

Marine Filtration Products

- Fuel
- Air
- Oil
- Hydraulic
- Water
- Coolant



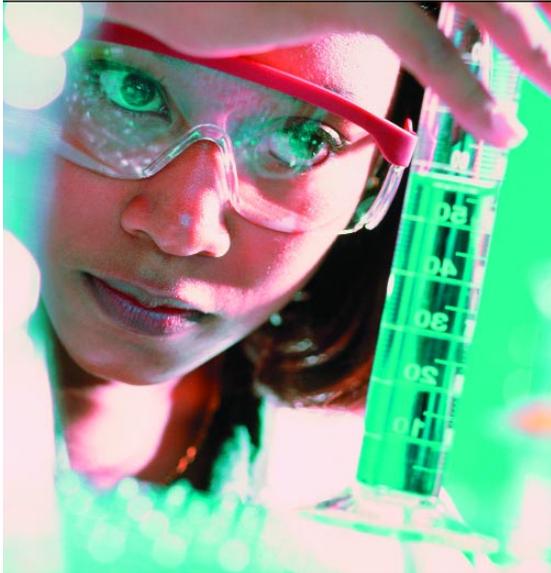


Whether on lake, river or open ocean, for pleasure or commerce, Racor is the preferred brand and single source for the most complete line of high performance engine filtration systems.

Racor's advanced technology offers fuel, oil, engine air, water, crankcase ventilation and hydraulic filtration solutions at every flow rate, in any application. Coolant system products and specially-formulated additives complete the product offering. Read on to learn more about stem-to-stern protection from Racor.



FUEL



1969

It all began with a patented, exceptionally efficient fuel filter/water separator. Today, the Racor Turbine Series remains the preferred choice on land and sea.



1995

Alternative fuels are, in one way, just like diesel – they're susceptible to the problems that result from water and solid contamination. Racor responds with a complete line of pre-strainers and coalescers.



1983

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



1987

With see-thru bowls or UL-listed, USCG accepted metal bowls Racor's diesel and gasoline filter/separators introduced convenience, reliability and peace-of-mind in one easy spin.

1997

High flow hydrocarbon vessels are manufactured to ASME standards and filters meet API/IP and military qualifications.



1991

Racor makes a commitment to the environment with Lifeguard, a fuel air separator that prevents fuel from escaping overboard from vent lines during refueling.



2002

The Racor Fuel Conditioning Module delivers consistent fuel pressure and volume to high pressure fuel injection systems under various speeds, loads and environmental conditions.

OIL



1992

Revolutionary, permanent full-flow oil filtration systems put an end to messy filter changes and expensive disposal. These remote mounts can be combined with Racor bypass oil filters and oil analysis to significantly extend oil changes.



1995

The Racor spin-on oil solution is ingenious and offers a permanent cleanable system that puts an end to frequent and messy on-board filter changes.

2001

The LFS300 Series converts a standard disposable spin-on can to a premium cartridge oil filter that's crushable, burnable and increases capacity and efficiency.



AIR

1994

Engine's gasping for a breath of fresh air breathe easy with the introduction of heavy-duty air filters.



1995

Crankcase ventilation filter systems that keep oily blowby from coating turbochargers and precision components are introduced. While cleaning up engine compartments, Racor CCV™ systems meet new environmental regulations to control crankcase emissions.



1999

Racor debuts its own marine air intake filters to provide clean intake air and reduce turbo noise.



2002

High performance lightweight air filters protect engines from damaging contamination. A large media area reduces air flow resistance and provides higher dirt holding capacity.



COOLANT

HYDRAULIC



1993
Racor pioneers the use of coolant heating to improve filtration and engine operation in winter.

1995
Racor additives help clean up coolant and fuel systems with ultra-high performance, ultra-concentrated additives. It's Racor protection in a bottle.



2001
Racor adds coolant pre-heaters and battery warming pads to offer engine users a means to keep engines warmed up and ready for instant starting without unnecessary wear to components.



1994
Racor engineers turn their attention to hydraulic systems and respond with innovative water-absorbing media that self-regulates its performance... swelling as it reaches capacity.



1996
Medium pressure hydraulic filters expand Racor's commitment to ultimate filtration for every engine, every system, every flow rate.



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A single valve on all of the double manifold MAX models isolates one filter/separator for service while the other keeps operating. This way, you keep running while draining contaminants from the collection bowl or while changing filter elements.

Legendary Diesel Fuel Filtration

When engines demand heavy duty, high capacity water separation and fuel filtration, the Turbine Series is the most complete, efficient and reliable engine protection you can install. Symbolizing Racor's continuing commitment to the science of filtration, the Turbine Series has established its position as the filter/separator often imitated, but never equaled. Models which include an aluminum bowl or stainless steel shield meet ASTM FS1201 certification, are UL-listed, American Bureau of Shipping, Veritas, Det Norske Veritas, ISO 10088 and U.S.C.G. accepted. For severe service, all-metal bowls should be specified.

With an Aquabloc II replacement element, you get a complete kit with all the seals you need. And not just any seals, but specially-formulated, Racor-engineered seals that ensure your Racor Filter/Separator at optimum levels of performance.



Order Genuine Aquabloc II Replacement Elements.

Be sure to specify both the size of element and the micron rating.

MODEL	500	900	1000
2 Micron	2010SM-OR	2040SM-OR	2020SM-OR
10 Micron	2010TM-OR	2040TM-OR	2020TM-OR
30 Micron	2010PM-OR	2040PM-OR	2020PM-OR

S = Secondary/Final 2 micron (Brown end cap)
 T = Primary or Secondary/Final 10 micron (Blue end cap)
 P = Primary 30 micron (Red end cap)



For convenience, end caps are color-coded for easy identification and application – red for 30 micron primary filtration, blue for 10 micron primary or secondary and brown for 2 micron secondary/final filtration

An internal shut-off valve in the 900 and 1000 series safeguards your engine from inferior will-fit elements

Aquabloc II media is a blend of high grade cellulose compounded with engineered fibers and a special chemical treatment. Water won't even cling to the element. Aquabloc II repels it.

Besides removing asphaltenes, gums and varnishes, Aquabloc II elements filter tiny particles of dirt and algae from fuel. Aquabloc II elements are rustproof – with polymer end caps that won't ever corrode.

The Inside Story

- 1** As fuel enters, it moves past the internal check valve then through the turbine centrifuge where it flows in a spiraling direction, spinning off large particulates and water droplets. Being heavier than fuel, they fall to the bottom of the collection bowl.
- 2** Smaller water droplets bead-up along and on the sides of the internal components and on the surface of the Aquabloc® II element. When heavy enough, they too fall into the high capacity bowl to be drained as needed.
- 3** Besides repelling water and tiny solids, asphaltenes, algae and rust are filtered from fuel by the Aquabloc® II element. Because Aquabloc® II elements are waterproof, they remain effective longer.

- T-handle vacuum restriction gauge is available for customer installation
- Genuine Aquabloc replacement element
- Rugged, non-corrosive die cast aluminum construction
- Check valve
- Turbine centrifuge
- MA units have shielded see-thru bowls; MAM bowls are all-metal
- U.L. listed drain valve and water sensor probe options are available



1606B Gauge



**RK20726 Water Alarm/
RK21069 Water Probe**



**RK19492
UL Listed Drain Valve**



MODEL	500 MA	900 MA	1000 MA	75/500 MAX ¹	75/900 MAX ¹	73/1000 MA ¹	75/1000 MAX ¹	77/1000 MA ^{1,2}	79/1000 MA ¹
Maximum Flow Rate	60 gph 227 lph	90 gph 341 lph	180 gph 681 lph	120 gph 454 lph	180 gph 681 lph	360 gph 1363 lph	180/360 gph 681/1363 lph	540 gph 2044 lph	360/540 gph 1363/2044 lph
Height	11.5"/292 mm	17"/432 mm	22"/559 mm	11.5"/292 mm	17"/432 mm	22"/559 mm	22"/559 mm	22"/559 mm	22"/559 mm
Width	5.8"/147 mm	6"/152 mm	6"/152 mm	14.5"/368 mm	18.75"/476 mm	17"/432 mm	18.75"/476 mm	21.5"/546 mm	21.5"/546 mm
Depth	4.8"/122 mm	7"/178 mm	7"/178 mm	9.5"/241 mm	11"/279 mm	12"/305 mm	11"/279 mm	12"/305 mm	12"/305 mm
Weight	4 lbs/2 Kg	6 lbs/3 Kg	10 lbs/5 Kg	17 lbs/7.7 Kg	23 lbs/10 Kg	26 lbs/11.8 Kg	30 lbs/13.6 Kg	39 lbs/17.7 Kg	52 lbs/23.6 Kg
Port Size Std. (Option)	3/4"-16 UNF 14 mm x 1.5	7/8"-14 UNF 22 mm x 1.5	7/8"-14 UNF 22 mm x 1.5	3/4"-16 UNF	7/8"-14 UNF	3/4" NPT	7/8"-14 UNF	1"-11.5 NPT	3/4"NPT
Clean Pressure Drop	0.61 PSI 4.23 kPa	0.34 PSI 2.4 kPa	0.49 PSI 3.4 kPa	0.70 PSI 4.83 kPa	1.7 PSI 11.7 kPa	1.7 PSI 11.7 kPa	3.7 PSI 25.5 kPa	1.7 PSI 11.7 kPa	2.5 PSI 17.2 kPa
Maximum ³ Operating Pres.	15 PSI 103 kPa	15 PSI 103 kPa	15 PSI 103 kPa	15 PSI 103 kPa	15 PSI 103 kPa	15 PSI 103 kPa	15 PSI 103 kPa	15 PSI 103 kPa	15 PSI 103 kPa
Element #	2010	2040	2020	2010	2040	2020	2020	2020	2020
Element Rmvl. Clearance	4"/102 mm	5"/127 mm	10"/254 mm	4"/102 mm	5"/127 mm	10"/254 mm	10"/254 mm	10"/254 mm	10"/254 mm

(1) For double or triple manifold models with 1/2" isolation valves, specify MAV. For double manifold models with single isolation valve and standard filter restriction gauge, specify MAX. The engine may be left operating during isolation of either filter.
 (2) 77/1000 triple manifold without shutoff valve also available.

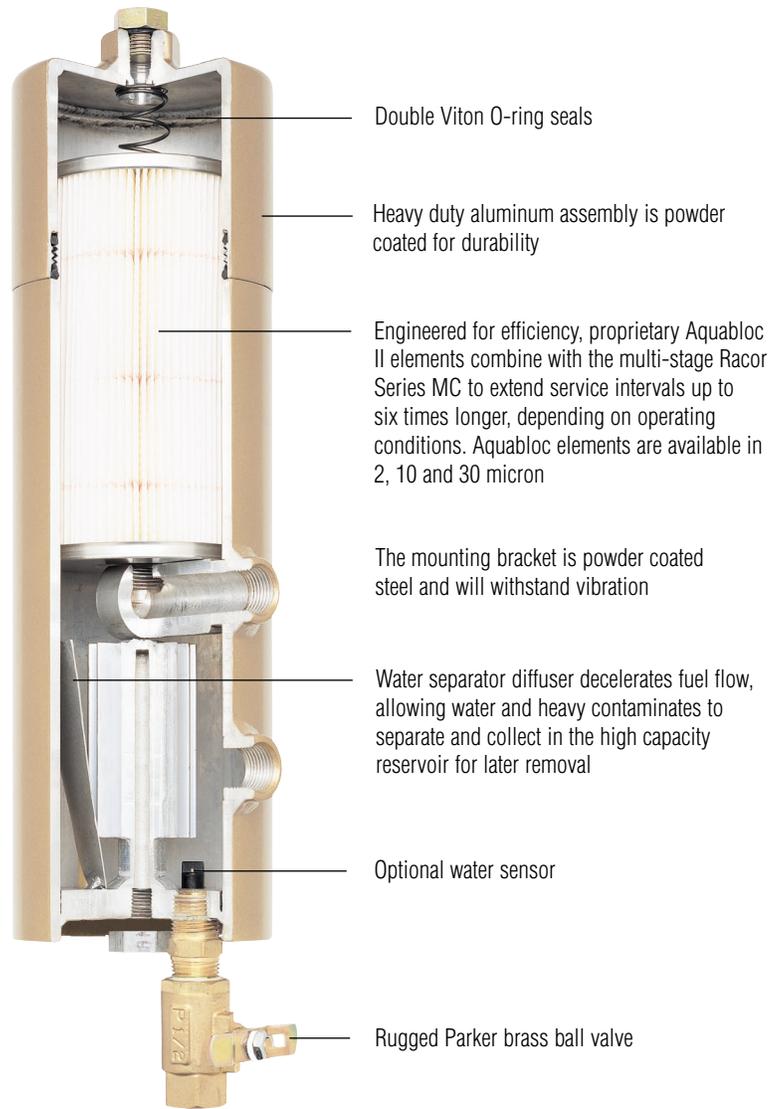
(3) Vacuum installation only. For accurate fuel flow rates consult your engine manual. As a guideline, gph = 0.18 x maximum engine horsepower (diesel only).
 (4) Filter/separators are available with metric tapped ports. Specify metric ports when ordering.

Marine Series MC for Commercial Vessels

The Racor Series MC Fuel Filter/Water Separator is a highly efficient, high capacity diesel fuel filter/water separator for demanding marine environments. Typical applications include workboats, commercial fishing vessels, oil rig supply boats and passenger ferries. Flow rates for the Series MC range from 60 gph to 540 gph.

The Series MC is designed to serve as the primary filter/separator package and is standard with high capacity Aquabloc II filter elements.

All Racor Series MC units meet 33 CFR (Code of Federal Regulations) Part 183, subpart J (pleasure craft) and 46 CFR, Part 56.50-75 (commercial shipping) for diesel fuel systems. Additionally, Series MC units meet or exceed A.S.T.M. Specification F-1201-88 which has been adopted by the United States Coast Guard for inspected vessels. The unit label is ASTM formatted for identification and individual model certification is available upon request.



Model	60MC	90MC	180MC	7590MC	75180MC	79180MC
Maximum Flow Rate	60 gph 227 lph	90 gph 341 lph	180 gph 681 lph	180 gph 681 lph	360 gph 1363 lph	540 gph 2044 lph
Port Size	1/2"-14 NPT	1/2"-14 NPT	3/4"-14 NPT	3/4"-14 NPT	1"-11 1/2 NPT	3/4"-14 NPT
Service Filter Element ³	48029	48029	48030	48029	48030	48030
Height	18.75" / 476	19.75" / 502	21.75" / 552	19.75" / 502	21.75" / 552	21.75" / 552
Width	6.31" / 160	6.31" / 160	6.4" / 163	17.25" / 438	17.5" / 445	25" / 635
Depth	6.69" / 170	6.69" / 170	7.1" / 180	10.5" / 267	11" / 279	11" / 279
Weight (dry)	8.5 lbs / 3.86 kgs	9 lbs / 4.1 kgs	14.4 lbs / 6.53 kgs	28 lbs / 12 kgs	41 lbs / 18.6 kgs	60 lbs / 26.8 kgs
Clean Element Pressure Drop	0.40 PSI 2.76 kPa	0.81 PSI 5.58 kPa	1.25 PSI 8.61 kPa	1.51 PSI 10.41 kPa	2.57 PSI 17.72 kPa	5.77 PSI 39.78 kPa
Operating Temperature	-40° / +150° F / -40° / +66° C (max. temperature as tested under ASTM F1201)					

(1) A water probe option is available.

(3) Allow at least 5 inches (127mm) clearance above the units for element replacement.

(2) Allow at least 2 inches (51mm) clearance under the units for draining water.

(4) Maximum allowable pressure for all models is 50 PSI / 345 kPa.



Durable, 12 vdc roller-cell electric fuel pump offers the benefit of an electric, on-demand, priming pump

Thermostatically controlled PTC style electric (150 watt) heater facilitates cold weather starting

High performance Aquabloc II cartridge-style filter media is environmentally friendly and incinerable

Water-in-fuel (WIF) sensor alerts the operator when service is required. Under-dash control module for pump and water sensor operation is included with pump option.

Removable and reusable contaminant collection bowl with self-venting drain



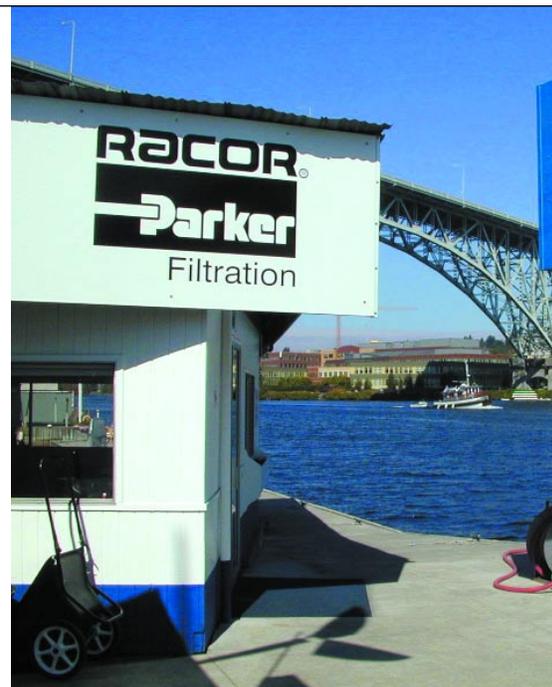
Basic Models	P3	P4	P5
Maximum Flow Rate	30 gph / 114 lph	40 gph / 170 lph	50 gph / 227 lph
Clean Pressure Drop	0.4 psi / 2.8 kPa	0.5 psi / 3.4 kPa	0.8 psi / 5.5 kPa
Maximum Pump Output (at 14.4 volts)	40 gph / 151 lph	40 gph / 151 lph	40 gph / 151 lph
Standard Fuel Port Size (SAE J476)	3/8" – 18 npt	3/8" – 18 npt	3/8" – 18 npt
Total Number of Ports Available:	2	2	2
Fuel Inlets	1	1	1
Fuel Outlets	1	1	1
Replacement Elements:			
02 micron	R58060-02	R58095-02	R58039-02
10 micron	R58060-10	R58095-10	R58039-10
30 micron	R58060-30	R58095-30	R58039-30
Minimum Service Clearance	2.5" (28 mm)	2.5" (28 mm)	2.5" (28 mm)
Height	7.7" (196mm)	9.0" (229 mm)	11.5" (292 mm)
Depth	5.2" (132 mm)	5.2" (132 mm)	5.2" (132 mm)
Width	4.8" (122 mm)	4.8" (122 mm)	4.8" (122 mm)
Weight (dry)	3.4 lb (1.5 kg)	3.8 lb (1.7 kg)	4.2 lb (1.9 kg)
Maximum Pump Output Pressure	10 psi (69 kPa)	10 psi (69 kPa)	10 psi (69 kPa)
Features: ¹			
Water Sensor	Standard	Standard	Standard
Heater	Standard	Standard	Standard
Pressure Regulator (10 psi)	Standard	Standard	Standard
Operating Temperature	-40° to +255°F / -40° to +121°C		

Vacuum installations are recommended. ¹ Not for use with gasoline applications.

How To Order – The example below illustrates how part numbers are constructed.

P4	2	10	N	H
Specify 'P3' for 30 gph, 'P4' for 40 gph, or 'P5' for 50 gph	'2' must be in the part number. (It specifies a 12 vdc pump)	Specify micron rating of element: '02', '10', or '30'	'N' must be in the part number. (It specifies standard 3/8" npt ports)	'H' must be in the part number. (It specifies a 12 vdc, 150 watt heater)

For continuous run pump operation, consult factory (1-800-344-3286).



The patented P Series diesel fuel conditioning module (for vacuum side applications only) was developed for application in any diesel engine fuel injection system. P Series assemblies are available in three sizes and all feature 3/8" NPT fuel ports. This innovative and modular fuel filter/water separator incorporates low-pressure fuel system components into a single package. Supplies clean, dry fuel to the fuel system and serves as a repriming system.

Compact and Versatile Systems for Main Propulsion and Genset Applications

1 Cost-Effective Visual Inspection



Cost effective designs for on engine or remote mounting. Complete assemblies or direct engine spin-on filters. Available with see-thru or all metal bowls.

2 High Capacity

Hand operated fuel priming pumps are integral to many Racor diesel spin-on series models. A feature that allows for the removal of unwanted air from the filter and the engine fuel system.

3 Environmentally Friendly

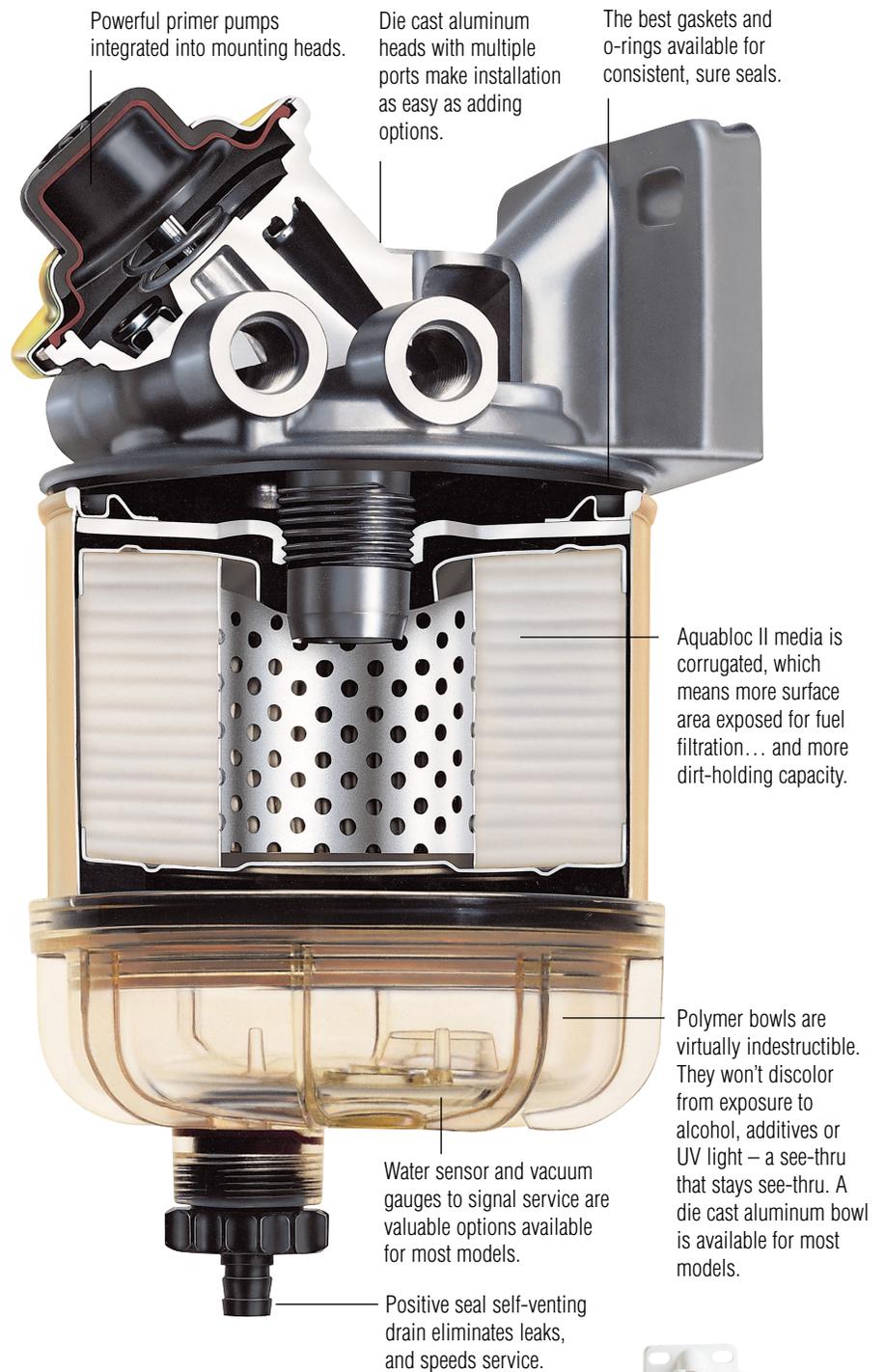
Engineered polymer bowls are reusable, impact-resistant and virtually indestructible. When it's time for service, only the filter element is replaced – the see-thru bowl and drain valve assembly are reused. The long life-cycle of the bowl saves money and reduces the environmental impact through disposal of less material. Use metal bowl versions for inspected or commercial vessels.

4 Easy Upgrades

See-thru bowls provide connection ports for upgrades which enhance engine performance and reliability. Powerful in-bowl heaters can be added to improve operation in colder climates and electronic sensors alert the operator to drain water in the bowl.

5 Corrosion-Free Construction

Advanced polymer technology means bowls will not deteriorate from water collection, alcohol-blended fuels, exposure to harsh additives or UV light. Unseen water lying in inferior sealed cans cause them to rust and corrode or worse yet, increase in level and pass through.



Racor Aquabloc elements are available in 2,10 and 30 micron ratings.



A handy accessory – bowl removal wrench Part # 22628



Dual Spin-On Filter/Separators

With the Racor Models 75/B32016 and 75/B32009, a simple turn of the integral handle puts a clean filter in service when the on-line filter gets dirty – so engines can keep operating. Maximum fuel flow is 40 and 120 gph respectively with both filters on-line (or one-half maximum fuel flow with one filter on-line). Three micron ratings can be specified and an optional metal bowl is available for severe service applications. Element replacement is not possible while the engine is running.



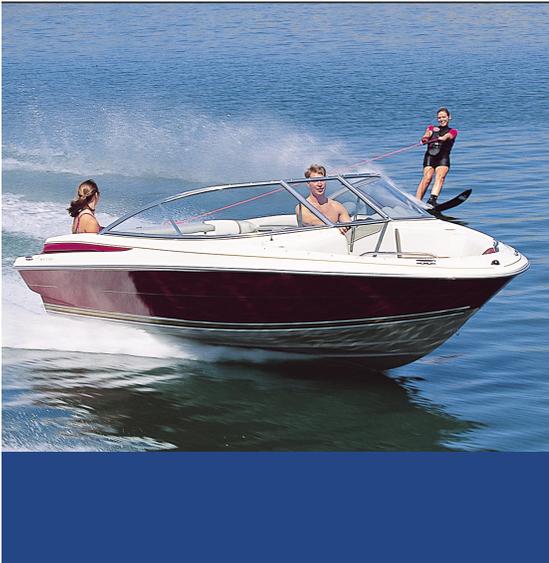
Please specify carefully—there are important differences among Spin-On Series features which effect performance and application.



	CLEAR BOWL	N/A	120A	230	245	460	490	4120	3150R	3250R
METAL BOWL	110A	120RMAM	230RMAM	245RMAM	460MAM	490MAM	4120MAM	N/A	N/A	N/A
Maximum flow Rate	15 gph/57 lph DIESEL 35 gph/133 lph GAS	15 gph / 57 lph	30 gph / 114 lph	45 gph / 170 lph	60 gph / 227 lph	90 gph / 341 lph	120 gph / 454 lph	150 gph 568 lph	250 gph 946 lph	
Gasoline or Diesel ¹	Both	Both	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
Vacuum Installation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pressure Installation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Maximum PSI ²	100 PSI / 690 kPa	7 PSI / 48 kPa	30 PSI / 207 kPa	30 PSI / 207 kPa	30 PSI / 207 kPa	30 PSI / 207 kPa	15 PSI / 103 kPa	7 PSI / 48 kPa	7 PSI / 48 kPa	
Clean Pressure Drop	0.15 PSI 1.08 kPa	0.15 PSI 1.08 kPa	0.31 PSI 2.14 kPa	0.61 PSI 4.21 kPa	0.39 PSI 2.7 kPa	0.95 PSI 6.5 kPa	.85 PSI 5.9 kPa	.68 PSI 4.7 kPa	1.0 PSI 6.9 kPa	
Port Size	1/4" NPT	1/4" NPT	1/4" NPT	1/4" NPT	3/8" NPT	3/8" NPT	3/4" SAE	7/8"-14 SAE	7/8"-14 SAE	
Integral Primer Pump ³	No	No	Yes	Yes	Yes	Yes	Yes	No	No	
Replacement Element No. ⁴	R11 T	R12 ⁵	R20 ⁵	R25 ⁵	R60 ⁵	R90 ⁵	R120 ⁵	S3238 ⁵	S3207 ⁵	
MAM Element ¹	R11T	R12SUL	R20TUL	R25TUL	S3211TUL	S3201TUL	S3201TUL	N/A	N/A	
No. of Ports	4	4	3	3	4	4	4	2	2	
Drain Type	Positive Seal	Positive Seal	Positive Seal	Positive Seal	Positive Seal	Positive Seal	Positive Seal	Positive Seal	Positive Seal	
Water Sensor Option	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Height	6" / 152 mm	6.5" / 165 mm	9" / 229 mm	10.5" / 267 mm	11" / 279 mm	11.8" / 300 mm	15" / 381 mm	13.63" / 346 mm	17.25" / 438 mm	
Width	3.2" / 81 mm	3.2" / 81 mm	4" / 102 mm	4" / 102 mm	4.5" / 114 mm	4.5" / 114 mm	4.5" / 114 mm	5.00" / 127 mm	5.00" / 127 mm	
Depth	3.2" / 81 mm	3.2" / 81 mm	4" / 102 mm	4" / 102 mm	4.8" / 121 mm	4.8" / 121 mm	4.8" / 121 mm	5.5" / 140 mm	5.5" / 140 mm	
Weight	1.3 lbs / 0.59 kg	1.3 lbs / 0.59 kg	2 lbs / 0.90 kg	2.2 lbs / 1.0 kg	2.7 lbs / 1.3 kg	2.9 lbs / 1.4 kg	3.9 lbs / 1.8 kg	3.6 lbs / 1.63 kg	4.6 lbs / 2.08 kg	

(1) Use 110A and MAM versions for inspected or commercial vessels.
 (2) Pressure installations are applicable up to the maximum PSI shown.
 (3) Models with integral primer pumps are not recommended for gasoline applications.

(4) Replacement element micron rating can be specified as "S" for 2 micron, "T" for 10 micron, or "P" for 30 micron as a suffix.
 (5) Ten micron only.



The Most Complete Protection On The Water

Being on the water is fun, having water in your fuel is not. And more than ever today's high performance gasoline inboard and outboard engines require clean, dry fuel. Standard spin-on filters simply don't offer the improved features and peace-of-mind that come with quality Racor fuel filter/water separators.

- Clear contaminant collection bowl with drain valve for outboards
- Ten micron Aquabloc media
- Long life with 98% efficiency
- Corrosion-resistant construction
- Metal bowl units for inboard powered boats meet 33 CFR and USCG standards
- Meets ABYC standard H-23



Basic Models	120R-RAC-01	120R-RAC-02	320R-RAC-01	320R-RAC-02	660-RAC-01	660-RAC-02	3120R-RAC-32
Maximum Flow Rate	30 gph / 114 lph	30 gph / 114 lph	60 gph / 340 lph	60 gph / 340 lph	90 gph / 454 lph	90 gph / 227 lph	120 gph / 227 lph
Filter Element No.	S3240	S3240UL	S3227	S3228UL	S3232	S3232UL	S3232UL
Center Threads	M18 x 1.5	M18 x 1.5	1-14	1-14	1-14	1-14	1-14
Head Port Size	1/4-18NPTF	1/4-18NPTF	1/4-18NPTF	1/4-18NPTF	3/8-18NPTF	3/8-18NPTF	1/2-14NPTF(1)
Height	6.5" / 166 mm	6.0" / 153 mm	9.38" / 238 mm	9.38" / 238 mm	11.00" / 280 mm	11.00" / 280 mm	10.38" / 264 mm
Width	3.2" / 81 mm	3.2" / 81 mm	4" / 102 mm	4" / 102 mm	4.2" / 106 mm	4.2" / 106 mm	4" / 102 mm
Depth	3.2" / 81 mm	3.2" / 81 mm	4" / 102 mm	4" / 102 mm	4.5" / 114 mm	4.5" / 114 mm	5" / 127 mm
Weight (dry)	1.1 lbs / .05 kgs	1.2 lbs. / .06 kgs	2 lbs / 0.90 kgs	2 lbs / 0.90 kgs	3 lbs / 1.4 kgs	3 lbs / 1.4 kgs	2 lbs / 0.90 kgs
Clean Pressure Drop	0.15 PSI / 1.03 kPa	0.15 PSI / 1.03 kPa	0.61 PSI / 4.23 kPa	0.15 PSI / 1.03 kPa			
Max Pressure	7 PSI / 48 kPa	7 PSI / 48 kPa	7 PSI / 48 kPa	7 PSI / 48 kPa	7 PSI / 48 kPa	7 PSI / 48 kPa	7 PSI / 48 kPa
Element Removal / Underbowl	1" / 25.4mm	1" / 25.4mm	1" / 25.4mm	1" / 25.4mm	1" / 25.4mm	1" / 25.4mm	1" / 25.4mm
Operating Temp.	-40° / +255° F / -40° / +124° C						

(1) Pressure installations are applicable up to the maximum PSI shown. Racor filter/separators will not separate oil from gasoline in blended fuel mixtures.

Compact filters for smaller boats and marine generators.



Part No.	025-RAC-01	025-RAC-02	025-RAC-05	110A	025-RAC-10	025-RAC-12
Flow Rate	25 gph	25 gph	25 gph	35 gph	45 gph	25 gph
Media	250 micron cleanable plastic screen	10 micron Aquabloc II filter	10 micron Cellulose filter	10 micron Aquabloc filter	105 micron prescreen filter	10 micron cellulose filter
Configuration	Anodized mounting head w/reusable see-thru bowl	Anodized mounting head w/reusable see-thru bowl	Stainless steel 5/16" w/hose barb epoxy paint	1/4 npt die-cast painted mounting head	1/2 npt epoxy paint	5/16 hose barb plastic
Dimensions	2.25" x 4.25"	2.25" x 4.25"	4.75" x 2.30"	6" x 3.20"	4.75 x 1.85	3.92 x 1.25

Upgrade Your Standard Gasoline Filter

Now, owners of inboard or outboard engines can get smoother operation and longer life – all in one easy spin onto their existing engine filter heads. There’s a choice of rugged, reusable see-thru bowl with self-venting drain or a metal bowl with drain plug for inboard applications. Metal bowls are UL-listed and USCG accepted. See-thru bowls are recommended for outboard applications only.



For inboards:
B3202MAM
B32021MAM



For outboards:
B32013
B32014

OUTBOARD ENGINE VESSELS	
B32013	Replaces Quicksilver. Also fits: Yamaha, Suzuki, SMI, Volvo Penta, Sierra, AquaPower and other filter heads. With see-thru bowl.
S3213	Replacement Element for B32013.
B32014	Replaces OMC. See-thru bowl.
S3214	Replacement Element for B32014
INBOARD ENGINE VESSELS	
B3202MAM	Replaces Quicksilver. Also fits: SMI, Sierra AquaPower and other filter heads. Metal bowl.
S3220UL	Replacement Element for B3202MAM
B32021MAM	Replaces OMC Metal Bowl. UL recognized.
S3221UL	Replacement Element for B32021MAM

Fuel Filter Funnel

The Racor Fuel Filter Funnel (RFF) family is a new heavy-duty, fast-flow, pre-filter-in-a-funnel that separates damaging free water and contaminants from gasoline, diesel, heating oil and kerosene. It’s ideal for fueling boats, a generator, lawn mower, chain saw, weed whacker, snow blower or ATV.

The new RFF features a stainless steel filter capable of removing free water and solids down to .005 inch and allows you to visually inspect the quality of your fuel supply as you refuel.



RFF Funnel Group
3.9 gpm, 5.0 gpm, 2.7 gpm

Caution for Aviation Users:

Petroleum products flowing over a plastic surface generate static electricity. Caution should be taken to ensure that the RFF is grounded to reduce static electricity buildup and reduce the chance of explosions or fire. Electrically bond the funnel by using a wire with a metal clip on each end and clamp one to the upper rim of the funnel and the other to the fueling source. For example, the metal gas can or nozzle from the pump.

The Ultimate In High Capacity Filtration

For over 30 years, Racor has been recognized as the leader in filtration and separation technology. Our engineering team takes specific application prerequisites, and by utilizing the latest computer-assisted design tools, quickly develops the necessary components to manufacture filter vessels that meet industry and customer-specific requirements. Our successful experience in global applications is the result of a continuous improvement process and real-world evaluations of product performance.



806 Fuel Filter/Water Separator



75/812 Fuel Filter/ Water Separator. Marine (MA) models with metal bowls are also available in the 800 Series.

RVFS Series

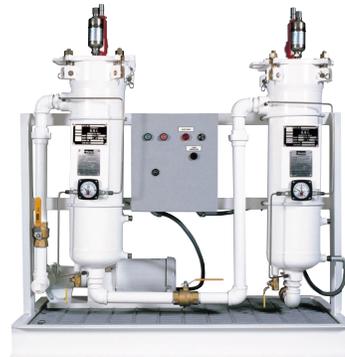
Racor RVFS Series filter vessel applications include removing liquid and solid contaminants from diesel fuel, gasoline, kerosene, aviation gas, jet fuel and other lubricating or hydraulic oils. RVFS vessels utilize proven filter design technology and can be used as coalescers, pre-filters or separators by changing internal components, flow direction or by selecting optional filter cartridges when ordering. The vessels are fabricated from carbon steel with an exterior primer coating of Gavlon suede gray and the interior is epoxy coated to meet MIL-C-4556E.

Element choices include coalescers, separators, particulate, clay bags, pre-filters or water absorbing cartridges.

Completely dressed factory filter vessels can be specified with differential pressure gauges, water sight glasses, air eliminators, and manual or automatic drains. Wall mount units can be special ordered. Consult factory for other options.



RVFS-2
14" W x 51" D



The multi-stage RVFS Filter System is a "turn-key" system ideal for easy installation and servicing. Part # RVFS-1-MS

800 Series

The Racor 800 Fuel Filter/Water Separator Series offers large diesel engine operators both ease of maintenance and continuous engine operation. Continuous operations include filter changeouts and the draining of accumulated water from the standard, see-thru, high impact bowls. If a metal bowl is required, add "MA" to the part number. Manifolded systems have sufficient fuel flow capacity for prime or standby power operations, commercial marine engines or other large engine applications.

The units utilize proven Racor technology with Aquabloc filtration, which filters to ten microns to purify diesel fuel upstream of OEM engine filters. Protecting high tolerance injection components keeps engines running at peak performance and lowers maintenance costs. One inch (1") NPTF inlet and outlet ports allow for improved flow and less restriction. Options include see-thru or metal contaminant collection bowls, heaters, water sensors, air eliminators, water sight glasses, manual or auto drains and vacuum or differential pressure gauges. Electric pumps are for diesel applications only.

For additional information, request bulletin No. 22586 (812, 75812) or 22658 (79812) or consult factory for other options.



Vessel Series	806	812	75/812	79/812	RVFS-1	RVFS-2	RVFS-3
Fuel Ports	1" NPT	1" NPT	1" NPT	1 1/4" NPT	2" NPT	2" NPT	2" NPT
Max. Flow Rate	360 gph / 1363 lph	720 gph / 2725 lph	1440 gph / 5450 lph	2160 gph / 8175 lph	50 gpm / 189 lpm	100 gpm / 378 lpm	150 gpm / 568 lpm
Max. Working Pressure	30 PSI / 207 kPa	30 PSI / 207 kPa	30 PSI / 207 kPa	30 PSI / 207 kPa	Jet A, AV Gas Flow Rates		
Clean Pressure Drop	1.6 PSI / 11 kPa	3.2 PSI / 22 kPa	6.0 PSI / 41.4 kPa	5.2 PSI / 35.9 kPa	50 gpm (189.3 lpm)	100 gpm / 378.5 lpm	150 gpm / 568 lpm
Temperature Rating	-10 F / +180 F	-10 F / +180 F	-10 F / +180 F	-10 F / +180 F	Diesel Fuel Flow Rates		
	-23 C / +82 C	-23 C / +82 C	-23 C / +82 C	-23 C / +82 C	25 gpm / 94.5 lpm	50 gpm / 189 lpm	75 gpm / 283.5 lpm
Design Pressure					245 PSI / 17 bar	245 PSI / 17 bar	245 PSI / 17 bar
Design Temperature					250 F / 121 C	250 F / 121 C	250 F / 121 C
Replacement Elements	RK 22788	RK 22610	RK 22610	RK 22610	RK 22610	RK 22610	RK 22610
Height	24" / 610 mm	34" / 855 mm	34" / 855 mm	34" / 855 mm	39" / 991 mm	51" / 1295 mm	65" / 1651 mm
Width	9" / 226 mm	9" / 226 mm	18" / 476 mm	30" / 762 mm	13.75" / 350 mm	13.75" / 350 mm	13.75" / 350 mm
Depth	9" / 229 mm	9" / 229 mm	16" / 394 mm	16" / 394 mm	13.5" / 343 mm	13.5" / 343 mm	13.5" / 343 mm
Dry Weight	25 lbs / 11 kgs	22 lbs / 10 kgs	77 lbs / 35 kgs	160 lbs / 73 kgs	68 lbs / 91 kgs	77 lbs / 113 kgs	86 lbs / 136 kgs
Collection Bowl Capacity	3.7 L	3.7 L	7.4 L	11.1 L			
Minimum overhead space required for element change	6.0" / 152 mm	12" / 305 mm	12" / 305 mm	12" / 305 mm	16" / 406 mm	32" / 813 mm	47" / 1194 mm

RK 22610 – Replacement Element Kit (contains one each of 8021 and 8022 filter elements and a lid gasket; 75812 requires 2 kits; 79812 requires 3 kits)

Options include see-thru or metal contaminant collection bowls, heaters, water sensors, air eliminators, water sight glasses, manual or auto drains, and vacuum or differential pressure gauges. Options, including filter elements, vary depending on the vessel series. Please consult Racor for available options. Electric pumps are for diesel applications only.

Element Options

	RVFS-1	RVFS-2	RVFS-3	Micron sizes
Silicone-treated				
Pleated Pre-filters	6" x 14"	6" x 30"	6" x 44"	0.5, 1, 2, 5, 10, 25
FBC Clay Bags	7" x 18"	7" x 18"	7" x 18"	N/A
Water Absorbing Elements	6" x 14"	6" x 14"	6" x 14"	1, 5, 10, 25
OCP Coalescer	8" x 15"	8" x 30"	8" x 44"	1, 2, 5, 10, 25
Teflon® Separator	4" x 15"	4" x 30"	4" x 44"	Screen

For additional information, request brochure no. 18-1708, RVFS Vessel Filter Element Options Identification and Application Guide.



RHFS-D-25 & RHFS-D-50

- ASME Code, Section VIII construction, stamped and certified.
- Designed for low pressure drop.
- Designed for easy element changeouts.
- A variety of positive element seal designs are available.
- Welded carbon steel construction is standard.
- Large capacity sumps are incorporated into each design.
- Alternate material types, including stainless steel and aluminum, can be designed and constructed for your requirements.
- A variety of interior and exterior surface coatings are available for your specification.
- Large capacity sumps are incorporated into each design.
- CAD provides fast and accurate custom vessel designs.

Consult factory for specific vessel tech data and dimensions.

Vessel Series	Flow Rates	Fuels	Elements	Inlet/Outlet	Specifications	Coatings
RHFS-D-25	1500 gph / 5677 lph	Diesel Fuel	CP Coalescers	NPT	Carbon Steel	Internal – Epoxy
RHFS-D-50	3000 gph / 11,354 lph		Teflon®, Synthetic & Paper Separators	RF Flange	ASME Code, Section VIII	External – Primer

Spin On Protection At The Pump

Start protecting your engine investment right at the pump. Racor's Fuel Dispensing Filters are essential for stationary and overhead tanks and mobile service vehicles. With their easy to install heads, they remove virtually 100% of the contaminants from diesel fuel.

Racor FDW elements feature a super absorbent, chemically-treated media that absorbs 25 times its weight in water, "locking it in" as a barrier against free and emulsified water. There is no bypass valve which ensures that fuel is completely protected. As the media swells, it significantly reduces the fuel flow rate, signaling a need to replace the element.

Racor offers filter protection down to 25 microns. Flow rates range from 15 to 100 gpm. Element service is clean and easy – there's no cartridge to replace – just spin on a new Racor filter element.

Fuel dispensing filters can be used with diesel fuel or gasoline.



Filter Heads

Part No.	HH07500	FDH12500	FDW125DD
Port Size	3/4" NPT	1 1/4" NPT	1 1/2" NPT
Element	FDW 3525 / 3825	FDW 51125	FDW 51125(2)
Element Thread	1" – 12 UNF	1 1/2" – 16 UNF	1 1/2" – 16 UNF
Flow Rate	15 gpm / 57 lpm	50 gpm / 176 lpm	100 gpm (Dual unit) / 375 lpm

Water Removing Filter Elements

Part No.	FDW 3525	FDW 3825	FDW 51125
Nominal Micron Rating	25	25	25
Element Size	3.7 D x 5.5 L	3.7 D x 8.0 L	5.0 D x 11.0 L
Element Thread	1" – 12 UNF	1" – 12 UNF	1 1/2" – 16 UNF
Application	Marinas	Marinas	Marinas

Maximum operating pressure of Fuel Dispensing Filter Heads and Water Removing Filters is 100 PSI (690kPa).
10 micron elements available through special order.

FBO-10 and FBO-14

Racor's new FBO-10 and FBO-14 filter assemblies were designed to meet the toughest refueling conditions and provide for ease of filter changeouts. Specify either FBO-10 or FBO-14 and cartridge element part number when ordering.



Easy to service without tools.

Drain

Element Applications

Micron Rating	Micron	FBO-10	FBO-14	Flow Rate	
		6 x 10 Element	6 x 14 Element	Diesel	Gas
Filter Separator	1	FBO-60327	FBO-60336	18	45
	5	FBO-60328	FBO-60337	18	45
	10	FBO-60353	FBO-60356	18	45
	25	FBO-60329	FBO-60338	18	45
Prefilter	1	FBO-60330	FBO-60339	20	50
	5	FBO-603331	FBO-60340	20	50
	10	FBO-60356	FBO-60357	20	50
	25	FBO-60332	FBO-60341	20	50
Absorptive Filter	1	FBO-60333	FBO-60342	18	45
	5	FBO-60334	FBO-60343	18	45
	10	FBO-60355	FBO-60358	18	45
	25	FBO-60335	FBO-60344	18	45

8250D

8250D Fuel Dispensing Filter utilizes water repelling 30 micron Aquabloc media and a see-thru bowl. The assembly can be hard plumbed directly to the fuel dispenser. Maximum flow rate is 250 gallons per hour.

Specifications

Part No.	8250D
Maximum Flow Rate	250 gph / 946l ph
Maximum Working Pressure	15 PSI / 103 kPa
Filter Element	S3207
Port Sizes	1 1/4" NPT
Height	16 in / 411mm
Width	5.3 in / 135 mm
Depth	5.3 in / 135 mm
Weight	3.1 lbs / 1.4 kg
Clean Pressure Drop	1.0 PSI / 6.9 kPa
Bowl/Sump Water Capacity	82 ml
Operating Temperature	-10° to 180° F -23° to 82° C

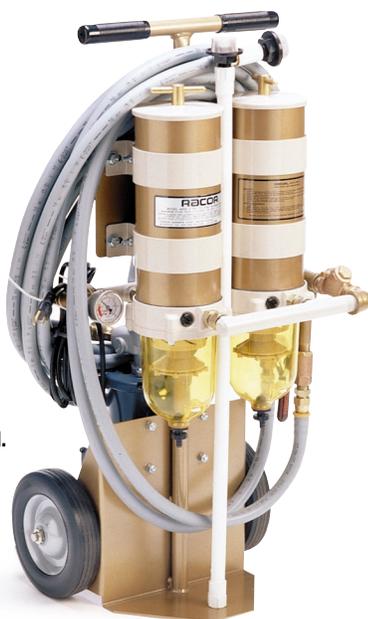




800-OF3 Fuel Recycling System can be mounted on a bulkhead and plumbed directly to fuel tanks or engines. Electric pumps are for diesel applications only.

Specifications

	800D-5REC	800D-OF3
Maximum Flow Rate	180 gph / 681 lph	180 gph / 681 lph
Maximum Working Pressure	15 PSI / 103 kPa	15 PSI / 103 kPa
Service Filter Element Number required/unit	2020TM-OR 2	2020TM-OR 2
Port Sizes	1/2" NPT	1/2" NPT
Height	46 in / 1168 mm	46 in / 1168 mm
Width	20 in / 508 mm	20 in / 508 mm
Depth	24 in / 610 mm	24 in / 610 mm
Weight (dry)	82 lbs / 37 kg	57 lbs / 26 kg
Clean Pressure Drop	1.5 PSI / 10.2 kPa	1.2 PSI / 8.5 kPa
Bowl/Sump Water Capacity	610 ml	610 ml
Operating Temperature	-10° to 180° F -23° to 82° C	-10° to 180° F
Voltage	120 VAC	Various— call Racor



The 800D-5REC Mobile Filter Buggy lets you conveniently take high capacity filtration wherever it's required.



Fuel Recycling Systems

Racor Recycling Systems can be used to remove water and contamination from diesel fuel, and kerosene in day tanks and fuel tanks. Tank recycling reduces the cost of engine fuel filters and maintenance requirements. The 800-OF3 wall/bulkhead mount model and the 800D-5REC portable buggy offer continuous or timed operation to meet demanding schedules. Filter assemblies feature genuine Aquabloc II elements, see-thru collection bowls which allow quick visual inspection and easy to use manual drain valves.

Wall/Bulkhead Mount

The wall or bulkhead mounted systems recycle diesel fuel to cleanup day tanks or fuel tanks. Systems offer continuous or timed operation to meet operators demanding schedules. Fuel tank recycling offers maximum engine filtration life and reduces engine maintenance costs. Vacuum gauges and optional water sensors alert operators when element service or water draining is needed. Various element ratings are available for engine filtration and fuel cleanliness compatibility.

Portable Filtration Systems

Racor's portable filter buggy removes water and contamination from diesel fuel, kerosene and light hydrocarbons. The unit's lightweight permits field maintenance operations with minimum effort. The 800D-5REC buggy features 10 micron Aquabloc elements. The unit flows up to 3 gallons per minute with a clean element low pressure drop of 1.5 PSI. Filter assemblies feature a clear collection bowl which shows operators water and contaminants being removed. A manual drain valve simplifies draining. Additional details can be obtained from Racor catalogue 7480.



We've Bottled Racor Protection

Racor Additives are performance-enhancing products for all climates and seasons. There are several convenient sizes, including one and 2.5 gallon bottles and a 16 oz. bottle that makes measuring quick and easy. The high concentration of active ingredients in Racor additives allows for higher treatment rates. All Racor Fuel Additives are alcohol-free.

Diesel Biocide

Racor Diesel Biocide is a multifunctional petroleum distillate fuel additive. It is used to help maintain color stability and clarity; control bacteria, fungi, organic reaction and sludge formation; inhibit corrosion; and disperse existent sludge.

EPA Est. No. 072342-CA-001. EPA Reg. No. 1448-172-47099.



- Kills faster and longer and more forms of algae and bacteria than other brands
- Kills both aerobic and anaerobic fungi
- Concentrated, extended time formula
- EPA approved as both a biocide and aftermarket fuel additive
- Prevents internal corrosion from microbial fouling
- Provides superior mixing with fuel at all temperatures
- Fuel and water soluble
- Does not cause foaming

Diesel Performance Plus+

Racor Diesel Performance Plus+ has the same engine protection qualities of Racor Diesel Conditioner Plus+ and it has five times the cetane improver to deliver optimal engine performance. The added performance comes with improved lubricity and is alcohol-free for better fuel system component protections



All the features of Racor Conditioner Plus+ and:

- Five times the cetane improver for faster starts and improved performance
- Lubricity improver passed HFRR Lubricity Test for diesel fuel per ASTM D6079-99
- Stabilizes fuel and prevents corrosion per ASTM D665A
- Four times the detergent additive for a clean fuel system

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All the features of Racor Conditioner Plus+ and:

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- Lubricity improver passed HFRR Lubricity Test for diesel fuel per ASTM D6079-99.
- Stabilizes fuel and prevents corrosion per ASTM D665A.
- Four times the detergent additive for a clean fuel system.

Diesel Winter Plus+

Racor Diesel Winter Plus+ is added to middle petroleum distillates such as No. 2 heating oil or diesel fuel to improve their low temperature operability as measured by pour point and cold filter plugging point. Racor Diesel Winter Plus+ prevents the plugging of lines, filter screens and valves and allows the fuel to flow freely down to -32° F (-36° C). Diesel Winter Plus+ contains a deicer, which can help reduce line freezing.



- Improves fuel flow and facilitates cold weather starting
- Improves efficiency of fuel filter/water separators through demulsification
- Contains a cetane improver and a deicer
- Smoother, quieter engine operation
- Prevents corrosion
- Stabilizes fuel quality during prolonged storage

Gasoline Conditioner Plus+

Racor Gasoline Conditioner Plus+ is a diluted multifunctional gasoline additive which cleans as it protects. Racor Gasoline Conditioner Plus+ is designed for secondary treatment applications. It can be used with all types of internal combustion systems and gasoline blends. By cleaning the engine's fuel injectors and carburetor, it provides better combustion, better fuel economy and lower exhaust emissions.



- Protects intake system against corrosion
- Prevents accumulation of deposits
- Improves efficiency of fuel filter/waters separators through demulsification
- Will not harm lube oil or catalytic converters
- Stabilizes quality of stored gasoline

Lube Oil Treatment

Racor Lube Oil Treatment is a fluorocarbon oil additive which contains an advanced, highly effective polymer lubricant. It provides a superior thin coating to protect precision engine parts and does not contain PTFE or Teflon®, which have been known to fall from suspension and clog precision engine components. It may be used with diesel and gasoline engines and is compatible with all motor oils including synthetics.



- Reduces noise and heat in diesel and gasoline engines
- Anti-corrosion formula
- Increases mileage, engine life and performance
- Reduces friction on cold start up
- Prevents premature wear on piston rings and cylinder walls, reducing harmful exhaust emissions

Coolant Treatment

Racor Coolant Treatment is a combination corrosion inhibitor and iron oxide/scale dispersant. Its unique formulation protects all types of metals, including aluminum, in diesel and gasoline engine cooling systems.



- Stabilizes engine coolants helping prevent the formation of abrasive gel-like deposits
- Neutralizes hard water salts
- Contains an inhibitor to help protect all metals in the engine cooling system from corrosive attack
- Maintains heat transfer in closed cooling systems
- Helps prevent overheating
- Disperses silica deposits
- Contains an anti-foam agent

Part No.	Description	Size	Treats
ADT 1116	Diesel Cond. Plus	16 ounces	320 gallons
ADT 1201	Diesel Cond. Plus	1 gallon	2,560 gallons
ADT 1555	Diesel Cond. Plus	55 gallon drum	140,800 gallons
ADT 2116	Diesel Biocide	16 ounces	1,280 gallons
ADT 2201	Diesel Biocide	1 gallon	10,240 gallons
ADT 2325	Diesel Biocide	5 gallons	51,200 gallons
ADT 2555	Diesel Biocide	55 gallon drum	563,200 gallons
ADT 3116	Diesel Perf. Plus	16 ounces	80 gallons
ADT 4116	Diesel Winter Plus	16 ounces	128 gallons
ADT 4201	Diesel Winter Plus	1 gallon	1,024 gallons
ADT 4995	Diesel Winter Plus	55 gallon drum	56,320 gallons
ADT 5116	Gasoline Cond. Plus	16 ounces	320 gallons
ADT 5555	Gasoline Cond. Plus	55 gallon drum	140,800 gallons
ADT 7116	Lube Oil Treatment	16 ounces	2 gallons
ADT 7201	Lube Oil Treatment	1 gallon	16 gallons
ADT 7555	Lube Oil Treatment	55 gallon drum	880 gallons
ADT 8116	Coolant Treatment	16 ounces	8 gallons
ADT 8201	Coolant Treatment	1 gallon	64 gallons



A convenient spout extension is available for quick, clean service. The spout fits 16 oz. bottles only. Order RK 21644.

Coolant Heaters

The Racor ECH™ Engine Coolant Heater Series benefits your engine all year long. Regardless of ambient temperature, pre-heating prolongs the life of your engine. The fact is, 90 percent of engine wear is due to low water jacket temperature. Racor ECH™ heaters reduce maintenance and service demands by reducing wear and lengthening the time between oil changes. That can mean more time between overhauls. Pre-heating the coolant keeps the engine at operating temperatures. It eliminates needless idling and reduces noise and air pollution.

Racor ECH™ tank-type coolant heaters maintain an engine’s operating temperature during down-time and serve as an excellent cold weather starting aid. From small, 500 watt durable plastic tank-type coolant heaters to large capacity tank-type coolant systems of 5,000 watts.

The Racor ECH™ tank-type coolant heaters operate using the thermo siphon circulation principle. Heated coolant is returned to the engine as colder coolant is drawn into the heater.

By utilizing standard alternating current (AC) from the customer- supplied source, they heat and maintain the engine coolant at a pre-determined temperature range. This warm coolant helps keep the engine ready for instant operation. Racor ECH tanktype coolant heaters are mounted off the engine for long life and increased wattage output.

Note: Not for use as fuel heaters.

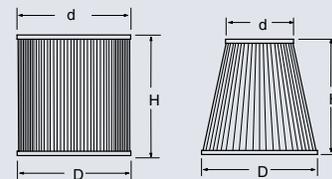
Contact Racor for ECH product bulletin



Air Filter Replacements

Racor offers direct replacements for the intake air filter portion of competitive airfilters/silencers. Also available is the replacement element for the vacuum limiter air separator.

The filter media for all replacement filters is an oil-impregnated cotton gauze and is sandwiched between pleated, epoxy-coated aluminum wire-mesh polyurethane sealing surfaces. This product is cleanable and must be oiled before re-using.



Walker Part Number	Racor Part Number	Dimensions (in) (DxHxd)
CD169	N/A	16x16x16
CD170	AF M8145	10x8x10
CD173	N/A	7.5x5x7.5
CD174	AF M8121	7.5x6x7.5
CD175	AF M8122	7.5x7x7.5
CD176	N/A	7.5x8x7.5
CD177	AF M8124	7.5x9x7.5
CD178	AF M8126	7.5x10x7.5
CD180	AF M8010	3" Air Separator Element
CD181	AF M8146	10x10x10
CD182	AF M8143	10x12x10
CD183	AF M8153	12x12x12
CD184	AF M8037	9x14x6.875
CD185	N/A	10x14
CD186	AF M8152	12x7x12
CD187	AF M8155	12x10x12
CD189	N/A	12x14x12
CD190	AF M8026	7.5x10x5.125
CD194	AF M8021	7.5x6x5.125
CD195	AF M8025	7.5x8x5.125
CD196	AF M8034	9x9
CD197	AF M8033	9x12
CD200	AF M8134	9x9x9
CD201	AF M8133	9x12x9
CD202	AF M8141	10x6x10
CD203	AF M8151	12x6x12
CD204	AF M8156	12x8x12

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.

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

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



CV1000

CV820

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) ¹	350–600 HP (260–450 KW) ¹
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 applications to any size diesel engines.

(2) The Crankvent® CV1000 must be used in two cycle engines with air box drain applications.

Additional details are available in technical manual #7503 or please consult Racor.



Cummins QSM11 marine engine with CCV cutaway



Caterpillar 3196 marine engine with Racor CCV/AF System



Marine Air Filter/Silencer (AF) System

Clean Up Engines & Engine Rooms

Marine diesel engines can benefit from the installation of a Racor CCV™ Crankcase Ventilation and Air Filter/Silencer System. The Racor system consists of Crankcase Ventilation Filters (CCV) and Engine Air Filter/Silencers (AF).

The CCV contains Racor's high-performance Vaporbloc™ filter made of depth-loading, micro-glass fiber coalescing media. The marine Air Filter/Silencer (AF) contains a washable media and is ruggedly built to provide an extended service life.

How the Systems Work

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 blowby 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.

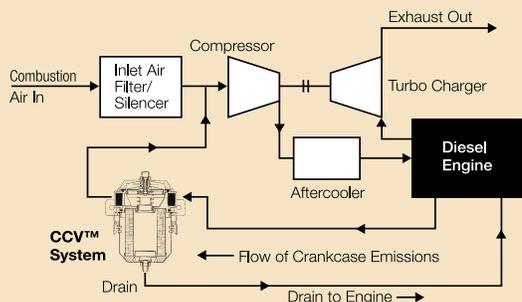
The Racor marine Air Filter/Silencer removes contaminants introduced into the air from both outside and inside the vessel. Sand, salt, carpet fibers and other contaminants are trapped in the oil-impregnated Vaporbloc™ filter media. Turbo noise is reduced by the unique design of the housing. An integral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



Air Filters / Silencers

Features and Benefits

- High efficiency crankcase ventilation filter with integral pressure regulator and high performance Vaporbloc filter
- Pop-up style indicator alerts the operator of a bypass condition and the need for a CCV Vaporbloc filter change
- Air Filter/Silencer is standard with an integral venturi port for CCV connection
- Air filter media is washable
- Optional tap sleeves for easy connection of existing air cleaner to CCV assembly
- Complete hose kits include fittings to facilitate installation
- Keeps engine compartments and components clean
- Prevents turbo and intercooler fouling
- Reduces smoke, odor and noise in the immediate environment
- Reduces environmental pollution from crankcase emissions

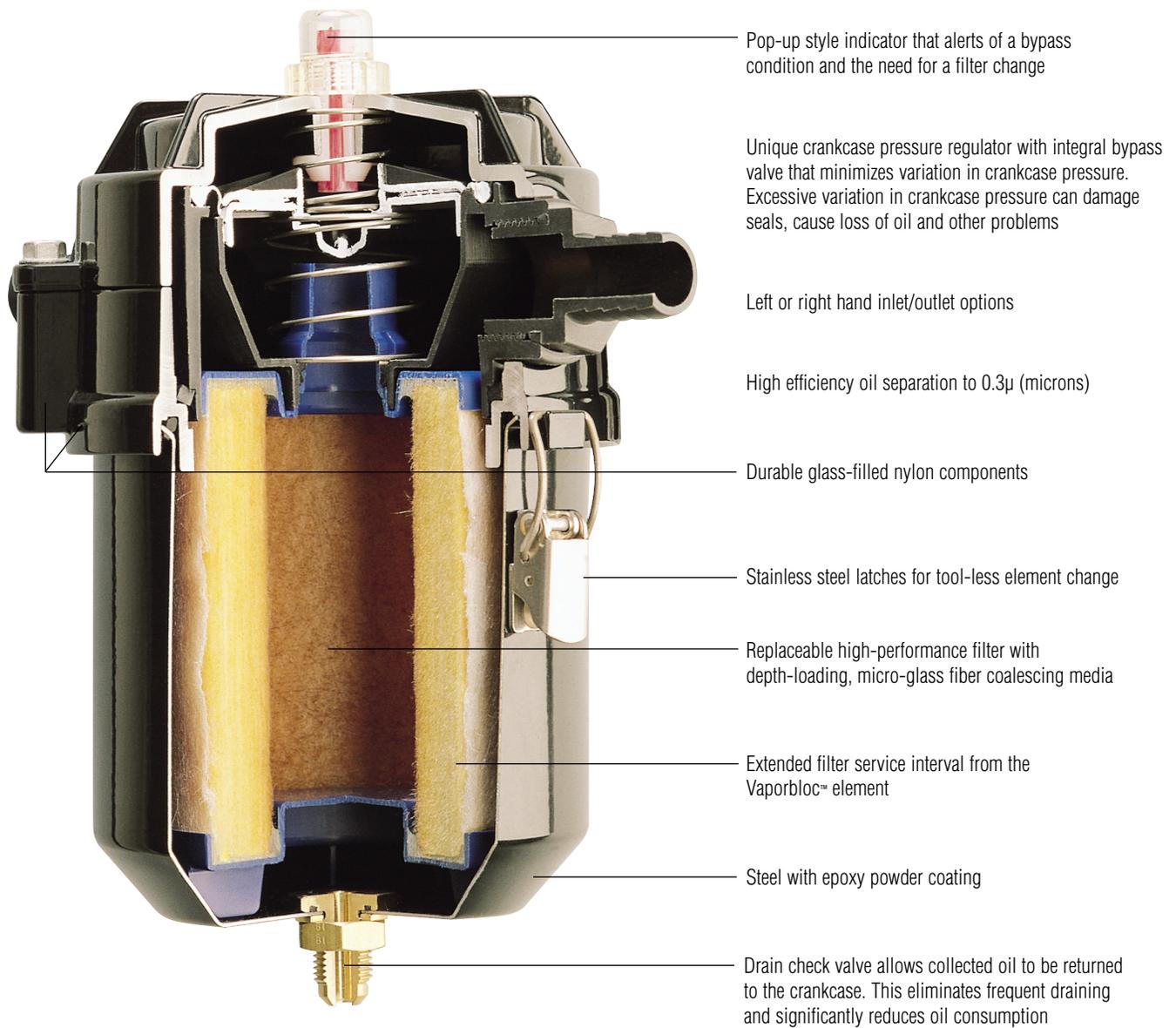


Racor CCV™ Systems

CCV4500 • CCV6000 • CCV8000

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.



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)

Marine Engine Application Worksheet

In order to determine the correct Racor CCV™ system for a particular application, certain engine information is required. This worksheet provides an orderly procedure for ordering Racor CCV systems. A complete kit is composed of (1) a Racor CCV assembly, (2) a Fitting/Hose Kit and (3) Air Intake Connector (Tap Sleeve or Marine Air Filter/Silencer Assembly).

1 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. (see FIG. 1)

CCV units are designed to handle crankcase flow rates of 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

Maximum Flow Rate	
CCV Model	Flow
CCV4500	10 CFM / 283 LPM
CCV6000	20 CFM / 566 LPM
CCV8000	40 CFM / 1132 LPM

FIG. 1



2 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.

3 Air Intake Connector – Select A, B, or C; Depending On Application

A. Tap Sleeve – Typically for Industrial/Mobile Power Applications:

Tap sleeves provide for connection of the Racor CCV™ outlet to the engine's air intake. Determine the inside diameter of the hose between the turbo and the air cleaner. This will determine the outside diameter of the tap sleeve required for completion of the installation of your Racor CCV™ system. Verify all dimensions of the tap sleeve before ordering.

Example: John Deere #4045T - Hose between turbo & air cleaner is 4" inside diameter. Correct tap sleeve is CCV40100, which is 4" outside diameter with a 1" OD hose barb.

B. 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"

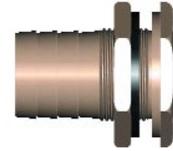


FIG. 3

C. 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 (see FIG. 2). 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

Maximum Flow Rate	
Marine Air Filter	AFR
AF M408512	800 cfm / 377 L/s
AF M501012	1200 cfm / 566 L/s
AF M601212	1600 cfm / 755 L/s

FIG. 2

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):

$$826 \text{ hp} \times 2.5 = 1032.5 \text{ AFR per turbo} = (2) \text{ AF M501012}$$

$$1110 \text{ hp} \times 2.5 = 1387.5 \text{ AFR per turbo} = (2) \text{ AF M601212}$$

CAT 3196 (4 cycle - twin turbo):

$$660 \text{ hp} \times 2.0 = 1320.0 \text{ AFR} = (1) \text{ AF M601212}$$

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 FIG. 3).



Optional Tap Sleeves

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

FIG. 3

CCV30100
CCV40100
CCV50125
CCV50125

For more detailed information and for available hose kits request technical manual number 55021, or call factory.



Specifications

	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	8.2" / 208 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	6.0" / 152 mm	2.25" / 57.2 mm	4.00" / 101.6 mm	5.00" / 127.0 mm
Replacement Element / Media Density/Medium	CCV 55365-04	CCV 55365-06	CCV 55248-06	CCV 55274-06	CCV 55222-06
Replacement Element / Media Density/High	N/A	CCV 55365-08	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	N/A	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.



Air Filters / Silencers Family



	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).

When is My Engine Air Filter “Used Up?”

Because it performs so well, it is not uncommon for the engine air filter to appear as if it has reached its capacity. Generally, there is considerable service life left. The only way to know when the engine air filter has reached capacity is to measure the restriction at service intervals.

A helpful and effective way to verify restriction is with a filter restriction monitor. A restriction monitor will provide a quick and accurate assessment of the air filter’s condition and remaining service life.



Filter Restriction Monitor

Part No.	Scale / Description
AFH8500	20" / H ₂ O Filter mount
AFH8501	25" / H ₂ O Filter mount
AFH8502	30" / H ₂ O Filter mount
AFH8510	20" / H ₂ O Dash mount
AFH8511	25" / H ₂ O Dash mount
AFH8512	30" / H ₂ O Dash mount
AFH8520	20" / H ₂ O Electric
AFH8521	25" / H ₂ O Electric
AFH8522	30" / H ₂ O Electric
AFH8530	20" / H ₂ O Remote mount
AFH8531	25" / H ₂ O Remote mount
AFH8532	30" / H ₂ O Remote mount

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)

Requires no additional room to service element



Eco II

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 beaded 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.

ECO®-SM

- Easy upgrade for existing air cleaners with separate elements
- Fast and easy to service with no housing to clean
- Safe... eliminates chance of dusting an engine during service
- Economical scheduled maintenance design
- Choice of three inlet locations to match new or retrofit applications

ECO®-SE

- For light and medium duty applications; smaller fleet and stationary engines up to 300 hp
- Easy to service, compact, lightweight, high-efficiency design
- Durable urethane outlet eliminates additional rubber connection
- Straight-thru design improves pressure differential in smaller engine air intakes

ECO®-LL

- Spin-On disposable features in a Long Life high performance version
- When extended maintenance intervals or severe service element life improvement is desired
- Choice of inlet locations
- More surface area than scheduled maintenance style

ECOLITE®

- Compact air cleaner with reverse flow flexibility.
- 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.
- Efficiency is rated 99.9%.
- No seals or gaskets to replace.
- Housing is strong, lightweight, rust resistant steel.

ECO®-BC

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®-CM Cowl Mount

For cowl-mount installation on conventional style truck cabs.

- Polished stainless steel cover.
- Replaceable filter element includes inlet nozzle and water drain valve.
- Air inlet/rain cap is standard.
- Right and left-hand versions.
- No bolts or filter gaskets needed to seal housing.
- Fits most existing mounting hole configurations.



Pamic® Light & Medium Service Air Cleaners

Pamic Series Air Cleaners provide unmatched engine protection for a wide range of equipment, from generators to compressors, stationary engines to marine engines.

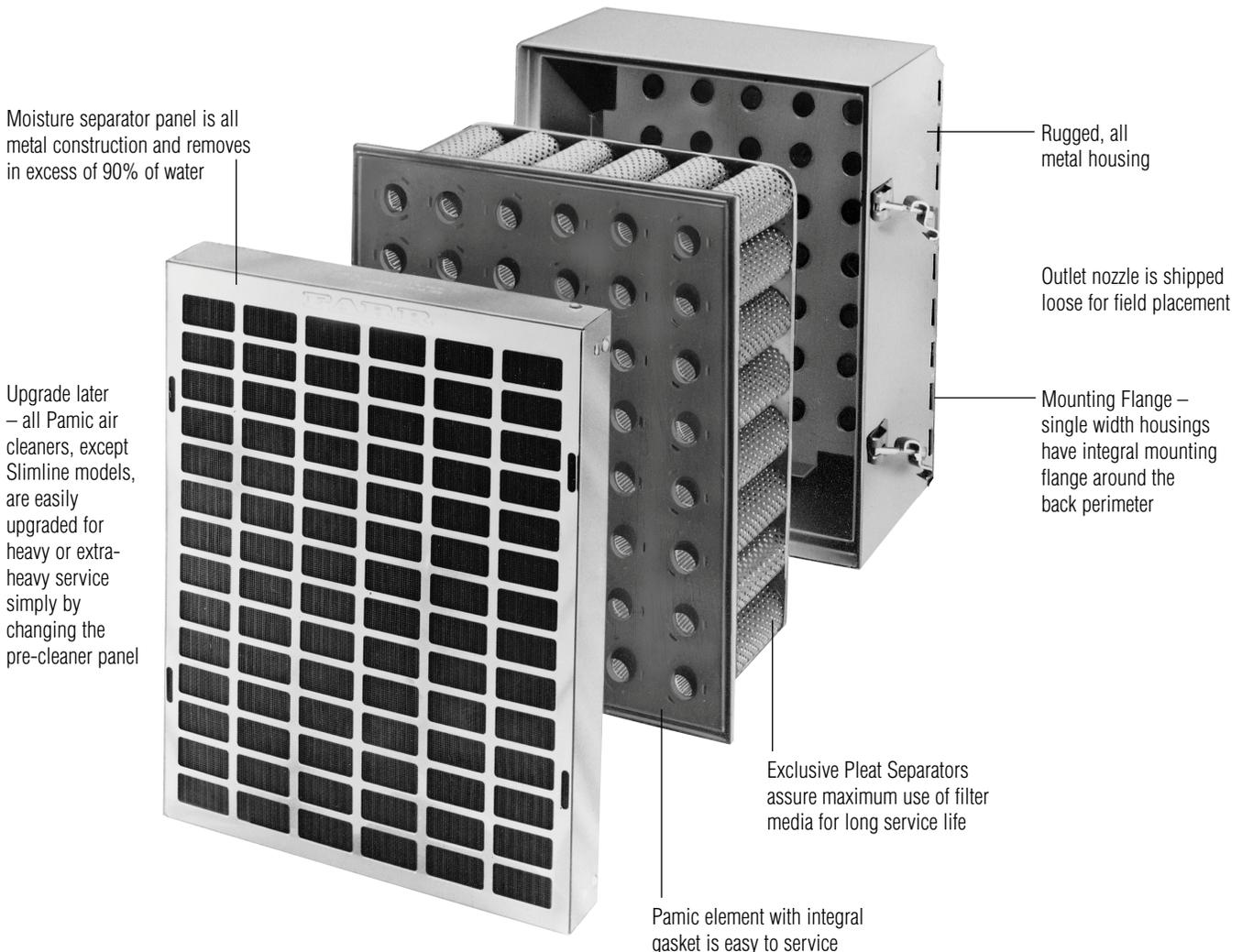
Greatest Protection – The Pamic filter element has an average efficiency rating of 99.9% (SAE J726). It begins at a high level and continues to increase throughout the life of the filter.

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 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. There are no separate gaskets to replace, because it is an integral part of the filter element.



Direct Spin-On LFS

The Racor Spin-on LFS oil filter threads directly onto virtually all engine lube oil heads. Clean up of the re-usable wire cloth filter is straightforward; simply remove the oil filter drain plug in the bottom of the filter end cap to drain dirty oil. Then unscrew the filter end cap and drop the dirty filter screen out, clean and replace. It's the most innovative and environmentally friendly oil filter change in the business.

Full-Flow Series Benefits

- 1 No more disposal worries
- 2 Eliminates filter inventory
- 3 Valuable diagnostic tool
- 4 Quick and easy maintenance
- 5 One-time investment
- 6 Full-Flow with built-in bypass
- 7 Indicator Light signals the need for service

The Racor Spin-on oil filter assembly incorporates a "time to service" light switch as well as an internal by-pass valve for engine protection. The light switch operates a panel-mounted indicator light, which alerts that it is time to service the oil filter. The light switch and by-pass valve is standard equipment LFS 700LS models.



Spins directly onto existing filter heads. LFS spin-on models are available for Caterpillar, Cummins, Detroit Diesel and other engines.

The rugged aluminum housing is designed for years and years of service. A high quality anodized finish means it will not rust or corrode.

Stainless Steel Wire Cloth Filter (Shown: LFS 700 dual wire cloth filter for Cummins engines using LF-3000 combination Full Flow/Bypass filter).

Light feature signals when it's time for service.

Direct Spin-On Full-Flow Application Guide

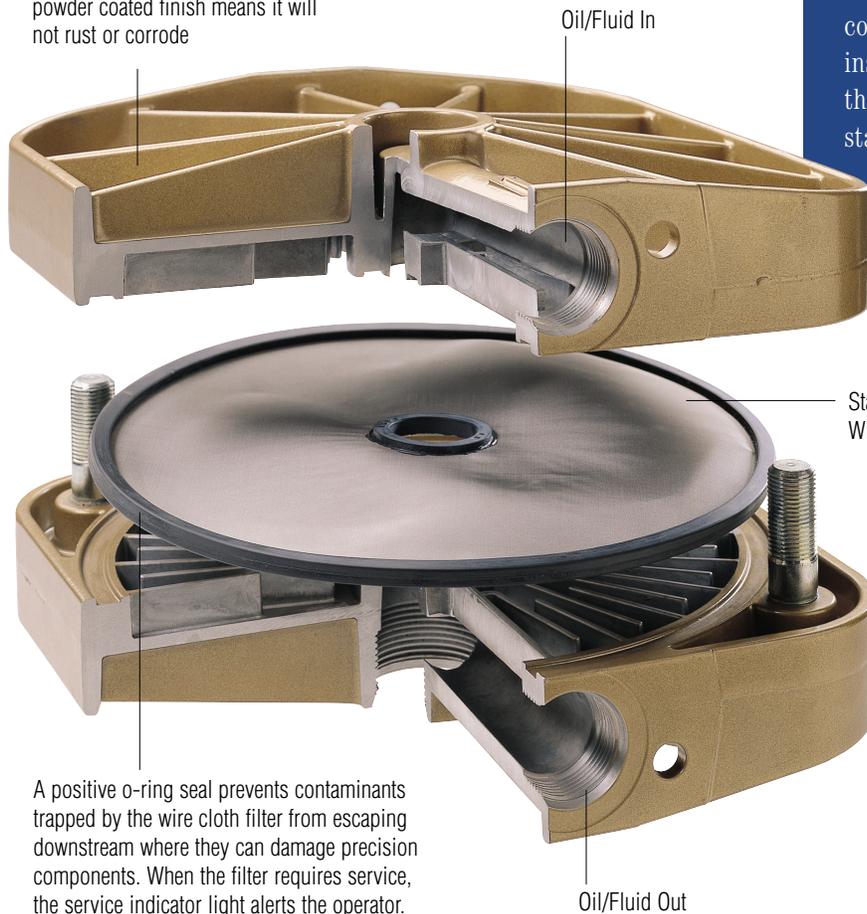
Application: Racor Filter Assembly:	Cummins LFS 700LS	Cummins/Detroit LFS 703LS	Detroit LFS 705LS KT	Caterpillar LFS 707LS KT	Isuzu LFS 710LS	Caterpillar LFS 712LS	International** LFS 714LS	International* FORD LFS 718LS
	All Engines (using LF-3000 B/P Filter element) L10, M11 NT Big Cam IV Series QSK19	C Series, L10, Big Cam IV, 230, 240, NTC-250, 290, 300, 350, 355, 370, 400 All KT All 53, 71, 6v92, 149 Series and Pre-1996 Series 60	Series 50 & 60, 1993 and on*	3116, 3208T, 3304, 3306 3126 MACK TRUCK EM-6, EN ENDT, EM-7* Volvo FLT	Mitsubishi FK & FM Series Truck GMC / Isuzu FVR with 8.4 Ltr. Volvo With John Deere 744E Industrial Isuzu Engine	3176, 3406, 3408, 3412, C-10, C-12, C-15 C-16	DT-466, 1994 and on	6.9L IDI, 7.3L IDI, 7.3L DI Power Stroke T444E
Filter Reference Data Cross-Over								
Fleetguard Fleetguard	LF-3000	LF670 LF3363^	LF3620^^ LF3671^	LF667 LF3379^	LF777	LF691A LF3566^	LF3640~	LF3344 LF3630
Baldwin Baldwin	BD103	B95-MPG^ B196	B495^^	B7600 B75	B7019	B99	B7030	B134 B7039
Wix Wix	51748	51812^ 51970	51971^^	51791 51788^	51728 51749	51792 51722	51799	51742 51734
Cummins	3318853	3313279						
Caterpillar Caterpillar				1R0739 1R0714		1R0716		
Detroit		23518524	25014504					
Isuzu					11324010521			
Mack				485-GB-3191				
International**							1819452-C1	1804442C1
Thread Size	2-1/4 x 12 UN	1-1/2 x 12 UN	1-5/8 x 12 UN	1-1/8 x 16 UN	1-3/8 x 16 UN	1-1/2 x 16 UN	M36 x 1.5	1-1/2 x 16

* Some Series 50 and 60 Detroit Diesel engines and some Mack engines use 2 filter assemblies. The LFS KT Kit provides 2 filter assemblies. ** Formerly Navistar
 ^ 3406C - 3176/22 psi ^ High efficiency/Upgrade synthetic media ^^ Requires 2 Filter assemblies ~ No By-pass in this filter

Remote Mount LFS

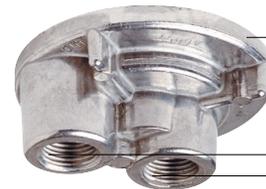
The Racor Remote-Mount LFS is ideal for marine applications because it can be conveniently located for easy service. Once installed, the remote-mount LFS eliminates the need to reach inaccessible on-engine standard oil filters.

The rugged die cast aluminum construction is designed for years and years of service. A high quality powder coated finish means it will not rust or corrode



A positive o-ring seal prevents contaminants trapped by the wire cloth filter from escaping downstream where they can damage precision components. When the filter requires service, the service indicator light alerts the operator.

A bypass relief valve lowers the restriction when the wire cloth filter is plugged. Warning light is available. Consult factory for ordering information.



Adapter to engine threads (not shown)

Port threads

Spin-On Oil Filter Adapter & Replacement O-Ring Kits

	LFS35	LFS60	LFS90
Maximum Flow Rate	6 gpm	20 gpm	45 gpm
Maximum PSI	150 PSI	150 PSI	150 PSI
Height	2.45" / 62.3 mm	3.50" / 89.3 mm	4.75" / 120.7 mm
Width	3.63" / 92.1 mm	6" / 152 mm	9.62" / 244.4 mm
Depth	3.63" / 92.1 mm	6" / 152 mm	9.50" / 241.3 mm
Weight	1.21 lbs / 55 Kg	4.31 lbs / 1.95 Kg	10.6 lbs / 4.8 Kg
Ports	3/8" NPT	1 1/16" - 12 (SAEJ1926)	1 5/16" - 12 (SAEJ1926)
Micron Availability	28, 40	28, 40, 60, 115	28, 40, 60, 115
Service Indicator Light	Yes	Yes	Yes
Hose Kit	LFS35HK	LFS60HK	LFS90HK

Complete Part No. Kit	Replacement Seal Kit* Part No.	Adapter to Engine Threads	Adapter In/Out Port Threads
LFS CHV-A	N/A	1/4"-20(2) 5/16"-18(2)	1/2"-14 NPTF
LFS 112-36A	RK 46169	1"-12	1/2"-14 NPTF
LFS 11212-48A	RK 46045	1 1/2"-12	1 5/16"-12 SAE
LFS 11216-41A	RK 46170	1 1/2"-16	1/2"-14 NPTF
LFS 11216-48A	RK 46045	1 1/2"-16	1 5/16"-12 SAE
LFS 11216-50A	N/A	1 1/2"-16	1 5/16"-12 SAE
LFS 116-36A	RK 46169	1"-16	1/2"-14 NPTF
LFS 11816-36A	RK 46169	1 1/8"-16	1/2"-14 NPTF
LFS 11816-48A	RK 46045	1 1/8"-16	1 5/16"-12 SAE
LFS 1316-36A	RK 46169	13/16"-16	1/2"-14 NPTF
LFS 13816-48A	RK 46045	1 3/8"-16	1 5/16"-12 SAE
LFS 15812-48A	RK 46045	1 5/8"-12	1 5/16"-12 SAE
LFS 1815-31A	RK 46169	18 mm x 1.5	1/2"-14 NPTF
LFS 2015-31A**	RK 46169	20 mm x 1.5	1/2"-14 NPTF
LFS 2015-36A	RK 46169	20 mm x 1.5	1/2"-14 NPTF
LFS 2015-31A	RK 46169	22 mm x 1.5	1/2"-14 NPTF
LFS 3416-31A	RK 46169	3/4"-16	1/2"-14 NPTF
LFS 5818-31A	RK 46169	5/8"-18	1/2"-14 NPTF

*O-ring or gasket should be replaced if adapter is removed from engine, after being in service. RK 46169: Gasket, 2.48" I.D. RK 46045: O-ring, 3.73" I.D. RK 46170: Gasket, 3.10" I.D.

BYPASS OIL FILTRATION SYSTEM

Now, engine owners have the opportunity to combine the Racor LFS with a highly efficient, environmentally safe Bypass Oil Filtration System.

The Racor Bypass Oil Series removes dirt, varnish, ash, tar, soot and other contaminants that full-flow filters cannot remove from your engine's oil. The system also removes condensed water, which forms damaging acids if it remains left in the oil.

The Bypass Oil Series filter element is a 1 micron filter element. With surface filters, particles tend to stack up on a single plane, thereby "loading" the filter and cutting off flow. The Bypass Oil Series filter element is a "depth" filter trapping different size particles at varying depths within the element, so loading is virtually eliminated.

Extended oil changes are possible with a Racor Bypass Oil LFS and regular oil analysis. Analysis provides important information about the condition of the oil and when it needs to be changed. It eliminates relying on "recommended change intervals" which are based on standard, full-flow filters.

By extracting samples of engine oil at predetermined intervals, a record can be established based on the actual condition of the engine and the oil.

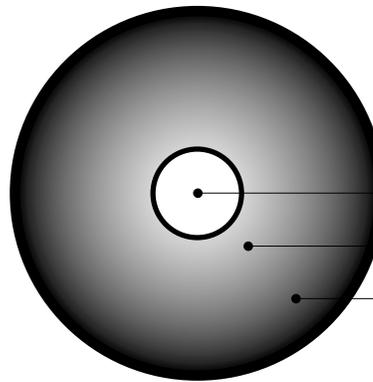


Easy-install mounting bracket

The engineered design of the filter element provides more efficient filtration for a significantly longer period of time than pleated paper, stacked disc and other cartridge filters

Spin-on cartridge element is made of an efficient combination of a cotton and cellulose woven media

Durable electronically applied powder control finish protects against corrosive salt spray, abrasive solvents and cleaning agents



Oil flows inward through the graded-density filter media

Cleansed Oil

1-5 Micron Filtration

35-40 Micron Filtration

Bypass Series Oil Filter Specifications



Part Number	LFS-800	LFS-801	LFS-802	LFS-820	LFS-825
Replacement Element (P/N)	LFS-800BPE	LFS-801BPE	LFS-802BPE	LFS-820BPE	LFS-825BPE
Engine Size/Horse Power	up to 150 hp	150 - 250	250 - 400	400 - 500	500 - 800
Sump Capacity	2.5 gal / 9.5 ltr	5 gal / 19 ltr	15 gal / 57 ltr	30 gal / 114 ltr	45 gal / 170 ltr
Flow Rate	.3 gpm / .9 lpm	.4 gpm / 1.4 lpm	.5 gpm / 1.9 lpm	1 gpm / 3.8 lpm	1.5 gpm / 5.7 lpm
Canister Cap	.13 gal / .5 ltr	.3 gal / .9 ltr	.5 gal / 1.9 ltr	2.5 gal / 9.5 ltr	3.5 gal / 13.3 ltr
Orifice Size	.040" / 1 mm	.040" / 1 mm	.040" / 1 mm	.093" / 2.4 mm	.101" / 2.6 mm
Port Size	1/8" npt	1/4" npt	1/4" npt	1/2" npt	1/2" npt
Height	5.5" / 14 cm	7.5" / 19.1 cm	11" / 27.9 cm	14.5" / 36.8 cm	20" / 50.8 cm
Width	4" / 10.2 cm	5.25" / 13.3 cm	5.25" / 13.3 cm	9" / 22.9 cm	9" / 22.9 cm



Spin-On Hydraulic Protection



Racor water-absorbing hydraulic filters feature a specially designed media that traps solid contaminants like dirt and rust and damaging water. As the element fills with water and plugging occurs, flow slows and the head goes into a bypass mode.

Water-absorbing spin-on hydraulic filters are available for virtually any application and are available in a 10 micron rating. To make monitoring easy, Racor offers a range of heads with pressure restriction gauges, including large diameter heads with standard, color coded bar gauges.

Elements

Low Pressure *Filtration applications for return lines and other low pressure fluid circuits.*

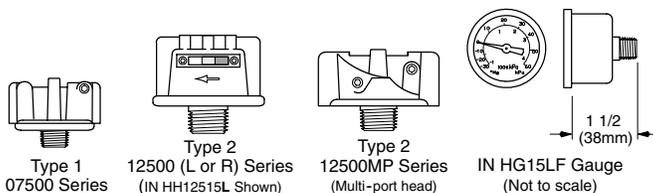
Part No.	IN HW3510	IN HW5710	IN HW5110
Flow Rate	15 gpm / 57 lpm	50 gpm / 190 lpm	50 gpm / 190 lpm
Threads	1" - 12	1 1/2" - 16	1 1/2" - 16
Dimensions	3.7D x 5.5L	5.0D x 7.0L	5.0D x 11.0L
Pressure	100 PSI / 690 kPa	100 PSI / 690 kPa	100 PSI / 690 kPa

See chart below for mounting head information.

High Pressure *Filtration applications for pressure locations within the fluid circuit.*

Part No.	HP60077	HP60080	HP60083	HP60086
Flow Rate	20 gpm	20 gpm	50 gpm	50 gpm
Length	Standard	Extended	Standard	Extended
Pressure	3000 PSI / 20,690 kPa			

Consult factory for ordering assistance.



Mounting Heads

Part No.	Head Type	Port Size	Center Thread	By-pass Setting (PSID)	Filter Application
Maximum flow rate for the heads below is 15 gpm / 900 gph and up to 175 PSI / 12.1 bar					
IN HH 75503	1	3/4" NPT	1"-12 UN	3	Use with 3510 filter
IN HH 07515	1	3/4" NPT	1"-12 UN	15	
IN HH 07525	1	3/4" NPT	1"-12 UN	25	
Maximum flow rate for the heads below is 50 gpm / 3000 gph and up to 175 PSI / 12.1 bar					
IN HH 12515 ¹	2	1 1/4" NPT	1 1/2"-16 UN	15	Use with 5710 and 51110 filters
IN HH 12525 ¹	2	1 1/4" NPT	1 1/2"-16 UN	25	
IN HH 12515MP ²	2	1 1/4" NPT	1 1/2"-16 UN	15	
IN HH 12525MP ²	2	1 1/4" NPT	1 1/2"-16 UN	25	

¹ Specify L or R. L provides the standard color-coded bar restriction gauge on the side of the head with the flow direction going to your left. R has the flow going to the right. See center head illustration, above.

² MP signifies a multi-port head. The multi-ports are for an optional in-head gauge, such as the IN HG15LF liquid filled, 1.5" diameter, compound pressure/vacuum gauge (1/8" NPT). See right illustration, above.

Reservoir Breather Filters



Reservoir breather filters provide precision hydraulic components with special protection against wear particles and destructive moisture. The use of

reservoir breather filters is especially critical in high humidity areas or where moisture is present near hydraulic systems. Racor reservoir breathers contain a unique filter media which removes both dirt and moisture. The spin-on design provides ease of service. Consult factory for details.



Model GLT 60006

Guardian: A Handy Way To Transfer Fluids

Contamination is sometimes added to a new fluid – hydraulic or diesel – during processing, mixing, handling, or storage. If your fluid system is sensitive to the harmful effects of contamination, the Guardian Portable Filtration System may be ideal for your application.

Medium Pressure Hydraulic Filters



Racor hydraulic filters for medium pressure applications are

rated to 3,000 PSI, and are crafted from corrosion-resistant anodized aluminum. An optional pop-up indicator signals the bypass condition and need for element replacement; however, a built-in bypass valve allows the system to continue operating in an unfiltered condition. Two flow rates and housing lengths accept a 10 micron element – with the extended lengths providing longer element life and larger sump capacity. Consult factory for ordering assistance.



Marine Rated – Best

Parker Marine Hose is USCG-rated hose for gasoline, diesel, lube oil and hydraulic systems for commercial and recreational applications.

It is fire resistant and meets SAE J1527 Type A class and SAE J1942 standards. As you'd expect, it delivers test-proven performance in a wide operating temperature range and constant working pressure. Long-lasting reinforced construction, kink and cut resistance, and compatibility with a variety of standard 100R5 fittings.

- Packaged in 350 foot reels or 50 foot kits.
- High tensile steel wire braid.
- 500 psi working pressure.
- Passed 2 1/2 minute fire test.



221FR - 8 SAE J1527

No-Skive Hose and Fittings

- No-Skive hose and fittings does not require removal of the outer hose cover, eliminating premature failure caused by skiving too long or short.
- Use of No-Skive hose and fittings keeps outer cover intact, protecting vulnerable wire wrap during fitting assembly.
- Cushioned grip increases hose life – supporting cushion of compressed rubber between gripping threads on fitting reduces wire movement, minimizing stress.
- Corrosion Protection – steel wire braid of No-Skive hose is never exposed because outer rubber cover is not removed before assembling fitting.
- No-Skive fittings allow socket threads to penetrate outer hose cover, and grip the wire braid of the hose.
- Simple two step assembly – attach socket to hose, thread nipple to socket.

Brass Part #	Plated Steel	Size
955-W5-R5	915-W5-R5	-5
955-W6-R6	915-W6-R6	-6
955-W8-R8	915-W8-R8	-8
955-W10-R10	915-W10-R10	-10
955-W12-R12	915-W12-R12	-12
955-W12-R16	915-W12-R16	-16

Reusable Fittings

Reusable style fitting design permits quick, easy field assembly without special tools... just replace the hose!



Fire-Resistant Marine Hose Meets SAE J1527 Type A Class 1 and SAE J1942 Standards

# Part Number	Hose I.D.		Hose O.D.		Working Pressure		Burst Pressure		Minimum Bend Radius		Weight		Inches of Hg	kPa (abs)
	inch	mm	inch	mm	psi	MPa	psi	MPa	inch	mm	lbs / ft	kg / m		
CGH-5	1/4	6,3	0.58	15	500	3,5	2000	14,0	1	25	0.19	0,28	20	33
CGH-6	5/16	8	0.68	17	500	3,5	2000	14,0	1-1/4	30	0.23	0,34	20	33
CGH-8	13/32	10	0.77	20	500	3,5	2000	14,0	1-3/4	45	0.28	0,42	20	33
CGH-10	1/2	12,5	0.92	23	500	3,5	2000	14,0	2-1/4	55	0.39	0,58	20	33



266 All Purpose – Better

266		Temperature	Description	Code		
All purpose, hydraulic, oil, anti freeze, fuel		-55° F to 302° F	Elastomer tube, textile inner braid, high tensile steel wire braid reinforcement	Medium pressure SAE J1402 All, FMVSS 106		
D.U.T Racor #	FMVSS Hose I.D.	106 Hose O.D.	Working Pressure	Burst Pressure	Minimum Bend Radius	Reusable Fitting Series
IH6078-4	3/16"	0.52"	2000 psi / 13790 kPa	8000 psi	3/4"	20-22
IH6079-5	1/4"	0.58"	1500 psi / 10342 kPa	6000 psi	1"	20-22
IH6080-6	5/16"	0.68"	1500 psi / 10342 kPa	6000 psi	1 1/4"	20-22
IH6081-8	13/32"	0.77"	1250 psi / 8618 kPa	5000 psi	1 3/4"	20-22
421		Temperature	Description	Code		
Mobile hose for petroleum based hydraulic fluids and oil		-40° F to 275° F	Seamless, extruded nylon core with open ply fibrous reinforcement	SAE 100R1, Type AT		
Racor #	Hose I.D.	Hose O.D.	Working Pressure	Burst Pressure	Minimum Bend Radius	Reusable Fitting Series
IH6027-10	5/8"	0.94"	1500 psi / 10342 kPa	6000 psi / 41369 kPa	8"	42
201		Temperature	Description	Code		
Hydraulic fluids, lube oil, anti freeze		-40° F to 302° F	Synthetic rubber, textile inner braid high tensile steel wire braid reinforced	SAE 100 R5, SAE J1402 All DOT FMVSS106-All		
Racor #	Hose I.D.	Hose O.D.	Working Pressure	Burst Pressure	Minimum Bend Radius	Reusable Fitting Series
IH6105-6	5/16"	0.68"	2250 / 15513	9000 / 62053	4"	20-22
IH6104-12	5/8"	1.08"	1500 / 10342	6000 / 41369	6 1/2"	20-22
IH6103-16	7/8"	1.23"	800 / 22063	3200 / 22063	7 3/8"	20-22
PFT Type A		Temperature	Description	Code		
Mobile air brake system		-40° F to 200° F	Seamless, single wall extruded nylon tubing	J844, Type A; FMVSS 108		
Racor #	Hose I.D.	Minimum Bend Radius				
IH6012-4A	1/4"	1"				
IH6120-5A	5/16"	1 1/4"				
PFT Type B		Temperature	Description	Code		
Mobile air brake system		-40° F to 200° F	Seamless, extruded nylon core with open ply fibrous reinforcement	S844, Type B; FMVSS 106		
Racor #	Hose I.D.	Minimum Bend Radius				
IH7063-6B	3/8"	1 1/2"				



801 General Purpose – Good

801 Push-Lok		Temperature	Description	Code		
Mobile application diesel, fuel, air, water		-45° F to 158° F	Synthetic rubber liner, one textile braid reinforcement, synthetic rubber cover	Low Pressure		
Racor #	Hose I.D.	Hose O.D.	Working Pressure	Burst Pressure	Minimum Bend Radius	Reusable Fitting Series
IH6016-4	1/4"	0.50"	250 psi / 1724 kPa	1000 psi / 6895 kPa	2 1/2"	82
IH6111-8	1/2"	0.78"	250 psi / 1724 kPa	1000 psi ✓	5"	82
IH6022-10	5/8"	0.91"	250 psi / 1724 kPa	1000 psi ✓	6"	82
821 Push-Lok		Temperature	Description	Code		
Mobile application diesel, fuel, air, water		-40° F to 212° F	Synthetic rubber liner, one textile braid oil & mildew resistant textile braid cover	Low Pressure		
Racor #	Hose I.D.	Hose O.D.	Working Pressure	Burst Pressure	Minimum Bend Radius	Reusable Fitting Series
IH6112-10	5/8"	0.91"	250 psi / 1724 kPa	1000 psi / 6895 kPa	5"	82
836 Push-Lok		Temperature	Description	Code		
Petroleum based, hydraulic & lube oil		-55° F to 302° F	Elastomer tube, 1 textile braid, reinforced, synthetic rubber cover	MSHA Accepted		
Racor #	Hose I.D.	Hose O.D.	Working Pressure	Burst Pressure	Minimum Bend Radius	Reusable Fitting Series
IH7062-6	3/8"	0.63"	250 psi / 1724 kPa	1000 psi / 6895 kPa	3"	82
IH7072-8	1/2"	0.78"	250 psi / 1724 kPa	1000 psi ✓	5"	82

Racor fittings are available in various materials, styles and sizes to fit every Racor filter/separator and most installation requirements.

Racor products feature several porting styles to external plumbing. However, the most common are SAE J1926 Straight Thread O-ring and SAE J476 National Pipe Thread. See the chart to the right for fitting torque values.

SAE J1926 Straight Thread O-ring

This design utilizes straight threads for holding power and an O-ring for superior sealing capability. Straight thread ports permit exact positioning of elbow fittings, provide a leak free joint, eliminate distortion and cracking of boss due to over tightening and are easier to maintain. The standard Parker O-ring material is compound No.N552 – 90, 90 durometer Buna – Nitrile (NBR). Apply a light coating of clean fuel or Parker Super O-lube to the O-ring prior to installation.

SAE J476 National Pipe Thread

Many Racor fuel ports feature the National Pipe Tapered for Fuels (NPTF – also known as Dryseal Pipe Thread) designed for best sealing efficiency in smaller sizes of filters. The crests of the threads flatten upon tightening and allow the flanks to make contact thus sealing the joint. Pipe thread sealant is recommended.



Recommended Assembly Torque Values (In Inch/lbs.) For Racor Fuel Filter Port Fittings

Fitting Size	Straight Thread O-Ring Fittings	National Pipe Thread Fittings	SAE / JIC 37° Male 1
#4	75±10	130±10	NA
#6	150±20	160±20	NA
#8	450±25	NA	1° (550±50)
#10	550±30	NA	1° (650±50)

1 Used on 900 & 1000 Turbine Series FGX / MAX models.

2 Rotation of fitting hex nut flats from finger tight.

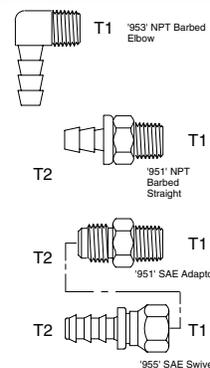
Port Plug Kits

Part No.	Used for	Material	Thread	Qty / Kit
RK30817	Fuel Port	Metal	1/4" – 18 NPT	2
22231	Fuel Port	Metal	3/8" – 18 NPT	2
RK10110	Vent Plug	Metal	3/8" – 24 SAE	1
RK20022	Fuel / Wtr. Probe	Metal	1/2" – 20 SAE	2
RK11-1679	Fuel / Heater	Plastic	9/16" – 18 SAE	1
22351	Fuel Port	Plastic	3/4" – 16 SAE	2
11911	Fuel Port	Metal	7/8" – 14 SAE	1
RK20618	Fuel / Vent	Metal	M14 X 1.5	2
22509	Fuel Port	Metal	M16 X 1.5	2

NPT
SAEJ531

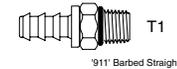
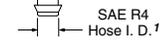
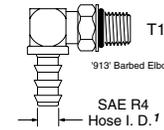
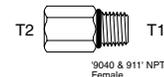
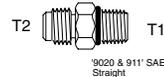
SAE
SAEJ514

Part No.	Thread 1 (SAEJ476)	Hose 2 (or thread)	Tube or Hose Size Number
953-N4-H5	1/4"-18	5/16"	5
953-N4-H6	1/4"-18	3/8"	6
953-N6-H6	3/8"-18	3/8"	6
951-N4-H4	1/4"-18	1/4"	4
951-N4H5	1/4"-18	5/16"	5
951-N4-H6	1/4"-18	3/8"	6
951-N6-H5	3/8"-18	5/16"	5
951-N6-H6	3/8"-18	3/8"	6
951-N6-H8	3/8"-18	1/2"	8
951-N6-J6	3/8"-18	9/16"-18UNF	6
951-N6-J8	3/8"-18	3/4"-16UNF	8
955-W6-H6	9/16"-18UNF	3/8"	6
955-W8-H8	3/4"-16UNF	1/2"	8



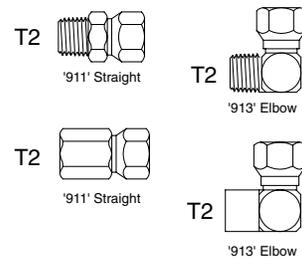
95X fittings are made of brass. Plated steel fittings are recommended for applications exposed to salt spray.

Fitting Part No.	Thread 1 (SAE J1926)	Thread 2 (or Hose I.D.)	Tube or Hose Size Number
9010-6-4	9/16"-18	7/16"-20	4
9010-6-6	9/16"-18	9/16"-18	6
913-08-J6	3/4"-16	9/16"-18	6
913-08-J8	3/4"-16	3/4"-16	8
913-08-J10	3/4"-16	7/8"-14	10
9020-6-4	9/16"-18	7/16"-20	4
9020-6-6	9/16"-18	9/16"-18	6
911-08-J6	3/4"-16	9/16"-18	6
911-08-J8	3/4"-16	3/4"-16	8
911-08-J10	3/4"-16	7/8"-14	10
9040-6-4	9/16"-18	1/4"-18	4
9040-6-6	9/16"-18	3/8"-18	6
911-08-F4	3/4"-16	1/4"-18	4
911-08-F6	3/4"-16	3/8"-18	6
911-08-F8	3/4"-16	1/2"-14	8
913-06-H5	9/16"-18	5/16"	5
913-06-H6	9/16"-18	3/8"	6
913-08-H6	3/4"-16	3/8"	6
913-08-H8	3/4"-16	1/2"	8
913-08-H10	3/4"-16	5/8"	10
911-06-H5/6	9/16"-18	5/16"-3/8"	5-6
911-08-H6	3/4"-16	3/8"	6
911-08-H8	3/4"-16	1/2"	8
911-08-H10	3/4"-16	5/8"	10

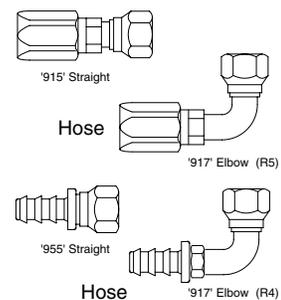


SAE Elbow Fitting Part No.	Thread 1 (SAE J1926)	Thread 2 (or Hose I.D.)	Tube or Hose Size Number
9010-10-8	7/8"-14	3/4"-16	8
9010-10-10	7/8"-14	7/8"-14	10
SAE Strt. Fitting			
9020-10-6	7/8"-14	9/16"-18	6
9020-10-8	7/8"-14	3/4"-16	8
9020-10-10	7/8"-14	7/8"-14	10
SAE to NPTF			
911-010-F4	7/8"-14	1/4"-18	4
911-010-F6	7/8"-14	3/8"-18	6
911-010-F8	7/8"-14	1/2"-14	8
911-010-F12	7/8"-14	3/4"-14	12
SAE to Hose			
913-010-H5	7/8"-14	5/16"	5
913-010-H6	7/8"-14	3/8"	6
913-010-H8	7/8"-14	1/2"	8
913-010-H10	7/8"-14	5/8"	10
913-010-H12	7/8"-14	3/4"	12
SAE to Hose			
911-010-H5	7/8"-14	5/16"	5
911-010-H6	7/8"-14	3/8"	6
911-010-H8	7/8"-14	1/2"	8
911-010-H10	7/8"-14	5/8"	10
911-010-H12	7/8"-14	3/4"	12

Fitting Part No.	Adapter Description	Thread 1	Hose 2
911-W10-N6	Straight Swivel, SAE X NPTM	7/8"-14	3/8"-18
911-W10-N8	Straight Swivel, SAE X NPTM	7/8"-14	1/2"-14
911-W10-N12	Straight Swivel, SAE X NPTM	7/8"-14	3/4"-14
911-W10-B8	Straight Swivel, SAE X BSPT	7/8"-14	1/2"-14
913-W10-N8	Elbow Swivel, SAE X NPTM	7/8"-14	1/2"-14
911-W10-F8	Straight Swivel, SAE X NPTF	7/8"-14	1/2"-14
911-W10-F12	Straight Swivel, SAE X NPTF	7/8"-14	3/4"-14
913-W10-F8	Elbow Swivel, SAE X NPTF	7/8"-14	1/2"-14



Fitting Part No.	Adapter Description	Thread 1	Hose I.D. (SAE R5)
915-W10-R8	Straight Swivel, SAE X Hose	7/8"-14	13/32" (#8)
915-W10-R10	Straight Swivel, SAE X Hose	7/8"-14	1/2" (#10)
915-W10-R12	Straight Swivel, SAE X Hose	7/8"-14	5/8" (#12)
917-W10-R8	Elbow Swivel, SAE X Hose	7/8"-14	13/32" (#8)
917-W10-R10	Elbow Swivel, SAE X Hose	7/8"-14	1/2" (#10)
917-W10-R12	Elbow Swivel, SAE X Hose	7/8"-14	5/8" (#12)
955-W10-H8	Straight Swivel, SAE X Hose	7/8"-14	1/2" (#8)
955-W10-H10	Straight Swivel, SAE X Hose	7/8"-14	5/8" (#10)
917-W10-H10	Elbow Swivel, SAE X Hose	7/8"-14	5/8" (#10)



Vacuum / Compound Gauge Kits

Vacuum and Compound (vacuum/pressure) gauges and related hardware are available to monitor element condition. As the filter element slowly becomes clogged with contaminants the restriction (resistance to flow) increases. The fuel pump still tries to draw fuel (suction) but because of this restriction less fuel is delivered to the engine and instead more air is pulled from it (fuel de-gassing). These results can cause the engine to lose power and eventually stall.

By installing a vacuum gauge in your fuel system (at the outlet side of the Racor filter) visual monitoring of element condition is possible at a glance. Note the position of the dial, or apply the 'red line' decal provided with most kits. This will assist in easy monitoring as filter efficiency begins to decrease, and when a filter change is necessary.



1606B Gauge

Note: Intervals of element changeout may vary depending on fuel cleanliness. Always keep a spare Racor element on hand.

Compound gauges are recommended for applications where pressure is occasionally present. These conditions are typically a result of 'head' pressure which is present in overhead fuel tank installations. Whatever the reason, compound gauges should be used because damage may result if a straight vacuum only gauge is used.

Kit Part No.	Description	Application Suction (vacuum) or Pressure
RK11233	Vacuum Gauge, all liquid filled out, 2" dial, 0–30 in.Hg. with 1/4" NPT back bracket mount.	Vacuum (Suction) or Pressure
1606B	Vacuum Gauge Kit. Gauge (RK11233), one 7232–4 & 7234–4 fitting. Instrument panel installation. #4 hose not included.	Vacuum (Suction) or Pressure
7232–4	Adapter fitting, 1/8"NPTM X#4 (1/4") hose. Use with 0102–4–2 fitting, if needed.	
7234–4	Adapter fitting, 1/4" swivel X #4 (1/4") hose. Use with all gauges, if needed.	
0102–4–2	Adapter fitting, straight 1/4" NPTM x 1/8" NPTF. For use with 7232–4 / 7234–4 fittings, if needed.	
RK11–1676	Vacuum Gauge. all liquid filled out, 2" dial, 0–30 inHg. With 1/4" NPT bottom boss mount.	Vacuum (Suction) or Pressure
RK11–1669	'T-Handle' Vacuum Gauge Kit. Includes Gauge (11–1676) and lid fitting (11–1668).	Vacuum (Suction) or Pressure
RK18–1104	Compound Gauge, liquid filled, 2" dial, 0–30 inHg. / 0–30 psi. 1/4" NPT back bracket mount.	Vacuum (Suction) or Pressure
RK18–1551	Compound Gauge, liquid filled, 2 1/2" dial, 0–30 inHg / 0–30 psi. 1/4" NPT back boss mount.	Vacuum (Suction) or Pressure
RK19476	Compound Gauge, 2" dial, 0–25 in.Hg. / 0–15 psi. 1/4" NPT bottom boss mount.	Vacuum (Suction) or Pressure

Vacuum Gauge or Switch Adapter Fittings

Fitting Part No.	Old Part No.	Use with:	Thread 1	Fitting end 2	Qty.
913-06-D6	9010HF6-6DTB	500 Series	9/16"-18	3/8" hose	10
Features 1/8" NPTF to attach vacuum gauge hose fitting.					
911-08-D8	New	500 / 4120R	3/4"-16	3/4"-16 SAE	10
911-010-D10	New	900 / 1000	7/8"-14	7/8"-14 SAE	10
9040-10-DT	No change	900 / 1000	7/8"-14	1/2"-14 NPTF	10
Both above feature 1/4" NPTF to attach vacuum gauge or hose fitting.					

Water Detection Modules & Kits

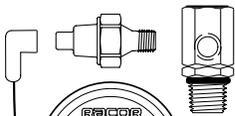
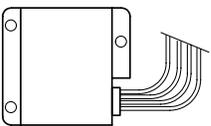
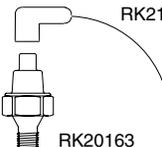
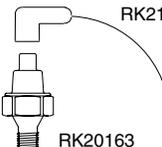
Racor Water Detection Kits are available in a wide selection for various installation requirements. Under dash, in-dash and remote mount, these solid-state units may be used with any Racor fuel filter/water separator and water probe. They are manufactured using the highest quality materials and are all 100% electrically tested.

An electronic detection module analyzes electrical resistance at the water probe and determines if water is present.

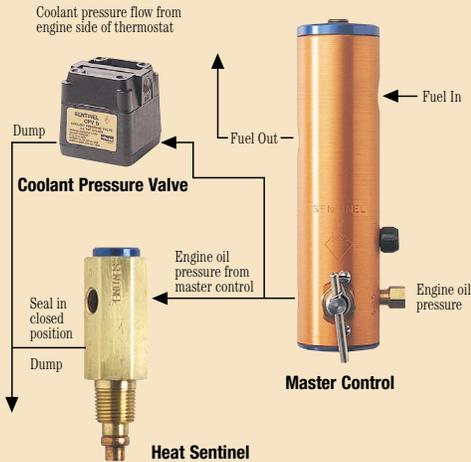
If so, the detection module operates to indicate water, based on its features listed below. All units reset automatically after water is removed (unless specified).

Caution: The water probe and detection modules work with 12 or 24 volts, direct current only and should never be wired to other brand modules or household 110 or 220 volts, alternating current.

Use the guide below to find the correct detection module for your application.

Kit Part No.		Use with the following voltage:	
RK12870	Under dash Water Detection Module. Light and audio illuminates and sounds when water is detected. Water must be drained to reset light and stop horn. Plastic enclosure measures: 1.38" square x 1.25 deep.	12 vdc	 <p>RK12870 / RK12871</p>
RK12871	Under dash Water Detection Module. same as above.	24 vdc	
RK20725	Under dash Mount Water Detection Module. Light only. Green 'ON' lamp illuminates with power and red 'DRAIN' lamp illuminates when water is detected. Initial power – up self diagnosis feature and circuit protection included. Plastic enclosure measures: 2.75" x 1" x 1.5"	12 vdc	 <p>RK20725 / RK20725-24</p>
RK20725-24	Under dash Water Detection Module Same as above.	24 vdc	
RK20726	2" Gauge Type Water Detection Module. Light and audio. Red 'DRAIN' lamp illuminates continuously and horn sounds momentarily when water is detected. Initial power-up self diagnosis feature and circuit protection included. Plastic case, satin black dial with white lettering.	12 or 24 vdc	 <p>RK20726</p>
RK30056	2" Gauge Type Water Detection Module and Water Probe Kit. (Module RK20726 and Probe RK21069, with 1/2"-20 threads).	12 or 24 vdc Bowl must have water probe port	
RK11-1570	2" Gauge Type Water Detector & Filter Restriction Module. Includes pre-set vacuum switch (7in.Hg.), connector and outlet adapter fitting. Red 'DRAIN' or 'CHANGE FILTER' lamp illuminate continuously and horn sounds momentarily when water is detected. Probe not included. Steel case, black dial with white lettering.	12 or 24 vdc For units with 7/8" SAE ports	 <p>RK11-1570</p>
RK14329	Remote Detection Unit. Sends 12 vdc hot (+) signal when an input ground signal (from a water probe or a vacuum switch – not included) is received. Must be used with a relay to power a horn or indicator lamp (if draw is over 1 amp). Plastic enclosure measures: 3" x 2.5" x .75"	12 vdc	
RK14321	Remote Detection Unit. Same as above but sends 24 vdc hot (+) signal.	24 vdc	
RK14332	Under dash mount. Same as RK14329 but sends a ground (-) signal. Enclosure size is same as RK20725, above.	12 vdc	
RK20163	Vacuum Switch Kit. 12 or 24 vdc, non-adjustable, 'NORMALLY OPEN' contacts close at 7 in.Hg., 118" NPT threads. For use with all models.		 <p>RK20163</p>
RK21030	Vacuum Switch Connector Kit (for use with above). Molded connector with single 18 AWG., 18" blue wire lead.		 <p>RK21030</p>

There's no way to predict where or when engine problems will occur. Hoses break, seals crack and connections fail in the most unlikely places and at the most inopportune times. These failures can quickly lead to damaged camshafts, cylinders and piston heads – even a total engine seizure.



Sentinel Systems Are Engine Insurance

With a Sentinel® protection system, diesel engines are shut down, or slowed down, before component failures cause expensive repair bills. Sentinel systems are ready to protect engines against a wide range of conditions:

- low oil pressure
- loss of coolant
- high oil temperature
- high coolant temperature
- high transmission temperature
- loss of tail pump pressure on irrigation engines



Sentinel systems are inexpensive insurance, offering engine protection, savings in time and money, and satisfied customers – all valuable assets in today's well managed operations.

Mechanical Reliability and Safety

From over-the-road vehicles to stationary power, Sentinel's mechanical shut down systems work when they have to, reliably and with minimal maintenance. They are not prey to moisture, corrosion, faulty connections, severed wiring, broken indicators or severe vibration – any of the host of problems that are inherent in electrical systems.

For remote equipment located in oil fields, mines, construction sites or other volatile environments prone to explosion hazards, Sentinel's trouble-free mechanical system has significant safety advantages over electrical systems.



Eliminate Fuel Vent Line Overflow During Refueling

Next time you fill up, watch your fuel vent line. A typical refueling will send up to a half a gallon or more of fuel spilling overboard. Fuel spillage is not only expensive, it's absolutely deadly to fragile lakes, rivers and waterways. Also, USCG and other regulations prohibit the discharge of oils including civil and criminal penalties.

Installed in the fuel tank vent line, the Racor Fuel/Air Separator efficiently separates air from fuel forced into the line. Air is vented, and all fuel is returned to the tank. The Fuel/Air Separator captures fuel normally discharged due to agitation and thermal expansion up to 2.4 PSI. It also eliminates damage to expensive striping and labels and protects finishes from fuel stains. The unit is also maintenance free – there's nothing to rust or corrode.

The Racor Fuel/Air Separator fits neatly into your vent line, actually replacing a section of the line. Fittings are included. One fuel/air separator unit is required for each vent line, and both models fit 5/8" vent lines.



	LG50	LG100
Application	Gasoline	Diesel/Gasoline
Dimensions	1 3/4" D x 6" L	4" D x 9 3/4" L
Max Air Flow	12 cfm / 5.6 lps	17 cfm / 8 lps
Thermal Expansion	Up to 2.4 PSI	up to 2.4 PSI
Vent Line Size ¹	5/8"	5/8"

(1) Adapter fitting is available for larger or smaller vent lines. Order part #RK50033.



Drink with Confidence

The same innovative technology that's made Racor the first name in marine engine protection makes Racor Drinking Water Filters a natural addition to your boat. Highly effective against the many contaminants present in on-board water supplies, Racor Drinking Water Filters ensure that you will have clean, fresh water on hand. There are two types of high efficiency Racor Water Filters – Taste and Odor Removal and Sediment Removal. Both models serve a single cold water faucet or water tank inlet and are sure to provide a refreshing improvement in water taste and quality.



- Multiple layers of tightly wound synthetic yarns trap sediment, rust, algae and other microscopic solids.
- Tough, tight-sealing see-thru bowl lets you inspect filter effectiveness at a glance.
- Activated charcoal element option for taste and odor removal.

Model No.	Description	Replacement
WFA12-S5	Sediment Removal, 5 micron	WFC-S5
WFA12-S30	Sediment Removal, 30 micron	WFC-S30
WFA12-S60	Sediment Removal, 60 micron	WFC-S60
WFA12-T5	Taste and Odor Removal, 5 micron	WFC-T5



Technical CD-Rom

Racor Parts, Service and Technical Information is available on CD-Rom.

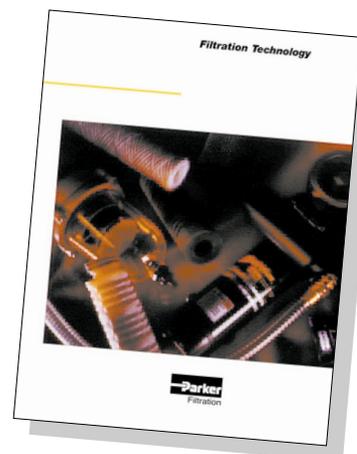
Order part number 7480F-CDRom @\$5.00 each. The information is also available online at www.parker.com/racor; click on Technical Information.



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The second edition of Filtration Technology is now in print. Parker's 250-page illustrated textbook covers the broadest range of filtration information ever assembled under one cover. The text is designed for anyone interested in industrial filtration, including engineers, educators, managers, distributors, salespeople and students.

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



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



About Parker Hannifin Corporation

Parker Hannifin is a leading global motion-control company dedicated to delivering premier customer service. A Fortune 200 corporation, we are listed on the New York Stock Exchange with PH as our symbol. Our components and systems comprise over 1,000 product lines that control motion in a wide spectrum of essential uses in some 1,200 industrial and aerospace markets. Parker is the only manufacturer to offer its customers a choice of hydraulic, pneumatic, and electro-mechanical motion-control solutions.

Our Company has the largest distribution network in its field, with over 6,000 distributors serving more than 300,000 customers worldwide.

Parker's Charter

To be a leading worldwide manufacturer of components and systems for the builders and users of durable goods. More specifically, we will design, market and manufacture products controlling motion, flow and pressure. We will achieve profitable growth through premier customer service.

Product Information

Parker Hannifin's North American customers seeking product information, the location of a nearby distributor or repair services will receive prompt attention by calling the Parker Product Information Center at our toll-free number: 1-800-C-PARKER (1-800-272-7537). In the United Kingdom, a similar service is available by calling 0500-103-203.

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