Heaters
For Diesel Fuel and Coolant Applications
Why You Need A Racor Fuel Heater

All diesel fuels (other than #1 diesel) contain dissolved waxes. At cold temperatures wax crystallizes, leading to fuel gelling and filter plugging. These changes greatly reduce fuel flow, adversely affecting the operability of vehicles.

With increased popularity of biodiesel and ultra low sulfur diesel (ULSD), we are faced with new cold weather challenges. While proper fuel winterization normally avoids trouble, both Biodiesels and USLD may experience wax crystallization and gelling at higher than expected temperatures and contribute to cold fuel flow problems anyway.

Keeping this in mind, it is necessary, now more than ever, to utilize an efficient fuel heating system for all cold weather applications.

In-Line Coolant Heat Exchangers

Nomad™ Coolant Heat Exchangers 1 3

Plumbed into the fuel line upstream from filters, the coolant heater is another compact way to run through the cold. An optional internal thermostatically controlled valve allows fuel to bypass the heater once it has reached operating temperature. Depending on fuel flow rate, an 89°F heat rise is possible. Like its electric partner, there are no moving parts, nothing to rust or corrode.

<table>
<thead>
<tr>
<th>Specification</th>
<th>320HTR4</th>
<th>320HTR4T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine HP</td>
<td>Up To 300</td>
<td>Up To 200</td>
</tr>
<tr>
<td>Internal Thermostat</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Fuel Port Size</td>
<td>7/8&quot;-14 UNF</td>
<td>7/8&quot;-14 UNF</td>
</tr>
<tr>
<td>Coolant Port Size</td>
<td>5/8&quot;</td>
<td>5/8&quot;</td>
</tr>
<tr>
<td>Height</td>
<td>3.8 in. (9.7 cm)</td>
<td>3.8 in. (9.7 cm)</td>
</tr>
<tr>
<td>Width</td>
<td>3.9 in. (9.9 cm)</td>
<td>3.9 in. (9.9 cm)</td>
</tr>
<tr>
<td>Depth</td>
<td>4.7 in. (11.9 cm)</td>
<td>4.7 in. (11.9 cm)</td>
</tr>
<tr>
<td>Weight (dry)</td>
<td>2.1 lbs (0.95 kg)</td>
<td>3.0 lbs (1.4 kg)</td>
</tr>
</tbody>
</table>
In-Line Electric Fuel Heaters
Nomad™ Electric Heaters

The Racor Nomad Diesel Fuel Heater is available in 300 and 500 watts and is one of the most compact and efficient ways to heat fuel on the road today. Installation usually takes about an hour. An optional frame rail mounting bracket eliminates drilling and welding.

<table>
<thead>
<tr>
<th>Specification</th>
<th>14278</th>
<th>14279</th>
<th>14257</th>
<th>14261</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine HP</td>
<td>up to 200</td>
<td>up to 200</td>
<td>200-300</td>
<td>200-300</td>
</tr>
<tr>
<td>Power Output</td>
<td>300 watts</td>
<td>300 watts</td>
<td>500 watts</td>
<td>500 watts</td>
</tr>
<tr>
<td>Voltage</td>
<td>12 vdc</td>
<td>24 vdc</td>
<td>12 vdc</td>
<td>24 vdc</td>
</tr>
<tr>
<td>Amperes Draw</td>
<td>21.4</td>
<td>10.7</td>
<td>35.7</td>
<td>17.9</td>
</tr>
<tr>
<td>Alternator Rating</td>
<td>65</td>
<td>40</td>
<td>75</td>
<td>45</td>
</tr>
<tr>
<td>Internal Thermostat</td>
<td>Yes</td>
<td>In-Cab Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel Port Size</td>
<td>7/8&quot;-14 SAE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>2.6 in. (6.6 cm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>5.8 in. (14.7 cm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth</td>
<td>5.4 in. (13.7 cm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (dry)</td>
<td>1.7 lbs (0.8 kg)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹For on-highway trucks, assuming all tractor lights and blowers are on. Use of more accessories will require a higher rating.

The Nomad electric heater lets you install a high quality heater with a minimum amount of time, space, and money.

Thermoline™ In-Fuel-Line Heater

The heavy duty Thermoline heater comes installed inside a new fuel line and literally replaces the fuel line between the tank and the primary filter. It prevents power loss and stall and assists starting down to -40°F. This heated path is recommended for extended use in cold weather environments and severe conditions.

<table>
<thead>
<tr>
<th>Specification</th>
<th>HEATER50012V</th>
<th>HEATER50024V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wattage</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Voltage</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Length</td>
<td>10 ft (3.05M)</td>
<td>10 ft (3.05M)</td>
</tr>
<tr>
<td>Fittings</td>
<td>7/8&quot;-14 SAE</td>
<td>7/8&quot;-14 SAE</td>
</tr>
</tbody>
</table>

Thermoline In-Fuel-Line Heater comes factory pre-wired with all hardware, ready for quick installation.
Fuel Filter/Water Separator With Heaters

300RC Series

The 300RC Series Diesel Fuel Filter/Heater/Water Separators are specifically designed to handle today's tough cold weather and Biodiesel fuel system problems. These units feature a standard high efficiency coolant heat exchanger to heat incoming fuel. The 300RC Series features high capacity Aquabloc® media allowing for excellent contaminant removal and water separation. Available in 2, 10, and 30 micron ratings.

<table>
<thead>
<tr>
<th>Basic Models</th>
<th>345RC30</th>
<th>360RC30</th>
<th>390RC30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Ports</td>
<td>3/8&quot; NPTF</td>
<td>3/8&quot; NPTF</td>
<td>3/8&quot; NPTF</td>
</tr>
<tr>
<td>Coolant Ports</td>
<td>5/8&quot; Hose Beed</td>
<td>5/8&quot; Hose Beed</td>
<td>5/8&quot; Hose Beed</td>
</tr>
<tr>
<td>Replacement Filter</td>
<td>R45 Series</td>
<td>R60 Series</td>
<td>R90 Series</td>
</tr>
<tr>
<td>Flow Rate</td>
<td>45 GPH (170 LPH)</td>
<td>60 GPH (227 LPH)</td>
<td>90 GPH (341 LPH)</td>
</tr>
<tr>
<td>Height</td>
<td>8.7 in (22.1 cm)</td>
<td>10.4 in (26.4 cm)</td>
<td>11.25 in (28.6 cm)</td>
</tr>
<tr>
<td>Width</td>
<td>4.0 in (10.2 cm)</td>
<td>4.0 in (10.2 cm)</td>
<td>4.0 in (10.2 cm)</td>
</tr>
<tr>
<td>Depth</td>
<td>4.8 in (12.2 cm)</td>
<td>4.8 in (12.2 cm)</td>
<td>4.8 in (12.2 cm)</td>
</tr>
<tr>
<td>Heat Rise</td>
<td>59°F @ 45 GPH</td>
<td>52°F @ 60 GPH</td>
<td>45°F @ 90 GPH</td>
</tr>
<tr>
<td>Ambient Temperature Range</td>
<td>-40° to +250°F (-40° to +121°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Fuel Temperature</td>
<td>190°F (88°C)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

300 Series In-Head Heater

The in-head 150W heater is a cold weather aid and is thermostatically controlled when power is provided. The heater will automatically turn on if the fuel temperature drops below 45°F (7°C) and will automatically turn off at 75°F (24°C).

Heat is supplied directly below the inlet port to melt the wax crystals and allow fuel to efficiently pass through the filter. The heater is operated by turning the ignition switch on for a minimum of five minutes prior to starting the engine.
Fuel Filter/Water Separator With Heaters

Spin-On Series In-Bowl Heaters

Racor equips Spin-On Series fuel filter/water separators with optional 200W resistance heaters integrated into the bowl. Placing the heat source just below the filter allows for maximum transfer.

Racor spin-on series in-bowl heaters are available installed in an assembly upon order (call Racor tech support for part numbers) or as retrofit kits which are listed below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Retrofit Kit For</td>
<td>500FG</td>
<td>500FG</td>
<td>900FH and 1000FH</td>
<td>900FH and 1000FH</td>
</tr>
<tr>
<td>Wattage</td>
<td>150</td>
<td>150</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Voltage</td>
<td>12V</td>
<td>24V</td>
<td>12V</td>
<td>24V</td>
</tr>
</tbody>
</table>

Turbine Series

The Racor Turbine Series comes available with a powerful heater which is situated directly below the filter to assist with cold starting. Thermostats are standard to meet the requirements of today’s advanced electronic engines. These heaters begin to work in just a few moments and place minimal demand on the battery.

Racor Turbine Series heaters are available installed in assembly upon order or as retrofit kits which are listed below.

<table>
<thead>
<tr>
<th>Specification</th>
<th>RK11-2002</th>
<th>RK11-2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heater Retrofit Kit For</td>
<td>900FH and 1000FH</td>
<td>900FH and 1000FH</td>
</tr>
<tr>
<td>Wattage</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Voltage</td>
<td>12V</td>
<td>24V</td>
</tr>
</tbody>
</table>
Worldwide Filtration Manufacturing Locations

North America

**Compressed Air Treatment**

Gas Separation & Filtration Division
Airttek/Finite/dominick hunter/Zander
Lancaster, NY
716 686 6400
www.parker.com/faf

Balston
Haverhill, MA
978 858 0505
www.parker.com/balston

**Engine Filtration**

Racor
Modesto, CA
209 521 7860
www.parker.com/racor

Holly Springs, MS
662 252 2656
www.parker.com/racor

**Hydraulic Filtration**

Hydraulic & Fuel Filtration
Metamora, OH
419 644 4311
www.parker.com/hydraulicfilter

Laval, QC Canada
450 629 9594
www.parkerfarr.com

Velcon
Colorado Springs, CO
719 531 5855
www.velcon.com

**Process Filtration**

domnick hunter Process Filtration
ScicLog
Oxnard, CA
805 604 3400
www.parker.com/processfiltration

**Water Purification**

Village Marine, Sea Recovery,
Horizon Reverse Osmosis
Carson, CA
310 637 3400
www.parker.com/watermakers

Europe

**Compressed Air Treatment**

dominick hunter Filtration & Separation
Gateshead, England
+44 (0) 191 402 9000
www.parker.com/dhfnf

Parker Gas Separations
Etten-Leur, Netherlands
+31 76 508 5300
www.parker.com/dhfnf

Hiross Zander
Essen, Germany
+49 2054 9340
www.parker.com/hzfd

Padova, Italy
+39 049 9712 111
www.parker.com/hzfd

**Engine Filtration & Water Purification**

Racor
Dewsbury, England
+44 (0) 1924 487 000
www.parker.com/rfde

Racor Research & Development
Stuttgart, Germany
+49 (0)711 7071 290-10

**Hydraulic Filtration**

Hydraulic Filter
Arnhem, Holland
+31 26 3760376
www.parker.com/hfde

Ujrala, Finland
+358 20 753 2500

**Condition Monitoring**

Parker Kittiwake
West Sussex, England
+44 (0) 1903 731 470
www.kittiwake.com

**Process Filtration**

dominick hunter Process Filtration
Parker Twin Filter BV
Birtley, England
+44 (0) 191 410 5121
www.parker.com/processfiltration

Asia Pacific

**Australia**

Castle Hill, Australia
+61 2 9634 7777
www.parker.com/australia

**China**

Shanghai, China
+86 21 5031 2525
www.parker.com/china

**India**

Chennai, India
+91 22 4391 0700
www.parker.com/india

**Parker Fowler**

Bangalore, India
+91 80 2783 6794
www.johnfowlerindia.com

**Japan**

Tokyo, Japan
+81 45 870 1522
www.parker.com/japan

**Korea**

Hwaseon-City
+82 31 359 0782
www.parker.com/korea

**Singapore**

Jurong Town, Singapore
+65 6887 6300
www.parker.com/singapore

**Thailand**

Bangkok, Thailand
+66 2186 7000
www.parker.com/thailand

**Latin America**

Parker Comercio Ltda.
Filtration Division
Sao Paulo, Brazil
+55 12 4009 3500
www.parker.com/br

**Pan American Division**

Miami, FL
305 470 8800
www.parker.com/panam

**Africa**

Aeroport Kempton Park, South Africa
+27 11 9610700
www.parker.com/africa