

Parker Hannifin Corporation

Aerospace Group

A leader in the development, design, manufacture and service of control systems and components for aerospace and related high technology markets, achieving profitable growth through premier customer service.



Climate & Industrial Controls Group

Designs, manufactures and markets system control and fluid handling components and systems to refrigeration, air conditioning and industrial customers worldwide.



Fluid Connectors Group

Designs, manufactures and markets rigid and flexible connectors and associated products used in pneumatic and fluid systems.



Instrumentation Group

A global leader in the design, manufacture and distribution of high quality critical flow components for worldwide process instrumentation, ultra high purity, medical and analytical applications.



Automation Group

A leading supplier of pneumatic and electro mechanical components and systems to automation customers worldwide.



Filtration Group

Designs, manufactures and markets quality filtration and clarification products, providing customers with the best value, quality, technical support and global availability.



Hydraulics Group

Designs, produces and markets a full spectrum of hydraulic components and systems to builders and users of industrial and mobile machinery and equipment.



Seal Group

Designs, manufactures and distributes industrial and commercial sealing devices and related products by providing superior quality and total customer satisfaction.

The name to trust in fuel filtration

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Worldwide Sales Locations

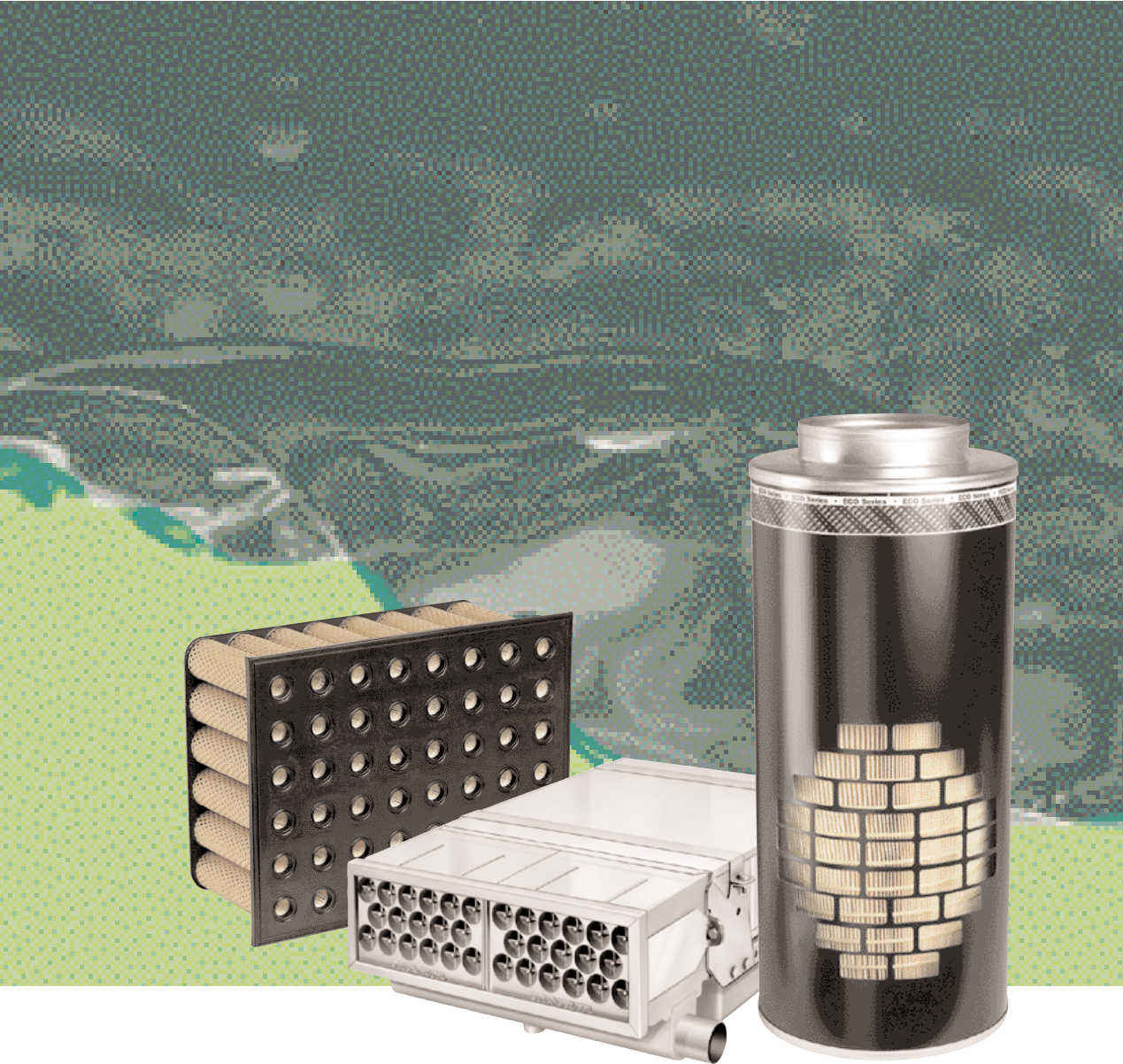
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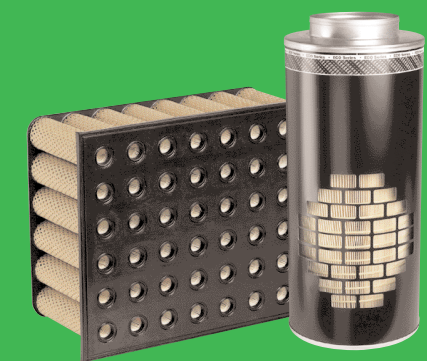
Distributor



Engine Air Filtration Systems

Brochure FDRB113GB1





Fresh air. That's what Racor air filtration is all about. Because when engines breathe easier they perform better – with more power, more torque and with improved fuel economy. The Racor lineup includes heavy duty air cleaners and pre-cleaners, crankcase ventilation, marine filter/silencers, cabin air filters and replacement filters. All are super high efficiency, with engineered, application-specific media that improves performance as it extends service life. Whatever your application, there's a Racor Air Filtration System that will help you and your engine breathe easy.



RACOR

The World's Best Filtration starts with the World's Best Engineering.

Parker's technical resources provide the correct filtration technologies that conform to your requirements. That's why thousands of manufacturers and equipment users around the world rely on Parker Filtration products and people.



Hydraulic, Lubrication & Coolant Filtration
High-performance filtration systems for protection of machinery in industrial, mobile and military/marine applications.



Finite and Balston Compressed Air & Gas Filtration
Complete line of compressed air/gas filtration and separation products; coalescing, particulate and adsorption filters in many applications in many industries.



Racor Fuel Conditioning & Filtration
Parker air, fuel and oil filtration systems provide quality protection for engines operating in any environment, anywhere in the world.



Process & Chemical Fluid Filtration
Liquid filtration systems for beverage, chemical and food processing; cosmetic, paint, water treatment; photo-processing; and micro-chip fabrication.



System Contamination Monitoring
On-line dynamic particle analysis, off-line bottle sampling and fluid analysis and measurement of water content polluting the oil in a system.

Parker Filtration's global reputation as a reliable supplier of superior filtration products is the result of a focused and integrated development and manufacturing system.

Parker Filtration consolidates quality filtration products, manufactured by process filtration, air and gas filtration and separation, fuel conditioning and filtration, fluid power products and hydraulic filter products into one broad-based range that covers many markets and most applications, as detailed here.

1975 Cold

1975 Racor pioneers integrated fuel heaters, now standard throughout the industry.

1984 Protection

1984 The Racor Sentinel System shuts down an engine before a major component failure can cause permanent damage. Sentinel remains the preferred all mechanical engine control system.

1987 Standard Equipment

1987 The first Navistar powered Ford E Series and F Series vehicles roll off the protection line with the revolutionary, compact and flexible Racor Spin On Series.

1991 The Environment

1991 Along with protecting engines, Racor makes products that protect the environment. Lifeguard is a marine fuel/air separator that prevents fuel from escaping overboard from vent lines during refuelling.

1994 Air

1994 Engines gasping for a breath of fresh air breathe easy with the introduction of synthetic, multi stage Racor "twice the life" air filters.

1996 Plant expansion

1996 In addition to the world class manufacturing facility in Modesto, Racor opens locations in Oklahoma, South Carolina, Brazil, Korea and South Africa.

1998 Additives

1998 For all climates and seasons, Racor Additives are formulated to enhance engine efficiency and performance. It's one more way to run clean.

2001 Global OEM

2001 Racor continues to forge long term relationships with Global OEM companies to produce sound, cost effective engineered solutions to meet specific application requirements.

Over 30 years of innovation, over 30 years of quality...

1969

Diesel Fuel

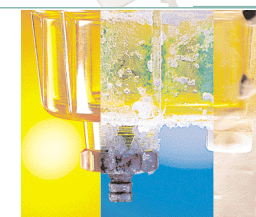
1969 It all began with a patented, and exceptionally efficient new way to remove water, dirt, rust and algae from diesel fuel.



1983

Technology

1983 Aquabloc® filters debut, and Racor Filter/Separators make another significant leap in filtration efficiency.



1985

Growth

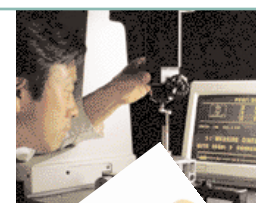
1985 Racor becomes a division of Parker Hannifin Corporation, further strengthening one of the world's most respected brands.



1989

Quality

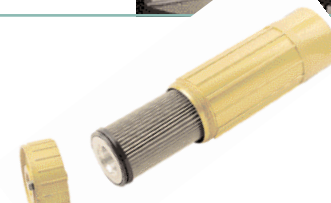
1989 Racor earns Ford Q1 certification, the first in a series of quality awards from one of the world's leading engine and equipment manufacturers.



1992

Oil

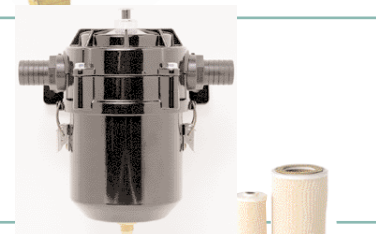
1992 Every bit as vital and every bit as dirty as fuel. The Racor solution is an ingenious one, a cleanable oil filter that puts an end to frequent filter changes and disposal.



1995

CCV Products

1995 Racor starts cleaning up engine rooms with a crankcase ventilation system that keeps oily blow-by from damaging turbo chargers and other precision components.



1997

Racor Hydrocarbon

1997 Racor Hydrocarbon Filters and Vessels debut – offering customers flow rates to 1000 gpm and higher.



2000

UK Facility

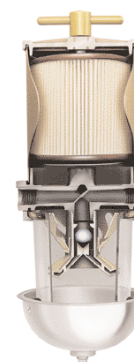
2000 Having moved out of Morley into a purpose built factory at nearby Dewsbury in 1998 Racor sees significant growth in Europe. 2000 saw the expansion of manufacturing capability to include all spin on series filters, and the establishment of a state-of-the-art design and test, research and development facilities.



2002

High performance air filters

2002 Racor purchases Farr opening up opportunities in medium and heavy duty Engine Air applications.



In Europe Morley, West Yorkshire in the UK becomes the centre of excellence in Europe.



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RACOR

Light to Medium Duty Industrial Mobile and Marine applications



ECO Series Spin-On Disposable Air Cleaners

With its revolutionary spin-on design, the completely disposable ECO Series offers faster, safer, more trouble-free service than any other air cleaner today. Built for rugged use, it combines maximum engine protection with fuel-efficient performance and long service life.

The ECO Series provides two significant improvements in engine protection. When the filter loads with dirt and replacement is required, collected dust and debris stay safely contained inside the disposable housing, eliminating the chance of contaminating the air intake system during air filter service. Since the ECO Series uses no clean air gaskets, you never have to worry about gasket leakage. The outlet simply hooks up to the intake with a rubber connection and clamp, creating a leak-tight seal.

Air flow distribution and dust loading are uniform throughout the high-performance filter cone pack, resulting in increased capacity and lower pressure differential for improved horsepower and fuel economy.

All ECO Series Spin-On Filters feature water-resistant media for improved performance and optimum life.

All Eco media are SAE rated to 99.9% efficiency (SAE J726C).

And most importantly, during changeouts, there are no seals or gaskets to replace.

ECO II

Beaded outlet

The first cone-type filter element that is both tapered and offset

Water-resistant media provides three to five times longer filter life than conventional designs

More usable media area than conventional filters

Paper pleats are permanently locked in place for reliable performance

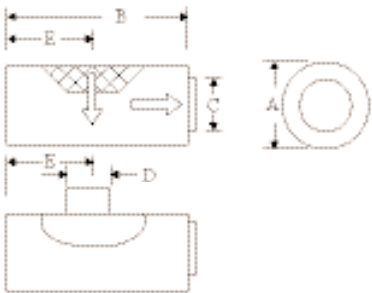
Media is SAE-rated to provide average efficiency of 99.9% (SAE J726C), with no seals or gaskets to replace.

Requires no additional room to service element



The ECO II was designed to provide lower replacement element cost on an **under hood truck application** due to the 2-piece design. The Inlet Adapter is a separate piece that stays on the truck and is purchased separately.

The ECO II used without the Inlet Adapter has become the standard in the Generator Set market. Air Flow is Outside-In with water drain holes around the perimeter.



Part No.	Dimensions					Air Flow (CFM)			Weight	
	(Diameter) A	(Length) B	(Outlet) C	(Inlet) D	E	4" w.g.	6" w.g.	8" w.g.	lbs	kg
071338001	9.75	24	6	No Inlet Adapter 6	9.0	750 820	940 1040	1100 1220	12.5 15.5	5.7 7.1
071338002	11	24	7	No Inlet Adapter 7	9.0	920 1200	1180 1460	1380 1700	16.2 19.2	7.4 8.8
071338003	13.5	24	7	No Inlet Adapter 7	9.0	1120 1370	1390 1730	1600 1950	19.0 22.0	8.6 10.0
071338004	13.5	18	7	No Inlet Adapter 7	9.0	1140 1350	1440 1700	1600 1800	16.9 19.9	7.7 9.1
071338005	13.5	15	7	No Inlet Adapter 7	7.5	1140 1350	1440 1700	1600 1800	14.0 17.0	6.3 7.7
071338006	13.5	24	7	No Inlet Adapter 7	9.0	1080 1300	1370 1710	1590 1780	19.36 22.3	8.78 10.1
071338007	11	24	7	No Inlet Adapter 7	11.5	920 1200	1190 1460	1390 1700	14.51 17.45	6.5 7.9
071338008	9.75	18	6	No Inlet Adapter 6	9	710 920	930 1030	1070 1190	9.13 12.1	4.14 5.5
071338009	13.5	24	7	No Inlet Adapter		1210	1600	1910	9.00	5.5

Economical, disposable and lightweight

The revolutionary spin-on concept of the compact ECO filter range makes it the ideal choice for truck installations, plus industrial and marine engine packages operating between 150hp and 1000hp (300-2000cfm).

Safer, faster, trouble free servicing is assured with an ECO filter.

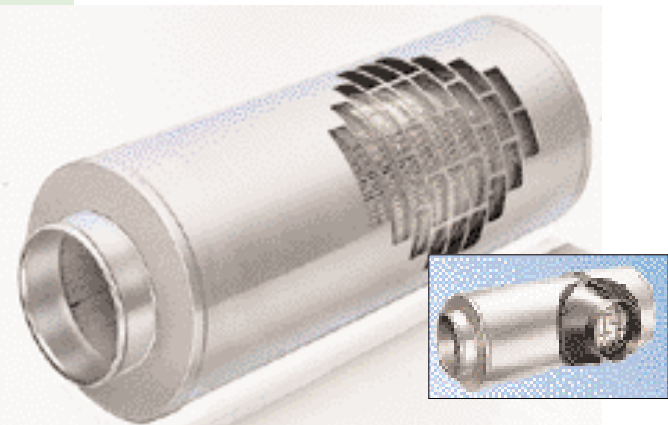
ECO operation

The tapered offset cone design employed in the ECO filters assures uniform air distribution, minimises air restriction and maximises element service life.

The extended area pleated element itself is fully supported and achieves an efficiency of 99.9% to SAE J726C for optimum engine protection.

Where space is at a premium the fully disposable ECO range is ideal as no additional space is required for element changeout.

The illustration below depicts the ECOLITE and shows the intake airflow from the side. The intake however can also be from one end, offering reverse flow flexibility.

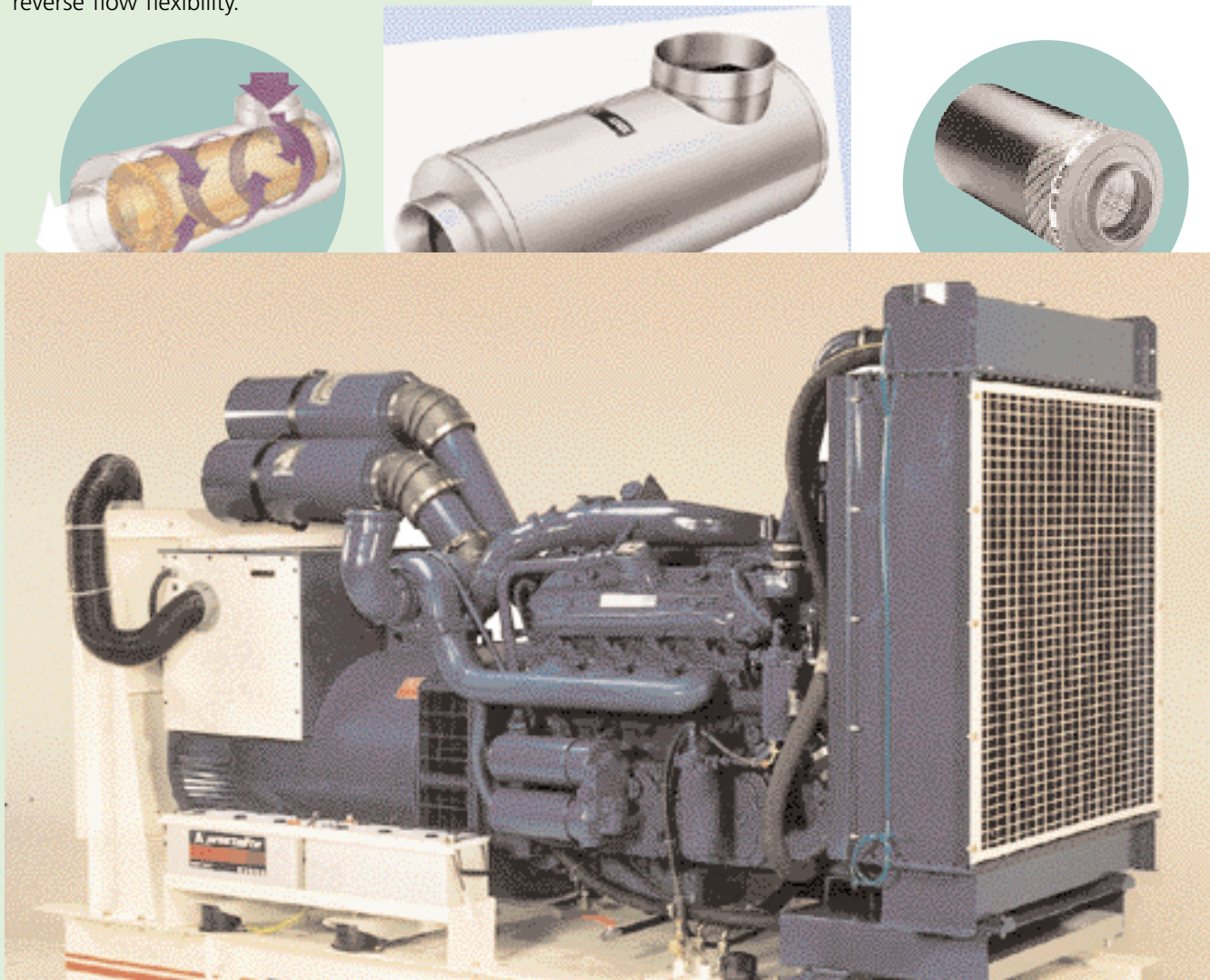


The ECO II range

Weighing only half as much as conventional filters the side inlet ECOII has all the inherent benefits of the ECO range but employs a cone-type element that is both tapered and offset. This feature ensures that airflow distribution and dust loading are uniform throughout, resulting in lower restriction and better fuel economy. The ECOII can also be rotated to position the air intake at any angle.

ECO-SE

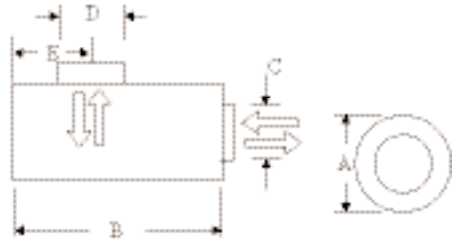
The ECO-SE is the ideal choice for today's smaller fleet vehicles and stationary engines up to 500hp (1000cfm).



Light to Medium Duty Industrial Mobile and Marine applications

ECOLITE

The original ECO Series product, the ECOLITE is still the only air filter in the industry that you **can flow air either direction**. This allows a variety of installation options with the same part number replacement element. The ECOLITE can be mounted in any orientation or convenient location; under the hood or outside, direct or remote.



Part No.	Dimensions					Air Flow (CFM)			Weight	
	(Diameter) A	(Length) B	(Outlet) C	(Inlet) D	E	4" w.g.	6" w.g.	8" w.g.	lbs	kg
062891001	9.75	24	6	6	5.5	820	1020	1200	16.0	7.3
062891002	11	24	7	7	5.5	1100	1420	1650	19.0	8.6
062891003	13.5	24	7	7	5.5	1375	1730	1900	27.0	12.3
062891004	13.5	18	7	7	5.5	1070	1350	1590	16.3	7.4
062891005	13.5	24	7	7	12.0	1375	1730	1900	27.0	12.3
062891007	9.75	24	6	6	12.0	820	1020	1200	16.0	7.30
062891010	13.5	15	7	7	5.5	1025	1300	1540	15.27	6.93

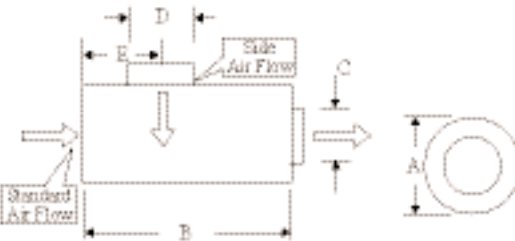
ECO-BC (Behind the Cab)

Designed for behind the cab installation on trucks, the ECO-BC must be mounted **vertical with Inside-Out Air Flow**. Also is used for under hood and engine compartment applications. The **rubber drain valve** in the bottom of the unit allows any ingested water or dirt to drain out.

Part No.	Dimensions					Air Flow (CFM)			Weight	
	(Diameter) A	(Length) B	(Outlet) C	(Inlet) D	E	4" w.g.	6" w.g.	8" w.g.	lbs	kg
094973001	11	24	7	7	5.6	1120	1450	1600	19.0	8.6
094973002	13.5	24	7	7	5.6	1450	1620	1750	27.0	12.3
094973003	9.75	24	6	6	5.6	875	1100	1250	16.0	7.3
094973004	9.75	18	6	6	9.1	720	900	1060	10.42	4.73
094973005	13.5	15	7	7	9.6	980	1240	1470	15.43	7.00
094973006	11	18	7	6	5.6	810	1020	1200	12.64	5.73
094973007	11	18	7	7	5.6	1010	1270	1490	12.50	5.67

ECO-SE (Small Engine Applications)

The ECO-SE is designed for small engine applications. It also has two unique features. First, it has a **urethane outlet tube** which allow the filter to be mounted directly to a metal tube or turbo without an additional rubber connection. Second, the standard unit is a straight through air filter, **air goes in one end and out the other**. Intake adapters are available if you would like to remotely locate the intake. **The side inlet** version offers additional mounting flexibility.

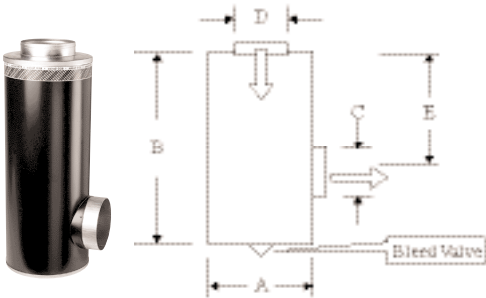


Part No.	Dimensions					Air Flow (CFM)			Weight	
	(Diameter) A	(Length) B	(Outlet) C	(Inlet) D	E	4" w.g.	6" w.g.	8" w.g.	lbs	kg
114500001	6.75	13.8	3	NA	NA	240	300	340	5.0	2.3
114500002	7.75	15.8	4	NA	NA	355	440	510	6.5	3.0
114500003	9.75	18.8	5	NA	NA	610	760	890	7.9	3.6
117122000	11	24	7	NA	NA	780	960	1180	12.9	5.9

ECO-SE Side Inlet

114880003	9.75	16.9	5	6	4.0	600	760	900	9.0	4.1
114880005	7.75	15.8	4	6	5.5	420	570	800	7.0	3.2

- Tapered offset cone design assures uniform air distribution, minimizes air restriction and maximizes element service life.
- Positive barrier, pleated paper media is set in a superior quality adhesive for a permanent seal.
- The only air filter available with choice of flow directions in a single part number.
- Airflow may enter or exit end opening.



This Spin-On disposable air cleaner features a Slimline design for vertical installations requiring tight or limited space restrictions such as behind the truck cab.

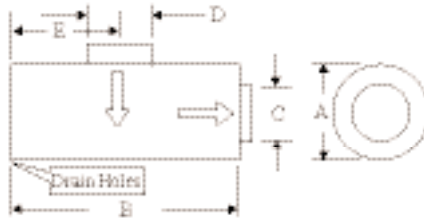
- Inside-out vertical applications only.
- Drain valve in base for water removal.

ECO-LL (Long Life)

Part No.	Dimensions					Air Flow (CFM)			Weight	
	(Diameter) A	(Length) B	(Outlet) C	(Inlet) D	E	4" w.g.	6" w.g.	8" w.g.	lbs	kg
400820001	11	24	7	7	16.5	985	1240	1475	19.0	8.6
400820002					12.0	905	1140	1340	19.0	8.6
400820003					5.5	645	810	950	19.0	8.6
400820004					16.5	1295	1625	1910	21.5	9.8
400820005	13.5	24	7	7	12.0	1170	1475	1735	21.5	9.8
400820006					5.5	845	1060	1250	21.5	9.8
400820007	13.5	18	7	7	12.5	1115	1375	1590	17.0	7.7
400820008					5.5	1100	1340	1545	17.0	7.7
400820009	13.5	15	7	7	9.5	1055	1330	1560	15.1	7.0
400820010					5.5	1135	1435	1690	15.1	7.0
400820011	9.75	24	6	6	18.5	875	1100	1295	13.1	6.0
400820012					12.0	820	1035	1215	13.1	6.0
400820013					5.5	610	770	905	13.1	6.0
400820014	11	18	7	7	12.5	970	1220	1455	13.5	6.2
400820015					5.5	715	905	1075	13.5	6.2
400820016	15	24	8	8	18.5	Non-Standard Filter, Not Stocked				
400820017					12.0					
400820018					5.5					
400820019	11	13	7	7	7.5	710	920	1100	10.24	4.64
400820020	11	15	7	7	7.5	820	1040	1230	11.50	5.22
400820021	11	15	6	7	7.5	Non-Standard Filter, Not Stocked				
400820022	11	18	6	7	12.5	650	815	960	12.77	5.79
400820023	11	13	6	7	7.5	720	900	1060	10.23	4.64
400820024	13.5	24	8	10	6.5	Non-Standard Filter, Not Stocked				
400820025	15	24	8	10	6.5					



The ECO-LL is similar to the ECO-SM, but is for applications where the customer wants to get the **longest life** from his air filter. There are also more sizes available. It is also for **Outside-In Air Flow** only and has drain holes around the perimeter.



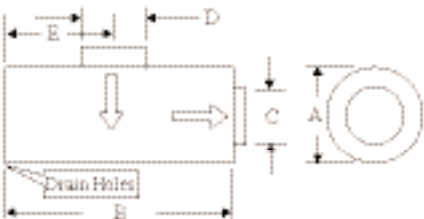
- Spin-On disposable features in a Long Life high performance version.
- Use when extended maintenance intervals, or severe service, or when element life improvement is desired.
- Choice of inlet locations.
- More media surface area than scheduled maintenance style.
- Beaded outlet.
- Drain holes for water removal.

ECO-SM (Scheduled Maintenance)

The ECO-SM was designed to give **additional mounting flexibility** to the O.E.M. customer, while offering a greater value to the fleet that changes filter elements based on a scheduled maintenance program. Due to the various inlet tube locations, the ECO-SM is ideal for retrofit applications. It is for **Outside-In Air Flow** only and has drain holes around the perimeter.



Part No.	Dimensions					Air Flow (CFM)			Weight	
	(Diameter) A	(Length) B	(Outlet) C	(Inlet) D	E	4" w.g.	6" w.g.	8" w.g.	lbs	kg
099842001	11	24	7	7	5.5	960	1210	1410	19.0	8.6
099842002					12.0	980	1220	1430	19.0	8.6
099842003					18.5	730	910	1070	19.0	8.6
099842004					5.5	1100	1380	1620	27.0	12.3
099842005	13.5	24	7	7	12.0	1130	1420	1670	27.0	12.3
099842006					18.5	1030	1280	1500	27.0	12.3
099842007	13.5	18	7	7	5.5	1120	1400	1630	24.0	10.9
099842008					12.5	1060	1320	1550	24.0	10.9
099842009	13.5	15	7	7	5.5	1070	1330	1550	22.5	10.0
099842010					9.5	1060	1320	1530	22.5	10.0

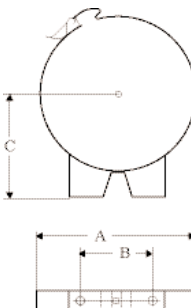


- Easy upgrade for existing air cleaners with separate elements.
- Fast and easy to service with no housing to clean or gaskets to service.
- Economical scheduled maintenance design
- Choice of three inlet locations to match new or retrofit applications.
- Beaded outlet.
- Drain holes for water removal.

Mounting Clamps

Part No.	Dimensions			ECO II	ECO-SE	ECO-SM	ECOLITE	ECO-BC	ECO-LL
	A	B	C						
071921001	9.80	4.50	5.50	3			3	3	3
071921002	11.00	5.00	6.10	3			3	3	3
071921003	13.50	6.00	7.40	3			3	3	3
071921006	15.00	6.00	8.20						3
099049001	6.85	3.50	5.12		3				
099049002	7.85	3.50	5.62		3				
099049003	9.77	4.50	6.60		3				
071921001	9.80	4.50	5.50		3				

Two required



Medium to Heavy Duty Industrial Mobile and Marine applications



UniPamic® Light & Medium Service Air Cleaners

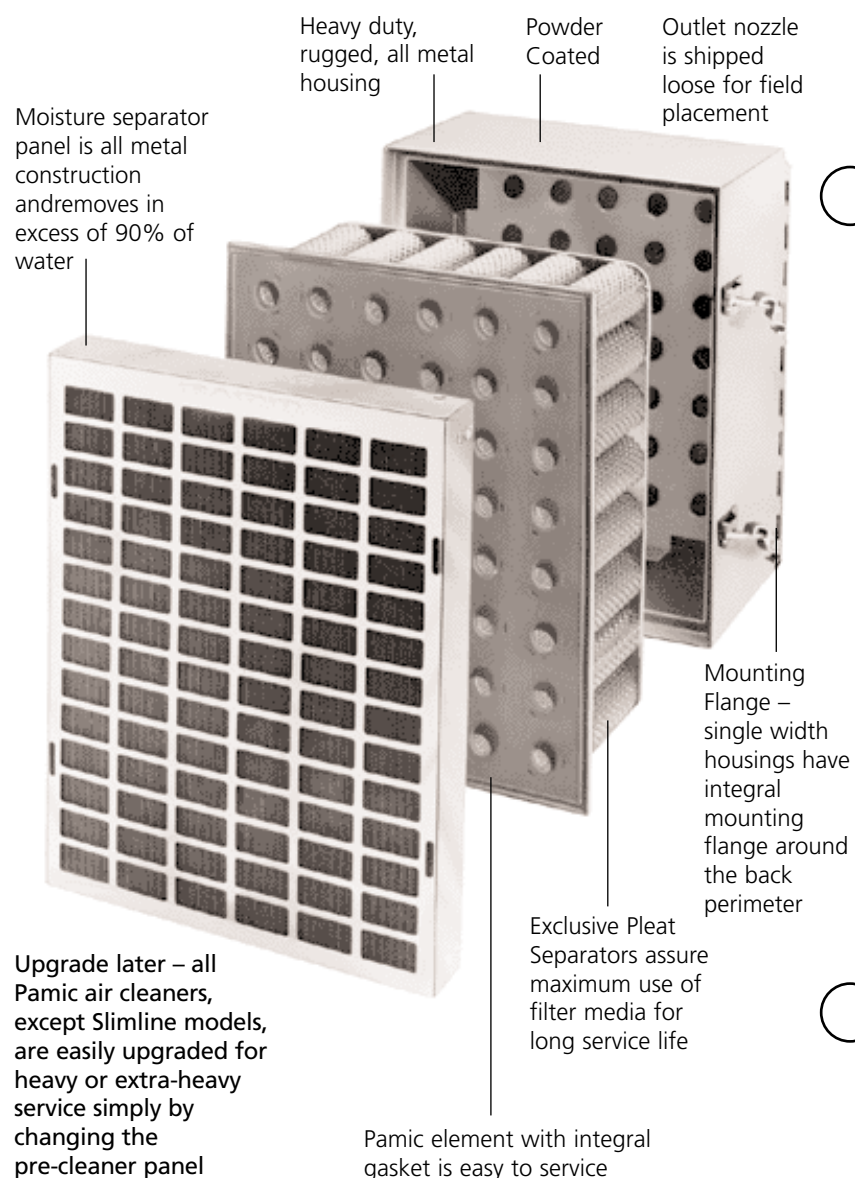
UniPamic Series Air Cleaners provide unmatched engine protection for a wide range of equipment, from on-highway trucks to compressors, stationary engines to marine engines.

Greatest Protection – The Pamic filter element has an average efficiency rating of 99.9% (SAE J726). It begins at a high level and continues to increase throughout the life of the filter.

Extended Service Life – The unique construction of the Pamic element with its exclusive mechanical pleat separation, provides more usable filter area than any competitive air cleaner, thus offering longer element life. UniPamic models feature an efficient moisture separator panel which removes over 90% of the water that may enter the face of the air cleaner. AutoPamic® models can be upgraded to include a gravity-discharged dust pre-cleaner. RotoPamic® models are upgradeable to either a compressed air or exhaust-aspirated pre-cleaner. An optional, easy-to-use service indicator tells when to change the filter element assuring maximum usage and lowest operating filter costs.

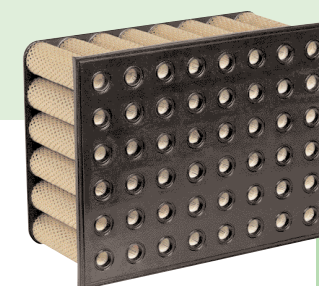
Increased Horsepower, Reduced Fuel Consumption – With its low intake air restriction and its greater effective media area than other dry-type air cleaners, the Pamic Series offers improved fuel economy and lowers per hour operating costs.

Easy To Service – No special tools or techniques, dirt is held inside the pleated filter element tubes. The filter is replaced from the dirty side of the air cleaner, reducing the danger of engine contamination. Because it is an integral part of the filter element, there are no separate gaskets to replace.



Basic UniPamic/Single Stage

- Moisture Separator panel
- Pamic Filter Element
- Air Cleaner Housing with integral mounting flanges and fasteners. Outlet nozzle must be ordered separately on all but Slimline double vertical kits.



* Four tube model is special order only.
† Indicates two moisture separator panels and two filter elements in a single housing.
* Airflow capacities beyond maximum recommendations will result in higher resistance and reduced filter life.

UniPamic Sizing

Number of Tubes in Air Filter	Maximum Airflow*	
	Light Service (cfm)	Medium Service (cfm)
4*	100	67
6	150	100
9	225	150
12	300	200
16	400	267
20	500	333
24	600	400
32	800	533
40	1000	667
48	1200	800
64	1600	1067
2-40†	2000	1333
2-48†	2400	1600
2-64†	3200	2133

Basic Unipamic Kits

No. of Tubes			Part No. No Nozzle [†]	Part No. Nozzle Fitted	Approx. Ship. Weight (lbs.)	Kg	Height (B)		Height (A*)		Outlet Nozzle** O.D. (ins.)
Total	High	Wide					(ins.)	mm	(ins.)	mm	
6	3	2	062701002	062702002	22	10	8.59	218	6.28	160	2.5
9	3	3	062701003	062702003	25	11	8.59	218	8.59	218	3
12	4	3	062701004	062702004	30	14	10.91	277	8.59	218	3
16	4	4	062701006	062702006	34	15	10.91	277	10.91	277	4
16	2	8	062703004		40	18	6.28	160	20.16	512	4
20	5	4	062701009	062702009	41	19	13.22	336	10.91	277	4
24	6	4	062701010	0627020010	44	20	15.53	394	10.91	277	4
24	4	6	062703007		44	20	10.91	277	15.53	394	4
32	8	4	062701012	0627020012	55	25	20.16	512	10.91	277	5
32	4	8	062703009		54	25	10.91	277	20.16	512	5
40	8	5	062701013	0627020013	62	28	20.16	512	13.22	336	5
40	5	8	062703010		62	28	13.22	336	20.16	512	5
48	8	6	062701014	0627020014	69	31	20.16	512	15.53	394	6
48	6	8	062703011		69	31	15.53	394	20.16	512	6
64	8	8	062701015	0627020015	79	36	20.16	512	20.16	512	6
80†	8	10	059709000		119	54	20.16	512	27.81	706	5.5
80†	5	6	059710000		119	54	13.22	336	41.69	1059	5.5
96†	8	12	059711000		132	60	20.16	512	32.44	824	6
96†	6	16	059712000		132	60	15.53	394	41.69	1059	6
128†	8	16	059713000		155	70	20.16	512	41.69	1059	6
32†	16	2	044422000		86	39	40.19	1021	6.28	160	5
48†	16	3	044426000		102	46	40.19	1021	8.59	218	6
64†	16	4	044430000		116	53	40.19	1021	10.91	277	6

* Plus clamping fasteners on sides only.

† Double side by side housing. Two air outlet nozzles required. There are no integral flanges on double housing.

* Double vertical housing. Outlet nozzle is factory installed in center of back on Slimline versions.

** Recommended size. Order separately.

Air Outlet Tubes & Nozzles

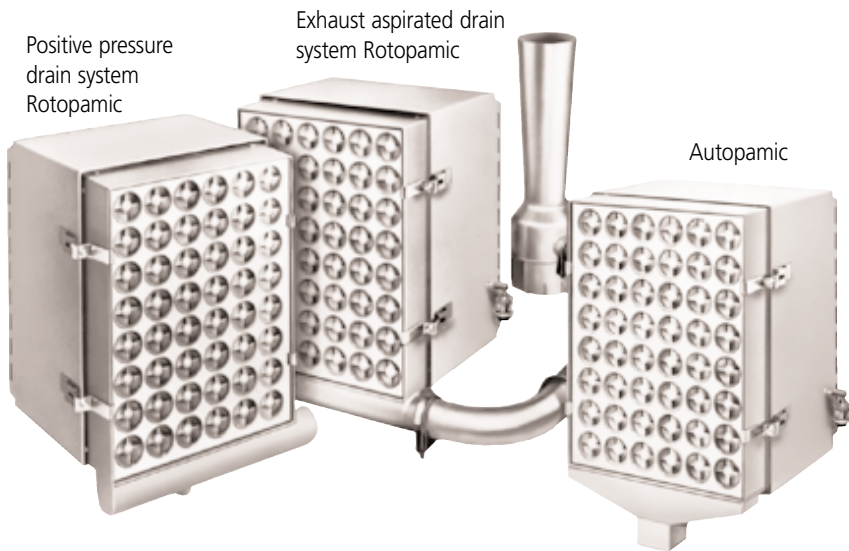
Diameter (inches)	Length (inches)	Style	Ordering Number	Approx Weight (lbs)
2.00	4.00	Straight Tubes	015382200	1.0
2.25	4.00		015382204	1.0
2.50	4.00		015382208	1.0
2.63	4.00		015382210	1.0
3.00	4.00		015382300	1.0
3.50	4.00		015382308	1.0
4.00	4.00		015382400	1.5
4.50	4.00		015382408	1.5
5.00	4.00		015382500	1.5
5.50	4.00		015382508	2.0
6.00	4.00		015382600	2.0
7.00	4.00		015382700	2.0
3.00	1.50	Nozzles	041199001	0.70
3.50	1.5		041199002	0.80
4.00	1.63		041199003	1.00
5.00	1.88		041199004	1.20
5.50	2.13		041199005	1.40
6.00	2.13		041199006	1.60
7.00	2.13		041199007	2.50

Replacement Elements

Total Tubes	Arrangement*	Ordering Number	Designation Number
2	1 x 2	012233001	P-2
4	2 x 2	012233002	P-4
6	2 x 3	012233012	P-6
9	3 X 3	012233003	P-9
12	3 X 4	012233004	P-12
12	2 X 6	012233014	P-12-26
16	4 X 4	012233005	P-16
16	2 X 8	012233018	P-16-28
18	3 X 6	012233017	P-18
20	4 X 5	012233006	P-20
24	4 X 6	012233007	P-24
24	3 X 8	012233019	P-24-38
30	5 X 6	012233015	P-30
32	4 X 8	012233008	P-32
36	6 X 6	012233020	P-36
40	5 X 8	012233009	P-40
48	6 X 8	012233010	P-48
64	8 X 8	012233011	P-64

* Pamic air filters will fit either vertical or horizontal housings.

Two Stage Medium to Extra Heavy Service Air Cleaners



AutoPamic Air Cleaners

For Medium and Heavy
Medium service includes most on and off-highway uses such as gravel and ready-mix trucks, outdoor generator sets, garbage trucks, fire trucks, air compressors and pumps.

This AutoPamic air cleaner model with a gravity discharge pre-cleaner is the easiest to install. It may be used on all types of engines.

Note: While total system efficiency is 99.9%, this pre-cleaner is 86% efficient (per SAE J726c).



Basic two stage kits include:

Outlet nozzle must be ordered separately.

- AutoPamic Pre-Cleaner
- RotoPamic Pre-Cleaner
- Pamic Filter Element
- Air Cleaner Housing
- Service Indicator
- Gravity Discharge

Positive Pressure

- Pamic Filter Element
- Air Cleaner Housing
- Service Indicator

Exhausted Aspirated

- RotoPamic Pre-Cleaner
- Pamic Filter Element
- Air Cleaner Housing
- Service Indicator
- Aspirator – Specify I.D. in inches of inlet tube to match O.D. of engine exhaust system. Shipped loose.
- Fittings, clamps, metal hose for aspirator connection.

RotoPamic Air Cleaners

Heavy service includes off-highway trucks, motor graders, crawler tractors, scrapers, cranes and shovels.

Extra heavy service includes such equipment as large scrapers, rock drills, rough terrain cranes and shovels, rock drilling and quarrying compressors, and full-tracked low speed tractors.

These pre-cleaners provide maximum service life of the disposable Pamic filter element.

Positive Pressure Drain System

Positive pressure bleed systems can be used on all turbocharged engines and two-cycle Detroit Diesel turbocharged or naturally aspirated engines. They can also be used wherever a continuous source of compressed air (4 PSIG or greater) is available, such as the receiver tank on an air compressor.

Exhaust Aspirated Drain System

These RotoPamic air cleaners with exhaust aspirated pre-cleaners are recommended for use on naturally aspirated engines, on turbocharged engines, or whenever a source of compressed air is not available. The exhaust aspirator must be mounted at the end of the exhaust system.

Note: While total system efficiency is 99.9%, either of these pre-cleaners is 94% efficient (per SAE J726) for extended element life.

AutoPamic & RotoPamic Sizing

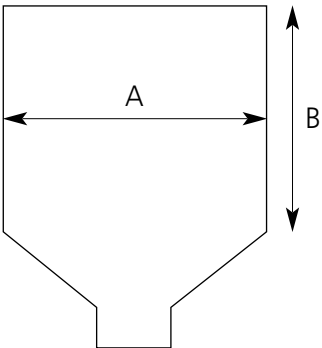
The chart below shows the number of filter tubes needed to meet engine airflow requirements. Match the CFM of your engine to the type of service the air cleaner will experience. recommended air cleaner size, for type of service shown, has been calculated for an optimum range of engine intake restriction, dirt holding capacity and filter service life.

Number of Tubes in Air Filter	ROTOPAMIC						AUTOPAMIC			
	Positive Pressure Bleed		Exhaust Aspirated Bleed				Gravity Discharge			
	Maximum Airflow		Maximum Airflow				Maximum Airflow			
	Heavy & Extra Heavy Service		Heavy Service		Extra Heavy Service		Medium Service		Heavy Service	
	CFM	m³ / h	CFM	m³ / h	CFM	m³ / h	CFM	m³ / h	CFM	m³ / h
4*	—	—	85	145	—	—	—	—	—	—
6	—	—	130	220	100	170	—	—	—	—
9	—	—	200	340	155	265	180	305	135	230
12	—	—	265	450	205	350	240	410	180	305
16	—	—	350	595	270	460	320	545	240	410
20	340	575	440	745	340	580	400	680	300	510
24	410	695	530	900	410	695	480	815	360	610
32	545	925	705	1200	545	925	640	1085	480	815
40	680	1155	880	1495	680	1155	800	1360	600	1020
48	815	1685	1055	1810	815	1385	960	1630	720	1225
64	1090	1850	1410	2395	1090	1850	1280	2175	960	1630
2-40†	1360	2310	1760	2990	1360	2310	1600	2720	1200	2040
2-48†	1630	2770	2110	3585	1630	2770	1920	3260	1440	2445
2-64†	2175	3695	2815	4780	2175	3695	2560	4350	1920	3260

* On special order only.

† Indicates two pre-cleaners and two filter elements in a single housing. On exhaust aspirated models, a single aspirator is used.

Sizing Specifications



Positive Pressure Bleed System Plumbing Kit (To be ordered separately)

Application	Ordering Number	Components Included*
All engines (except Detroit Diesel 2-cycle) where connection is taken from side of turbocharger	061999000	Check Valve for pre-cleaner dust pin. Turbocharger hose fitting. Hose clamps
For Detroit Diesel 2-cycle engines only, where connection is made to air box. Specify engine model & rpm	See Racor Installation Bulletin	Air box fitting. Special air box cover (when required). Hose clamps.

* Order 3/4" (19.1mm) high-temperature silicone hose separately.

Note: For positive pressure plumbing kit for double housings, see your Racor representative.

Ordering Information – Bleed Systems

Number of Tubes			RotoPamic Positive Pressure Kits			RotoPamic Exhaust Aspirated Kits			AutoPamic Gravity Discharge Kits			Dimensions							
Total	Wide	High	Part No.	Approx. Ship. Wt.		Part No.	Part No.	Approx. Ship. Wt.		Part No.	Part No.	Approx. Ship. Wt.		Width(A ⁴)		Height(B)		Recom** Outlet Nozzle OD	
			No Nozzle ^A	Lbs.	Kg	No Nozzle ^A	Nozzle Fitted	Lbs.	Kg	No Nozzle ^A	Nozzle Fitted	Lbs.	Kg	Inches	mm	Inches	mm	Inches	mm
6	2	3	—	—	—	062709003		37	17	—		—	—	6.28	160	8.59	218	2.5	63.5
9	3	3	—	—	—	062709005	062710005	42	19	062705001	062706001	32	15	8.59	218	8.59	218	3.0	76.2
12	3	4	—	—	—	062709007		51	23	062705002	062706002	37	17	8.59	218	10.91	277	3.0	76.2
12	4	3	—	—	—	—	062710007					37	17	10.91	277	8.59	218	3.0	76.2
16	4	4	—	—	—	062709011	062710011	54	25	062705004	062706004	44	20	10.91	277	10.91	277	4.0	101.6
16	8	2	—	—	—	062711007		65	30	—		—	—	20.16	512	6.28	160	4.0	101.6
20	5	4	062715001	53	24	—				062707005 ⁵		52	24	13.22	336	10.91	277	4.0	101.6
20	4	5	062713001	53	24	062709017	062710017	62	28	062705007	062706007	52	24	10.91	277	13.22	336	4.0	101.6
24	6	4	062715003	62	28	062711013		80	36	062707006		59	27	15.53	395	10.91	277	4.0	101.6
24	4	6	062713003	59	27	062709019	062710019	72	33	062705008	062706008	62	28	10.91	277	15.53	395	4.0	101.6
32	8	4	062715007	71	32	062711017		93	42	062707008		70	32	20.16	512	10.91	277	5.0	127.0
32	4	8	062713007	70	32	062709023	062710023	93	42	062705010	062706010	71	32	10.91	277	20.16	512	5.0	127.0
40	8	5	062715009	84	38	062711019		105	48	062707009		81	37	20.16	512	13.22	336	5.0	127.0
40	5	8	062713009	82	37	062709025	062710025	104	47	062705011	062706011	84	38	13.22	336	20.16	512	5.0	127.0
48	8	6	062715011	94	43	062711021		119	54	062707010		92	42	20.16	512	15.53	395	6.0	127.0
48	6	8	062713011	92	42	062709027	062710027	118	54	062705012	062706012	93	42	15.53	395	20.16	512	6.0	152
64	8	8	062713013	111	50	062709029	062710029	138	63	062705013	062706013	111	50	20.16	512	20.16	512	6.0	152
80 ⁶	10	8	067872000	148	67	059719000		195	89	059714000		160	73	27.81	706	20.16	512	(2) 5.5	139.7
80 ⁶	16	5	067873000	151	69	059720000		197	89	059715000		160	73	41.69	1059	13.22	336	(2) 5.5	139.7
96 ⁶	12	8	067874000	168	76	059721000		226	103	059716000		175	79	32.44	824	20.16	512	(2) 6.0	125
96 ⁶	16	6	067875000	171	78	059722000		228	103	059717000		175	79	41.69	1059	15.53	395	(2) 6.0	152
128 ⁶	16	8	067876000	209	95	059723000		270	123	059718000		217	98	41.69	1059	20.16	512	(2) 6.0	152

^A Double side by side housing. Two air outlet nozzles required. There are no integral flanges on double housing.

^B Double vertical housing. Outlet nozzle is factory installed in center of back on Slimline versions.

** Recommended size. Order separately for 'No Nozzle' Parts.

^A No Nozzle included or orifice cut into housing. Correct Nozzle size should be selected** and welded onto housing as required. Welding should be performed by a qualified welder. Racor can not accept responsibility for weld quality or integrity.

Medium to Extra Heavy Duty Applications

Features

Easy to Install – Available in three sizes, for either horizontal or vertical mounting. The integral mounting flange meets the needs of most “bolt-on” applications. A wide selection of flexible fittings, clamps and couplings to connect the air cleaner to the engine intake is also available.

Maintenance is Simple – No special skills or tools are required to change the filter element. Servicing is quick and clean. The long, effective life of the DynaCell reduces maintenance... a special advantage in remote installations.

SuperClone Pre-Cleaner

For heavy and extra duty service, the SuperClone Pre-Cleaner is recommended. SuperClone removes most of the airborne dust prior to it reaching the DynaCell element, extending the systems useful service life.

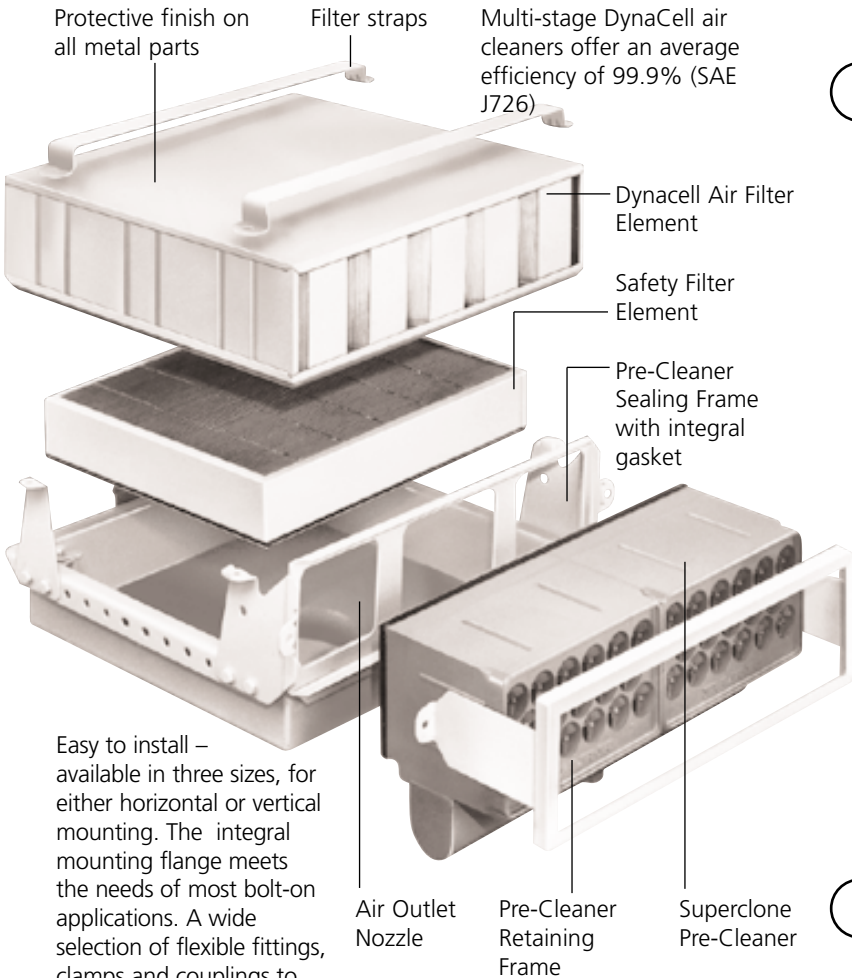
Three models are available:

- Gravity discharge for heavy service
- Exhaust aspirated
- Positive pressure aspirated

For applications requiring heavy service, exhaust aspirated or positive pressure aspirated versions are recommended.

Single Stage Air Cleaner

- Designed originally as a low profile under hood engine air cleaner for frontal air intake systems on-highway trucks, the DynaCell is now used in a variety of applications where a low profile and high efficiency are required.
- Applications Include – Off-highway and logging trucks, agricultural tractors and motor graders, construction and mining equipment. Severe service applications include large scrapers, rock drills, cranes, shovels and low speed track type tractors.
- Two and Three-Stage – In addition to the primary DynaCell element, and your choice of SuperClone Pre-Cleaners, a third stage safety filter is also available. The pleated paper safety filter is housed in a deeper plenum pan than the two-stage model and provides the ultimate protection.



Easy to install – available in three sizes, for either horizontal or vertical mounting. The integral mounting flange meets the needs of most bolt-on applications. A wide selection of flexible fittings, clamps and couplings to connect the air cleaner to the engine intake is also available.

No special tools are required to change the filter element. Servicing is quick and clean.



Positive Pressure Bleed Systems Plumbing Kit for Turbocharged 4-Cycle Engines (Included with Positive Pressure SuperClones)

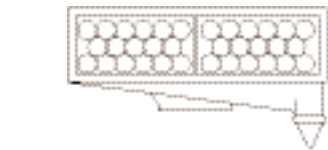
Application	Part No.	Parts included
All engines where connection is taken from pressure side of turbocharger.	061999000 for T-512 & T-519 062215000 for T-528	Plumbing fittings, clamps and check valve. 3/4" high-temp silicone hose is not included.

Specifications

Horizontal Dynacell Model		Gravity Discharge		Exhaust Aspirated		Positive Pressure Aspirated*		Nozzle Size	Separate Nozzle Ordering Number
		With Nozzle	Without Nozzle	With Nozzle	Without Nozzle	With Nozzle	Without Nozzle		
T-512	Two-Stage	066386002	066386001	066452002	066452001	066417002	066417001	5"	041199004
	Three-Stage	066386003	–	066452003	–	066417003	–	5"	–
T-519	Two-Stage	066386005	066386004	066452005	066452004	066417005	066417004	6"	041199006
	Three-Stage	066386006	–	066452006	–	066417006	–	6"	–
T-528	Two-Stage	066386008	066386007	066452008	066452007	066417008	066417007	7"	041199007
	Three-Stage	066386009	–	066452009	–	066417009	–	7"	–

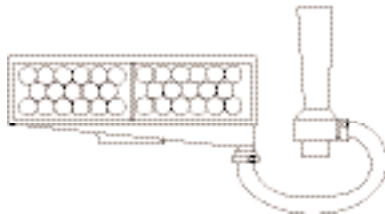
Vertical Dynacell Model		Gravity Discharge		Exhaust Aspirated		Positive Pressure Aspirated*		Nozzle Size	Separate Nozzle Ordering Number
		With Nozzle	Without Nozzle	With Nozzle	Without Nozzle	With Nozzle	Without Nozzle		
T-512	Two-Stage	066401002	066401001	066452002	066452001	066430002	066430001	5"	041199004
	Three-Stage	066401003	–	066452003	–	066430003	–	5"	–
T-519	Two-Stage	066401005	066401004	066452005	066452004	066430005	066430004	6"	041199006
	Three-Stage	066401006	–	066452006	–	066430006	–	6"	–
T-528	Two-Stage	–	–	066452008	066452007	066430008	066430007	7"	041199007
	Three-Stage	–	–	066452009	–	066430009	–	7"	–

Note: On special order, the factory can position the Outlet Nozzle to most specification on two-stage models.
† On three-stage models with safety filter, the Outlet Nozzle is factory located in the center of the pan.
* For positive pressure bleed available air pressure may range from 4 to 100 psi. Specify pressure and engine airflow. Racor will factory size bleed orifice. If air pressure and flow are not specified, units will be shipped with only a pilot hole in the bleed orifice – see Bulletin B-1500-40 for field sizing of orifice.



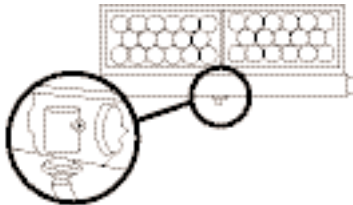
Heavy Service Gravity Discharge

The gravity discharge SuperClone is the easiest to install. No additional ducting or pressure lines are required. It removes up to 86% (SAE J726) of the intake air dust load.



Extra Heavy Service Exhaust Aspirated

The exhaust aspirated model is ideal where no source of positive pressure is available. It requires installation of an aspirator on the engine exhaust and ducting to the pre-cleaner. It removes up to 94% (SAE J726) of the dirt entering the air cleaner.



Extra Heavy Service Positive Pressure Aspirated

The positive pressure SuperClone is designed for the heaviest dirt concentrations. Aspirator uses compressed air from engine air intake manifold, air box, or air compressor receiver tank. Air pressures from 4-100 psig are suitable for aspirator. Removes up to 94% (SAE J726) of the dirt entering the air cleaner.

Medium Standard Air Filters

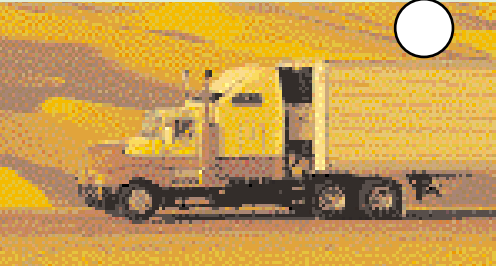
Applications

Racor Standard Air Filters are designed to be connected to the air intake of the gasoline or diesel engine.

- Applications include:
- Agricultural machinery.
 - Earth-moving equipment.
 - Stationary engines; generator sets.
 - Trucks, buses & recreational vehicles.
 - Material handling equipment.
 - Snow removal equipment & street sweepers.

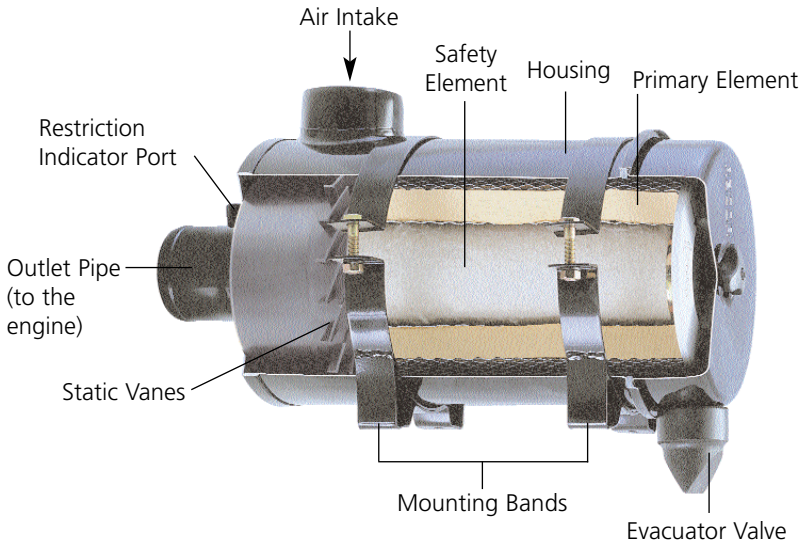
How they work

Air flows through static vanes (plastic or metal) which causes the air to spin. Centrifugal force separates the heaviest impurities (dust, dirt, insects and other debris) from the air stream. These contaminants are discharged automatically through an integral evacuator valve. Only purified air flows to the air filter elements (primary and safety stages of filtration).



Heavy Duty Standard Air Filters

For On-Highway, Off-Highway and Stationary Applications



MODEL	Airflow Range	Horsepower Range	Weight (With filter Elements)	Maximum Length	Maximum Diameter	Inlet Size	Outlet Size	Primary Element	Safety Element
AFSF4	53 to 159 CFM (1.5 to 4.5 m³/min)	30 to 80 HP (22 to 60 KW)	8.40 lbs (3.80 kg)	15.15" (385 mm)	6.50" (165 mm)	2.5" (63 mm)	2.5" (63 mm)	AR6060	AS6121
AFSF6	159 to 212 CFM (4.5 to 6.0 m³/min)	80 to 90 HP (60 to 67 KW)	10.79 lbs (4.90 kg)	16.73" (425 mm)	7.80" (198 mm)	3" (76 mm)	2.75" (70 mm)	AR6122	AS6123
AFSF8	212 to 282 CFM (6.0 to 8.0 m³/min)	90 to 120 HP (67 to 90 KW)	11.70 lbs (5.30 kg)	17.52" (445 mm)	8.50" (216 mm)	3" (76 mm)	3" (76 mm)	AR6144	AS6180
AFSF12	282 to 423 CFM (8.0 to 12.0 m³/min)	120 to 160 HP (90 to 120 KW)	16.50 lbs (7.50 kg)	18.82" (478 mm)	10.08" (256 mm)	4" (102 mm)	4" (102 mm)	AR6067	AS6159
AFSF15	423 to 529 CFM (12.0 to 15.0 m³/min)	160 to 180 HP (120 to 134 KW)	21.92 lbs (9.95 kg)	18.90" (480 mm)	11.06" (281 mm)	4" (102 mm)	4" (102 mm)	AR234401	AS6182
AFSF18	529 to 635 CFM (15.0 to 18.0 m³/min)	180 to 210 HP (134 to 157 KW)	27.55 lbs (12.50 kg)	21.57" (548 mm)	11.42" (290 mm)	4.5" (114 mm)	4" (102 mm)	AR6321	AS6320
AFSF20	635 to 706 CFM (18.0 to 20.0 m³/min)	210 to 250 HP (157 to 187 KW)	31.06 lbs (14.10 kg)	20.79" (528 mm)	12.52" (318 mm)	5.25" (133 mm)	5.25" (133 mm)	AR6277	AS6316
AFSF21	706 to 741 CFM (20.0 to 21.0 m³/min)	240 to 280 HP (179 to 209 KW)	33.90 lbs (15.40 kg)	23.94" (608 mm)	12.52" (318 mm)	5.25" (133 mm)	5.12" (130 mm)	AR246501	AS6220
AFSF310	741 to 988 CFM (20.0 to 21.0 m³/min)	280 to 320 HP (209 to 239 KW)	40.00 lbs (18.15 kg)	23.27" (591 mm)	15.43" (392 mm)	6" (152 mm)	6" (152 mm)	AR6154	AS6221
AFSF430	988 to 1517 CFM (28.0 to 43.0 m³/min)	320 to 450 HP (239 to 335 KW)	78.65 lbs (35.70 kg)	28.46" (723 mm)	18.11" (460 mm)	6" (152 mm)	6" (152 mm)	AR6324	AS6323

Heavy Duty Combination Dynamic Pre-Cleaner / Filters



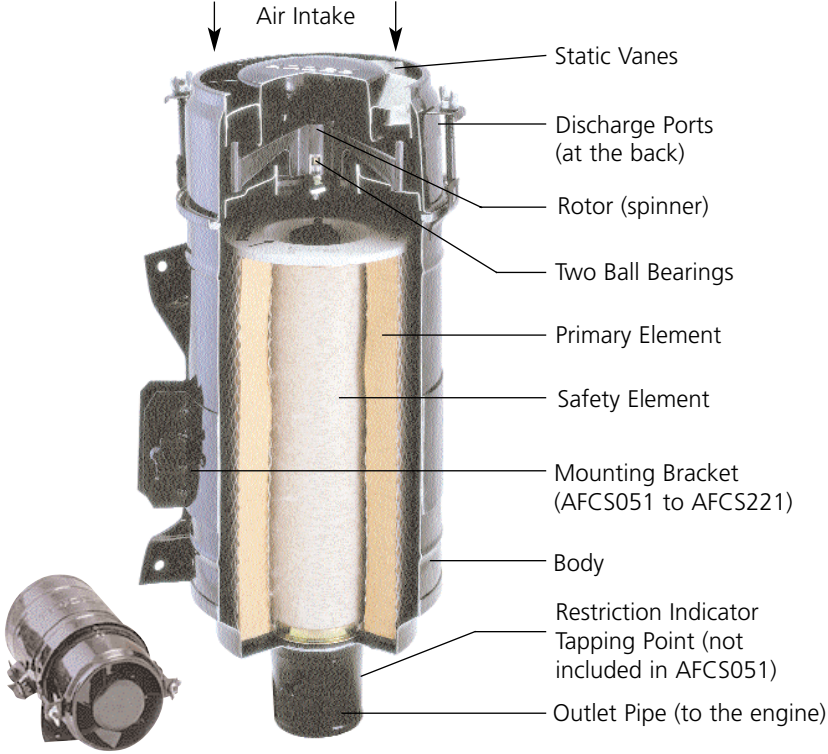
Applications

Racor Combination Dynamic Pre-Cleaner / Air Filters are specifically designed to be connected to the air intake of gasoline and diesel engines. The advantages of the systems include their compact size and ease of installation. The three-stage air filtration systems are designed with only one connection to the engine.

- Applications include:
- Agricultural machinery.
 - Earth moving, construction & mining equipment.
 - Stationary engines, generator sets.
 - Trucks, pick-ups, off-road vehicles.
 - Material handling equipment.
 - Snow removal equipment & street sweepers.

Features and Benefits

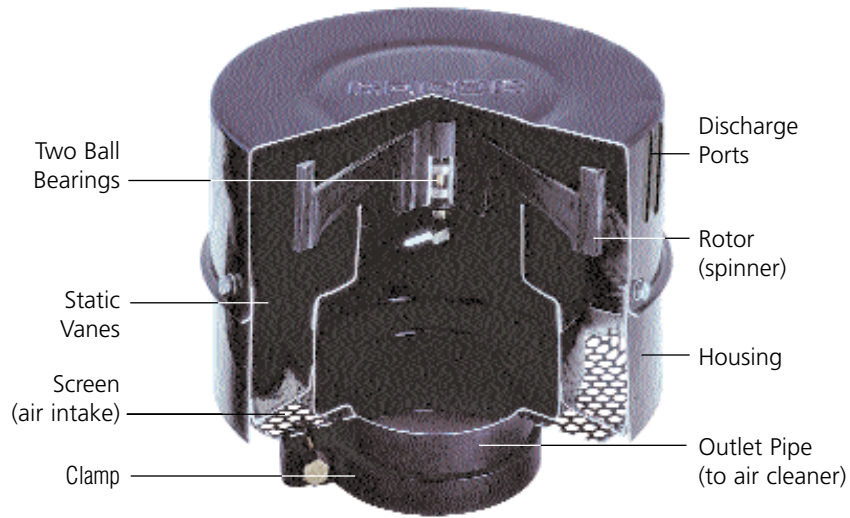
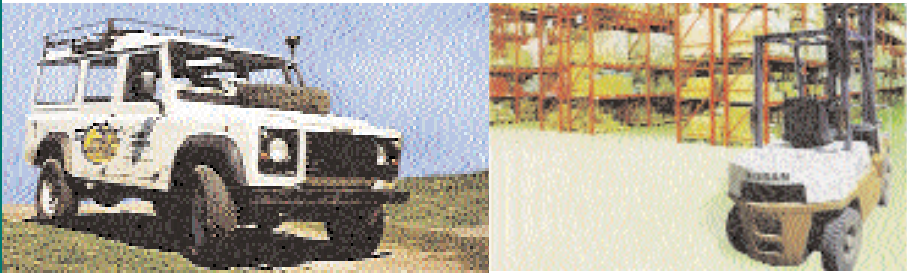
- Pre-Cleaners remove up to 90% of impurities from intake air before the air enters the filter elements.
- Extends engine air filter life.
- Reduces down time.
- Prolongs engine and turbocharger life.
- Saves on fuel costs.
- Safety element is standard in most models.



MODEL	Airflow Range	Horsepower Range	Weight (With filter Elements)	Maximum Length	Maximum Diameter	Outlet Size	Primary Element	Safety Element
AFCS051	53 to 124 CFM (1.5 to 3.5 m³/min)	30 to 70 HP (22 to 52 KW)	8.60 lbs (3.90 kg)	15.04" (382 mm)	7.40" (188 mm)	2.5" (63 mm)	AR6322	–
AFCS071	124 to 159 CFM (3.5 to 4.5 m³/min)	50 to 70 HP (37 to 52 KW)	10.35 lbs (4.70 kg)	18.90" (480 mm)	7.40" (188 mm)	2.5" (63 mm)	AR6060	AS6121
AFCS081	159 to 212 CFM (4.5 to 6.0 m³/min)	70 to 80 HP (52 to 60 KW)	12.70 lbs (5.75 kg)	20.47" (520 mm)	8.03" (204 mm)	2.75" (70 mm)	AR6122	AS6123
AFCS121	212 to 282 CFM (6.0 to 8.0 m³/min)	80 to 110 HP (60 to 82 KW)	16.50 lbs (7.50 kg)	22.20" (564 mm)	9.05" (230 mm)	3" (76 mm)	AR6144	AS6180
AFCS181	282 to 423 CFM (8.0 to 12.0 m³/min)	110 to 150 HP (82 to 112 KW)	20.30 lbs (9.20 kg)	24.25" (616 mm)	9.96" (253 mm)	4" (102 mm)	AR6067	AS6159
AFCS221	423 to 529 CFM (12.0 to 15.0 m³/min)	150 to 180 HP (112 to 135 KW)	24.20 lbs (11.00 kg)	25.47" (647 mm)	11.34" (288 mm)	4" (102 mm)	AR234401	AS6182
AFCS251	529 to 706 CFM (15.0 to 20.0 m³/min)	180 to 240 HP (134 to 179 KW)	30.00 lbs (13.60 kg)	27.87" (708 mm)	13.27" (337 mm)	5.25" (133 mm)	AR6277	AS6316
AFCS261	706 to 741 CFM (20.0 to 21.0 m³/min)	200 to 260 HP (149 to 194 KW)	31.90 lbs (14.50 kg)	30.71" (780 mm)	13.27" (337 mm)	5.12" (130 mm)	AR246501	AS6220

Heavy Duty On-Highway Pre-Cleaners

For Mobile Equipment Applications



Applications:

Racor Engine Air Pre-Cleaners are designed to be mounted on or connected to the air filter intake of a gasoline or diesel engine air cleaner.

Applications include:

- All fast-moving mobile equipment such as trucks, buses and recreational vehicles.

Features and Benefits

- Removes up to 80% of impurities from intake air before the air enters the filter elements.
- Compact, low-profile design.
- The bottom-intake air entry design eliminates the opportunity for water intrusion during high speed and stationary operation.
- Easy to install. Three plastic outlet reduction sleeves are provided with each assembly.

MODEL	Airflow Range	Horsepower Range	Weight	Maximum Height	Maximum Diameter	Outlet Size
AFHP31	53 to 124 CFM (1.5 to 3.5 m³/min)	30 to 60 HP (22 to 45 KW)	2.40 lbs (1.10 kg)	6.06" (154 mm)	7.00" (178 mm)	3-2.75-2.5" (76-70-63 mm)
AFHP41	124 to 247 CFM (3.5 to 7.0 m³/min)	60 to 120 HP (45 to 90 KW)	3.40 lbs (1.55 kg)	7.00" (178 mm)	8.50" (216 mm)	3.25-3-2.75-2.5" (82-76-70-63 mm)
AFHP42	124 to 247 CFM (3.5 to 7.0 m³/min)	60 to 120 HP (45 to 90 KW)	3.50 lbs (1.60 kg)	7.00" (178 mm)	8.50" (216 mm)	4-3.75-3.5-3.25" (102-95-89-82mm)
AFHP81	247 to 388 CFM (7.0 to 11.0 m³/min)	120 to 160 HP (90 to 120 KW)	4.20 lbs (1.90 kg)	8.07" (205 mm)	9.58" (243 mm)	3.25-3-2.75-2.5" (82-76-70-63 mm)
AFHP82	247 to 388 CFM (7.0 to 11.0 m³/min)	120 to 160 HP (90 to 120 KW)	4.30 lbs (1.95 kg)	8.07" (205 mm)	9.58" (243 mm)	4-3.75-3.5-3.25" (102-95-89-82 mm)
AFHP83	247 to 388 CFM (7.0 to 11.0 m³/min)	120 to 160 HP (90 to 120 KW)	4.40 lbs (2.00 kg)	8.07" (205 mm)	9.58" (243 mm)	4.5-4.33-4-3.75" (114-110-102-95 mm)
AFHP91	388 to 530 CFM (11.0 to 15.0 m³/min)	160 to 220 HP (120 to 165 KW)	5.20 lbs (2.35 kg)	8.15" (207 mm)	11.02" (280 mm)	4.5-4.33-4-3.75" (114-110-102-95 mm)
AFHP92	388 to 530 CFM (11.0 to 15.0 m³/min)	220 to 300 HP (165 to 225 KW)	5.50 lbs (2.50 kg)	8.15" (207 mm)	11.02" (280 mm)	5.25-5-4.75-4.5" (133-127-121-114 mm)
AFHP111	530 to 776 CFM (15.0 to 22.0 m³/min)	220 to 300 HP (165 to 225 KW)	6.50 lbs (2.95 kg)	7.87" (200 mm)	12.20" (310 mm)	5.25-5-4.75-4.5" (133-127-121-114 mm)
AFHP112	530 to 776 CFM (15.0 to 22.0 m³/min)	220 to 300 HP (165 to 225 KW)	6.60 lbs (3.00 kg)	7.87" (200 mm)	12.20" (310 mm)	6-5.5-5.25-5" (152-140-133-127 mm)
AFHP211	776 to 1059 CFM (21.0 to 30.0 m³/min)	300 to 400 HP (225 to 300 KW)	8.40 lbs (3.80 kg)	9.13" (232 mm)	14.17" (360 mm)	6-5.5-5.25-5" (152-140-133-127 mm)
AFHP212	776 to 1059 CFM (21.0 to 30.0 m³/min)	300 to 400 HP (225 to 300 KW)	8.80 lbs (4.00 kg)	9.13" (232 mm)	14.17" (360 mm)	7-6.75-6.5-6.25" (178-171-165-159 mm)

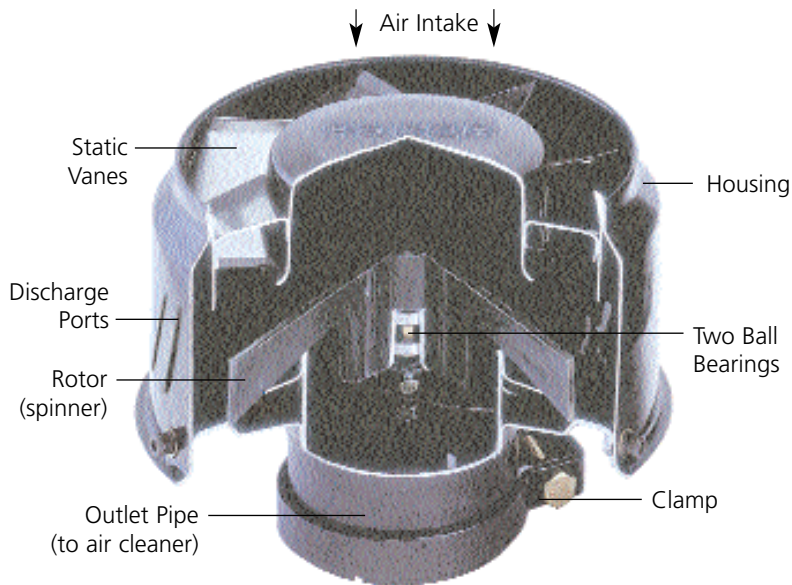
On-Highway and Off-Highway Air Pre-Cleaners

For Under Hood Applications

How they work

Racor Under Hood Engine Air Pre-Cleaners can be remote mounted or attached directly to the air cleaner eliminating the need for an external air intake.

- No exterior vehicle modification for intake air.
- High air flow, low differential design.



MODEL	Airflow Range	Horsepower Range	Weight	Maximum Height	Maximum Diameter	Outlet Size
AFUP006	53 to 141 CFM (1.5 to 4.0 m³/min)	30 to 60 HP (22 to 45 KW)	1.75 lbs (0.80 kg)	5.12" (130 mm)	5.59" (142 mm)	2.5" (I.D.) (63 mm)
AFUP006E	53 to 141 CFM (1.5 to 4.0 m³/min)	30 to 60 HP (22 to 45 KW)	2.40 lbs (1.10 kg)	5.71" (145 mm)	5.59" (142 mm)	2.5" (O.D.) (63 mm)
AFUP007	141 to 176 CFM (4.0 to 5.0 m³/min)	60 to 70 HP (45 to 52 KW)	2.86 lbs (1.30 kg)	6.18" (157 mm)	7.09" (180 mm)	3-2.75-2.5" (I.D.) (76-70-63 mm)
AFUP007E	141 to 176 CFM (4.0 to 5.0 m³/min)	60 to 70 HP (45 to 52 KW)	3.08 lbs (1.40 kg)	6.61" (168 mm)	7.09" (180 mm)	3" (O.D.) (76 mm)
AFUP021	176 to 282 CFM (5.0 to 8.0 m³/min)	70 to 100 HP (52 to 75 KW)	3.52 lbs (1.60 kg)	5.83" (148 mm)	7.87" (200 mm)	3.25-3-2.75-2.5" (I.D.) (82-76-70-63 mm)
AFUP021E	176 to 282 CFM (5.0 to 8.0 m³/min)	70 to 100 HP (52 to 75 KW)	4.07 lbs (1.85 kg)	6.69" (170 mm)	7.87" (200 mm)	3.25" (O.D.) (82 mm)
AFUP041	282 to 423 CFM (8.0 to 12.0 m³/min)	100 to 140 HP (75 to 104 KW)	4.30 lbs (1.95 kg)	7.32" (186 mm)	8.98" (228 mm)	4-3.75-3.5-3.25" (I.D.) (102-95-89-82 mm)
AFUP041E	282 to 423 CFM (8.0 to 12.0 m³/min)	100 to 140 HP (75 to 104 KW)	4.85 lbs (2.20 kg)	7.36" (187 mm)	8.98" (228 mm)	4" (O.D.) (102 mm)
AFUP061	423 to 635 CFM (12.0 to 18.0 m³/min)	140 to 200 HP (104 to 150 KW)	4.95 lbs (2.25 kg)	7.44" (189 mm)	9.45" (240 mm)	5.25-5-4.75-4.5" (I.D.) (133-127-121-114 mm)
AFUP061E	423 to 635 CFM (12.0 to 18.0 m³/min)	140 to 200 HP (104 to 150 KW)	5.70 lbs (2.60 kg)	7.95" (202 mm)	9.45" (240 mm)	5.25" (O.D.) (133 mm)
AFUP091	635 to 741 CFM (18.0 to 21.0 m³/min)	200 to 300 HP (149 to 224 KW)	6.60 lbs (3.00 kg)	8.03" (204 mm)	11.02" (280 mm)	5.25-5-4.75-4.5" (I.D.) (133-127-121-114 mm)
AFUP091E	635 to 741 CFM (18.0 to 21.0 m³/min)	200 to 300 HP (149 to 224 KW)	7.71 lbs (3.50 kg)	8.98" (228 mm)	11.02" (280 mm)	5.25" (O.D.) (133 mm)
AFUP131	741 to 988 CFM (21.0 to 28.0 m³/min)	300 to 350 HP (224 to 261 KW)	7.25 lbs (3.30 kg)	10.08" (256 mm)	13.03" (331 mm)	6-5.5-5.25-5"-(I.D.) (152-140-133-127 mm)

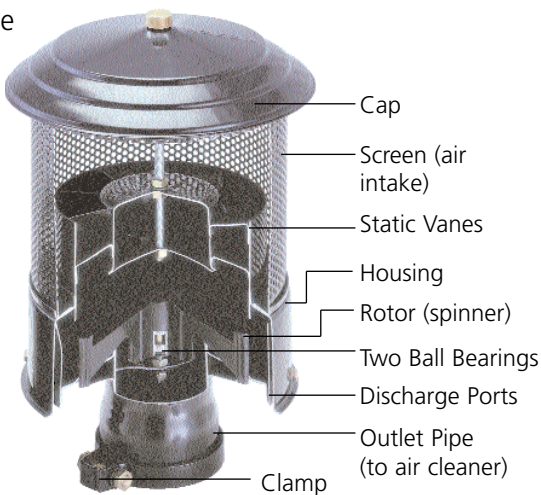
Heavy Duty Off-Highway and Industrial Air Pre-Cleaners

For Agriculture, Construction and Stationary Applications

Applications

Racor Engine Air Pre-Cleaners are designed to be mounted on or connected to the air filter intake of a gasoline or diesel engine air cleaner.

Their applications include all slow-moving and industrial equipment such as agricultural machinery; earth moving, construction and mining equipment; pumping plants; generator sets; material handling equipment; snow removal equipment and street sweepers.



Models
AFAP414 to AFAP401

How they work

Racor Engine Air Pre-Cleaners are usually installed in place of the rain cap, dust bowl, or aspirated pre-cleaner (exhaust system). In some applications, they can be mounted directly to the air cleaner.

Air enters the system through a pre-screen that removes large debris. It then flows through static vanes causing the air to spin. As the air spins, centrifugal force separates dust, dirt, insects, rain and snow from the air stream. The swirling air drives a high velocity rotor that acts as a blower evacuating contaminants through special discharge ports at the bottom or in the side of the unit. Only purified air flows to the air filter elements.

Ember Separators



Optional stainless steel face plate shown

Ember Separator packages offer a pre-separation capability to be added to any engine system to allow it to be operated in environments containing smoke and hot embers. The separator allows the passage of air, without the risk of the engine air intake system sucking in hot embers capable of igniting the air filter and thus the engine. Especially useful for fire engines attending open fires such as forestry fires or farm fires where the risk is extremely high.

Ember separator packs without mounting flange

Part No.	Description	Sq. In.
123970001	20.0 x 8.0 x 1 Ember Separator Pack	160
123970002	8.62 x 7.94 x 1 Ember Separator Pack	69
123970003	20 x 5.5 x 1 Ember Separator Pack	110
123970004	9.0 x 20.75 x 1 Ember Separator Pack	187
123970005	12.0 x 9.5 x 1 Ember Separator Pack	114
123970006	10.75 x 9.25 x 1 Ember Separator Pack	99.4
123970007	20.75 x 11.25 x 1 Ember Separator Pack	233.4
123970008	15.0 x 4 x 1 Ember Separator Pack	60
123970009	7.75 x 7.75 x 1 Ember Separator Pack	60
123970010	5.88 x 20.6 x 1 Ember Separator Pack	121.3
123970011	8.0 x 9.0 x 1 Ember Separator Pack	72
123970012	5.5 x 16.25 x 1 Ember Separator Pack	89.4
123970013	25.0 x 3.50 x 1 Ember Separator Pack	87.5
123970014	3.5 x 12.0 x 1 Ember Separator Pack	42
123970015	15.5 x 8.0 x 1 Ember Separator Pack	124
123970016	8.75 x 23.0 x 1 Ember Separator Pack	201.3
123970017	12.75 x 5.34 x 1 Ember Separator Pack	68
123970018	9.5 x 5.34 x 1 Ember Separator Pack	50.8
123970019	7.0 x 16.0 x 1 Ember Separator Pack	112
123970020	6.8 x 11.88 x 1 Ember Separator Pack	81.8
123970021	17.10 x 11.35 x 1 Ember Separator Pack	194
123970022	16.25 x 5.5 x 1 Ember Separator Pack	89.4

Filter Service Indicator

“Filter Minder” Service Indicator is a precision Airflow Restriction Gauge designed to take the guesswork out of air cleaner element replacement. Its operation is simple and virtually foolproof.

As dirt captured by the filter cartridge gradually builds up, the system pressure drop increases and is indicated by the Filter Minder on an easy-to-read scale.

The indicator locks up at the point of maximum restriction so readings can be taken with or without the engine running. When the desired change-out point is reached and the filter cartridge is easily reset by simply pushing the button at the bottom of the unit.

This indicator works equally well on both gasoline and diesel equipment.

The Service indicator lets you know exactly when to replace filter elements. It reduces unnecessary labor and element costs by avoiding premature replacement. It permits you to maximize air filter element life.

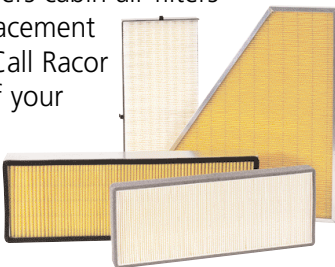
Economical – Saving one filter element change-out can more than cover the cost of the Service Indicator. It's a small price for a potentially large gain year after year.



Cabin Air Filters

Presently, 40% of all vehicles in use have a cabin air filter installed. These filters are used to remove dust, pollen, mold spores, engine exhaust and other gases from the cabin air. The filter should be changed out every 15,000 miles. By servicing the filter, the heater and evaporator will be protected from corrosion and the air in the cabin compartment will be more healthy for the occupants.

Racor now offers cabin air filters for select replacement applications. Call Racor today to see if your cabin air filter is available.



Closed Crank Case Ventilation Systems



Cummins QSM11 marine engine with CCV cutaway



Caterpillar 3196 marine engine with Racor CCV/AF System

- In closed environments like generator set and marine engine rooms, damage to surrounding equipment such as radiators and electronic control panels can cause hazardous conditions, down time and expensive maintenance.
- Oil mist will coat and contaminate the aftercooler and other engine components. This coating reduces engine cooling capacity, causes a degradation of engine performance and reliability over time, and shortens the useful service life of the engine components.
- The engine intake inhales contaminated gasses, clogging air filter systems and damaging turbo-charger components. It is imperative that oil mist be removed from the crankcase emissions prior to introduction into the engine air intake in closed breather systems.

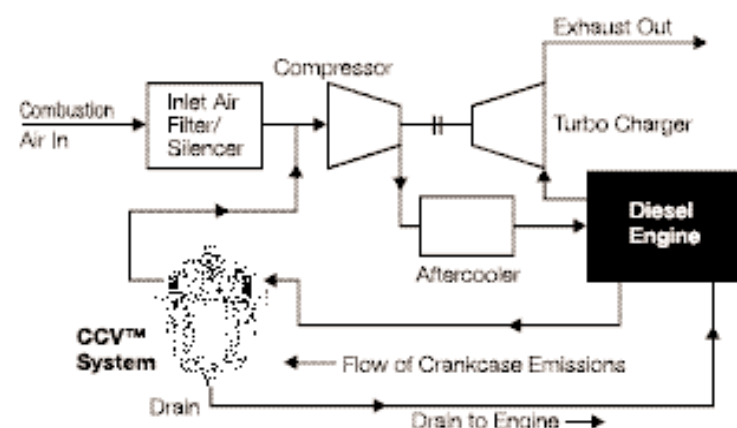


The problem – open and unfiltered engine crankcase breathers

Environmental concerns and legislation to control crankcase emissions have increased significantly. To further reduce the total emissions of engines, it is becoming necessary to close the crankcase breather system, routing these gases into the air intake system.

Crankcase blowby is produced when combustion gases under high pressure are blown passed the piston rings into the crankcase. As these blow by gases pass through the crankcase, they become contaminated with oil mist. Racor's crankcase ventilation system removes these contaminations. The exhaust can then be allowed to be vented in the atmosphere.

For applications requiring more stringent emissions requirements, a closed crankcase filter is recommended. In this application, the exhaust from the crankcase filter is routed to the inlet side of the turbo. A regulator in the crankcase filter controls the vacuum in the crankcase to ensure proper operation.



Racor CCV™ Systems

In a robust, compact package, the patented Racor CCV closed crankcase ventilation filter systems provide superior oil coalescence and crankcase pressure control under the most severe conditions.

The only routine maintenance required for the Racor Crankcase Ventilation Filter System is filter replacement. Typical service life of the high performance filter in diesel applications is 750 hours. Some variations in service life occur depending on load profile, engine wear condition, flow and aerosol mass concentration of crankcase emissions, and soot concentration.

How to Select the Racor CCV Assembly:
Racor CCV application is determined by crankcase flow in CFM. CFM on new engines is low but as the engine wears on, the CFM increases. Select the correct Racor CCV model by dividing the engine horsepower output by 40.

Single CCV units are designed to handle various crankcase flow rates up to 40 CFM. Traditionally, the crankcase flow rate can be calculated as follows: Rated horsepower ÷ 40 = cubic feet per minute (CFM). This formula can only be used as a guide since recent improvements in piston design have produced engines with higher horsepower and lower blow-by flow rates. The blow-by flow rate of a worn engine, at time of overhaul, is generally double the flow rate when the engine is new. The flow rate of a worn engine is factored into the formula. Note: Specify left or right hand inlet when ordering.

Example: CAT 3116-260HP / 40
= 6.5 CFM, select CCV4500
CAT 3406-525HP / 40
= 13.13 CFM, select CCV6000

Pop-up style indicator that alerts of a bypass condition and the need for a filter change

Unique crankcase pressure regulator with integral bypass valve that minimizes variation in crankcase pressure. Excessive variation in crankcase pressure can damage seals, cause loss of oil and other problems

Left or right hand inlet/outlet options

High efficiency oil separation to 0.3μ (microns)

Durable glass-filled nylon components

Stainless steel latches for tool-less element change

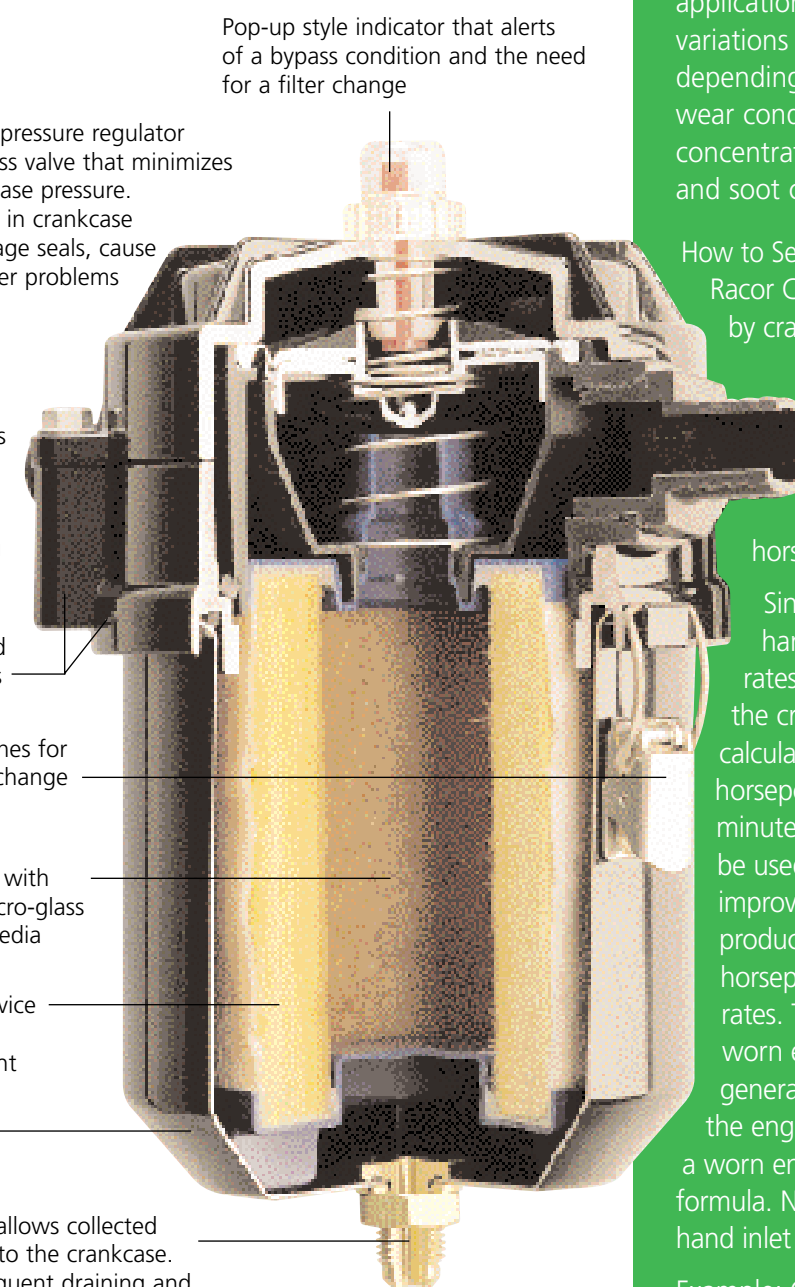
Replaceable high-performance filter with depth-loading, micro-glass fiber coalescing media

Extended filter service interval from the Vaporbloc™ element

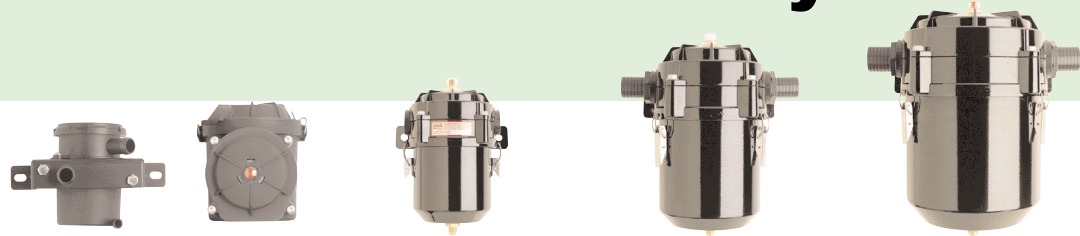
Steel with epoxy powder coating

Drain check valve allows collected oil to be returned to the crankcase. This eliminates frequent draining and significantly reduces oil consumption

Maximum continuous operating temperature, -40°F to +240°F (-40°C to 116°C)



Closed Crank Case Ventilation Systems



	CCV1500	CCV3500	CCV4500	CCV6000	CCV8000
Height	5.1" / 130 mm	7.0" / 178 mm	9.25" / 235.0 mm	12.00" / 304.8 mm	13.88" / 352.6 mm
Maximum Opening Width (incl. clamps & bracket)	8.2" / 208 mm	7.0" / 178 mm	7.50" / 190.5 mm	11.25" / 286.8 mm	13.25" / 336.6 mm
Depth	5.6" / 142 mm	6.3" / 160 mm	5.60" / 142.2 mm	7.30" / 185.4 mm	9.30" / 236.2 mm
Weight	1.5 lbs / .68 kg	2.3 lbs / 1.0 kg	3.26 lbs / 1.48 kg	5.01 lbs / 2.28 kg	8.72 lbs / 3.96 kg
Filter Removal Clearance	6.0" / 152 mm	4.6" / 117 mm	2.25" / 57.2 mm	4.00" / 101.6 mm	5.00" / 127.0 mm
Replacement Element / Media Density/Low	CCV 55365-04	N/A	N/A	N/A	N/A
Replacement Element / Media Density/Medium	N/A	CCV 55304-06	CCV 55248-06	CCV 55274-06	CCV 55222-06
Replacement Element / Media Density/High	N/A	CCV 55304-08	CCV 55248-08	CCV 55274-08	CCV 55222-08
Housing Material	Glass-filled nylon and black powder epoxy coated steel bracket.	Glass-filled nylon components.	Die cast head, glass-filled nylon and black powder epoxy coated steel bowl.	Die cast head, glass-filled nylon and black powder epoxy coated steel bowl.	Die cast head, glass-filled nylon and black powder epoxy coated steel bowl.
Inlet & Outlet Thread Size	3/4" hose	3/4" hose	1 3/16" - 12 STOR	1 5/8" - 12 STOR	1 7/8" - 12 STOR
Max. Cubic Feet per Minute	1" cfm / 30 lpm	3.0" cfm / 84 lpm	10 cfm / 283 lpm	20 cfm / 566 lpm	40 cfm / 1132 lpm
Crankcase Pressure Regulator	Vacuum limiting valve	Integral	Integral	Integral	Integral
Bypass/Change Indicator	N/A	Integral	Integral or Remote	Integral or Remote	Integral or Remote
Engine Block Check Valve Return Fitting	N/A	1/4" NPT	1/4" NPT	1/4" NPT	3/8" NPT
Swivel Fitting (Qty.)	N/A	# 6 JIC (2pcs.)	# 6 JIC (2pcs.)	# 6 JIC (2pcs.)	# 8 JIC (2pcs.)
Oil drain hose I.D.	N/A	.375"	.375"	.375"	.5"

Additional details are available in technical manual #55021. * Units can be manifolded to handle higher flow rates.

Crankvent CV820 and CV1000 Systems trap crankcase blow-by and recycle engine oil through a high performance, open-cell foam filter. They help to decrease costs for maintaining air filters and keeping engine rooms clean. These units are typically used as an "open" system for non-turbocharged engines.



Model No.	CV820	CV1000 ²
Diameter	6.00" / 152 mm	8.14" / 207 mm
Height	7.55" / 192 mm	8.48" / 215 mm
Weight	2.0 lbs. / 0.9 kg	3.0 lbs. / 1.4 kg
Filter Removal Clearance	4.00" / 102 mm	4.00" / 102 mm
Housing Material	Anodized aluminum All 18-8 stainless hardware	Anodized aluminum All 18-8 stainless hardware
Inlet Size	1" Female NPT	1-1/4" Female NPT
Outlet Size	1" Female NPT	1-1/4" Female NPT
Horsepower Range	Up to 350 HP (75–260 KW)	350–600 HP (260–450 KW)
Max. Cubic Feet per Minute	10 cfm / 283 lpm	15 cfm / 425 lpm
Service Kit	CV 820 SK	CV 1000 SK

For use on naturally aspirated engines.
(1) Use of two or more filters per engine allows higher flow.
(2) The Crankvent® CV1000 must be used in two cycle engines with air box drain applications.

Open System Crankcase Filtration



Integral drain/check valve allows for periodic disposal of collected oil. For maintenance-free operation, valve can be plumbed directly to the oil pan

High efficiency, high capacity open cell foam filter
A unique baffle design disperses gases throughout the full length of the media – improving efficiency and release of oil into the reservoir – maintaining a low pressure drop throughout an extended filter life
Reduces NOx and hydrocarbon emissions by lowering combustion temperatures (Closed systems only)

Specially-compounded, long-lasting seals
Oil reservoir collects filtered contaminants

Marine Air Filter / Silencers

- Reduces noise up to 10 dba
- Can integrate Racor CCV systems
- Corrosion resistant
- Cleanable air filter
- No tools needed for serving
- Compact design



Marine Air Filter Assembly

In order to determine the correct marine air filter application, you will need to know the marine air filter rating (AFR). You will need to provide the hose connection to turbo. Choose the correct marine air filter application per the following guideline:

Verify that the marine air filter dimensions will fit into your engine room.
4 cycle engines: AFR = HP x 2.0 2 cycle engines: AFR = HP x 2.5

Note: If AFR is close to maximum capacity of the marine air filter as listed below, use the next size larger.

Example: DDC 12V92TA DDEC (2 cycle – twin turbo):

826 hp x 2.5 = 1032.5 AFR per turbo = (2) AF M501012

1110 hp x 2.5 = 1387.5 AFR per turbo = (2) AF M601212

CAT 3196 (4 cycle - twin turbo):

660 hp x 2.0 = 1320.0 AFR = (1) AF M601212

In addition, note the dimensions of the marine air filter outlets and the Racor CCV connector barb outside diameter from the chart in the Marine Air Filter Kit installation Section to ensure the correct installation for your engine. However, the marine air filters typically correspond with the following CCV Models (see chart on right).



	AF M408512	AF M501012	AF M601212
Max. Air Flow*	800 cfm / 377.6 l/s	1200 cfm / 566.4 l/s	1600 cfm / 755.2 l/s
Outlet Diameter	4.00" / 101.6 mm	5.00" / 127.0 mm	6.00" / 152.4 mm
Filter Element	AF M8040	AF M8050	AF M8060
Length	12.50" / 317.5 mm	12.50" / 317.5 mm	12.50" / 317.5 mm
Depth	9.59" / 243.5 mm	11.14" / 282.8 mm	13.51" / 343.2 mm
Hose Barb size	1.00" / 25.4 mm	1.25" / 25.4 mm	1.25" / 31.75 mm
Weight	4.16 lbs / 1.89 kgs	5.03 lbs / 2.28 kgs	8.00 lbs / 3.63 kgs
CCV hose barb	1" OD	1 1/4" OD	1 1/4" OD
Operating Temperature	-40° / +240° F / -40° / +116° C		

Values given are cubic feet per minute (cfm) and liters per second (l/s).

The engine crankcase breather is connected to the inlet of the Racor CCV assembly. The CCV outlet is connected to the engine's combustion air inlet via an air intake connector where filtered blow-by gas is recycled through the combustion process. Oil collected in the CCV sump is returned to the crankcase through a hose and a drain check valve.

The Racor marine air filter/silencer removes contaminants introduced into the air from both outside and inside the vessel. Sand, salt, carpet fibers and other contaminants are trapped in the oil-impregnated filter media. Turbo noise is reduced by the unique design of the air filter/silencer housing. An integral hose connection on the housing routes the clean blow-by from the CCV back into the engine.

Marine Air Filter	CCV Model
AF M408512	CCV4500
AF M501012	CCV6000
AF M601212	CCV8000



Marine Air Filter/Silencer (AF) System



AF Range compatible with CCV applications.

Select a Fitting/Hose Kit:

Fitting / Hose Kits come with both fittings and enough hose for the inlet and outlet sides of the Racor CCV assembly. Racor CCV filter units require straight thread o-ring x hose barb fittings available only at Racor. In order to determine the correct application, you need to know the quantity and the outside diameter of engine breather(s) hose connection. Fitting/Hose Kits are available in various sizes and configurations. Consult factory or Racor.com.

Optional Tap Sleeves

CCV30100, CCV40100, CCV50125, CCV50125



Hump Hose Fittings

These are designed to be used with existing air cleaner to turbo rubber adapters.

Part Number	Hose
CCV55113	1"
CCV55114	1 1/4"
CCV55115	1 1/2"

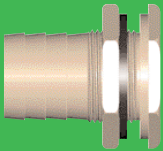


FIG. 3

Air Filter Cleaning Kit

To be used for washing and re-oiling Racor cleanable air filters.

Part Number:
AFM82006



AIR FILTER ACCESSORIES

Low Resistance Flexible Air Inlet Fitting and Clamps

Rubber elbows, adapters and clamps provide positive sealing, minimal airflow restriction and easy servicing.

Flexible air inlet fittings are made of high quality EPDM rubber, and provide minimum airflow restriction between the air cleaner and engine air inlet. Their flexibility simplifies both installation and service. Stainless steel adjustable clamps assure a positive seal and ease of service.



Standard Filter Monitor Part No.s

Part Number	Range (in. water vac.)	Description
400033015 ^A	8-15	Direct Mount
400033020 ^A	8-20	Direct Mount
400033025 ^A	8-25	Direct Mount
014440001 ^A	8-25	Direct Mount w/ 90° fitting
072604000 ^B	4-25	Remote Mount
076248001 ^A	8-25	Dash Mount

^A Unit standard with a 1/8"-27 NPT straight fitting

^B Unit standard with a 90° coupling and 10' hose

Filter Monitor/Single Latching Position

Part Number	Range (in. water vac.)
500198020	20
500198025	25

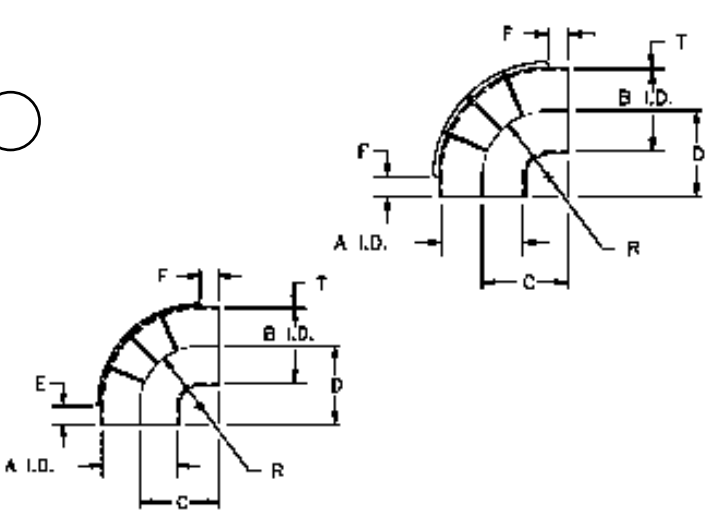
Accessories

Part Number	Description
400034000	90° fitting (Adapts to straight fitting)

Air Inlet Clamps



Rubber Elbows, Adapters & Clamps for Engine Air Intake Systems

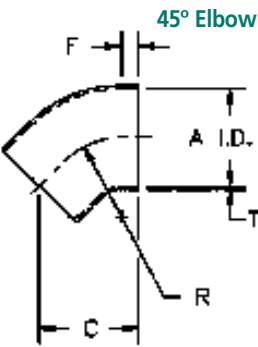


90° Elbow

Part Number	A	B	C	D	F	R	T
401403001	3.50	3.50	5.50	5.50	1.50	4.00	0.25
401403002	4.00	4.00	5.75	5.75	1.25	4.50	0.25
401403003	5.50	5.50	6.50	6.50	1.75	4.75	0.25
401403004	7.00	7.00	7.56	7.58	2.00	5.56	0.31
401403013	5.00	5.00	6.12	6.12	1.62	4.50	0.25
401403014	6.00	6.00	6.75	6.75	1.75	5.00	0.25
401403019	8.00	8.00	8.50	8.50	2.00	6.50	0.38
401403030	2.00	2.00	3.50	3.50	1.50	2.00	0.20
401403038	3.00	3.00	5.25	5.25	1.50	3.75	0.25
401403058	2.50	2.50	4.00	4.00	1.50	2.50	0.25
401403063	10.00	10.00	10.50	10.50	2.00	8.50	0.37
401403201	4.50	4.50	5.50	5.50	2.00	3.50	0.25
401403205	6.00	6.00	5.00	5.00	1.50	3.50	0.25

90° Reducing Elbow

Part Number	A	B	C	D	E	F	R	T
401403025	6.00	5.50	6.75	6.75	1.50	1.75	5.00	0.25
401403029	7.00	5.50	6.25	5.75	1.50	1.50	3.68	0.31
401403033	7.00	5.00	6.25	7.00	2.74	2.74	4.25	0.25
401403035	6.00	5.00	6.00	7.00	1.75	1.75	4.25	0.25
401403041	6.00	5.00	4.75	4.75	1.25	1.25	3.50	0.25
401403044	7.00	6.00	9.00	7.56	3.00	3.00	4.38	0.38
401403056	5.00	4.00	6.00	5.75	1.75	1.75	3.75	0.25
401403057	4.00	3.00	4.50	3.62	1.50	1.50	3.00	0.19
401403066	4.00	3.50	3.62	4.50	1.50	1.50	3.00	0.19
401403091	7.00	6.00	7.00	5.00	1.63	2.50	4.38	0.37
401403092	8.00	7.00	8.50	8.50	2.00	2.00	6.50	0.42
401403098	4.00	3.75	5.75	5.75	2.75	2.75	3.00	0.25
401403206	6.00	4.00	6.00	6.25	2.75	2.50	3.50	0.25
401403207	6.00	4.00	4.75	4.75	1.25	1.25	3.50	0.25
401403208	6.00	4.00	5.81	4.75	1.25	2.31	3.50	0.25
401403209	6.00	4.00	5.50	6.25	2.75	2.00	3.50	0.25
401403219	3.00	2.36	3.00	3.00	0.68	1.00	2.00	0.25



45° Elbow

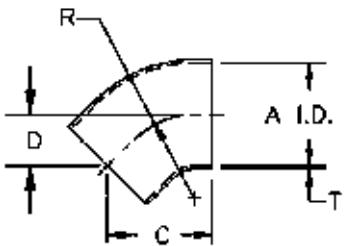
Part Number	A	C	F	R	T
401403005	3.50	5.00	1.68	3.50	0.25
401403006	4.00	5.50	1.46	4.25	0.25
401403007	5.50	6.25	1.70	4.75	0.25
401403008	7.00	8.00	2.38	5.56	0.31
401403015	5.00	5.50	1.36	4.50	0.25
401403016	6.00	6.50	1.74	5.00	0.25
401403020	8.00	8.06	2.00	6.50	0.38
401403059	3.00	5.50	1.60	3.75	0.25
401403202	10.00	10.50	2.25	8.50	0.37
401403212	4.50	5.06	1.50	3.50	0.25

45° Reducer Elbow

Part Number	A	B	C	F	R	T
401403042	7.00	6.00	7.38	1.75	5.56	0.31
401403003	6.00	5.00	6.44	1.75	4.00	0.23
401403013	6.00	5.50	6.44	1.75	4.87	0.25

68° Reducer Elbow

Part Number	A	B	C	D	E	F	R	T
401403055	7.00	6.00	7.60	6.00	3.43	1.68	5.00	0.25



22° Elbow

Part Number	A	C	D	R	T
401403034	5.50	5.15	1.75	4.75	0.25
401403210	6.00	5.25	1.75	5.00	0.25
401403214	4.00	4.25	1.50	4.00	0.25

38° Elbow

Part Number	A	C	D	R	T
401403204	6.00	7.30	2.25	4.00	0.25

54° Elbow

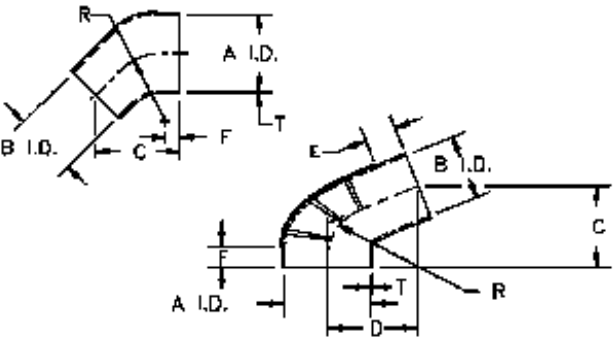
Part Number	A	C	D	R	T
401403216	5.50	7.81	1.87	6.00	0.25
401403217	6.00	7.44	1.75	5.75	0.25

63° Elbow

Part Number	A	C	D	R	T
401403220	8.00	11.90	2.00	5.60	0.38

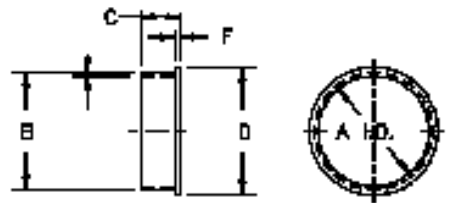
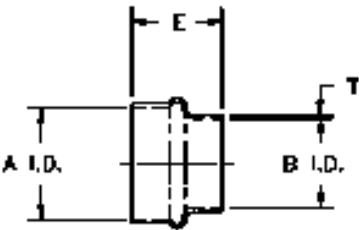
68° Elbow

Part Number	A	C	D	R	T
401403211	5.50	8.31	2.00	4.80	0.25
401403215	4.50	8.50	2.30	4.30	0.25
401403218	6.00	9.13	1.75	7.25	0.25



Reducer Hump Hose

Part Number	A	B	E	T
015094022	6.00	5.00	6.00	0.25
015094023	6.00	5.50	6.00	0.25
015094024	5.50	5.00	6.00	0.25
015094026	5.50	4.00	6.00	0.25
015094027	3.50	3.00	6.00	0.25
015094031	7.00	5.50	7.00	0.25
015094032	8.00	7.00	5.00	0.25
015094037	7.00	5.00	7.00	0.25
015094045	7.00	6.00	6.00	0.25
015094060	3.00	2.50	6.00	0.25
015094061	4.00	3.00	5.25	0.25
015094062	10.00	8.00	6.00	0.25
015094065	5.00	4.00	6.00	0.25
015094073	4.50	4.00	6.00	0.25
015094086	8.00	5.50	7.00	0.25
015094092	8.00	6.00	6.00	0.25
015094105	4.00	3.50	5.25	0.25
015094106	6.00	4.00	6.00	0.25
015094107	6.00	4.00	8.00	0.25
015094108	6.00	4.00	7.00	0.25
015094109	6.00	4.00	7.00	0.25
015094111	3.00	2.75	3.50	0.19
015094112	3.50	2.75	4.00	0.19
015094113	4.00	2.75	4.00	0.19
015094114	3.50	2.50	6.00	0.25
015094115	3.00	2.36	6.00	0.25

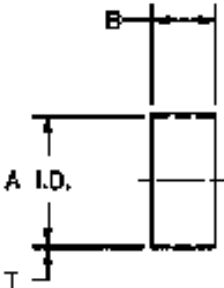


Reducer Insert Sleeve

Part Number	A	B	C	D	F	T
015094036	5.00	5.50	1.75	6.00	0.25	0.25
015094043	5.50	5.00	1.75	6.50	0.25	0.25
015094064	5.00	5.00	1.75	6.50	0.25	0.50
015094072	4.00	5.00	1.75	5.50	0.25	0.50
015094080	3.00	4.00	1.75	4.50	0.25	0.50
015094081	6.00	7.00	1.75	7.50	0.25	0.50
015094082	8.00	9.00	1.75	9.50	0.25	0.50
015094089	2.75	4.00	1.75	4.50	0.25	0.62
015094094	2.25	2.50	1.75	3.00	0.25	0.13
015094096	6.25	7.00	1.75	7.50	0.25	0.38
015094102	4.50	5.00	1.75	5.50	0.25	0.25
015094103	4.00	5.50	1.75	6.00	0.25	0.75
015094104	4.00	4.50	1.75	5.00	0.25	0.25

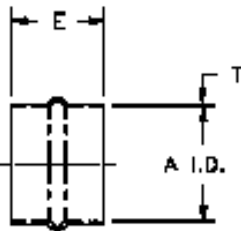
Straight Sleeve

Part Number	A	B	T
015094047	2.75	2.40	0.25
015094048	3.50	2.50	0.25
015094049	3.50	3.00	0.25
015094050	4.75	3.20	0.25
015094051	5.50	3.80	0.25
015094052	5.50	4.00	0.25
015094053	6.00	3.50	0.25
015094054	7.00	5.00	0.25
015094070	5.00	2.50	0.25
015094075	4.00	3.50	0.25
015094076	5.00	3.50	0.25
015094077	7.00	3.50	0.25
015094078	8.00	3.50	0.25
015094079	9.00	3.50	0.25
015094095	6.00	6.50	0.25
015094097	4.00	3.00	0.25



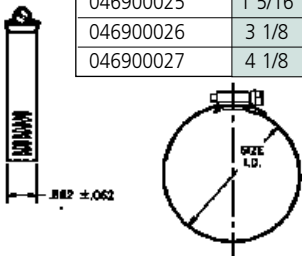
Coupling

Part Number	A	E	T
015094009	3.50	5.25	0.25
015094010	4.00	5.25	0.25
015094011	5.50	6.00	0.25
015094012	7.00	7.00	0.25
015094017	5.00	6.00	0.25
015094018	6.00	6.00	0.25
015094021	8.00	8.00	0.31
015094039	3.00	5.25	0.25
015094040	10.00	6.00	0.25
015094046	4.50	6.00	0.25
015094116	5.00	4.88	0.25
015094117	8.00	5.00	0.25



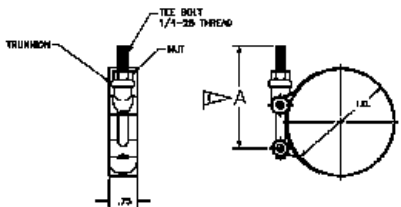
Worm Gear Clamp

Part No.	I.D (min)	I.D (max)
046900001	2 1/16	3
046900005	2 9/16	3 1/2
046900006	2 3/4	4 5/8
046900007	4 5/8	5 1/2
046900008	5 1/8	6
046900009	13/16	1 3/4
046900010	1 9/16	2 1/2
046900011	4 1/8	5
046900012	5 5/8	1 1/2
046900013	3 1/16	4
046900014	6 1/8	7
046900015	6 7/8	7 3/4
046900016	8 3/8	9 1/4
046900017	9 1/8	10
046900018	7 5/8	8 1/2
046900019	9 7/8	10 3/4
046900020	11 3/8	12 1/4
046900021	14 3/8	15 1/4
046900022	15 1/8	16
046900024	3 5/16	4 1/4
046900025	1 5/16	2 1/4
046900026	3 1/8	6
046900027	4 1/8	7



T-Bolt Clamp

Part No.	I.D (min)	I.D (max)
111657001	1.88	2.12
111657002	2.31	2.62
111657003	2.81	3.12
111657004	3.31	3.62
111657005	3.81	4.12
111657006	4.31	4.62
111657007	4.81	5.12
111657008	5.31	5.62
111657009	5.81	6.12
111657010	6.31	6.62
111657011	7.44	7.75
111657012	8.44	8.75
111657013	6.75	7.06
111657014	7.75	8.06
111657015	8.50	8.81
111657016	9.69	10.00
111657017	10.50	10.81
111657018	6.50	6.81
111657019	7.50	7.81
111657020	9.25	9.56
111657021	10.31	10.62
111657022	7.06	7.38
111657023	7.13	7.44
111657024	7.19	7.50
111657025	7.00	7.31



Reducer Coupling w/Fitting

Part Number	A	B	E	T	U	V	W
125291001	7.00	5.00	7.00	0.25	1.83	.63	1/8
125291002	7.00	5.50	7.00	0.25	1.83	.75	1/8
125291003	7.00	6.00	6.00	0.25	1.56	.88	1/8
125291004	6.00	5.00	6.00	0.25	1.50	.75	1/8
125291005	7.00	4.00	8.00	0.25	3.83	.63	1/8

Cobra 90° Elbow (Special)

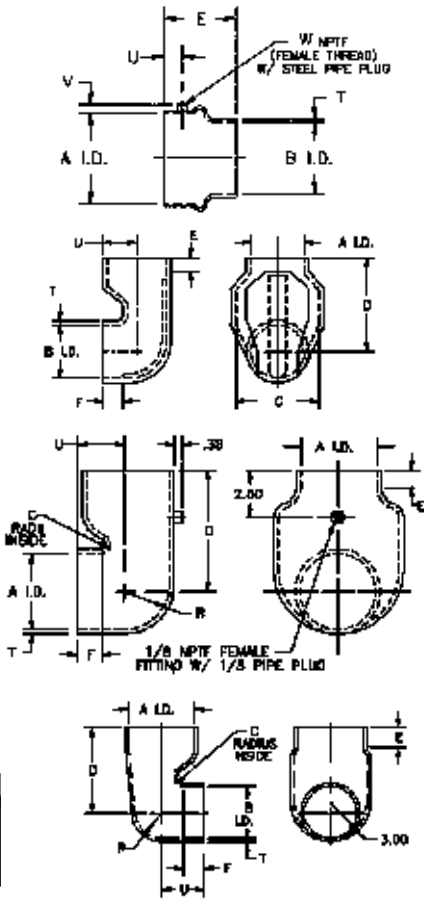
Part Number	A	B	C	D	E	F	T	U
401079068	3.00	3.00	5.00	5.35	1.75	1.14	0.25	1.93
407079074	4.00	5.00	6.62	7.00	2.00	1.00	0.31	2.50
401079093	6.00	5.00	9.23	10.80	2.00	1.50	0.32	5.00

Cobra 90° Elbow

Part Number	A	C	D	E	F	R	T	U
401079069	4.00	0.75	6.44	1.50	1.50	2.00	0.25	2.69
401079071	4.00	0.75	6.44	1.50	1.50	2.00	0.25	2.69
401079087	4.00	0.75	6.44	1.50	2.00	2.00	0.25	3.19

Cobra 90° Elbow (Special)

Part Number	A	B	C	D	E	F	R	T	U
401079083	5.00	4.00	0.75	6.44	1.50	1.50	2.25	0.25	3.19
401079090	5.00	4.00	0.75	6.44	1.50	0.88	2.25	0.25	2.57



More from Parker Racor
Hydraulic

Parker Filtration's global reputation as a reliable supplier of superior hydraulic and lubrication filtration products, fluid power products and fluid condition monitoring equipment, is the result of a focused and integrated development and manufacturing system. A range of products that cover many markets and most applications.



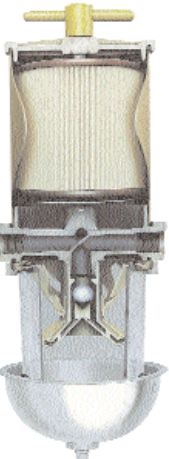
Hydrocarbon

Hydrocarbon filter vessels and elements represent an important and fast developing part of the Parker Racor range. Installation applications include aviation fuel trucks, diesel fuel dispensing systems; marine fuel docks, bulk fuel storage and garage pump dispensing systems. Racor quality elements offer customers finer filtration, cleaner, drier hydrocarbon products and extended element change intervals.



Marine

It's easy to see why Parker Racor is the most trusted name in marine filtration. Experienced sailors and marine system designers know that a fuel filter failure can stop a craft dead in the water. For nearly four decades, Racor has designed and manufactured diesel fuel filter/water separators that represent the standard in the marine industry.



Fuel & Water

Parker Racor fuel and oil filtration systems provide quality protection for engines operating in any environment, anywhere in the world. Racor's tried and trusted range of Spin-On fuel filter/water separators and the legendary Turbine Series represent, to customers, OEMs and end users alike, the very best in fuel filtration solutions.

