AQUATEC™ is the name for a new series of water-bath heaters from Heatec. The name distinguishes this line of heaters from the many other types of heaters we make. Aquatec heaters are used mostly to heat fuel gas and liquids such as crude oil.

The heater is used to heat fuel gas at power generation plants, compressor stations and wellheads. The gas is heated before its pressure is reduced. Heating fuel gas while it is still at a high pressure keeps ice crystals and hydrates from forming in the lines when its pressure is reduced for combustion. Ice and hydrates can cause major damage to gas-fired turbines and other equipment.

The heater is used to heat crude oil at offshore platforms and refineries. The oil is heated to reduce its viscosity so it can be easily pumped.

Aquatec heaters are normally gas-fired. Outputs of our standard models range from 0.65 million to 9 million Btu/hour. They may be customized to suit your needs. They can be configured for use in hazardous areas (Class 1, Div.1 or 2) where safety is a concern. And they can also be designed to operate in isolated areas where electrical power is not available.

Heater Construction
Aquatec heaters are skid-mounted, factory-wired and piped. Key components of the heater are the heater shell, burner, furnace tube, serpentine tube bundles, and expansion chamber. (Please see illustration).

The furnace tube may be either a single U-tube or multiple U-tubes, depending on Btu needed. Likewise, one or more burners may be used. Burners that operate on a forced draft using a blower can be used. Or, burners that operate on natural draft without a blower can be used.

Tube bundles and furnace tubes are removable as required by API-12. The heaters are externally insulated and have an aluminum skin.
How The Heater Works

Gas or liquid products are heated to 130–150 degrees F as they flow through tube bundles in the heater. The tube bundles are heated *indirectly* by a water bath that surrounds the tube bundles and the furnace tube.

To avoid creating unwanted condensates, high temperature burner gases do not heat the tube bundles *directly*. If the high temperature gases were allowed to come into direct contact with the tube bundles (which are at a relatively low temperature), moisture in the gas would condense on the tube bundles and create a corrosive liquid.

The expansion chamber stores water overflow created by expansion. It also serves as water saver by reducing evaporation.
### Aquatec™ forced draft heaters

<table>
<thead>
<tr>
<th>Basic Model</th>
<th>Btu/hour (million)</th>
<th>Length (feet)</th>
<th>Width (feet)</th>
<th>Height (feet)</th>
<th>Gas Flow Rate (MMSCFD)</th>
<th>Gas inlet temp (degF)</th>
<th>Gas outlet temp (degF)</th>
<th>Net Weight (pounds)</th>
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Heights shown include expansion tank, but do not include the stack.

### Aquatec™ natural draft heaters

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<th>Height (feet)</th>
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<th>Gas inlet temp (degF)</th>
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</table>

Heights shown include expansion tank, but do not include the stack.

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**About Heatec**

Heatec has been in business since 1977. We design, manufacture and service heating and storage systems. These products are used in the hot mix asphalt industry and numerous other industries.

You will find Heatec products at chemical plants, at oil-and-gas refineries, on off shore platforms and on barges. You will also find them at power generation plants, wood product manufacturers, food factories, pharmaceutical companies, roofing manufacturers and others.

Heatec products include heaters, vaporizers, and heat recovery units. The heaters are either horizontal or vertical and have either helical coils or serpentine coils. Heater and vaporizer sizes range from 0.5 to 70 million Btu/hour. Products also include pump skids, storage tanks and expansion tanks.

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Heatec facility in Chattanooga, Tennessee