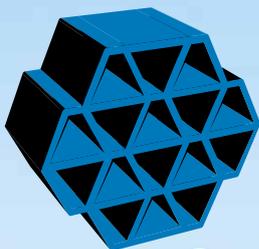




Donaldson Delivers

# PowerCore® Air Cleaner Assemblies



PowerCore® filtration technology delivers improved filtration performance

**PowerCore™**  
A DONALDSON FILTRATION TECHNOLOGY

# PowerCore® Filtration Technology

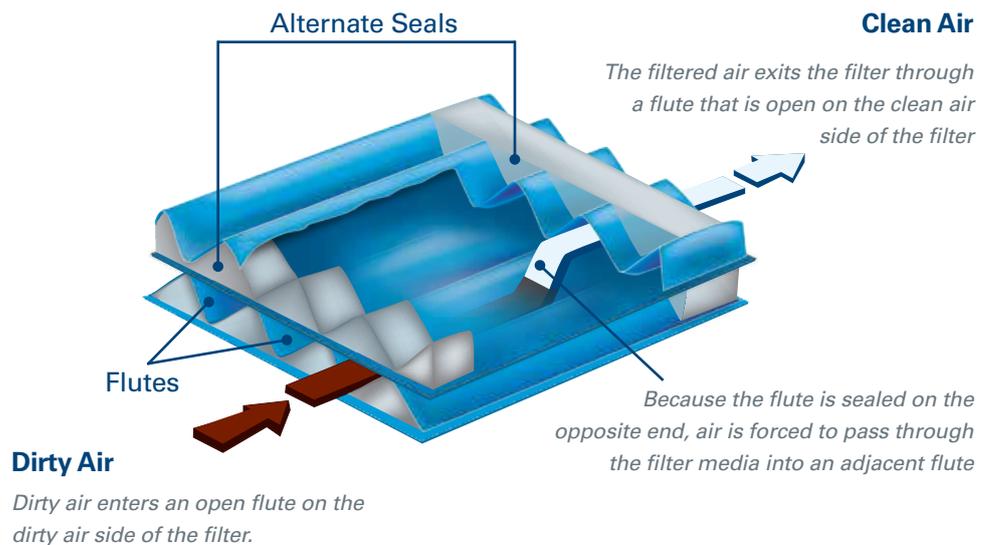


## Donaldson PowerCore® air cleaners deliver...

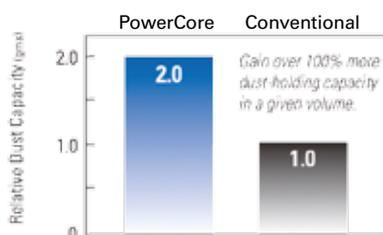
- System design flexibility
- Metal-free, light weight materials
- Rugged construction
- Straight-through airflow technology invented by Donaldson
- Advanced sealing technology
- 3 x more efficient than the average Axial pleated filter
- RadialSeal™ advanced sealing technology
- Inertial particle separation technology

For greater filtration, our PSD air cleaners are adaptable to a scavenged air system.

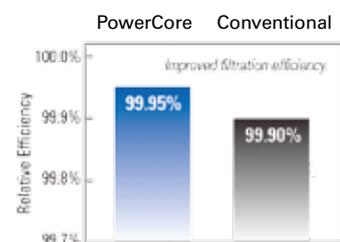
Donaldson PowerCore® PSD air cleaners offer two-stage filtration in a single, compact unit that delivers superior filtration performance using PowerCore Filtration Technology. This non-metal air cleaner (except for cover clamps) is ideal for medium and heavy-duty equipment operating in severe dust environments.



### Dust Holding Capacity



### Overall Efficiency



## Superior Performance in Half the Space

### Features

- More compact at a given performance level than standard pleated filters
- Non-metal filters
- Improved engine protection; no media movement, expansion, contraction or bunching
- Improved contaminant encapsulation; dust and dirt stay contained in filter during servicing
- High efficiency integrated pre-cleaner improves filter life
- Improved handling and maintenance; lighter and smaller
- Easily serviced; no tool required to remove or replace cover
- Can be used with scavenge line or Vacuator™ valve
- Built in mounting brackets eliminate the need to purchase separate mounting bands

### Applications

- Donaldson PCD Air Cleaners are suitable for light to medium dust conditions with engine airflow ranges up to 974 cfm.
- Donaldson PSD Air Cleaners are suitable for off-road equipment operating in medium to heavy dust conditions with engine airflow ranges up to 1490 cfm
- Obround housing shape allows for narrow or wide mounting orientation
- Models have either end or side filter service access
- Sustained temperature tolerance: -40°C to 82°C
- Scavenged system components - exhaust ejectors and check valves are available for PSD air cleaner models

### Mounting Flexibility

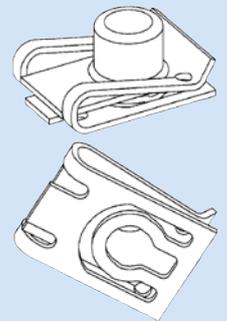
With mounting locations on three sides of the housing (exception D080020 & D080026) and two separate drop tube orientations, the PSD series offers the greatest amount of flexibility for a wide variety of installations.

PSD air cleaners are not to be mounted using U-Clips on both sides adjacent to the access cover. The PSD14 air cleaners **MUST** be mounted with **nine U-Clips** - four on the side opposite the access cover and all five U-Clips on **ONE** of the two sides.

Fixation Points use M8 fasteners. Maximum torque is 18 N•m.

U-Clips are shipped with each air cleaner. Affix these to the mounting location (all in the same direction) and slide the housing into place.

Donaldson PCD air cleaners need to be mounted to equipment on at least one mounting location (base, or either of two sides). It can also be mounted at two points, using the base and one side. It should not be mounted using the two side mounting locations - as this will cause pressure/flexing, and could result in leaks.



## 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 of the entire air intake system, include the restriction caused by ducting, elbows, and pre-cleaners

### Initial Airflow Restriction

(non-scavenged)

#### PSD Air Cleaners

CFM @ "H <sub>2</sub> O			Part Number Orientation
6"	8"	10"	
MODELS WITH SERVICE ACCESS ON END			
176	206	232	H D080020
176	206	232	V D080026
MODELS WITH SERVICE ACCESS ON SIDE			
180	216	245	V D080056
267	315	357	H D090055
284	329	370	V D090101
284	326	370	H D090121
293	345	391	V D090073
293	345	391	H D090120
500	580	652	V D100029
500	580	652	H D100030
500	580	652	H D100072
532	622	700	V D100031
532	622	700	H D100032
532	622	700	H D100068
700	810	915	V D120035
700	810	915	H D120036
700	810	915	V D120037
700	810	915	H D120038
1133	1323	1490	V D140078
1133	1323	1490	H D140079
1133	1323	1490	H D140088

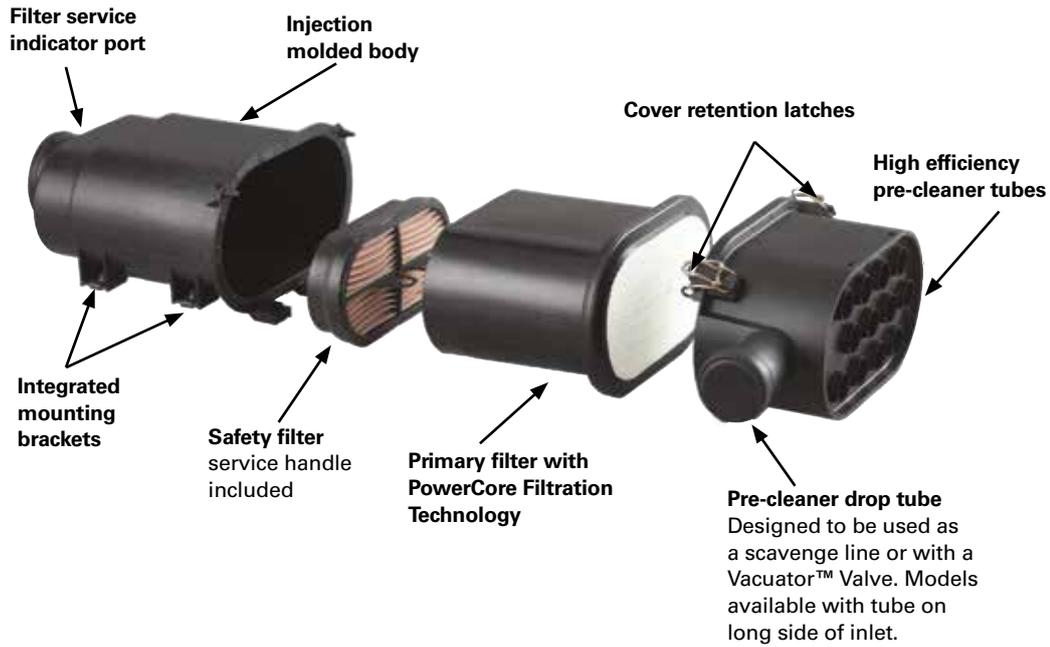
#### PCD Air Cleaners

CFM @ "H <sub>2</sub> O			Part Number Orientation
6"	8"	10"	
MODELS WITH SERVICE ACCESS ON SIDE			
422	493	555	O D090114
422	493	555	I D090115
746	867	974	O D100145
746	867	974	I D100146

## PowerCore® PSD Air Cleaners

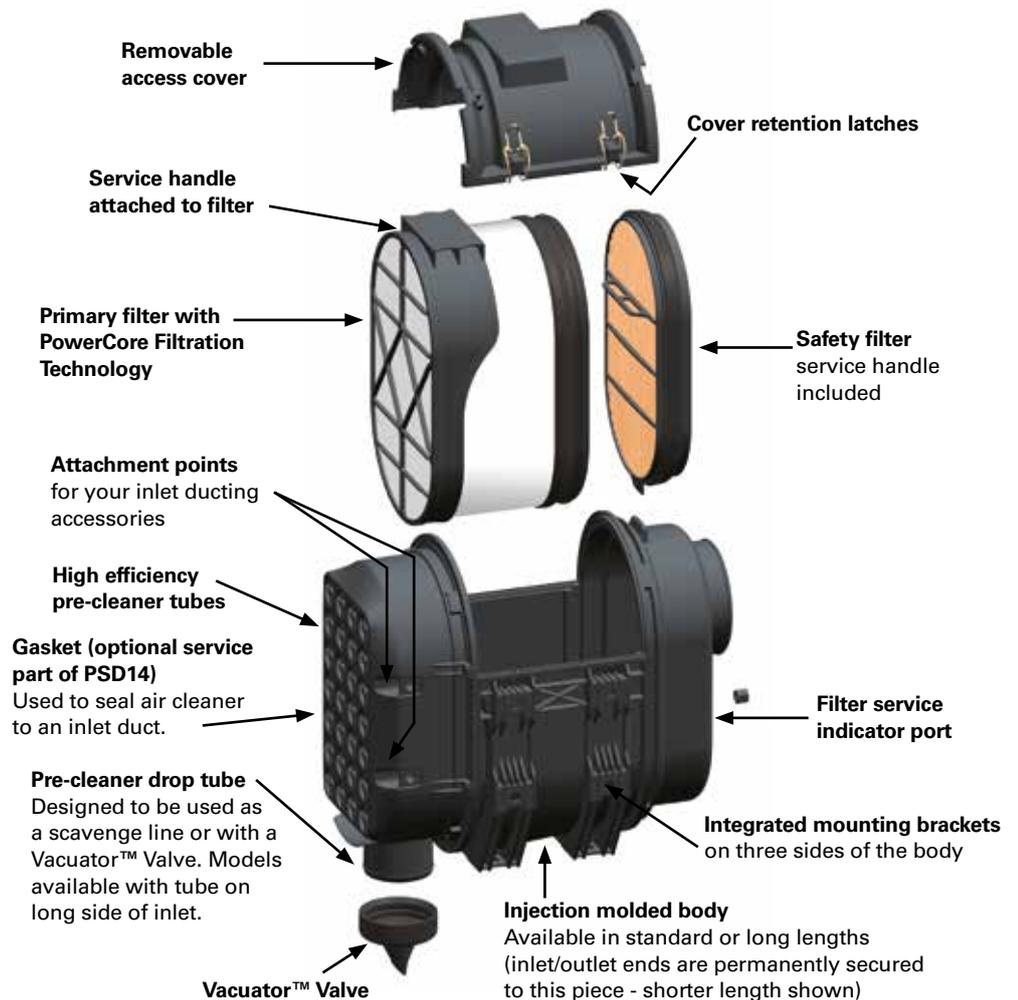
### Service Access on Inlet End - PSD08

Exploded view of D080020



### Service Access on Side - PSD08, PSD09, PSD10, PSD12 and PSD14

Exploded view of D090073



**PCD09, PCD10**

Exploded view of PCD09

Donaldson PowerCore PCD air cleaners offer single-stage filtration in a compact unit and is ideal for on-highway trucks and other applications in light to medium dust conditions.

Available with either inline inlet/outlet or offset inlet/outlet the PCD family offers performance for engine airflow ranges up to 974 cfm. Its obround housing shape allows for a narrow or wide mounting orientation with side access for easy filter service and maintenance.



D090108 Offset Inlet/Outlet



D090109 Inline Inlet/Outlet

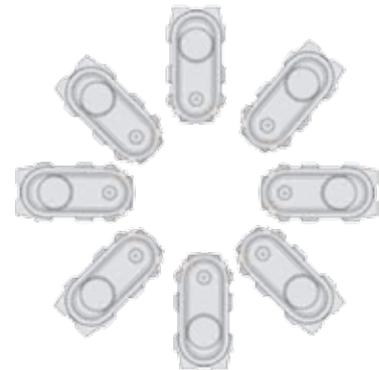
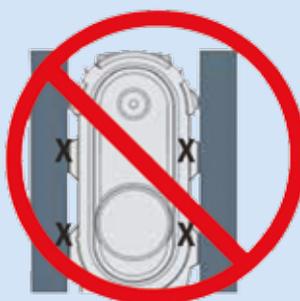


**Mounting Flexibility**

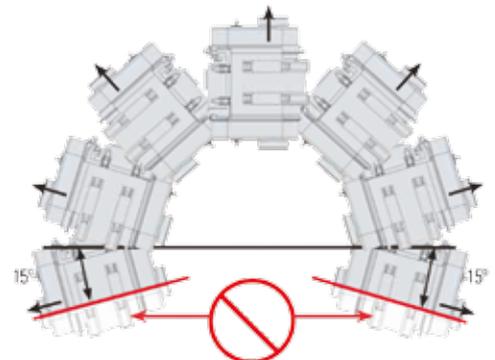
With mounting locations on three sides of the housing, the PCD series offers a great deal of flexibility for a wide variety of installations.

The PCD air cleaner needs to be mounted to equipment on at least one mounting location (base, or either of two sides). It can also be mounted at two points, using the base and one side. It should not be mounted using the two side mounting locations - as this will cause pressure/flexing, and could result in leaks. (See illustration, below.)

Xs represent U-Clips mounted on both sides adjacent to the access cover.) The U-Clips accept M8 threaded fasteners. Maximum torque is 18 N•m.



Outlet Position Front View  
Any Orientation is Acceptable

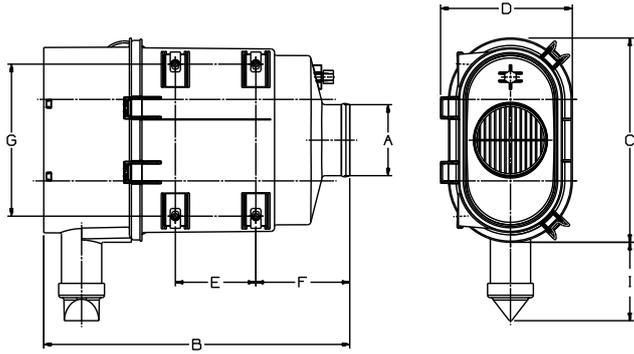


**CAUTION: Outlet Tube Mounting Position**  
The outlet tube angled 15° below the horizontal axis allow dust or foreign objects to fall into the air duct or engine during servicing.

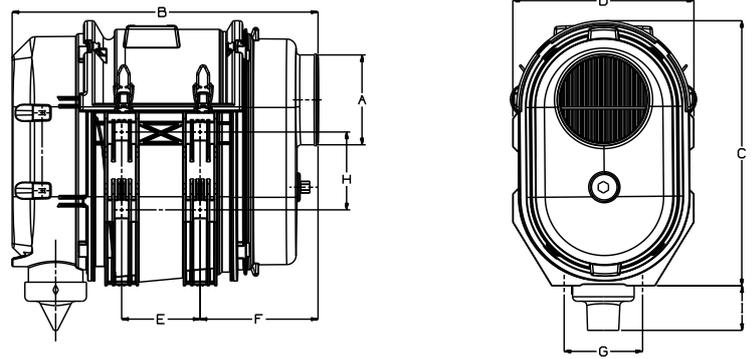


# PowerCore® PSD Air Cleaners

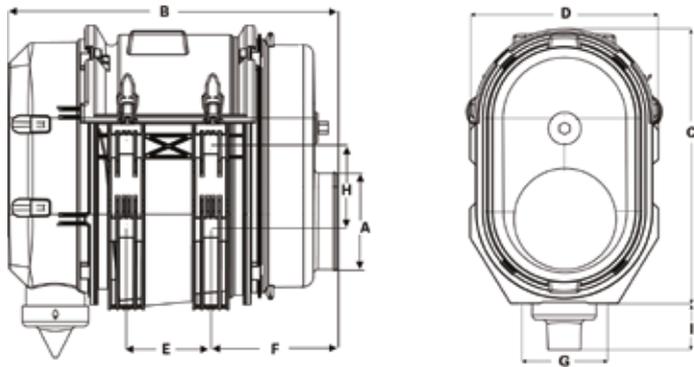
## PSD08 Models - Service Access on End (Vertical Model Shown)



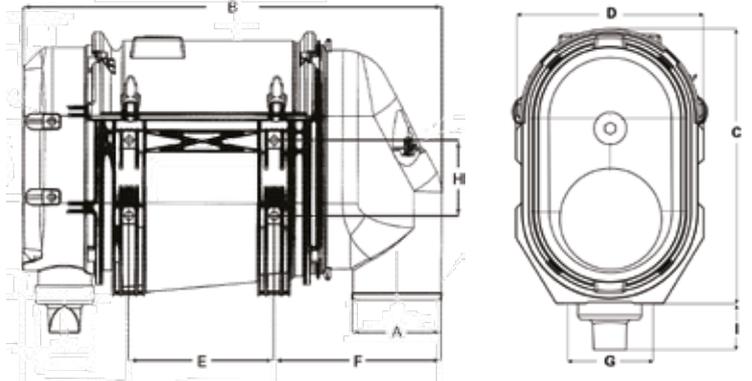
## PSD08, PSD09, PSD10, PSD12 - Service Access on Side (Vertical Model Shown)



## PSD D100070 Lower Outlet Point



## PSD D100122 90° Outlet Point



## PSD Specifications (Letters are keyed to drawings)

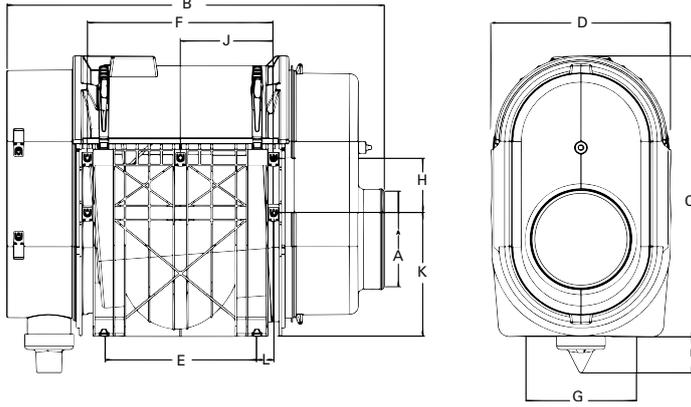
Orientation: H=Horizontal; V=Vertical

Part Number	Orientation	A		B		C		D		E		F		G		H		I		Weight	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
<b>MODELS WITH SERVICE ACCESS ON END</b>																					
D080020	H	89	3.50	380	14.97	256	10.07	154	6.05	100	3.94	117	4.59	191	7.50			98	3.87	2.2	4.8
D080026	V	89	3.50	380	14.97	256	10.07	154	6.05	100	3.94	117	4.59	191	7.50			98	3.87	2.2	4.8
<b>MODELS WITH SERVICE ACCESS ON SIDE</b>																					
D080056	V	89	3.50	370	14.55	247	9.70	180	7.09	69	2.72	142	5.60	118	4.65	75	2.95	51.9	2.04	2.2	4.9
D090073	V	102	4.00	433	17.05	362	14.25	180	7.09	110	4.33	174	6.85	100	3.94	130	5.12	72	2.85	3.7	8.1
D090101	V	102	4.00	533	20.98	363	14.29	180	7.09	180	7.09	183	7.21	100	3.94	130	5.12	70	2.75	4.3	9.5
D090120	H	102	4.00	433	17.05	360	14.17	180	7.09	110	4.33	174	6.85	110	4.32	130	5.12	60	2.36	3.7	8.1
D090121	H	102	4.00	533	20.98	363	14.29	180	7.09	180	7.09	183	7.21	110	4.32	130	5.12	60	2.36	4.3	9.5
D090055*	H	102	4.00	432	17.00	363	14.31	180	7.09	110	4.33	173	6.83	100	3.94	130	5.12	68	2.68	5.0	11.0
D100029	V	127	5.00	429	16.90	374	14.74	254	10.01	110	4.33	165	6.50	110	4.33	110	4.33	63	2.48	5.3	11.7
D100030**	H	127	5.00	429	16.90	374	14.74	254	10.01	110	4.33	165	6.50	110	4.33	110	4.33	70	2.76	5.3	11.7
D100031	V	152	6.00	529	20.84	384	15.12	254	10.01	210	8.27	165	6.50	110	4.33	110	4.33	54	2.12	6.1	13.4
D100070	V	152	6.00	529	20.84	384	15.12	254	10.01	210	8.27	165	6.50	110	4.33	110	4.33	54	2.12	6.1	13.4
D100122	V	152	6.00	529	20.84	384	15.12	254	10.01	210	8.27	165	6.50	110	4.33	110	4.33	54	2.12	6.1	13.4
D100032**	H	152	6.00	529	20.84	384	15.12	254	10.01	210	8.27	165	6.50	110	4.33	110	4.33	70	2.76	6.1	13.4
D100068	H	152	6.00	529	20.84	384	15.12	254	10.01	210	8.27	165	6.50	110	4.33	110	4.33	70	2.76	6.1	13.4
D100072	H	127	5.00	429	16.90	374	14.74	254	10.01	110	4.33	165	6.50	110	4.33	110	4.33	70	2.76	5.3	11.7
D120035	V	152	6.00	496	19.53	430	16.93	306	12.04	168	6.62	160	6.30	154	6.08	110	4.33	68	2.68	7.0	15.5
D120036	H	152	6.00	496	19.53	430	16.93	306	12.04	168	6.62	160	6.30	154	6.08	110	4.33	68	2.68	7.0	15.5
D120037	V	152	6.00	596	23.46	441	17.36	306	12.04	268	10.56	160	6.30	154	6.08	110	4.33	68	2.68	7.9	17.4
D120038	H	152	6.00	596	23.46	441	17.36	306	12.04	268	10.56	160	6.30	154	6.08	110	4.33	68	2.68	7.9	17.4

\* Access cover and outlet tube rotated 180° compared to view shown in the D140079 photo on page 7.

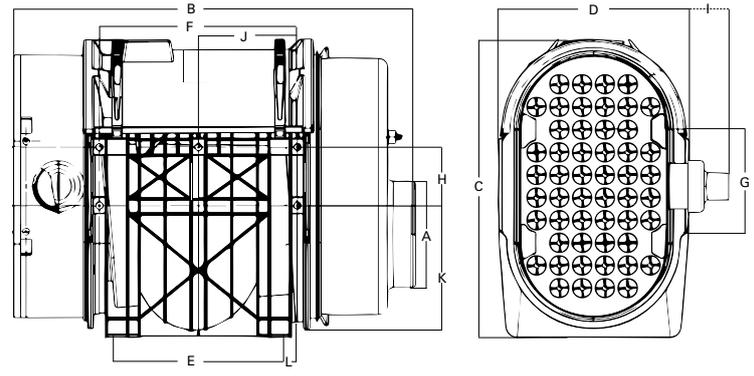
\*\* Access cover rotated 180° compare to view shown in the D140079 on page 7.

PSD14 - Service Access on Side  
(Vertical Model Shown)



PSD14 - Service Access on Side  
(Horizontal Model Shown)

D140079



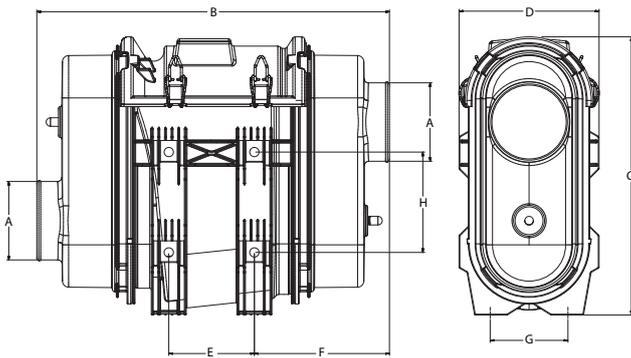
The PSD 14 air cleaner **MUST** be mounted with **NINE U-Clips** - four on the side opposite the access cover and all five U-Clips on **ONE** of the two sides.



Part Number Orientation		A		B		C		D		E		F		G		H		I		J		K		L		Weight	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
MODELS WITH SERVICE ACCESS ON SIDE																											
D140078	V	178	7.00	670	26.37	501	19.71	318	12.52	272	10.68	330	13.0	230	9.00	98	4.59	65	2.53	165	6.5	222	8.75	29	1.2	11.4	25.0
D140079	H	178	7.00	670	26.37	501	19.71	318	12.52	272	10.68	330	13.0	230	9.00	98	4.59	66	2.60	165	6.5	222	8.75	29	1.2	11.4	25.0
D140088*	H	178	7.00	670	26.37	501	19.71	318	12.52	272	10.68	330	13.0	230	9.00	98	4.59	66	2.60	165	6.5	222	8.75	29	1.2	11.4	25.0

PowerCore® PCD Air Cleaners

PCD09, PCD10



Note: a minimum service clearance of 50mm (2.00") is required for wire latches

PCD Specifications (Letters are keyed to drawings)

Inlet Orientation: I=In line; O=Off set

Part Number Orientation		A		B		C		D		E		F		G		H		Service Clearance (I)		Weight	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
D090114	O	102	4.00	453	17.85	360	14.18	180	7.09	110	4.33	173	6.83	100	3.94	130	5.12	330	13.0	4.1	9.1
D090115	I	102	4.00	453	17.85	360	14.18	180	7.09	110	4.33	173	7.21	100	3.94	130	5.12	330	13.0	4.1	9.1
D100145	O	127	5.00	436	17.17	375	14.75	254	10.01	110	4.33	165	6.50	110	4.33	110	4.33	356	14.0	5.2	11.4
D100146	I	127	5.00	436	17.17	375	14.75	254	10.01	110	4.33	165	6.50	110	4.33	110	4.33	356	14.0	5.2	11.4

# Service Parts & Accessories

## PowerCore PSD

D080020, D080026	
Cover (D080020)	P602985 <sup>3</sup>
Cover (D080026)	P601735 <sup>3</sup>
Elbow, 45°	P109331
Elbow, 90°	P114318
Filter, Primary	P608533 <sup>3</sup>
Filter, Safety	P600975 <sup>3</sup>
Hump hose	P114319
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P776033 <sup>3</sup>
Outlet band clamp	P148342
Vacuator™ Valve	P158914 <sup>3</sup>

D080056	
Cover	P615530 <sup>3</sup>
Elbow, 45°	P109331
Elbow, 90°	P114318
Filter, Primary	P617631 <sup>3</sup>
Filter, Safety	P615493 <sup>3</sup>
Hump hose	P114319
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P776033 <sup>3</sup>
Outlet band clamp	P148342
U-Clip (4 clips)	P784517 <sup>3</sup>
Vacuator™ Valve	P617632 <sup>3</sup>

D090055, D090073	
Cover	P785651 <sup>3</sup>
Elbow, 45°	P105545
Elbow, 90°	P105533
Elbow, 90° reducing	P121482
Filter, Primary	P608665 <sup>3</sup>
Filter, Safety	P606121 <sup>3</sup>
Hump hose	P105609
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P777366 <sup>3</sup>
Outlet band clamp	P148343
U-Clip (4 clips)	P784517 <sup>3</sup>
Vacuator™ Valve	P112803 <sup>3</sup>
Inlet Adapter Kit	P902987

D090101	
Cover	P786989 <sup>3</sup>
Elbow, 45°	P105545
Elbow, 90°	P105533
Elbow, 90° reducing	P121482
Filter, Primary	P608675 <sup>3</sup>
Filter, Safety	P606121 <sup>3</sup>
Hump hose	P105609
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P777366 <sup>3</sup>
Outlet band clamp	P148343
U-Clip (4 clips)	P784517 <sup>3</sup>
Vacuator™ Valve	P112803 <sup>3</sup>
Inlet Adapter Kit	P902987

Note: 3 = Shipped with air cleaner initially

D090120	
Cover	P785651 <sup>3</sup>
Elbow, 45°	P105545
Elbow, 90°	P105533
Elbow, 90° reducing	P121482
Filter, Primary	P608665 <sup>3</sup>
Filter, Safety	P606121 <sup>3</sup>
Hump hose	P105609
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P777366 <sup>3</sup>
Outlet band clamp	P148343
U-Clip (4 clips)	P784517 <sup>3</sup>
Vacuator™ Valve	P112803 <sup>3</sup>
Inlet Adapter Kit	P902987

D090121	
Cover	P786989 <sup>3</sup>
Elbow, 45°	P105545
Elbow, 90°	P105533
Elbow, 90° reducing	P121482
Filter, Primary	P608675 <sup>3</sup>
Filter, Safety	P606121 <sup>3</sup>
Hump hose	P105609
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P777366 <sup>3</sup>
Outlet band clamp	P148343
U-Clip (4 clips)	P784517 <sup>3</sup>
Vacuator™ Valve	P112803 <sup>3</sup>
Inlet Adapter Kit	P902987

D100029, D100030, D100072	
Cover	P784279 <sup>3</sup>
Cover, with watertight seal	P619481
Elbow, 45°	P109021
Elbow, 90°	P107844
Elbow, 90° reducing	P143895
Filter, Primary	P608665 <sup>3</sup>
Filter, Safety	P601560 <sup>3</sup>
Hump hose	P105610
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P777366 <sup>3</sup>
Outlet band clamp	P148345
U-Clip (4 clips)	P784517 <sup>3</sup>
Vacuator™ Valve	P112803 <sup>3</sup>
Inlet Adapter Kit	P902988

D100031, D100032, D100068, D100070, D100122	
Cover	P784298 <sup>3</sup>
Cover, with watertight seal	P619482
Elbow, 45°	P105547
Elbow, 90°	P105535
Filter, Primary	P608675 <sup>3</sup>
Filter, Safety	P601560 <sup>3</sup>
Hump hose	P105612
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P777366 <sup>3</sup>
Outlet band clamp	P148347
U-Clip (4 clips)	P784517 <sup>3</sup>
Vacuator™ Valve	P112803 <sup>3</sup>
Inlet Adapter Kit	P902988

D120035, D120036	
Cover	P608171 <sup>3</sup>
Elbow, 45°	P105547
Elbow, 90°	P105535
Filter, Primary	P608667 <sup>3</sup>
Filter, Safety	P607557 <sup>3</sup>
Hump hose	P105612
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P777366 <sup>3</sup>
Outlet band clamp	P148347
U-Clip (4 clips)	P784517 <sup>3</sup>
Vacuator™ Valve	P112803 <sup>3</sup>
Inlet Adapter Kit	P902989

D120037, D120038	
Cover	P608180 <sup>3</sup>
Elbow, 45°	P105547
Elbow, 90°	P105535
Filter, Primary	P608677 <sup>3</sup>
Filter, Safety	P607557 <sup>3</sup>
Hump hose	P105612
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P777366 <sup>3</sup>
Outlet band clamp	P148347
U-Clip (4 clips)	P784517 <sup>3</sup>
Vacuator™ Valve	P112803 <sup>3</sup>
Inlet Adapter Kit	P902989

D140078, D140079, D140088	
Cover, with watertight seal	P623026 <sup>3</sup>
Elbow, 45°	P105548
Elbow, 90°	P105536
Elbow, 90° reducing	P215307
Filter, Primary	P621983 <sup>3</sup>
Filter, Safety	P621984 <sup>3</sup>
Hump hose	P105613
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P622945 <sup>3</sup>
Outlet band clamp	P148348
U-Clip (9 clips)	P622745 <sup>3</sup>
Vacuator™ Valve	P112803 <sup>3</sup>
Gasket	P623192

## PowerCore PCD

D090114, D090115	
Cover	P785651 <sup>3</sup>
Elbow, 45°	P105545
Elbow, 90°	P105533
Elbow, 90° reducing	P121482
Filter, Primary	P608665 <sup>3</sup>
Filter, Safety	P606121 <sup>3</sup>
Hump hose	P105609
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P777366 <sup>3</sup>
Outlet band clamp	P148343
U-Clip (4 clips)	P784517 <sup>3</sup>

D100145, D100146	
Cover	P784279 <sup>3</sup>
Cover, with watertight seal	P619481
Elbow, 45°	P109021
Elbow, 90°	P107844
Elbow, 90° reducing	P143895
Filter, Primary	P608666 <sup>3</sup>
Filter, Safety	P601560 <sup>3</sup>
Hump hose	P105610
Informer™ indicator 25" H <sub>2</sub> O	X002277
Latch	P777366 <sup>3</sup>
Outlet band clamp	P148345
U-Clip (4 clips)	P784517 <sup>3</sup>

## PowerCore Inlet Adapter Kits

Donaldson PowerCore® Inlet Adapter Kits are available to fit all PSD09, PSD10 and PSD12 catalogue model PowerCore® air cleaners. These quick and simple to fit kits allow even greater flexibility in the application of the PowerCore® air cleaners with all the advantages of the new PowerCore® technology.

### Step One

Fitting the U-Clips onto mounting points



### Step Two

Applying the sealing tape



### Step Three

Securing the adapter to the housing



Part Number	Description	Suits PowerCore® Model	Inlet Diameter
PowerCore Housings sold separately			
P902987	PSD09	D090055, D090073, D090101, D090120, D090121	4"
P902988	PSD10	D100029, D100030, D100031, D100032, D100068, D100070, D100072, D100122	5"
P902989	PSD12	D120035, D120036, D120037, D120038	6"

## Scavenge System Components

Scavenging is accomplished by introducing a secondary airflow to the drop tube on the air cleaner- generally through the use of an ejector or ejector muffler (see illustration to the right). This flow pulls the separated contaminant from the pre-cleaner and inserts it into the exhaust stream.

Exhaust ejectors, adapters and check valves complement the PSD product offering.



## Exhaust Ejectors

All exhaust ejectors are constructed of heavy-gauge, aluminised steel or painted with high-temperature black paint. Select the appropriate ejector by the intake airflow or exhaust flow (CFM) of your engine.

Engine Intake CFM		Exhaust CFM @ 482°C		Standard Ejectors			Expanded I.D. Ejectors			Length		Scavenge Tube O.D.	
				Inlet Diameter		Part Number	Inlet Diameter		Part Number				
Low	High	Low	High	in	mm			in		mm		in	mm
140	180	350	450	2.26	57.5	H001277 <sup>3</sup>				7.94	201	1.25	32
165	215	415	545	2.77	70	H001278 <sup>3</sup>				9.72	248	1.25	32
300	390	760	990	3.02	77	H001279 <sup>3</sup>				10.80	274	1.25	32
450	590	114	1500	4.02	105	H001284 <sup>3</sup>				14.38	365	1.25	32
500	715	1270	1800	5.03	128	H001035 <sup>1</sup>				29.50	749	1.50	38
660	950	1662	2393	5.03	127.8	H002616 <sup>4</sup>	5.17	131.0	H002766 <sup>4</sup>	22.00	558.8	1.75	44
800	1150	2015	2896	6.04	153.4	H002617 <sup>2</sup>							
1285	1820	3235	3875	32.50	826	H001039 <sup>2</sup>				32.5	825	2.00	51
1100	1500	2770	3778	6.04	153.4	H002619 <sup>2</sup>							

<sup>1</sup> - Use 3-ply Silicone Scavenge Hose (1.50" I.D., 3ft. length) P171378 and Lined Hose Clamp P115200

<sup>2</sup> - Use 3-ply Silicone Scavenge Hose (2.00" I.D., 3ft. length) P171381 and Lined Hose Clamp P115200

<sup>3</sup> - Use 3-ply Silicone Scavenge Hose (1.25" I.D., 3ft. length) P171376 and Lined Hose Clamp P532924

<sup>4</sup> - Use 3-ply Silicone Scavenge Hose (1.75" I.D., 3ft. length) P171380 and Lined Hose Clamp P115200

## Scavenge Adapters

Part Number	Adapter Type	Outlet Diameter		Diameter		Height	
		in	mm	in	mm	in	mm
P783746	3" to 1.50" Straight	1.50	38	3.00	78	2.68	68
P784019	3" to 1.25" 90 Degree	1.25	32	3.00	78	2.68	68
P617276	3" to 2.00" 90 Degree	2.00	50	3.00	78	2.20	56



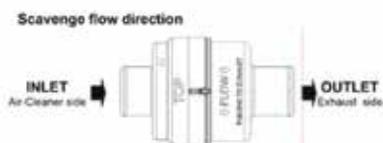
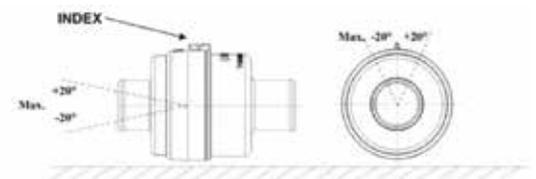
Straight Adapter



90° Adapter

## Check Valve Operation and Orientation

- Prevents back flow of exhaust gas into the pre-cleaner
- For proper installation, it is important that the index is installed upward and horizontal with no more than a 20° variation
- Install the inline check valve as close as possible to the air cleaner
- Temperature resistance of 200°C



Part Number	Inlet Diameter		Outlet Diameter		Length		Body Diameter	
	in	mm	in	mm	in	mm	in	mm
P786337	1.25	32	1.25	32	4.45	113	2.80	71
P786340	1.50	38	1.50	38	4.45	113	2.80	71
P786343	2.00	50	2.00	50	4.45	113	2.80	71

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. Note: your air cleaner service cover may be in a different position than shown.

## 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 scheduled service.



## 2 Check Vacuator™ Valve & Pre-Cleaner Tubes

Shut off the engine. Inspect the Vacuator™ Valve (or scavenge line) for damage. If damaged, replace. If plugged or full of contaminant, check the pre-cleaner tubes, which should be free of contaminant. If plugged or excess contaminant is visible, the pre-cleaner tubes will need to be cleaned.

To clean the pre-cleaner tubes, remove the housing service cover and Vacuator Valve and leave the filter installed (to avoid dust from entering the air induction outlet). Use a low-volume of compressed air to gently blow out the separator tubes. The compressed air can be pushed through both sides of the tubes AND from the drop tube where the Vacuator Valve attaches.

If compressed air is not available or the use of compressed air was not effective due to dried contaminant within the housing, remove the air cleaner from the machine, cover the air intake pipe to prevent contaminant. Remove the primary and secondary filters and Vacuator Valve. Use a low pressure water (e.g., garden hose) to clean the tubes and inside of housing. Direct the flow of water through the separator tubes from both ends and repeat as needed to clean out the housing. Spray out the Vacuator Valve port, alternating between it and the separator tubes. Make sure that all internal housing surfaces are dry prior to reinstalling the filters, Vacuator Valve, and unit on the machine.



NEVER use a pressure sprayer to clean out the air cleaner housing while it is installed on the machine. Avoid using excessive pressure when spraying out the separator tubes as damage can occur.

## 3 Remove the Primary Filter

For end service pull the filter out of the housing.

For side service push down on the service handle to tilt the filter to a 5° angle. This will loosen the seal. Then, pull up on the service handle to remove the filter from the housing.



## 4 Visually Inspect the Safety Filter

Remove any excess dirt and wipe out the housing with a damp cloth before servicing the safety filter. Visually inspect the safety filter but do not remove it unless it is damaged or due for change out. Verify that the safety filter is properly seated in the housing. The safety filter should be replaced every three primary filter changes.



The safety filter should be replaced every three primary filter changes.

## 5 Remove Safety Filter if Indicated or if Excessively Contaminated

To remove the safety filter, use the plastic handle on the face of the safety filter. Pull the filter toward the centre of the housing and remove it. Ensure that the outlet tube sealing area is clean and undamaged. If the safety filter is removed and the new filter is not to be installed immediately, be sure to cover the seal tube with a cloth so that dirt is not admitted. After removing the safety filter, wipe the air cleaner housing interior and seal surfaces with a clean, damp cloth.



## 6 Inspect the New Filters

Visually check for cuts, tears or indentations on the sealing surfaces and the media pack before installation. If any damage is visible, do not install.



## 7 Replace the Safety Filter

If replacing the safety filter, use the plastic handle. Slide the filter at an angle into the outlet side and push it in place until the filter seats firmly and evenly within the housing.

On side-service access models, insert the safety filter tab into the positioning slot before pushing the filter into place.



## 8 Insert the Primary Filter

For end service access models, slide the primary filter into the housing until the gasket seats against the housing. For side service access models, slide the filter down at approximately a 5° angle until it makes contact with the end of the housing. Rotate the filter toward the outlet section to complete the seal.



## 9 Replace the Service Cover

For end service access models with hinge tabs, insert the hinge tabs into the housing, tilt the service cover into place and secure latches. For end service models without hinge tabs, put the service cover into place and secure the latches. For side-service access models, place the service cover in position and fasten the metal or rubber (PSD14) latches. If the cover doesn't seat, remove and re-check the filter position and access cover orientation.



## 10 Inspect the Entire Air Cleaner System

Make sure that inlet and outlet connections are in good condition. Torque to and do not exceed 40 in•lb. Replace rubber connectors if necessary and reset the service indicator.



# PowerCore® Filtration Technology

## Global Presence with Local Touch

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

Donaldson distribution centers are strategically located to quickly and accurately deliver filtration and exhaust products wherever replacement products are needed. We work with a network of transportation, third party logistics companies,

consolidators and cross-docking facilities to meet or exceed our customers' requirements.

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



**Donaldson Australasia Pty Ltd**  
PO Box 153, Wyong NSW 2259

**Freecall: 1800 345 837**  
Ph: +61 2 4350 2000  
Fax: +61 2 4351 2036

**Donaldson New Zealand**  
PO Box 14-770, Panmure 1741 Auckland

Ph: +64 9 579 2790  
Fax: +64 9 579 0322

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