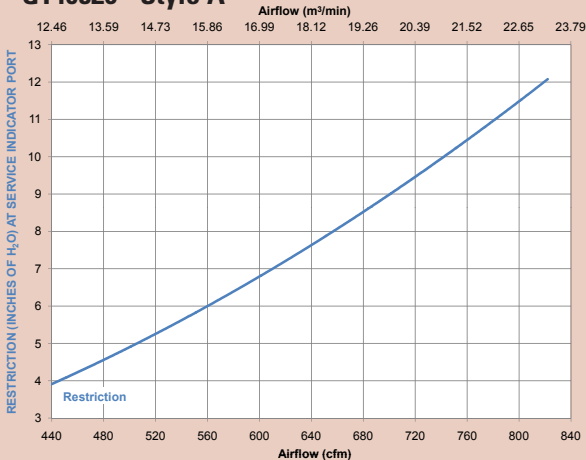
G130107 - Style B



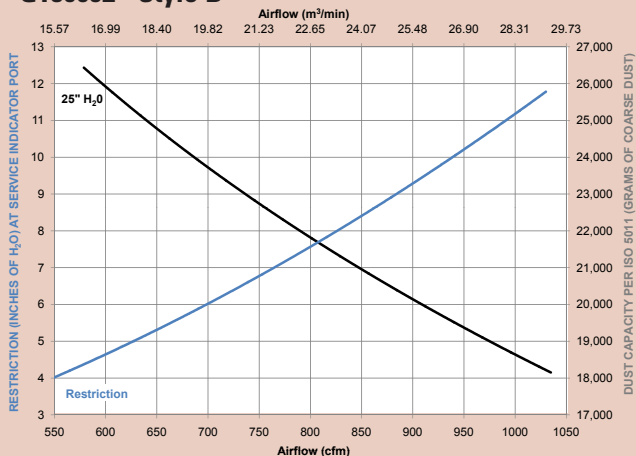
G140523 - Style A



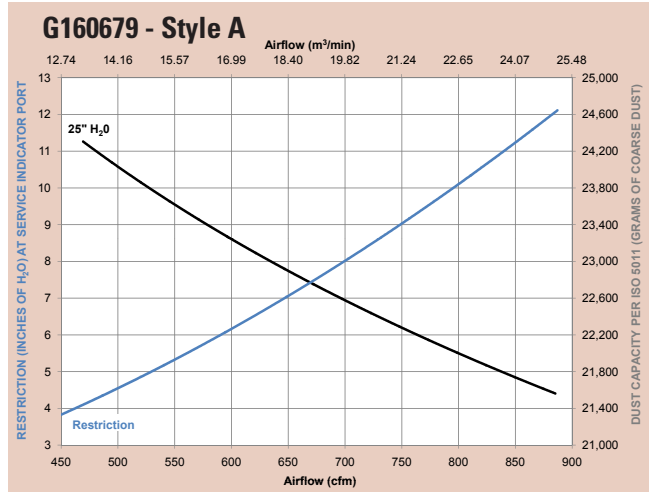
G140526 - Style A



G150092 - Style B

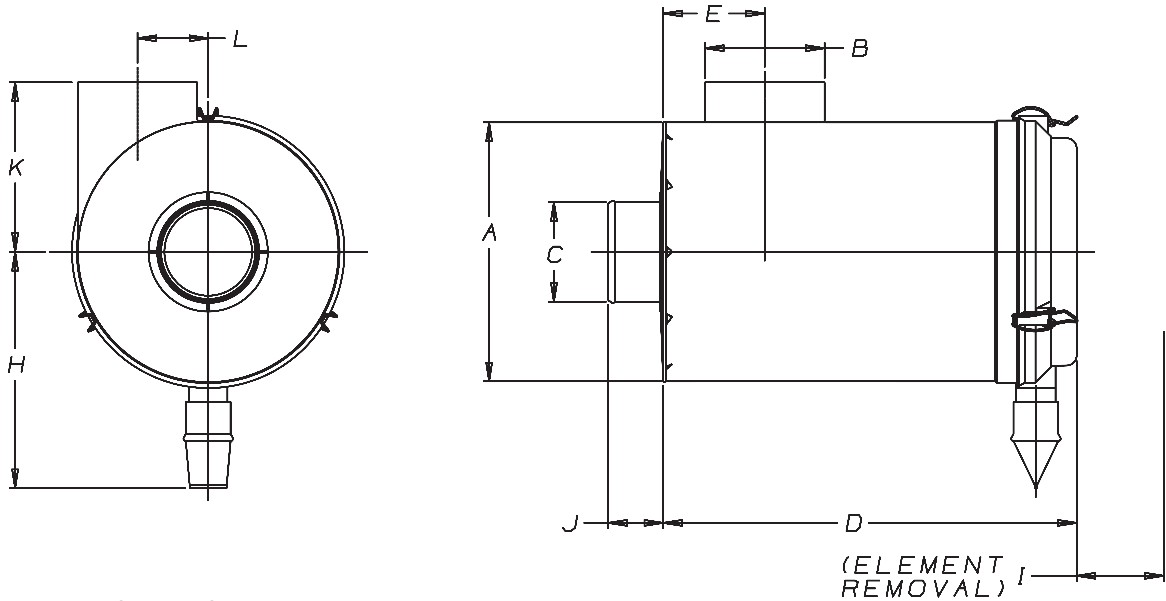


continued — FRG Air Cleaner Performance Curves (Restriction & Dust Capacity)



**FRG Specification Illustrations**

Style B — Latch Service Cover (Style A on next page)



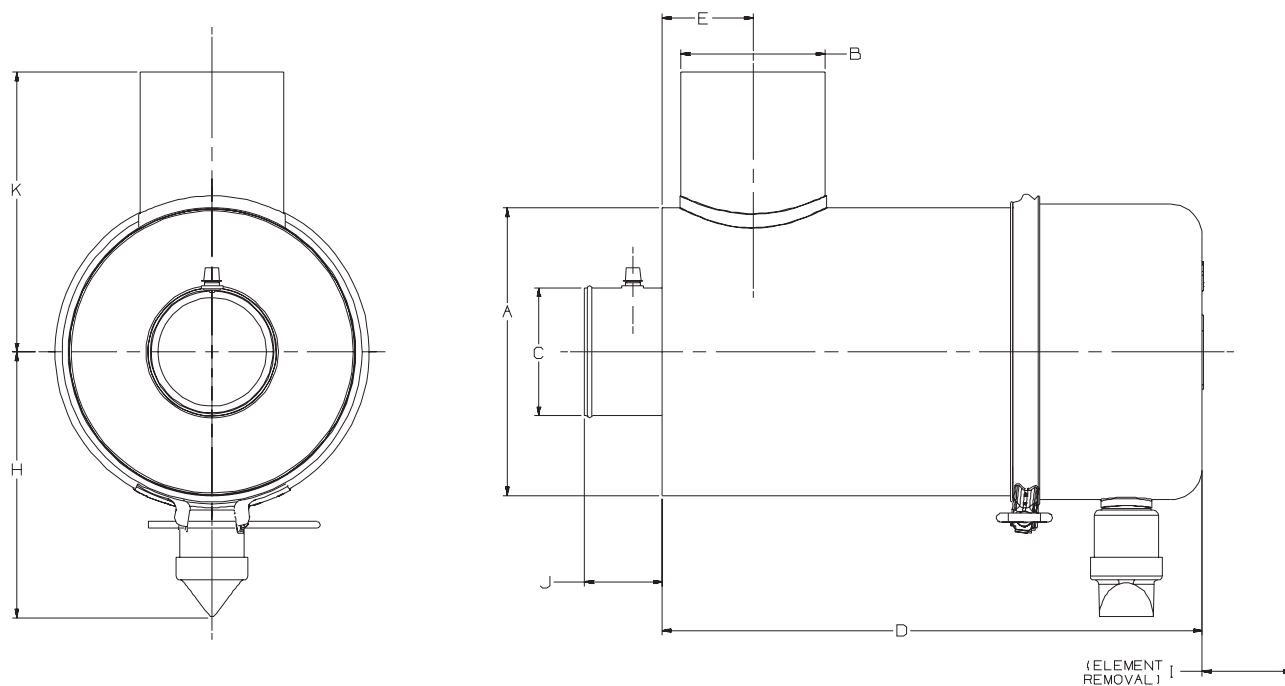
**FRG Specifications (Style B)**

Air Cleaner Models	Body Diameter (A)		Inlet Diameter (B)		Outlet Diameter (C)		Housing Length (D)		Inlet Location (E)		Center Line to Valve (H)		Service Clearance (I)		Outlet Length (J)		Inlet Length (K)		Offset Inlet Location (L)	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
<b>STYLE B - LATCH SERVICE COVER</b>																				
G100297	10.2	259	4.5	114	4.0	102	16.93	430	3.54	90	10.63	270	15.00	373	2.59	66	8.07	205	2.81	72
G110214	11.0	279	5.0	127	4.5	114	13.78	350	4.13	105	10.81	275	17.00	428	2.64	67	7.50	191	2.96	75
G110206	11.0	279	5.0	127	4.5	114	19.28	490	4.13	105	10.81	275	17.00	428	2.64	67	7.50	191	2.96	75
G130107	13.0	330	6.0	152	5.0	127	16.73	425	5.22	132	11.85	301	18.00	450	2.64	67	8.50	216	3.54	90
G130097	13.0	330	6.0	152	5.0	127	20.87	530	5.22	132	11.85	301	18.00	450	2.64	67	8.50	216	3.54	90
G150092	15.0	381	7.0	178	6.0	152	20.87	530	5.51	140	13.31	338	19.00	482	2.75	70	9.50	241	4.03	102
G180031	18.0	457	8.0	203	8.0	203	25.60	650	5.04	128	15.80	402	28.62	600	3.35	85	11.42	290	5.05	128



## FRG Specification Illustrations

### Style A — Bolt/Clamp Service Cover

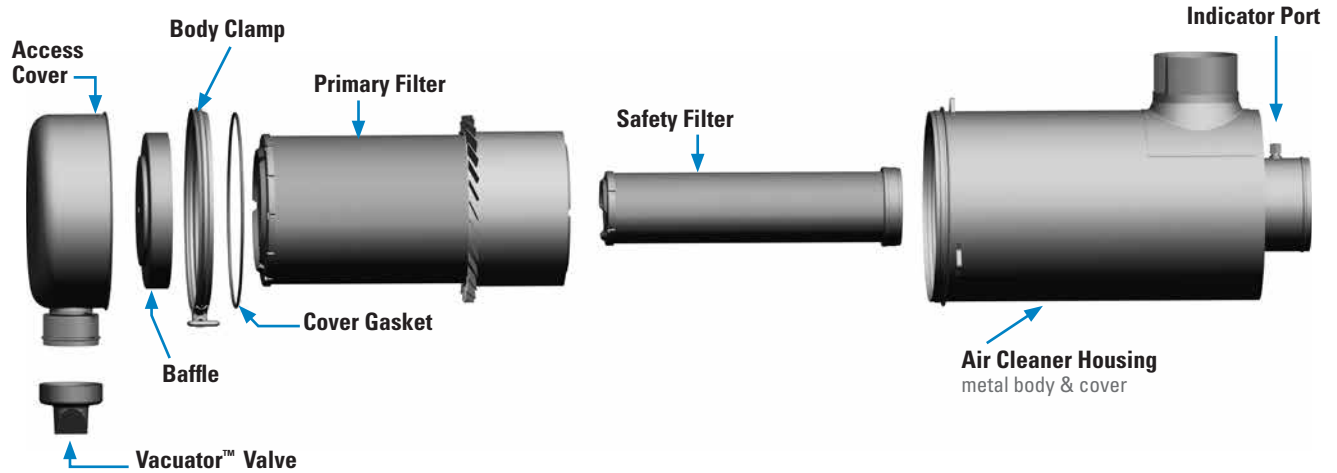


### FRG Specifications (Style A)

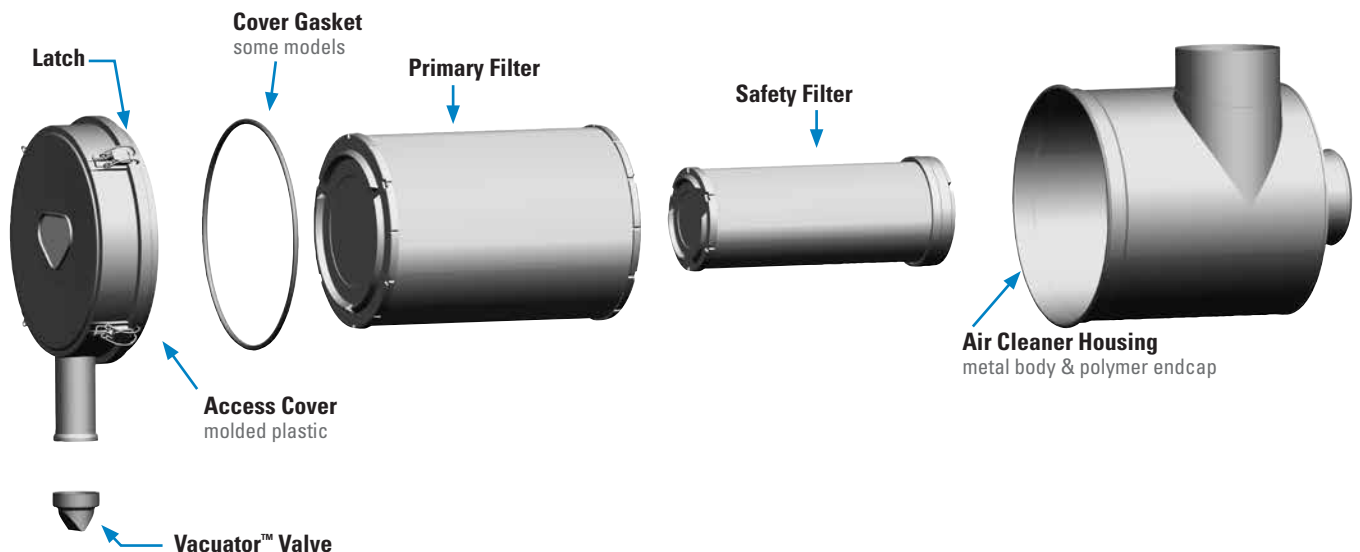
Air Cleaner Models	Body Diameter (A)		Inlet Diameter (B)		Outlet Diameter (C)		Housing Length (D)		Inlet Location (E)		Center Line to Valve (H)		Service Clearance (I)		Outlet Length (J)		Inlet Length (K)	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
<b>STYLE A - BOLT/CLAMP SERVICE COVER</b>																		
G052685	5.25	133	2.50	64	2.50	64	14.76	375	2.06	52	6.36	162	9.80	249	2.30	58	4.97	126
G052686	5.25	133	2.50	64	2.50	64	14.76	375	2.06	52	6.36	162	9.80	249	2.30	58	4.97	126
G065541	6.55	166	3.00	76	3.00	76	15.44	392	1.92	49	6.28	160	12.31	313	2.22	56	6.38	162
G065551	6.55	166	3.00	76	3.00	76	15.44	392	1.92	49	6.28	160	12.31	313	2.22	56	6.38	162
G080582	8.00	203	3.75	95	3.50	89	15.84	402	2.38	60	7.96	202	12.44	316	2.46	62	7.25	184
G080585	8.00	203	3.75	95	3.50	89	15.84	402	2.38	60	7.96	202	12.44	316	2.46	62	7.25	184
G090245	9.00	229	4.50	114	4.00	102	16.90	429	2.84	72	8.27	210	16.90	429	2.43	62	8.75	222
G090250	9.00	229	4.50	114	4.00	102	16.90	429	2.84	72	8.27	210	16.90	429	2.43	62	8.75	222
G100395	10.19	259	4.50	114	5.00	127	21.03	534	3.38	86	8.96	228	13.06	332	2.10	53	8.09	205
G100398	10.19	259	4.50	114	5.00	127	21.03	534	3.38	86	8.96	228	13.06	332	2.10	53	8.09	205
G120415	12.00	305	5.00	127	5.00	127	19.06	484	4.69	119	9.62	244	9.10	231	2.28	58	8.92	227
G120417	12.00	305	5.00	127	5.00	127	19.06	484	4.69	119	9.62	244	9.10	231	2.28	58	8.92	227
G140523	14.00	356	6.00	152	6.00	152	22.06	560	5.28	134	10.72	272	12.10	307	2.26	57	10.12	257
G140526	14.00	356	6.00	152	6.00	152	22.06	560	5.28	134	10.72	272	12.10	307	2.26	57	10.12	257
G160679	16.00	406	7.00	178	7.00	178	24.04	611	5.76	146	11.72	298	14.10	358	2.29	58	12.00	305

## FRG Service Parts

### Style A — Bolt/Clamp Service Cover



### Style B — Latch Service Cover



## FRG Service Parts & Accessories

### G052685 FRG Style A

Clamp .....	P002904
Cover .....	P120279
Elbow, 45° .....	P105543
Elbow, 90° .....	P105531
Filter, primary .....	P600043 .....3
Filter, safety .....	P600047 .....3
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001378
Mounting band .....	P002348 .....2
Mounting bands, metal .....	P002348
Outlet band clamp .....	P148339
Vacuator™ Valve .....	P158914

### G052686 FRG Style A

Clamp .....	P002904
Cover .....	P120279
Elbow, 45° .....	P105543
Elbow, 90° .....	P105531
Filter, primary .....	P600043 .....3
Filter, safety (optional) .....	P600047
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001378
Mounting band .....	P002348 .....2
Outlet band clamp .....	P148339
Vacuator™ Valve .....	P158914

#### SERVICE PARTS NOTES:

- 2 = Two required for proper installation
- 3 = Shipped with air cleaner initially
- 8 = Cover assembly includes latches but no Vacuator™ Valve

**G065541 FRG Style A**

Clamp .....	P002940
Cover .....	P522133
Elbow, 45° .....	P105544
Elbow, 90° .....	P105532
Elbow, 90° reducing .....	P123462
Filter, primary .....	P549271 .....3
Filter, safety .....	P549277 .....3
Hump hose .....	P105608
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001379
Mounting band .....	P007191 .....2
Outlet band clamp .....	P148341
Vacuator™ Valve .....	P158914

**G065551 FRG Style A**

Clamp .....	P002940
Cover .....	P522133
Elbow, 45° .....	P105544
Elbow, 90° .....	P105532
Elbow, 90° reducing .....	P123462
Filter, primary .....	P549271 .....3
Filter, safety (optional) .....	P549277
Hump hose .....	P105608
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H001379
Mounting band .....	P007191 .....2
Outlet band clamp .....	P148341
Vacuator™ Valve .....	P158914

**G080582 FRG Style A**

Clamp .....	P003951
Cover .....	P600321
Elbow, 45° .....	P109331
Elbow, 90° .....	P114318
Filter, primary .....	P601437 .....3
Filter, safety .....	P601476 .....3
Hump hose .....	P114319
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H000466
Mounting band .....	P004307 .....2
Outlet band clamp .....	P148342
Vacuator™ Valve .....	P158914

**G080585 FRG Style A**

Cover .....	P600321
Elbow, 45° .....	P109331
Elbow, 90° .....	P114318
Filter, primary .....	P601437 .....3
Filter, safety (optional) .....	P601476
Hump hose .....	P114319
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H000466
Mounting band .....	P004307 .....2
Outlet band clamp .....	P148342
Vacuator™ Valve .....	P158914

**G090245 FRG Style A**

Clamp .....	P102025
Cover .....	P600657
Elbow, 45° .....	P105545
Elbow, 90° .....	P105533
Elbow, 90° reducing .....	P121482
Filter, primary .....	P601280 .....3
Filter, safety .....	P601286 .....3
Hump hose .....	P105609
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000170
Inlet hood, plastic .....	H000468
Mounting band .....	P004073 .....2
Outlet band clamp .....	P148343
Vacuator™ Valve .....	P158914

**G090250 FRG Style A**

Cover .....	P600657
Elbow, 45° .....	P105545
Elbow, 90° .....	P105533
Elbow, 90° reducing .....	P121482
Filter, primary .....	P601280 .....3
Filter, safety (optional) .....	P601286
Hump hose .....	P105609
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000170
Inlet hood, plastic .....	H000468
Mounting band .....	P004073 .....2
Outlet band clamp .....	P148343
Vacuator™ Valve .....	P158914

**G100297 FRG Style B**

Cover .....	P538200 .....8
Elbow, 45° .....	P105545
Elbow, 90° .....	P105533
Elbow, 90° reducing .....	P121482
Filter, primary .....	P781039 .....3
Filter, safety .....	P777639 .....3
Gasket, cover .....	P537308
Hump hose .....	P105609
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, plastic .....	H000467
Latch .....	P777366
Mounting band .....	P004076 .....2
Outlet band clamp .....	P148343
Vacuator™ Valve .....	P776008

**G100395 FRG Style A**

Baffle, metal .....	P602211
Clamp .....	P106071
Dust cup/cover .....	P103827
Elbow, 45° .....	P109021
Elbow, 90° .....	P107844
Elbow, 90° reducing .....	P143895
Filter, primary .....	P601790 .....3
Filter, safety (optional) .....	P777639 .....3
Hump hose .....	P105610
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000170
Inlet hood, plastic .....	H000468
Mounting band .....	P004076 .....2
O-ring .....	P101401
Outlet band clamp .....	P148345
Vacuator™ Valve .....	P103198

**G100398 FRG Style A**

Baffle, metal .....	P602211
Clamp .....	P106071
Dust cup/cover .....	P103827
Elbow, 45° .....	P109021
Elbow, 90° .....	P107844
Elbow, 90° reducing .....	P143895
Filter, primary .....	P601790 .....3
Filter, safety (optional) .....	P777639
Hump hose .....	P105610
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000170
Inlet hood, plastic .....	H000468
Mounting band .....	P004076 .....2
Mounting bands, metal .....	P004076
O-ring .....	P101401
Outlet band clamp .....	P148345
Vacuator™ Valve .....	P103198

**G110206 FRG Style B**

Cover .....	P538452 .....8
Elbow, 45° .....	P114316
Elbow, 90° .....	P113733
Filter, primary - ES & HE .....	EAF5105
Filter, primary - SM .....	P532966 .....3
Filter, safety .....	P533781 .....3
Gasket, cover .....	P526676
Hump hose .....	P114317
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000170
Inlet hood, plastic .....	H000468
Latch .....	P536439
Mounting band .....	P004079 .....2
Outlet band clamp .....	P148344
Vacuator™ Valve .....	P158914

**G110214 FRG Style B**

Cover .....	P538452 .....8
Elbow, 45° .....	P114316
Elbow, 90° .....	P113733
Filter, primary .....	P536457 .....3
Filter, safety .....	P536492 .....3
Gasket, cover .....	P526676
Hump hose .....	P114317
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000170
Inlet hood, plastic .....	H000468
Latch .....	P536439
Mounting band .....	P004079 .....2
Outlet band clamp .....	P148344
Vacuator™ Valve .....	P158914

## G120415 FRG Style A

Baffle, metal.....	P106329
Clamp.....	P121067
Dust cup/cover.....	P109296
Elbow, 45°.....	P109021
Elbow, 90°.....	P107844
Elbow, 90° reducing.....	P143895
Filter, primary.....	P601767 .....3
Filter, safety.....	P601774 .....3
Hump hose.....	P105610
Informer™ indicator 25" H <sub>2</sub> O.....	X002277
Inlet hood, metal.....	H000165
Inlet hood, plastic.....	H000469
Mounting band.....	H000349 .....2
O-ring.....	P017804
Outlet band clamp.....	P148345
Vacuator™ Valve.....	P103198

## G120417 FRG Style A

Baffle, metal.....	P106329
Clamp.....	P121067
Dust cup/cover.....	P109296
Elbow, 45°.....	P109021
Elbow, 90°.....	P107844
Elbow, 90° reducing.....	P143895
Filter, primary.....	P601767 .....3
Filter, safety (optional).....	P601774
Hump hose.....	P105610
Informer™ indicator 25" H <sub>2</sub> O.....	X002277
Inlet hood, metal.....	H000165
Inlet hood, plastic.....	H000469
Mounting band.....	H000349 .....2
O-ring.....	P017804
Outlet band clamp.....	P148345
Vacuator™ Valve.....	P103198

## G130097 FRG Style B

Cover.....	P538259 .....8
Elbow, 45°.....	P109021
Elbow, 90°.....	P107844
Elbow, 90° reducing.....	P143895
Filter, primary.....	P537876 .....3
Filter, safety.....	P537877 .....3
Gasket, cover.....	P537699
Hump hose.....	P105610
Informer™ indicator 25" H <sub>2</sub> O.....	X002277
Inlet hood, metal.....	H000165
Inlet hood, plastic.....	H000469
Latch.....	P776033
Mounting band.....	P013722 .....2
Outlet band clamp.....	P148345
Vacuator™ Valve.....	P776008

## G130107 FRG Style B

Cover.....	P538259 .....8
Elbow, 45°.....	P109021
Elbow, 90°.....	P107844
Elbow, 90° reducing.....	P143895
Filter, primary.....	P532503 .....3
Filter, safety.....	P532504 .....3
Gasket, cover.....	P537699
Hump hose.....	P105610
Informer™ indicator 25" H <sub>2</sub> O.....	X002277
Inlet hood, metal.....	H000165
Inlet hood, plastic.....	H000469
Latch.....	P776033
Mounting band.....	P013722 .....2
Outlet band clamp.....	P148345
Vacuator™ Valve.....	P776008

## G140523 FRG Style A

Baffle, metal.....	P106771
Clamp.....	P100866
Dust cup/cover.....	P109297
Elbow, 45°.....	P105547
Elbow, 90°.....	P105535
Filter, primary.....	P532503 .....3
Filter, safety.....	P532504 .....3
Hump hose.....	P105612
Informer™ indicator 25" H <sub>2</sub> O.....	X002277
Inlet hood, metal.....	H000275
Inlet hood, plastic.....	H000606
Mounting band.....	H000350 .....2
O-ring.....	P017335
Outlet band clamp.....	P148347
Vacuator™ Valve.....	P103198

## G140526 FRG Style A

Baffle, metal.....	P106771
Clamp.....	P100866
Dust cup/cover.....	P109297
Elbow, 45°.....	P105547
Elbow, 90°.....	P105535
Filter, primary.....	P532503 .....3
Filter, safety (optional).....	P532504
Hump hose.....	P105612
Informer™ indicator 25" H <sub>2</sub> O.....	X002277
Inlet hood, metal.....	H000275
Inlet hood, plastic.....	H000606
Mounting band.....	H000350 .....2
O-ring.....	P017335
Outlet band clamp.....	P148347
Vacuator™ Valve.....	P103198

## G150092 FRG Style B

Cover.....	P777920 .....8
Elbow, 45°.....	P105547
Elbow, 90°.....	P105535
Filter, primary.....	P777868 .....3
Filter, safety.....	P777869 .....3
Hump hose.....	P105612
Informer™ indicator 25" H <sub>2</sub> O.....	X002277
Inlet hood, metal.....	H000339
Inlet hood, plastic.....	H000607
Latch.....	P776033
Mounting band.....	P016845 .....2
Outlet band clamp.....	P148347
Vacuator™ Valve.....	P776008

## G160679 FRG Style A

Baffle, metal.....	P106637
Clamp.....	P100789
Dust cup/cover.....	P106952
Elbow, 45°.....	P105548
Elbow, 90°.....	P105536
Filter, primary.....	P549523 .....3
Filter, safety.....	P549530 .....3
Hump hose.....	P105613
Informer™ indicator 25" H <sub>2</sub> O.....	X002277
Inlet hood, metal.....	H000339
Inlet hood, plastic.....	H000607
Mounting band.....	H000351 .....2
O-ring.....	P017336
Outlet band clamp.....	P148348
Vacuator™ Valve.....	P103198

## G180031 FRG Style B

Cover.....	P783185
Elbow, 45°.....	P112606
Elbow, 90°.....	P112605
Filter, primary.....	P781098 .....3
Filter, safety.....	P781102 .....3
Hump hose.....	P112608
Informer™ indicator 25" H <sub>2</sub> O.....	X002277
Inlet hood, plastic.....	H001053
Mounting band.....	H770037 .....2
Outlet band clamp.....	P148349
Vacuator™ Valve.....	P105220

### SERVICE PARTS NOTES:

- 2 = Two required for proper installation
- 3 = Shipped with air cleaner initially
- 7 = Included with each replacement filter
- 8 = Cover assembly includes latches, but no Vacuator Valve.



This servicing information is provided as a best practices guide. It is not intended to replace or supersede the service instructions supplied by your engine or vehicle manufacturer.

### 1 Check the Restriction

Replace the filter only when the restriction level has reached the maximum recommended by the engine or equipment manufacturer or on a regular service schedule.



### 2 Remove the Primary Filter and check the Vacuator™ Valve

Shut off the engine. Unfasten or unlatch the service cover.

Because of its RadialSeal™, the filter fits tightly over the outlet tube and there will be some initial resistance, similar to breaking the seal on a jar. Gently move the end of the filter back and forth to break the seal then rotate while pulling straight out. Avoid knocking the filter against the housing.

If your air cleaner is equipped with a Vacuator™ Valve, visually check and physically squeeze it.



Make sure the valve is flexible and not inverted, damaged or plugged. Replace it if damaged or if it looks like any of these images. A damaged or missing vac valve will disrupt the designed flow of air through the air cleaner.

### 3 Visually Check the Safety Filter and Clean Both Surfaces of the Outlet Tube

If your air cleaner has a safety filter, visually check the safety filter in place for signs of damage. Do not remove the safety filter unless it is damaged or due for replacement. Also verify that the safety filter is properly seated in the housing.

The safety filter should be replaced every three primary filter changes. Use a clean damp cloth to wipe both the filter sealing surface and the inside of the outlet tube. Ensure that the outlet tube sealing area is undamaged.

Contaminant on the sealing surface could hinder an effective seal and cause leakage. If the safety filter is to be replaced, avoid leaving the outlet tube exposed to the air.

If there is to be a delay in installing the new safety filter, cover the air cleaner outlet tube to avoid admitting any dust.



### 4

#### 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. Eliminate any source of air leaks before installing the new primary filter.



### 5

#### Inspect the New Filter

Inspect the new filter for any damage that may have occurred through mishandling. NEVER install a damaged filter. Visually check the inside of the open end, which is the sealing area.

Do not wipe the filter RadialSeal™ area as the new Donaldson RadialSeal filter may have a dry lubricant on the seal to aid installation.



### 6

#### Insert the New Filter

First, if you're servicing the safety filter at this change-out, seat it properly into position before installing the primary filter. Insert new filters carefully. Seat the primary filter by hand, making certain it is inserted completely into the air cleaner housing. To complete a tight seal, apply pressure by hand at the outer rim of the filter, not the flexible center.

No cover pressure is required to hold the seal in place and one should NEVER use the service cover to apply pressure. This could damage the housing and fasteners and void the warranty. If the service cover presses against the filter before the cover is fully in place, remove the cover. With cover off, push the filter farther into the air cleaner by hand and then the cover will go on with no extra force. Once the filter is in place, secure the service cover.



Continued on next page



### 7 Check Inlet Hoods and Pre-Cleaners

Check any intake hoods and pre-cleaner devices during maintenance routines.

A missing inlet hood will significantly shorten filter life. If your unit had a hood or pre-cleaner originally, make sure you replace it. Check openings and tubes on pre-cleaners to make sure they are not plugged. Replace any units that are damaged. Damaged or dented units will not operate properly.



### 8 Check Connectors for Tight Fit

Make sure service indicators are reset and in proper working order.

Check that all mounting bands, clamps, bolts, and connections in the entire air cleaner system are tight.

Check for holes in piping, and repair or replace as needed.

Any leaks in the intake piping will admit dust directly to the engine.



## Under Hood Mount, Two-Stage Filtration For Large Construction & Mining Equipment

The FTG Cycloflow™ Air Cleaner is another two-stage air cleaner with a built-in pre-cleaner. This air cleaner has axial seal style filters. The FTG is typically mounted under hood with the service cover on the outside for access.

### Applications

- Allows 32-59 m³/min. airflow throughput per air cleaner
- Horizontal installation
- Sustained temperature tolerance: to 82 °C

### Ideal for

- Large industrial and construction equipment: crawler tractors, crane loaders, excavators and air compressors with large engines operating in severe dust environments
- Agricultural machinery
- Mining equipment
- Oil and gas hydraulic fracturing (fracking) equipment
- Off-highway vehicles

### Air Cleaner Features

- Unique, flared inlet allows maximum airflow with low restriction
- 21" body diameter
- Two-stage filter system — the first stage removes up to 85% of incoming dust with a tangential air inlet
- Inlet on side, outlet on end (G flow)
- Already tapped to accept filter service indicator (1/8"-27 NPT male)
- Safety filter protects engine inlet during filter change out
- Vacuator™ Valve automatically releases the pre-cleaned dust
- Housing is metal and coated with a black, corrosion- and chemical-resistant polymer paint
- Mounting the unit directly to the engine is not recommended; excessive engine vibration can cause premature air cleaner structural failure



### Accessories

- Mounting bands (order separately).
- If the installed air cleaner will be exposed to rain, snow or debris, an **inlet cap** can prevent moisture ingestion.
- A **service indicator** measures the airflow restriction across the filter, thereby showing how much useful life the filter has left and when to replace the filter (see Accessories section of this catalog).

*Note:* Outlet tapped to accept filter service indicator (1/8"-27 NPT male).





**FLOW**

**G**

**INLET**

**OUTLET**

**Air in the Side, Out the End** (standard flow filters)

**When Selecting an Air Cleaner . . .**

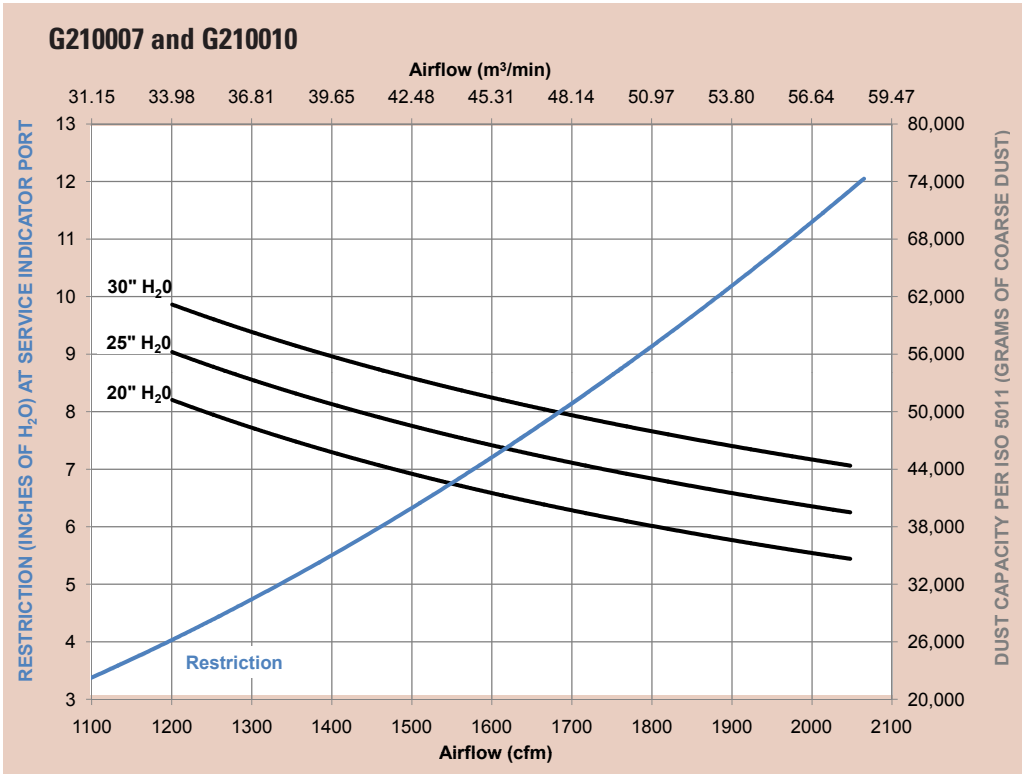
Determine the airflow requirements of your engine, then find the corresponding cfm airflow in the table below. The restriction numbers (shown in inches of water) indicate the approximate initial restriction of each model air cleaner at that cfm. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, and pre-cleaners.

The only difference in these two models is the position of the inlet on the air cleaner body. For location and dimensions, see details on next page.

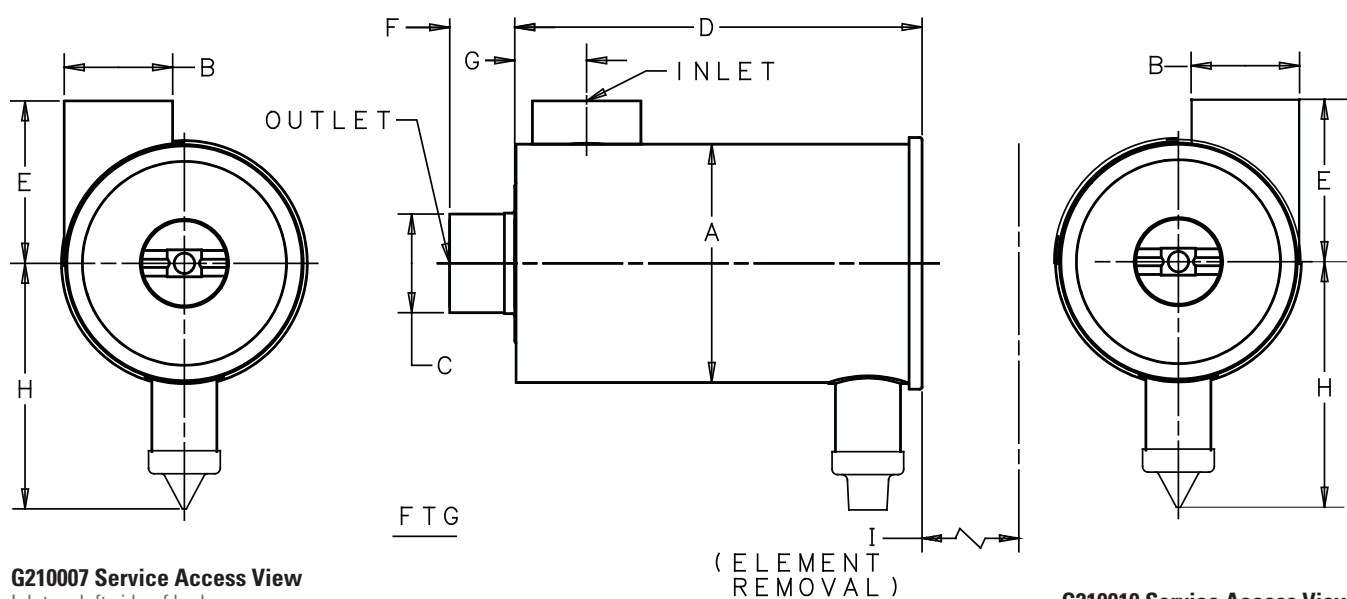
**Initial Airflow Restriction**

Airflow CFM @ H <sub>2</sub> O			Air Cleaner Models	Weight	
6"	8"	10"		lbs	kg
1465	1680	1870	G210007 / G210010	88	40

FTG Air Cleaner Performance Curves (Restriction & Dust Capacity)



## FTG Specification Illustrations



**G210007 Service Access View**

Inlet on left side of body

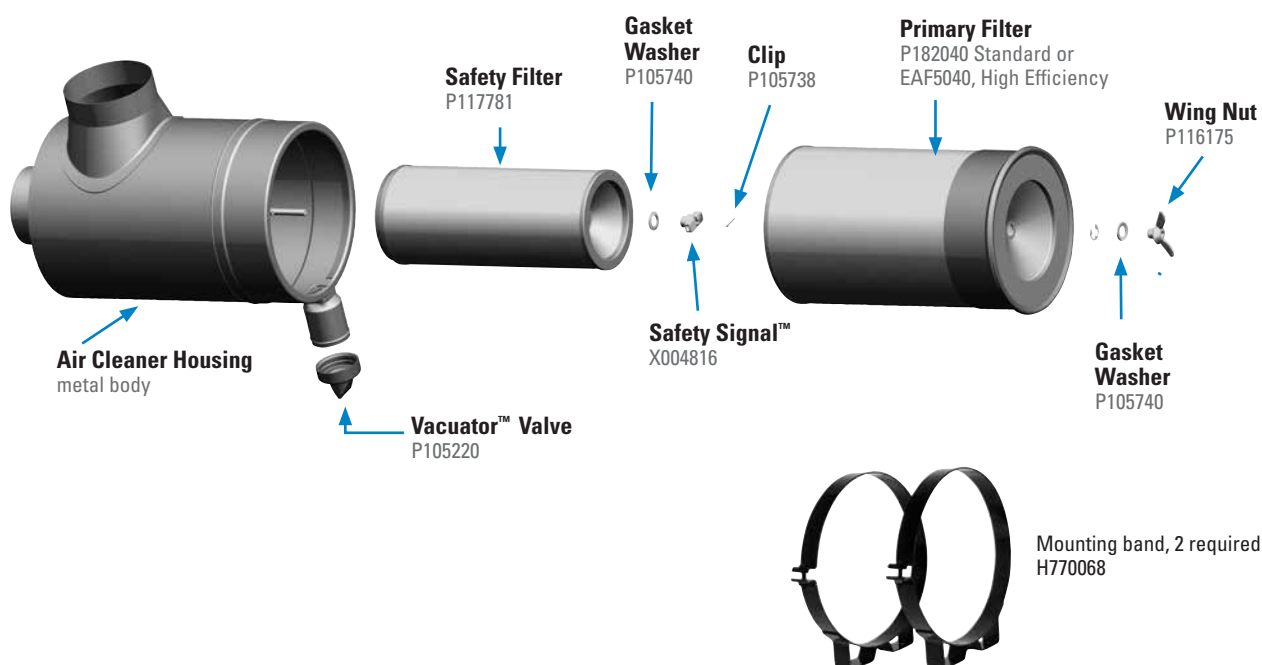
**G210010 Service Access View**

Inlet on right side of body

## FTG Specifications

Air Cleaner Models	Body Diameter (A)		Inlet Diameter (B)		Outlet Diameter (C)		Housing Length (D)		Inlet Location (E)		Center Line to Valve (F)		Service Clearance (G)		Outlet Length (H)	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
G210007	21.00	546	10.00	254	10.00	254	24.13	613	13.00	330	17.40	442	24.13	613	3.54	90
G210010	21.00	546	10.00	254	10.00	254	24.13	613	13.00	330	17.40	442	24.13	613	3.54	90

## FTG Service Parts





This servicing information is provided as a best practices guide. It is not intended to replace or supersede the service instructions supplied by your engine or vehicle manufacturer.

### 1 Check the Restriction

Check the restriction level of the air cleaner filter service indicator. Replace the filter only when the restriction level has reached the maximum recommended by the engine or equipment manufacturer or on a regular service schedule.



### 2 Clean Out the Vacuator™ Valve

Remove the Vacuator Valve and clean out any dust found in the drop tube. Reinstall Vacuator Valve or replace if found worn or damaged.



Make sure the valve is flexible and not inverted, damaged or plugged. Replace it if damaged or if it looks like any of these images. A damaged or missing Vacuator Valve will disrupt the designed flow of air through the air cleaner.

### 3 Gently Remove the Old Filter

Shut off the engine. Loosen and retain the wing nut bolt, remove bolt and washer. Replace both if damaged or worn.

Using the metal handle, pull the dirty filter gently from the housing. Accidental bumping will shake dirt loose inside the filter housing.



### 4 Visually Check the Safety Filter

Visually check the safety filter without removing it. Replace if damaged or every three primary filter changes. Also verify that the safety filter is properly seated in the housing.

If the safety filter is to be replaced, it should be done immediately or the clean air outlet should be sealed. Use a clean cloth to avoid contaminant being introduced to the engine during service.



### 5 Always Clean the Inside of the Housing

Dirt left in the air cleaner housing is harmful to your engine. Use a clean, damp cloth to wipe the inside of the housing before fitting the new filter.

Block the outlet tube of the air cleaner with a small dampened towel prior to cleaning the seal surface to avoid contaminating the induction system.



### 6 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.

### 7 Inspect Your Old Filter and Check for Uneven Dirt Patterns

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



### 8 Inspect New Filters

Before installing the new filters, visually inspect them for shipping damage and gasket integrity. If a filter is damaged, do not install it. If desired, write the date of the filter change on the outer end of the filter end cap.



### 9 Install the New Filters

First, if you're servicing the safety filter at this change-out, seat it properly into position before installing the primary filter. Insert new filters carefully over the center bolt, hand tighten wing nut bolt for both filters.

Make sure the primary filter gasket seats evenly to create a proper seal. If you don't have a good seal, dirty air can by-pass the filter.



### 10 Ensure an 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. Attend to any leaks immediately to avoid dirt entering your engine directly. Reset the filter service indicator.





## Horizontal Mount, Integral Vacuator™ Valve

### Severe Duty, Two-Stage Filtration for Large Construction & Mining Machines

#### Applications

- Allows up to 1200 cfm airflow throughput per air cleaner
- Horizontal installation
- Designed for large industrial and construction machines — crawler tractors, crane loaders, excavators, and air compressors with large engines operating in severe dust environments

#### Air Cleaner Features

- Unique, flared inlet allows maximum airflow with low restriction
- 21" body diameters
- Two-stage air cleaning deals with very dusty environment:
  - (1) Built-in louver spins air to separate up to 85% of incoming dust before it reaches the filter
  - (2) Primary filter removes up to 99.99% of the remaining dust
- Built-in Vacuator™ Valve collects and releases pre-cleaned dust
- Safety filter on all models protects engine inlet during primary filter change out
- Housing is metal and coated with a corrosion and chemical resistant polymer paint

#### Filter Features

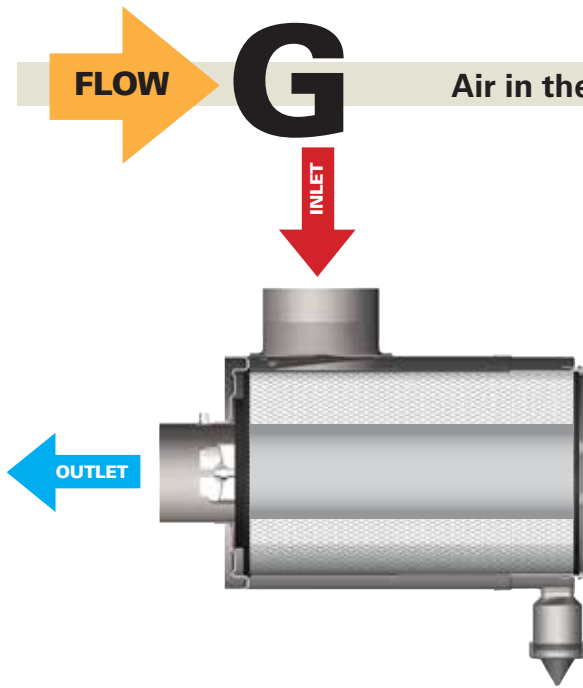
- Replacement filter choices include an extended service, high efficiency filter for restriction maintenance, or a standard life filter for scheduled maintenance

#### Accessories

- See the Accessories section for details on Donaldson air intake add-ons that can enhance the performance of your system
- Each FVG is tapped to accept a filter service indicator
- Order mounting bands, hoods, and other accessories separately



*FVG air cleaners are used in tandem on this underground mining equipment to double the airflow throughput to the engine.*



**Air in the Side, Out the End** (standard flow filters)

### When Selecting an Air Cleaner . . .

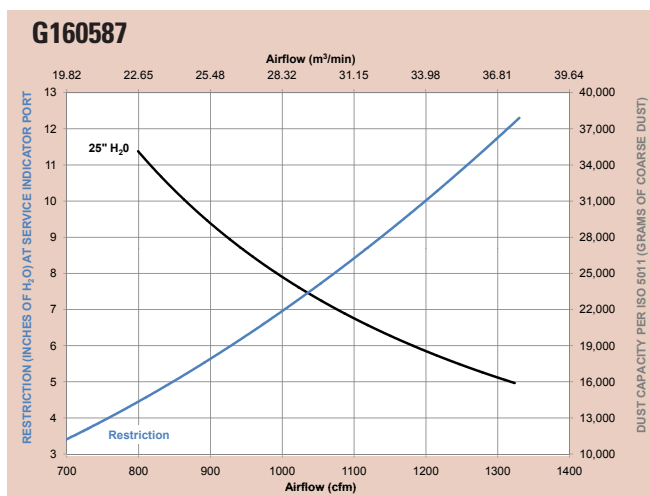
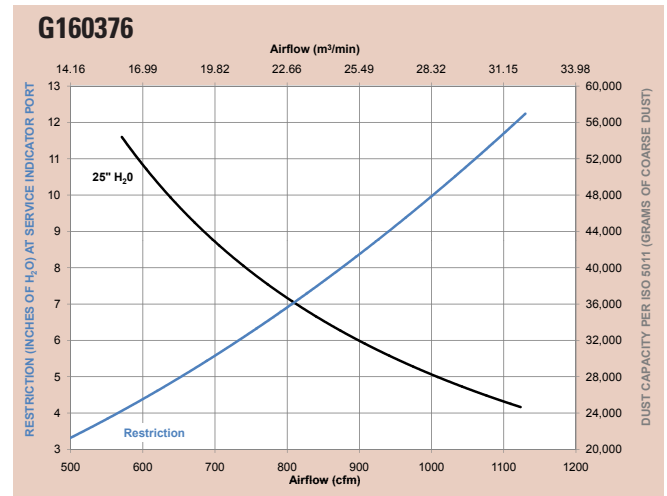
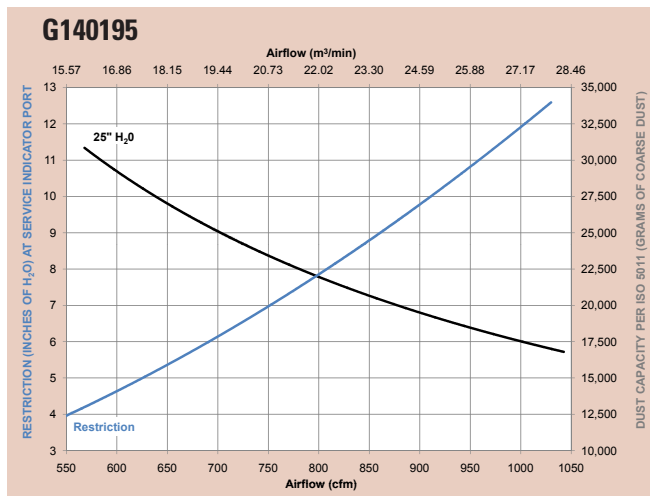
Determine the airflow requirements of your engine, then find the corresponding cfm airflow in the table below. The restriction numbers (shown in inches of water) indicate the approximate initial restriction of each model air cleaner at that cfm. If there are two air cleaner models that fit your parameters, choosing the one with the lower restriction will provide longer filter service life. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, and pre-cleaners.

#### Initial Airflow Restriction

CFM @ "H <sub>2</sub> O	6"	8"	10"	Air Cleaner Model
690	810	910		G140195
730	880	1000		G160376
930	1070	1200		G160587

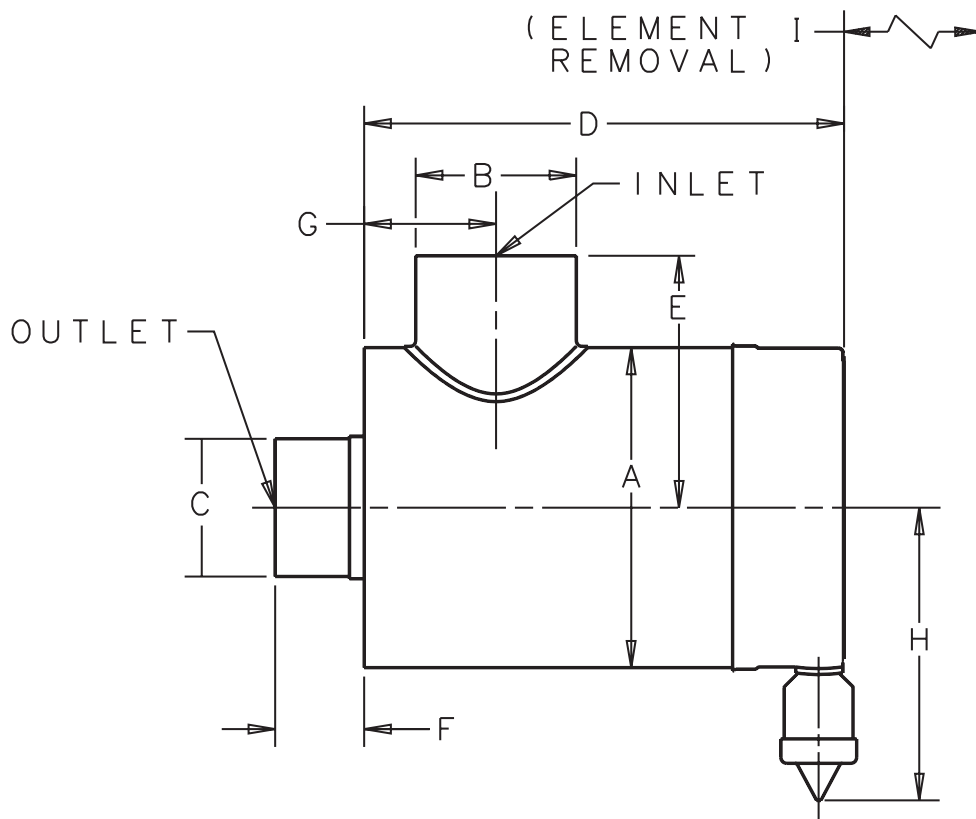
Looking for a different air cleaner with newer Donaldson technologies? Check out the FRG Air Cleaners. This line has models that cover this airflow range.

### FVG Air Cleaner Performance Curves (Restriction & Dust Capacity)





## FVG Cycloflow™ Specification Illustration

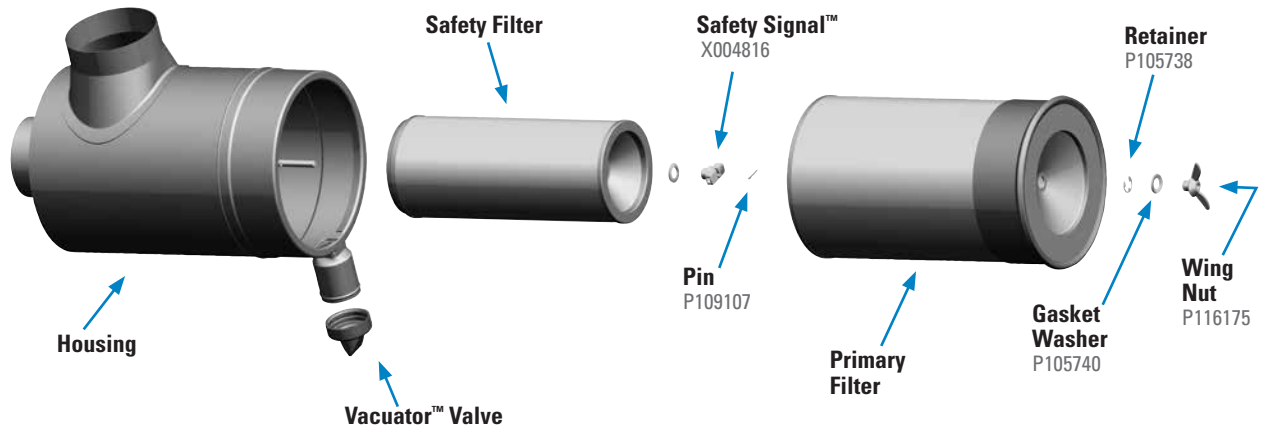


## FVG Specifications

Air Cleaner Models	Body Diameter (A)		Inlet Diameter (B)		Outlet Diameter (C)		Length (D)		(E)		Inlet Length (F)		(G)		(H)		Service Clearance (I)		Weight	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
G140195	13.95	354	7.00	178	6.00	152	20.87	530	10.98	279	3.88	99	5.75	146	12.71	323	20.72	526	48	22
G160376	16.00	406	7.00	178	7.00	178	20.87	530	13.00	330	3.88	99	5.28	134	13.80	351	20.72	526	62	28
G160587	16.00	406	7.00	178	7.00	178	24.87	632	13.00	330	3.88	99	5.75	146	13.80	351	24.50	622	66	30

For FVG air cleaner service servicing information see pages 118-120.

## FVG Exploded View



## FVG Service Parts & Accessories

### G140195 FVG

Elbow, 45° .....	P105547
Elbow, 90° .....	P105535
Filter, primary .....	P182043 .....3
Filter, primary - ES & HE .....	EA5043
Filter, primary - SM .....	P181043
Filter, safety .....	P124860
Gasket washer .....	P105740
Hump hose .....	P105612
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000339
Inlet hood, plastic .....	H000607
Mounting band .....	H000350 .....2
Mounting bands, metal .....	H000350
Outlet band clamp .....	P148347
Pin .....	P109107
Retainer .....	P105738
SafetySignal indicator .....	X004816
Vacuator™ Valve .....	P103198
Wing nut .....	P116175

### G160376 FVG

Elbow, 45° .....	P105548
Elbow, 90° .....	P105536
Filter, primary .....	P124867
Filter, safety .....	P124866
Gasket washer .....	P105740
Hump hose .....	P105613
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000339
Inlet hood, plastic .....	H000607
Mounting band .....	H000351 .....2
Outlet band clamp .....	P148348
Pin .....	P109107
Retainer .....	P105738
SafetySignal indicator .....	X004816
Vacuator™ Valve .....	P103198
Wing nut .....	P116175

### G160587 FVG

Elbow, 45° .....	P105548
Elbow, 90° .....	P105536
Filter, primary .....	P182049 .....3
Filter, primary - ES & HE .....	EA5049
Filter, primary - SM .....	P181049
Filter, safety .....	P116446
Gasket washer .....	P105740
Hump hose .....	P105613
Informer™ indicator 25" H <sub>2</sub> O .....	X002277
Inlet hood, metal .....	H000339
Inlet hood, plastic .....	H000607
Mounting band .....	H000351 .....2
Mounting bands, metal .....	H000351
Outlet band clamp .....	P148348
Pin .....	P109107
Retainer .....	P105738
Vacuator™ Valve .....	P105220
Wing nut .....	P116175

### NOTES:

- 2 = Two required for proper installation
- 3 = Shipped with air cleaner initially

ES =Extended Service  
 HE =High Efficiency  
 SM=Scheduled Maintenance

Even More

Donaldson Delivers

# ^ Innovative Filtration Solutions for Engines, Equipment and the People Who Use Them

## Fuel Filtration

Expanded line of fuel filters protect engine components and extend equipment life.

- Includes a full complement of filters to fit Stanadyne® and Racor® fuel systems, and Cummins® engines.
- Twist&Drain™ valves turn the complicated task of removing water into an easy process.



Stanadyne® is a registered trademark of Stanadyne Corporation. Racor® is a registered trademark of Parker Hannifin Corporation. Cummins® is a registered trademark of Cummins Inc.



## Lube Filtration

Donaldson lube filters keep engine oil clean by capturing contaminants that can cause engine damage.

- With coverage for a full range of popular engines, Donaldson lube filters meet or exceed application requirements.
- Donaldson Endurance™ lube filters — with Synteq™ media — deliver improved lubricant flow, improved cold start performance and a higher level of engine protection to prolong engine and equipment life.



## Mufflers & Exhaust Accessories

- For more than 60 years, Donaldson has been a leading supplier of exhaust systems, components and accessories for medium- and heavy-duty diesel powered trucks and equipment.



## Hydraulic and Transmission Filtration

- Offering a broad line of spin-on, cartridge-style and in-tank hydraulic filters — including high, medium and low pressure options — that protect transmissions, machinery and components in hundreds of applications.
- A complete line of hydraulic accessories to accommodate virtually any mobile application.
- T.R.A.P.™ breather technology
- Donaldson Duramax® filters are the highest rated medium pressure filters available.



**DURAMAX®**

## Coolant Filtration

- Donaldson coolant filters remove contaminants and maintain cooling system balance — keeping today's hot-running engines cool and reducing downtime.
- Donaldson Endurance™ coolant filters allow you to extend filter life while maintaining coolant condition.

