

## Superior Protection for Larger Engines RadialSeal Sealing Technology Means Reliable Filtration and Quicker Service

The FRG2 Air Cleaners is a two-stage hybrid air cleaner with RadialSeal™ Sealing Technology. Ideal for medium- to heavy duty applications like construction equipment, agricultural machinery, mining equipment and off-highway vehicles. The FRG2 Air Cleaner is the Next Generation FRG Air Cleaner Product featuring Donaldson's Unique Design Concept.

For more details on this UDC Feature, see page 7.

**Built with  
Donaldson  
Technology.**



**UNIQUE  
DESIGN  
CONCEPT**

### Applications FRG2

- Horizontal mount required
- Provides variety of airflow volumes to engine: from 6.5 to 51 m<sup>3</sup>/min.
- Temperature tolerance: to 83°C continuous / 105°C intermittent
- Body diameters of 10", 11", 13", 15" and 18"

### Features FRG2

- Two stage filter system: the first stage removes up to 85% of incoming dust
- Vacuator™ Valve automatically releases the pre-cleaned dust
- Proven RadialSeal™ Technology
- Tapped for restriction indicator as standard
- Durable, long-lasting finish. Comprised of two materials: injection molded, high strength polymer service cover and a metal body (the service cover is accessed by latches)
- Indicator thread size = 1/8-27NPT (MALE)

- Mounting the unit directly to the engine is not recommended; excessive engine vibration can cause premature air cleaner structural failure
- Cost effective / Compact and light
- Flexible installation
- Durable, high-tech and easy to service design

### Accessories

Donaldson intake accessories for your FRG2 Air Cleaner can help overcome or prevent various problems. For instance:

- Mounting bands for FRG2s must be ordered 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 cartridge (see Accessories section of this catalogue).

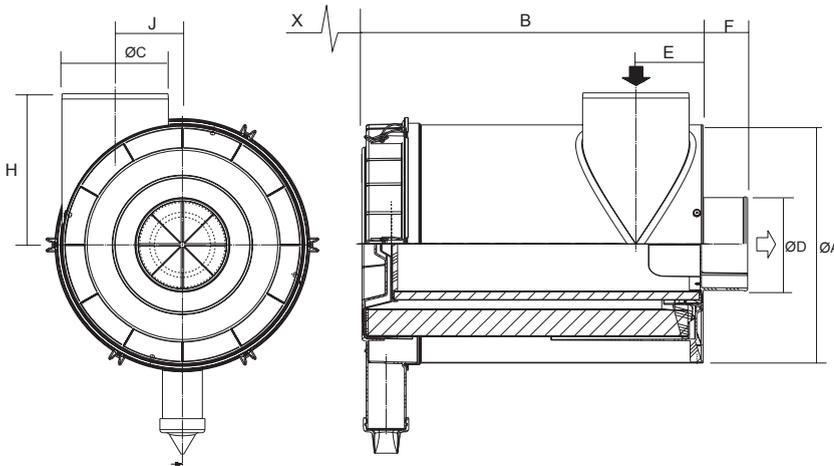
## FRG2 Specifications

**UNIQUE  
DESIGN  
CONCEPT**



### FRG2      FRG Air Cleaners

G100420	G100281
G100428	G100284
G110381	G110211
G110382	G110269
G130236	G130120
G130232	G130061
G130234	G130088
G130233	G130087
G130235	G130113
G150255	G150092
G150259	G150112
G150256	G150097
G180087	G180033
G180074	G180035
G180073	G180031
G180075	G180038



Air Cleaner Model No.	Airflow Range m <sup>3</sup> /min.	Dimensions (mm)										
		A	B	C	D	E	F	H	J	L	X°	Z°°
G100420 *	7 - 14	259	430	114	101	90	52	205	68	270	373	107
G100428	7 - 16	259	430	114	101	90	52	205	68	270	373	107
G110381 " *	8 - 16	279	480	127	114	108	67	191	77	275	373	107
G110382 *	8 - 16	279	480	127	114	108	67	191	77	275	373	107
G130236 *	10 - 18	330	425	152	127	132	58	216	90	301	365	93
G130232 *	13 - 24	330	530	152	127	132	58	216	90	301	470	93
G130234 " *	13 - 24	330	530	152	127	132	58	216	90	301	470	93
G130233	13 - 25	330	530	152	127	132	58	216	90	301	470	93
G130235 "	13 - 25	330	530	152	127	132	58	216	90	301	470	93
G150255 *	16 - 32	381	530	178	152	140	70	242	103	336	480	93
G150259 " *	16 - 32	381	530	178	152	118	70	242	103	336	480	93
G150256	16 - 33	381	530	178	152	140	70	242	103	336	480	93
G180087 *	20 - 39	457	510	203	178	128	85	290	128	402	460	130
G180074 *	22 - 39	457	650	203	178	128	85	290	128	402	600	130
G180073 *	25 - 42	457	650	203	203	128	85	290	128	402	600	130
G180075 " *	25 - 42	457	650	203	203	128	85	290	128	402	600	130

" Inlet on opposite side      \* Includes safety element      X° Free space needed to remove main element  
Z°° Free space needed to remove cover

Medium Dust Conditions

## FRG2 Service Parts

Service Parts						
Air Cleaner Model No.	Main Element	Kit Number •	Access Cover Assy*	Vacuator™ Valve	Rain Cap	Mounting band**
G100420	P785589	X770689	P784944	P776008	H770012	P004076
G100428	P785589	-	P784944	P776008	H770012	P004076
G110381	P785396	X770690	P784923	P158914	H770013	P004079
G110382	P785396	X770690	P784923	P158914	H770013	P004079
G130232	P785390	X770691	P784892	P776008	H770090	P013722
G130233	P785390	-	P784892	P776008	H770090	P013722
G130234	P785390	X770691	P784892	P776008	H770090	P013722
G130235	P785390	-	P784892	P775569	H770090	P013722
G130236	P785398	X770692	P784892	P776008	H770090	P013722
G150255	P785590	X770693	P785551	P776008	H770089	P016845
G150256	P785590	-	P785551	P776008	H770089	P016845
G150259	P785590	X770693	P785551	P776008	H770089	P016845
G180073	P785394	X770688	P784792	P105220	H001053	H770037
G180074	P785394	X770688	P784792	P105220	H001053	H770037
G180075	P785394	X770688	P784792	P105220	H001053	H770037
G180087 "	P786197	X770683	P784792	P105220	H001053	H770037

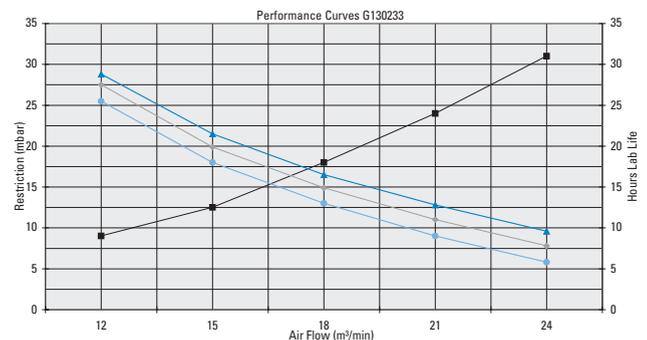
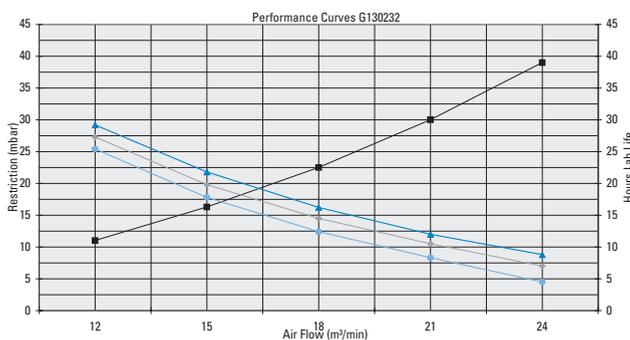
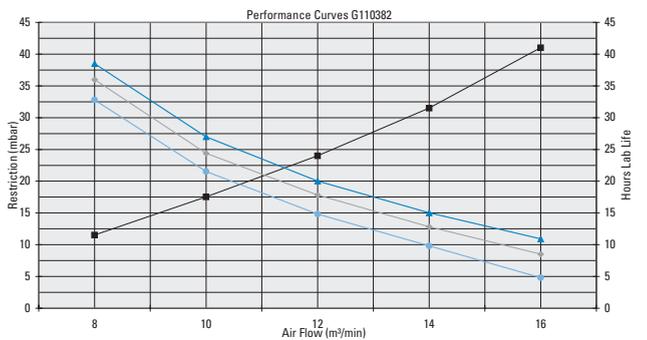
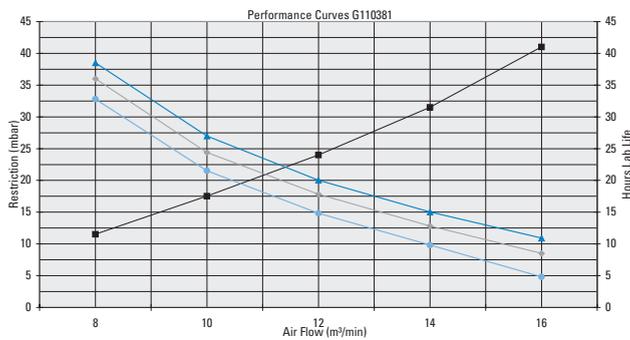
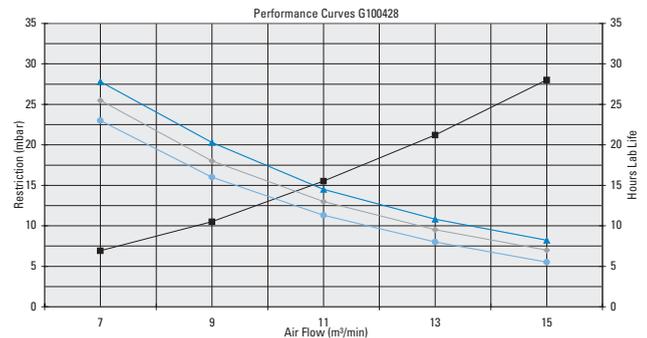
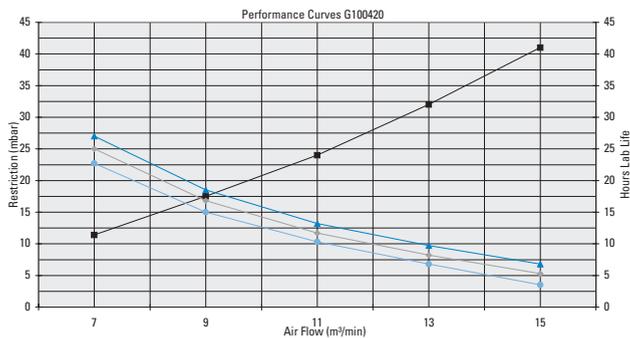
\* Spare Part only    \*\* Two mounting band needed per Air Cleaner  
 " No restriction indicator tapping point  
 • Safety element can only be bought as a kit meaning together with the main element

Medium Dust Conditions

## When specifying an Air Cleaner...

Determine the Airflow Requirements of your engine, then find the corresponding m<sup>3</sup>/min. airflow in the charts below. The restriction numbers - shown in mbar at the left side of the chart - indicate the approximate initial restriction of each model air cleaner at that m<sup>3</sup>/min. When calculating total initial restriction of the entire air intake system, include the restriction caused by ducting, elbows, pre-cleaners, etc. The estimated lab life hours are indicated at the right side of the chart.

## FRG2 Performance Curves

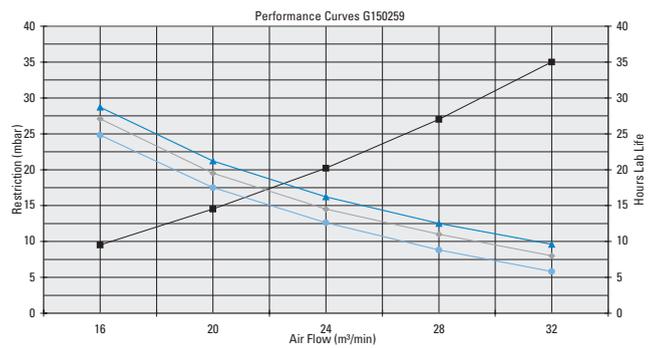
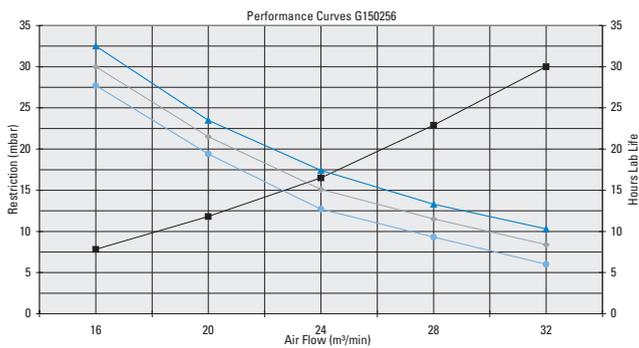
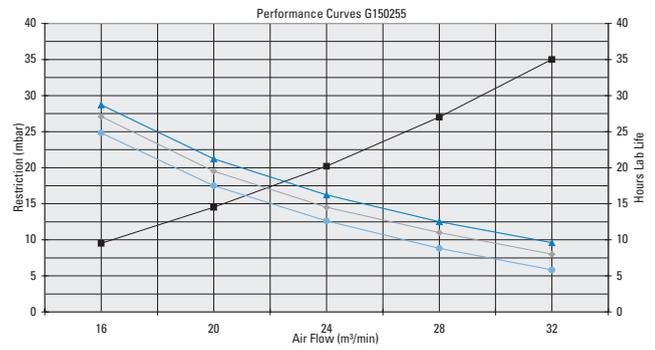
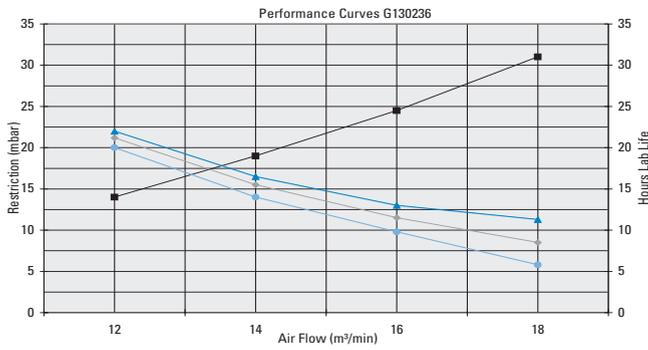
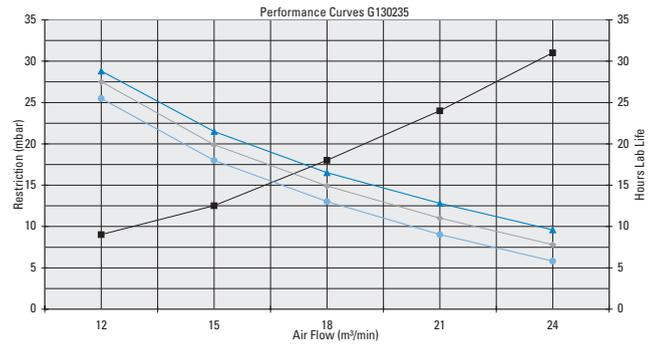
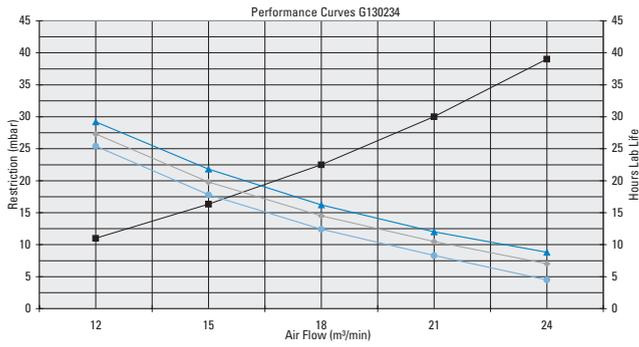


Restr. A/c Piezo
  LL50mbar
  LL62mbar
  LL75mbar

All performance curves are according ISO 5011 standards - Restriction measured at Piezo  
 All tests are done with ISO Coarse at Dust Concentration of 1g/m<sup>3</sup>

Medium Dust Conditions

## FRG2 Performance Curves

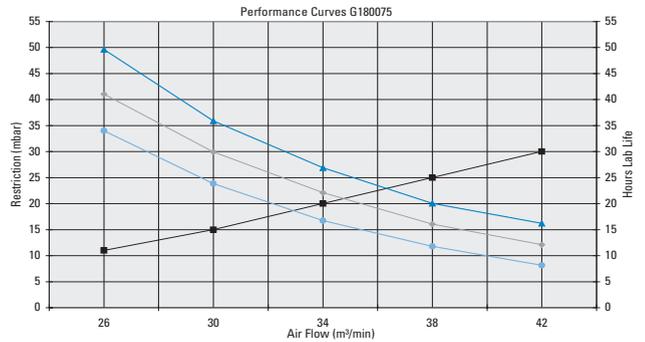
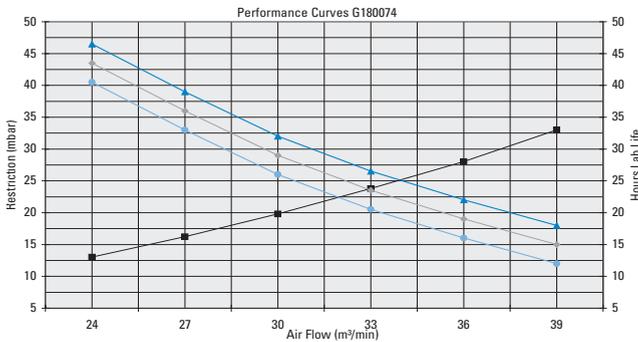
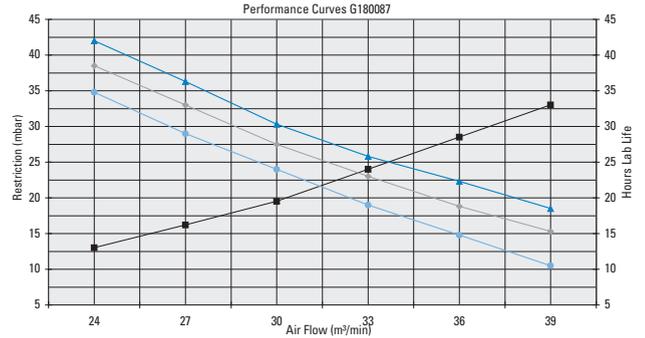
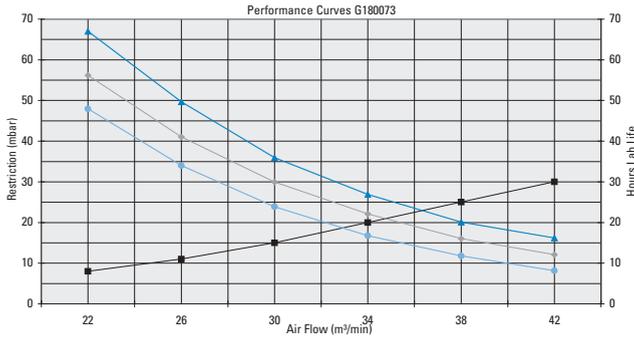


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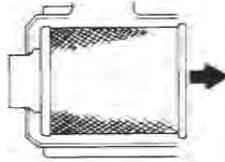
## 1 Remove the Filter

Unfasten or unlatch the service cover.



Rotate the filter while pulling straight out.

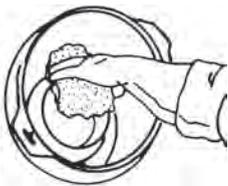
Because the filter fits tightly over the outlet tube to create the critical seal, there will be some initial resistance, similar to breaking the seal on a jar. Gently move the end of the filter back and forth to break the seal then rotate while pulling straight out. Avoid knocking the filter against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



If your air cleaner has a safety filter, replace it every third primary filter change. Remove the safety filter as you would the primary filter. Make sure you cover the air cleaner outlet tube to avoid any unfiltered contaminant dropping into the engine.

## 2 Clean Both Surfaces of the Outlet Tube and Check the Vacuator™ Valve

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



Outer edge of the outlet tube

Wipe both sides of the outlet tube clean.



Inner edge of the outlet tube

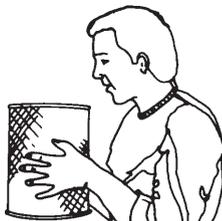
### If your air cleaner is equipped with a Vacuator Valve

Visually check and physically squeeze to make sure the valve is flexible and not inverted, damaged or plugged.



## 3 Inspect the Old Filter for Leak Clues

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



## 4 Inspect the New Filter for Damage

Inspect the new filter carefully, paying attention to the inside of the open end, which is the sealing area.

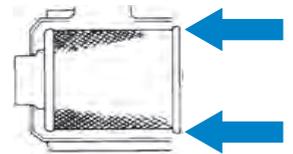
NEVER install a damaged filter. A new Donaldson radial seal filter may have a dry lubricant on the seal to aid installation.



## 5 Insert the New Radial Seal Filter Properly

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

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



The critical sealing area will stretch slightly, adjust itself and distribute the sealing pressure evenly. To complete a tight seal, apply pressure by hand at the outer rim of the filter, not the flexible center. Avoid pushing on the center of the urethane end cap. No cover pressure is required to hold the seal. NEVER use the service cover to push the filter into place! Using the cover to push the filter in could cause damage to the housing, cover fasteners and will void the warranty.

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

Once the filter is in place, secure the service cover.



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



## 6 Check Connectors for Tight Fit

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