In Line Thermal Fluid Pre-Heater
SA Electric Series

DESCRIPTION

The Hy-Way SA electric pre-heater is designed for use in heating viscous liquids such as: no. 4, 5, and 6 fuels or reclaimed oils. The SA pre-heater can quickly and efficiently boost oil temperatures on demand to achieve optimum viscosity for atomizing heavier fuels. The SA pre-heater is also an effective compliment to older or existing heating systems where additional heat exchange is required.

The design of the SA pre-heater consists of a hollow jacket cylinder with a series of internal heat tubes mounted on a skid frame construction. Each tube houses a heating element which consists of a series of specially wound wire coils fitted within evenly spaced porcelain insulators and joined by a contiguous support strap. The heat exchanger is externally thermally insulated and covered in embossed aluminum for maximum efficiency and durability. Sizes are available from 50 to 200 kilowatts. Optional dual density staging is available for reduced current draw.

APPLICATION

Most combustion systems are designed for minimum viscosity levels of 100 SSU (Seconds Saybolt Universal) in order to achieve maximum atomization of the oil for efficient combustion. The Hy-Way SA electric pre-heater is designed to quickly reach, on demand, the required temperatures necessary to maintain 100 SSU. These temperatures generally range from 100°F to 250°F. In addition, viscosity must be reduced to maintain proper pumping flow to prevent vaporization, cavitation and overheating which can lead to coking of the thermal system.

STANDARD FEATURES

- Fully insulated exterior with aluminum covering
- Control panel remotely mounted
- Digital P.I.D. temperature controller
- Non-arcing power relays
- Safety interlocks
- Fused control circuit transformer
- Low watt density design
- Removal of heating elements without draining the system
- Discharge manifold

OPTIONS

- Special sizes and designs to meet your application needs
- S.C.R. power controller
- Flow switch
- Fuel pump and motor, base mounted with flexible connectors
- Fused pump motor starter located in control panel
- Back pressure regulating valve
- Dial thermometer with wells
- Pressure gauges and needle valves
In-Line Thermal Fluid Pre-Heater

![Diagram of in-line thermal fluid pre-heater with specifications and dual loop piping schematic for pumping and heating heavy oils.]

<table>
<thead>
<tr>
<th>MODEL</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA504T-11</td>
<td>11'-0&quot;</td>
<td>8'-0&quot;</td>
<td>12&quot;</td>
<td>18&quot;</td>
<td>18&quot;</td>
<td>36&quot;</td>
<td>10&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>SA704T-16</td>
<td>17'-3&quot;</td>
<td>13'-3&quot;</td>
<td>12&quot;</td>
<td>18&quot;</td>
<td>18&quot;</td>
<td>36&quot;</td>
<td>10&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>SA1004T-21</td>
<td>23'-9&quot;</td>
<td>18'-6&quot;</td>
<td>12&quot;</td>
<td>18&quot;</td>
<td>18&quot;</td>
<td>36&quot;</td>
<td>10&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>SA1508T-16</td>
<td>17'-3&quot;</td>
<td>13'-3&quot;</td>
<td>12&quot;</td>
<td>18&quot;</td>
<td>18&quot;</td>
<td>36&quot;</td>
<td>10&quot;</td>
<td>48&quot;</td>
</tr>
<tr>
<td>SA2008T-21</td>
<td>22'-6&quot;</td>
<td>18'-6&quot;</td>
<td>12&quot;</td>
<td>18&quot;</td>
<td>18&quot;</td>
<td>36&quot;</td>
<td>10&quot;</td>
<td>48&quot;</td>
</tr>
</tbody>
</table>

Specifications subject to change without notice.  
copyright © 1996-2013 Gencor Industries, Inc.