GreenMAX™
Heavy-Duty, High-Capacity, Fuel Filter/Water Separator With Options for All-Weather Operations
The World’s Most Innovative
Diesel Fuel Filter Water Separator.

Clean is the new green. GreenMAX is engineered for return on investment, and the operative word is GREEN – delivering a low cost filter change-out, low-cost per operation and environmentally friendly filter disposal.

GreenMAX. 40 years of Racor Innovation.
1 POWERFUL PACKAGE.

**High-Performance All-Weather Filtration**
- Patented, Progressive Two-Stage Aquabloc® Media
- Hot Engine Return Fuel Recirculating Heater
- Ultra-High Efficiency + Capacity
- Trademark Racor Clear Bowl & Quick Turn Drain
- Heavy-Duty Design & Construction

Integrated Piston-Style Hand Priming Pump or Fill Port

Hot Engine Return Fuel Recirculating Heater

Dual Inlet / Outlet Ports

Low Restriction at High Flow Rates

Patented Filter Valve Mechanism Holds Prime and Prevents Clean Side Contamination During Service

Durable Multi-Port Cast Aluminum Mounting Head Assembly

Add a Fuel Filter Change Indicator – Change Your Fuel Filter Only When Needed

Easy to Mount with Through-Holes for a 3/8” Bolt and Tapped for a M8 Bolt

Aquabloc High-Capacity, High-Flow Filter Element

Rated Diesel Flow Rate 150 gph (568 lph)

Optional 200W Electric In-Bowl Fuel Heater for Severe Cold Conditions (Not Shown)

High-Capacity Removable, Reusable and Extremely Durable Bowl – A See-Thru Bowl That Stays See-Thru

Water-In-Fuel (WIF) Water Sensor Alerts Operator for Service (1/2-20 SAE Port)

As never before, today’s sensitive high-pressure fuel injection systems demand flawless removal of damaging water and solid contamination. Yet, fuel additives to diesel and biodiesel have made separation of harmful liquid and solid particulates more challenging than ever.

The one-word solution is the same as it has been for more than 40 years: Racor. Specifically, the new GreenMAX integrated fuel filter/water separator. GreenMAX is the apex of a continuous development effort to advance the art and science of filtration, a program that has made Racor filtration systems the preferred brand on engines worldwide.

Add a Fuel Filter Change Indicator – Change Your Fuel Filter Only When Needed

RK 32037 Fuel Service Indicator
Today’s engines inject diesel fuel at pressures of up to 30,000 PSI. Injector tolerances are measured in microns, and the smallest particle of dirt or water can destroy precision components, leading to catastrophic damage to engines, operations and profitability.

GreenMAX is designed with exceptional water-removing efficiencies for both bulk and emulsified water, very low restriction of fuel flow and high dirt-holding capacity. The heart of the system is progressive, dual-stage coalescing and filtration delivered by the patented Aquabloc filter element, a process that makes GreenMAX the new global standard for filtration.

**Stage One: Water Coalescing**
Water droplets coalesce on the outside of a chemically treated composite media. As the droplets grow in size, being heavier than fuel, they fall into the collection bowl to be drained away. Importantly, the large surface area of the pleated media helps to slow fuel velocity, enabling extraordinary water removal efficiency.

**Stage Two: Fuel Filtration**
Engineered, pleated media filters microscopic particles of dirt and rust.
AQUABLOC – THE INSIDE STORY

The ultra-high-efficiency Aquabloc media is an engineered blend of distinct media formulations – high-grade cellulose compounded with engineered fibers and chemical treatments proven to repel water.

- Ultra-high capacity means less frequent filter changes, boosting operating economy.
- Aquabloc media is both corrugated and pleated to present a large effective filtration surface area. This design innovation slows fuel velocity to improve coalescing and filtration efficiency.
- The high dirt-holding capacity Aquabloc media helps to dramatically extend the life of final-stage on-engine filters, and reduce the overall cost of the filtration program.

Aquabloc Composite Filter Media with Low Flow Restriction

- Aquabloc cartridge filter elements are available in 2, 10, and 30 micron ratings so that protection can be tailored to the application, fuel quality, operating environments and service schedules.

AQUABLOC MEDIA HELPS OEMs to meet rigid government emission standards. In fact, Racor engineers have helped to define the very SAE standards by which filtration efficiency is measured.

- A fuel filter/separator with replaceable cartridge element is the lowest-cost filtration solution.

A patented filter ensures that the original Aquabloc replacement elements can be fitted – guaranteeing ongoing filtration quality, performance and warranty compliance.

R61691T [10 micron]: 99%, SAE J1839 OCT2010, Coarse Droplet Water / Fuel Separation Test @ 150 GPH with ULSD

R61691T [10 micron]: 98%, SAE J1985 AUG2006, Fuel Filter - Initial Single-Pass Efficiency Test @ 150 GPH
GreenMAX Fuel Heating:
Go Fearlessly into the Cold.

Two heating options, including a patented engine return fuel recirculating technology, deliver free-flowing fuel even in the most severe weather conditions.

Engine Return Fuel Recirculation

The GreenMAX Fuel Filter Water Separator features an innovative patented technology that utilizes unused warm engine fuel returning to the tank to provide on-demand fuel heat transfer for cold weather operations. This cold weather feature melts the wax and paraffins that separate from diesel fuel at cold temperatures (cloud point) and restrict fuel flow during the filtration stage.

The recirculating valve is self-regulating, sensing fuel temperature and automatically closing once the fuel is warm, and returns hot fuel to the tank.

This option includes a fuel recirculation valve that is thermostatically controlled to direct engine return fuel into the GreenMAX prior to the filtration stage.

The engine return fuel is mixed with the GreenMAX incoming fuel flow from the fuel tank, providing optimum fuel temperature for efficient fuel filtration and engine performance.

When the fuel system temperature is stabilized for optimum fuel filtration and engine operation, the engine return fuel recirculation valve automatically redirects the engine return fuel to the fuel tank.
GreenMAX. The Compact Frame or Engine-Mount Filtration System.

Cold Start In-Bowl Electric-Thermostatically Controlled Fuel Heating Options

To bring fuel quickly to operating temperatures in very cold conditions, optional 200W in-bowl heater is available. The in-bowl heater is thermostatically controlled and self-regulating, automatically shutting down once target fuel temperature is achieved.

To summarize GreenMax fuel heating options: Electric heaters help you get started; hot fuel recirculating keeps you running.

Properties of biodiesel vary greatly and can have an impact on water separation performance.

Custom Options: Contact Racor
- Depth coalescing cartridge media
- Inlet & outlet port threading up to M22
- Short bowl
- Surface finishes and paint

<table>
<thead>
<tr>
<th>GreenMAX™ Fuel Filter/Water Separator</th>
<th>FIRST FIT</th>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>Rated Flow Rate</td>
<td>4400R02</td>
<td>GreenMAX FF/WS, W/Hand Primer Pump, 2 Micron</td>
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<td>4400R10</td>
<td>GreenMAX FF/WS, W/Hand Primer Pump, 10 Micron</td>
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<tr>
<td></td>
<td>4400R30</td>
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<tr>
<td>No. of Ports</td>
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<td>GreenMAX FF/WS, 12v in bowl heater, W/Hand Primer Pump, 2 Micron</td>
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<td>Particulate Removal Efficiency (SAE J1965)</td>
<td>Min 98% (R61691T)</td>
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<tr>
<td>Water Removal Efficiency (SAE J1839)</td>
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<td>Return Fuel Heat Valve (Thermostatically Controlled)</td>
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<td>Electrical Heater 12 or 24 vdc</td>
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<tr>
<td>Water Sensor</td>
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<td>Vacuum (Maximum)</td>
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<td>Ambient Temperature Range</td>
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<td>Maximum Fuel Temperature</td>
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<td>Fuel Compatibility</td>
<td>Diesel fuel per ASTM D975 and Biodiesel blends up to B20 per ASTM D7467</td>
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<tr>
<td>Fuel Filter Change Indicator</td>
<td>Vacuum Gauge/Filter Indicator/Vacuum Switch</td>
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Service Description
- R61691S: Element Assembly, GreenMAX 2 Micron
- R61691T: Element Assembly, GreenMAX 10 Micron
- R61691P: Element Assembly, GreenMAX 30 Micron
- RK6165804: Engine Return Fuel Heat Kit
Worldwide Filtration Manufacturing Locations

North America
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www.parker.com/balston

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Phoenixville, PA
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⚠️ WARNING: The products described in this catalog can expose you to chemicals including Diisomethyl phthalate, Carbon black, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.