Compressor Air Cleaner Systems with PCD PowerCore® Filtration Technology

High efficiency air cleaner design is smaller, lighter, easier to service and most importantly, designed specifically for compressors.

Product Description:

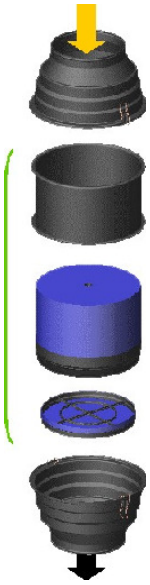
Patented Air Cleaner Design

- Standard models cover a wide range of airflow requirements
- Mounts vertically or horizontally
- Compact system size plus increased efficiency
- Smaller, lightweight filters are easy to service
- RadialSeal™ sealing technology
- Easy to install
- Lower shipping inventory, freight and storage costs due to reduced size
- Standard restriction indicator port
- Rugged construction
- Powder-coated black finish
- Aftermarket protection

Serviceability

- Environmentally friendly, incinerable and metal-free element
- Easy to service
- Cleaner servicing–unique design encapsulates containment during removal

PowerCore® Structure



Inlet Cone (optional)

- Consider if compressor is outdoors
- Outlet Cone also available with filter service indicator tap
- Easiliy removed with two clamps

Filter Sleeve

Primary Filter

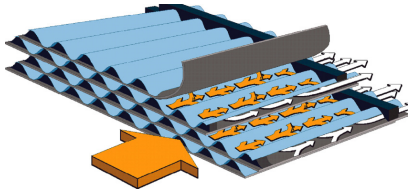
Safety Filter (optional)

Outlet Cone

Filter Assembly

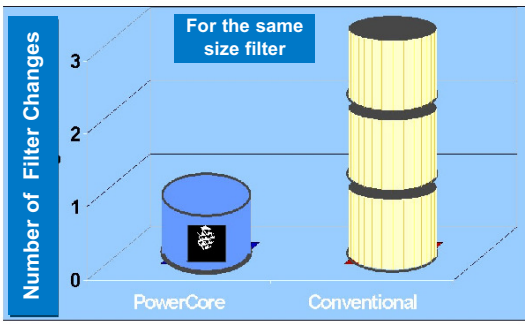
- Filter Sleeve
- Primary Filter w/PowerCore Filtration Technology
- optional Safety Filter (recommend for vertical application)

A wide variety of elbows, clamps and hoses available.



PowerCore® Filter Media

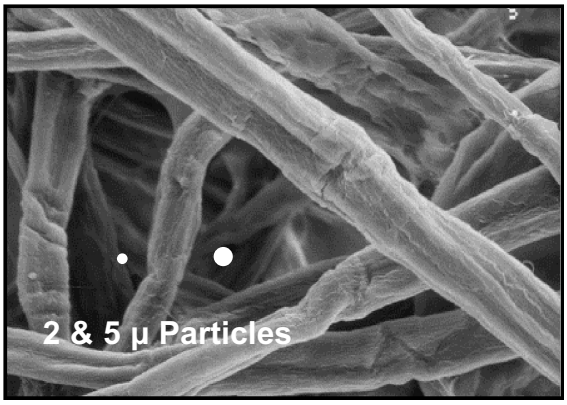
PowerCore® Capacity Comparison



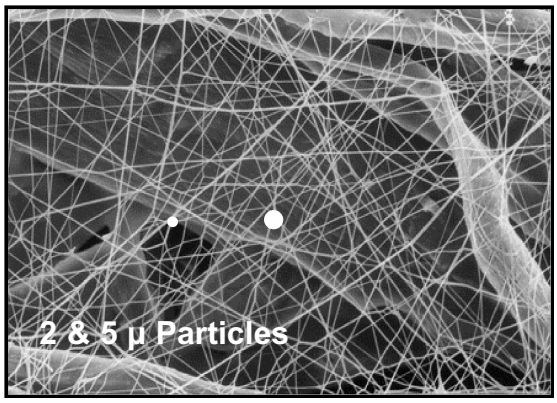
Compressor Air Cleaner Systems with PowerCore® Filtration Technology

Media Advantages

The Ultra-Web® nanofiber technology has a web-like filtering layer applied over the surface of specially formulated cellulose media. This causes sub-micron contaminants to load on the surface. In field tests, filters using Ultra-Web® nanofiber technology hold up to five times more contaminant and allow less contaminant to pass through the media than comparably sized cellulose air filters. Ultra-Web® fibers have sub-micron diameters and small interfibre spaces, which result in more contaminant being captured and lower restriction. This results in superior air / oil separator protection and life extension.

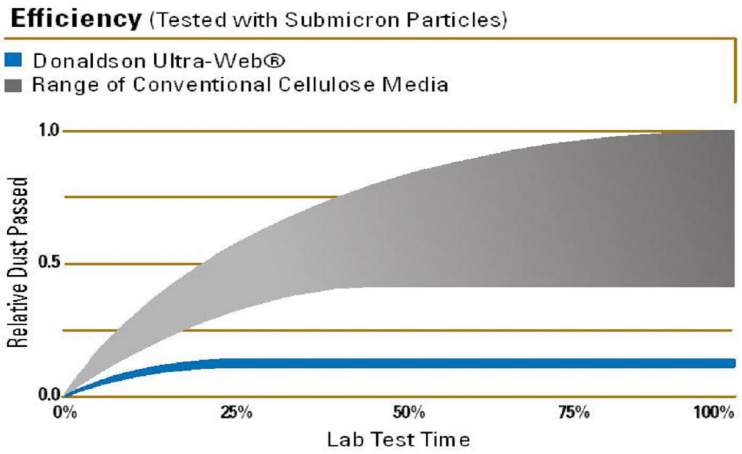


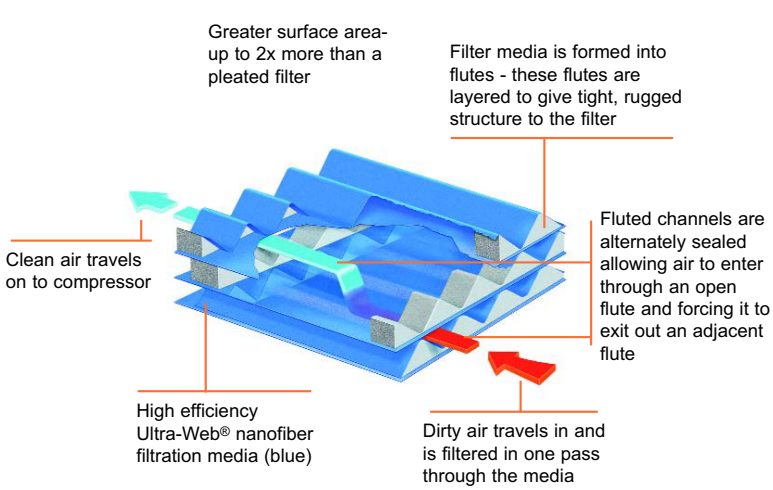
Cellulose Air Filter Media



Ultra-Web® Filter Media

PowerCore® with Ultra-Web® Efficiency





PowerCore® Media Set Up:

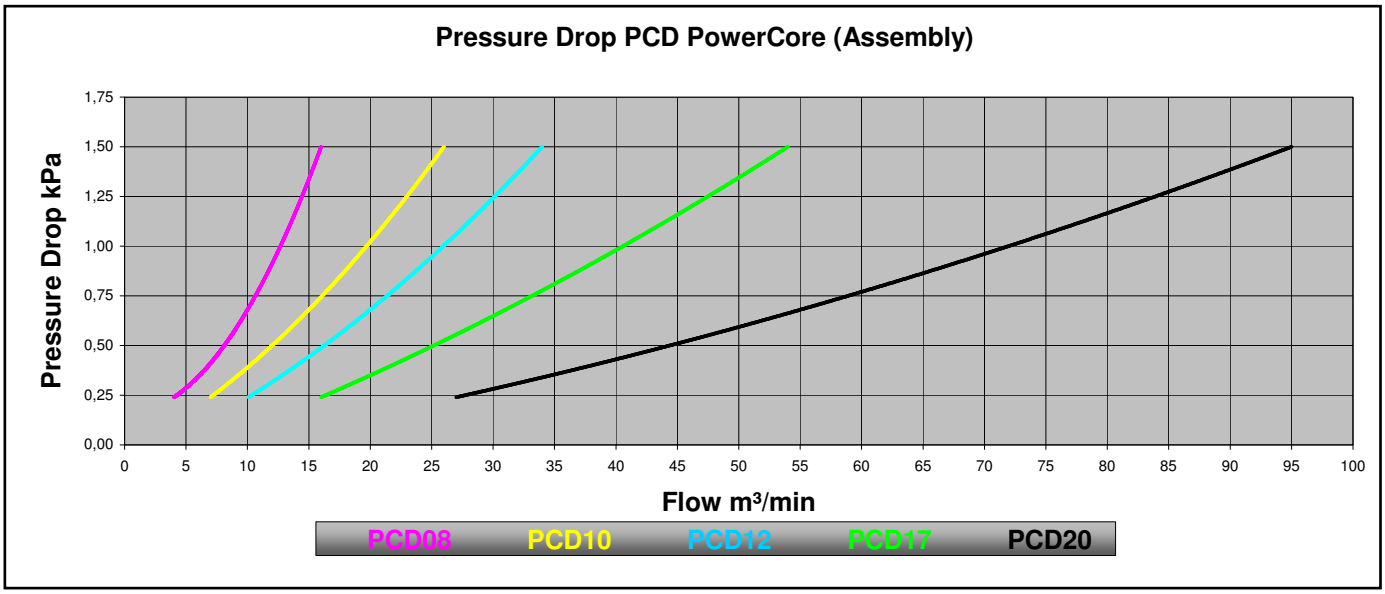
The PowerCore® filtration technology's straight-through fluted filter design offers:

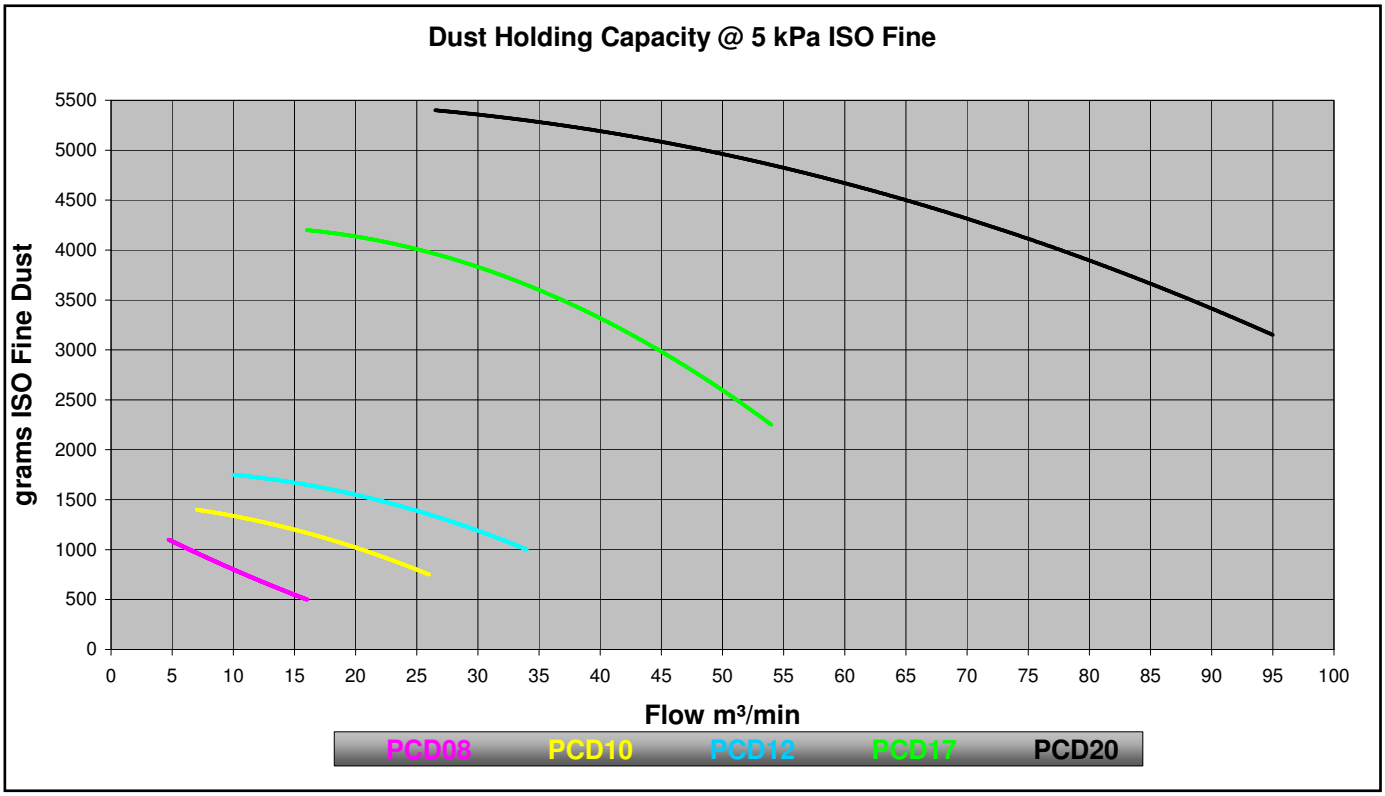
- Improved filtration efficiency - The use of Ultra-Web® nanofiber filtration media has demonstrated results of 10 times cleaner air than conventional filter media.
- Improved compressor protection - No media movement, expansion, contraction or bunching, with less dust and dirt passed on to the compressor.
- Improved air / oil separator life through reduced ingestion of contamination.
- Improved contaminant encapsulation - Dust and dirt won't dislodge during servicing.
- Improved handling and maintenance - Lighter and smaller than conventional filters.
- Improved disposal ease - No metal, incinerable.

Compressor Air Cleaner Systems with PowerCore® Filtration Technology

Size 8” - 12”			
Air Intake Filters			
Product	PC-D080021 8” Air Intake Filter	PC-D100028 10” Air Intake Filter	PC-D120032 12” Air Intake Filter
Application	Compressor Air Intake	Compressor Air Intake	Compressor Air Intake
Media type	Ultra-Web®	Ultra-Web®	Ultra-Web®
Flow Direction	Axial Flow	Axial Flow	Axial Flow
Sealing	Radial Seal™	Radial Seal™	Radial Seal™
Airflow (m^3/min)	4.6 - 15.4	7.2 - 26.0	10.5 - 34.0
Pressure Drop @ max. Airflow (Pa)	1500	1500	1500
Gravimetric Efficiency @ ISO Fine dust (%)	> 99.95	> 99.95	> 99.95
Air Intake Elements			
Product	PP-P040363 8” Air Intake Element	PP-P040364 10” Air Intake Element	PP-P040365 12” Air Intake Element
Options			
Product	P041485 Inlet Cone	P041354 Inlet Cone	P041411 Inlet Cone
	H770090 Rain Hood	H770090 Rain Hood	H770089 Rain Hood
	on request Pre Cleaner	on request Pre Cleaner	on request Pre Cleaner
	X002251 Restriction Indicator	X002251 Restriction Indicator	X002251 Restriction Indicator
	xxxxxxxx Safety Element	P547520 Safety Element	xxxxxxxx Safety Element
Size 17” - 20”			
Air Intake Filters			
Product	PC-D170033 17” Air Intake Filter	PC-D200050 20” Air Intake Filter	-
Application	Compressor Air Intake	Compressor Air Intake	-
Media type	Ultra-Web®	Ultra-Web®	-
Flow Direction	Axial Flow	Axial Flow	-
Sealing	Radial Seal™	Radial Seal™	-
Airflow (m^3/min)	16.0 - 54.0	27.0 - 95.0	-
Pressure Drop @ max. Airflow (Pa)	1500	1500	-
Gravimetric Efficiency @ ISO Fine dust (%)	> 99.95	> 99.95	-
Air Intake Elements			
Product	PP-P040366 17” Air Intake Element	PP-P042939 20” Air Intake Element	-
Options			
Product	P041499 Inlet Cone	P042940 Inlet Cone	-
	H001053 Rain Hood	H770082 Rain Hood	-
	on request Pre Cleaner	on request Pre Cleaner	
	X002251 Restriction Indicator	X002251 Restriction Indicator	-
	xxxxxxxx Safety Element	P546250 Safety Element	-

Compressor Air Cleaner Systems with PowerCore® Filtration Technology

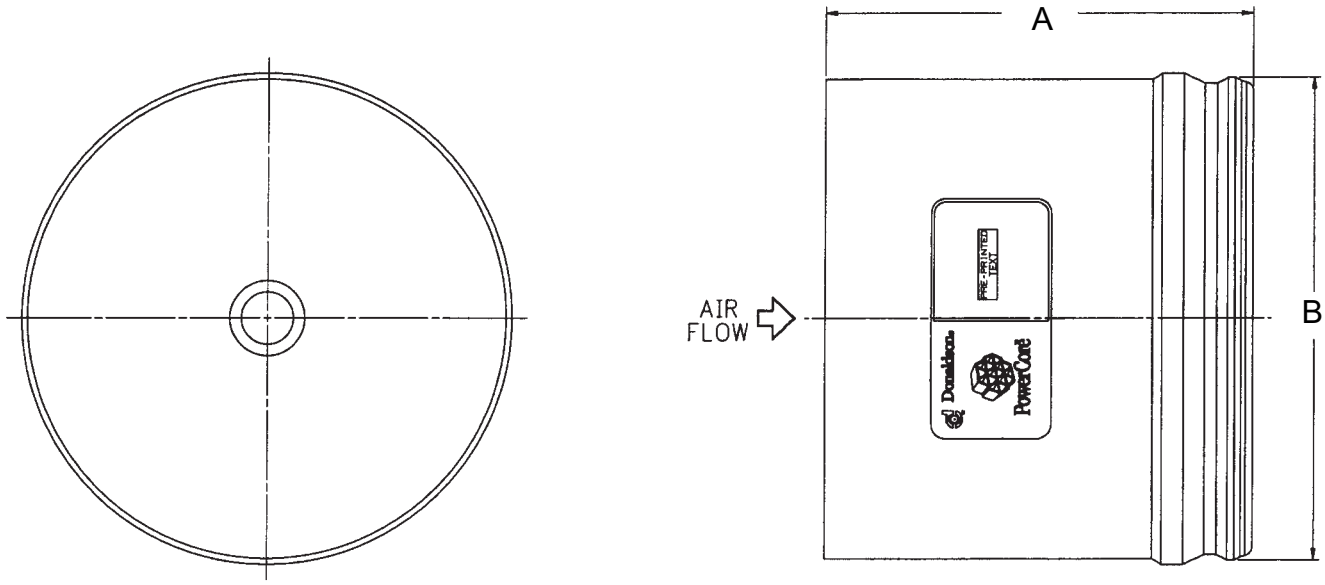




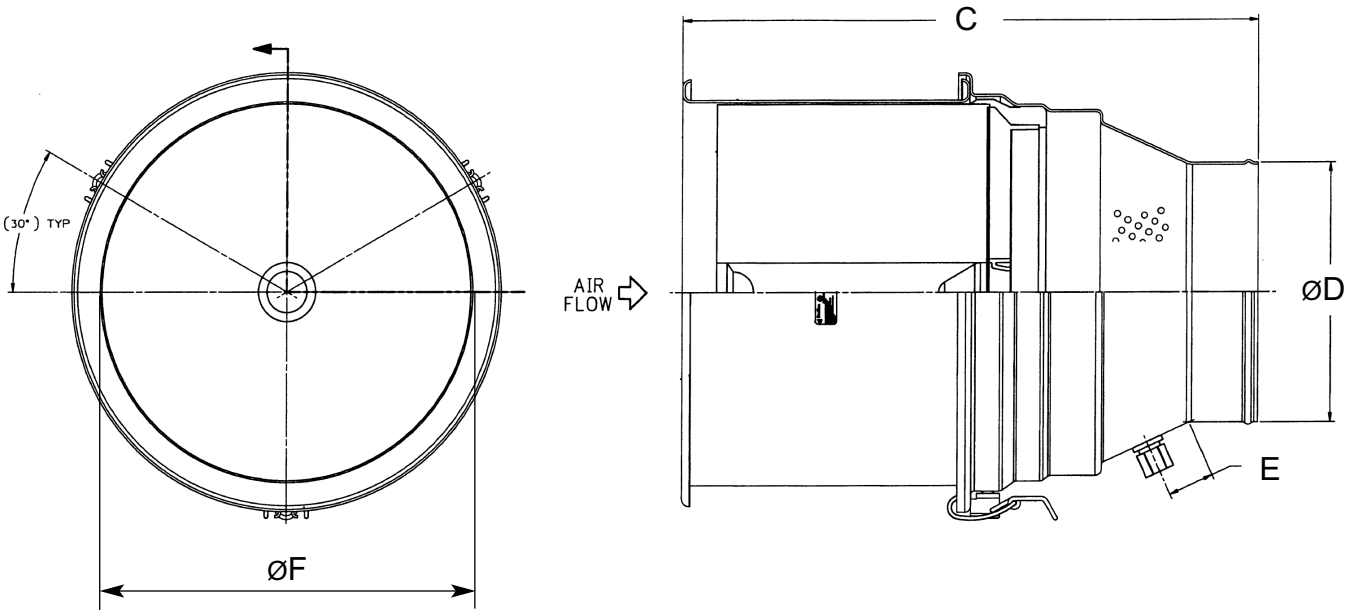
PowerCore® Energy Savings		
	Initial Restriction	1000 Pa Savings = 1% Efficiency or Capacity Improvement.
Traditional Air Cleaner	1500 Pa	**Every 1000 Pa reduction adds approximately 1% to the compressor efficience!**
PowerCore	500 Pa	
Savings	**1000 Pa**	

Example - Traditional Air Cleaner:
1% effiency loss on 100 kW compressor = 1 kW power loss.
Assuming energy costs of 8 cent/ kWh and 8000 OPH/ year, 1 kW loss = 640 €/ year higher energy cost + earlier wearout + less component lifetime.

PCD PowerCore® Element Drawing



PCD PowerCore® Assembly Drawing



Size	A		B		C		ø D (outer diameter)		E		ø F (inner diameter)	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
8”	181.1	7.13	204.4	8.05	316.9	12.48	139.7	5.50	25.4	1.00	205.0	8.07
10”	181.1	7.13	251.3	9.89	344.5	13.56	152.4	6.00	38.2	1.50	256.0	10.08
12”	181.1	7.13	300.0	11.81	352.5	13.88	177.8	7.00	44.4	1.75	307.0	12.09
17”	181.1	7.13	426.5	16.79	435.0	17.12	203.2	8.00	57.9	2.28	427.0	16.81
20”	206.1	8.11	508.0	20.0	446.0	17.56	254.0	10.00	101.7	4.00	512.0	20.16