APPLICATION
Freeze protection 5°C (40°F) of steam lines. Intermittent exposure to 593°C (1100°F). TubeTrace HTX2 is a pre-engineered electric traced tube bundle for steam sample lines and impulse lines to pressure transmitters. TubeTrace HTX2 will provide water freeze protection in ambient conditions down to -34°C (-30°F) with 40 kph (25 mph) wind. HTX2 is suitable for superheat steam service temperatures up to 593°C (1100°F) for a duration of 2 minutes per cycle.

In the past, the only option for tubing subject to high temperature exposure was heat traced with series resistance mineral insulated (MIQ) heat trace. MIQ heaters are custom made to fit each application, so long lead times and specific field measurements are often required. TubeTrace HTX2 solves this with Thermon parallel resistance HPT heat trace isolated from direct contact with high temperature tubing.

TubeTrace HTX2 bundles are suitable for continuous exposure to 399°C (750°F) and/or intermittent superheat steam service temperatures to 593°C (1100°F) even when power is applied to the heat trace during ambient conditions of 5°C (40°F).

RATINGS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watt density</td>
<td>16 W/m @ 10°C (5 w/ft @ 50°F)</td>
</tr>
<tr>
<td>Supply voltages</td>
<td>120 or 240 Vac Nominal</td>
</tr>
<tr>
<td>Maintain temperature</td>
<td>5°C (40°F) (Freeze protection)</td>
</tr>
<tr>
<td>Minimum design ambient</td>
<td>-34°C (-30°F)</td>
</tr>
<tr>
<td>Max. continuous exposure temp.</td>
<td>399°C (750°F)</td>
</tr>
<tr>
<td>Intermittent service temperature</td>
<td>593°C (1100°F)</td>
</tr>
<tr>
<td>Minimum bend radius</td>
<td>SEI- HTX2: 305 mm (12&quot;) MEI- HTX2: 406 mm (16&quot;)</td>
</tr>
</tbody>
</table>

PRODUCT FEATURES
- “Touch Safe” jackets protect personnel
- “Cut-to-length” for faster installation
- Rated for intermittent exposure temperatures of 593°C (1100°F) for 2 minutes/2.5 hr cycle
- Designed for ambient sensing control at 5°C (+40°F)
- Freeze protect in ambient of -34°C (-30°F)

CONSTRUCTION
1. Process tube(s)
2. High temperature woven glass fiber thermal insulation
3. HPT heat trace
4. Thermal diffusion foil
5. Non-hygroscopic glass fiber insulation
6. Polymer outer jacket (ATP or TPU)

BASIC ACCESSORIES

END SEAL KIT
FAK-7HTS-HTX2-1
- Up to 3.0” o.d.
- Single tube, single tracer

FAK-7HTS-HT/HTX-2
- Up to 3.50” o.d.
- Dual tube, single tracer

Note
1. Higher voltages up to 480 Vac may be possible: contact Thermon for design assistance.
### POWER OUTPUT CURVES
The power outputs shown apply to cable installed on insulated metallic pipe (using the procedures outlined in IEEE Standard 515) at the service voltages stated below. For use on other service voltages, contact Thermon.

#### 120 Vac Service Voltage
- **Catalog Number**: HPT 5-1
  - **Start-Up Temperature**: 10 (50) °C
  - **Power Output at 10°C (50°F)**: 16 (5) W/m

#### 240 Vac Service Voltage
- **Catalog Number**: HPT 5-2
  - **Start-Up Temperature**: -18 (0) °C
  - **Power Output at -18°C (0°F)**: 10 (50) W/m

### CIRCUIT BREAKER SIZING
Maximum circuit lengths for various circuit breaker amperages are shown below. Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The National Electrical Code and Canadian Electrical Code require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

<table>
<thead>
<tr>
<th>120 Vac Service Voltage</th>
<th>Max. Circuit Length vs. Breaker Size (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Catalog Number</strong></td>
<td><strong>Start-Up Temperature</strong></td>
</tr>
<tr>
<td>HPT 5-1</td>
<td>10 (50) °C</td>
</tr>
<tr>
<td></td>
<td>-18 (0) °C</td>
</tr>
<tr>
<td></td>
<td>-29 (-20) °C</td>
</tr>
<tr>
<td></td>
<td>-40 (-40) °C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>240 Vac Service Voltage</th>
<th>Max. Circuit Length vs. Breaker Size (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Catalog Number</strong></td>
<td><strong>Start-Up Temperature</strong></td>
</tr>
<tr>
<td>HPT 5-2</td>
<td>10 (50) °C</td>
</tr>
<tr>
<td></td>
<td>-18 (0) °C</td>
</tr>
<tr>
<td></td>
<td>-29 (-20) °C</td>
</tr>
<tr>
<td></td>
<td>-40 (-40) °C</td>
</tr>
</tbody>
</table>

### HOW TO SPECIFY

<table>
<thead>
<tr>
<th>Bundle Type</th>
<th>Process Tube Material</th>
<th>Process Tube(s)</th>
<th>High Temperature</th>
<th>Heat Trace Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEI</td>
<td>316 SS Welded</td>
<td><strong>HTX2</strong></td>
<td>Intermittent Exposure to 593°C (1100°F)</td>
<td>50 = HPT 5 w/ft. 120 Vac</td>
</tr>
<tr>
<td>MEI</td>
<td>316 SS Seamless</td>
<td></td>
<td></td>
<td>51 = HPT 5 w/ft. 240 Vac</td>
</tr>
</tbody>
</table>

- **Heat Trace Type**: 50 = HPT 5 w/ft. 120 Vac
- **Heat Trace Type**: 51 = HPT 5 w/ft. 240 Vac

### CERTIFICATIONS/APPROVALS

- **FM Approvals**
  - Ordinary Locations
  - Hazardous (Classified) Locations
  - Class I, Division 2, Groups B, C and D
  - Class II, Division 2, Groups F and G
  - Class III, Divisions 1 and 2
- **UL Listed**
  - Ordinary Locations
  - Hazardous (Classified) Locations
  - Class I, Division 1, Groups B, C and D
  - Class II, Division 2, Groups E, F and G
  - Class III, Divisions 1 and 2
- **Canadian Standards Association**
  - Ordinary Locations
  - Hazardous (Classified) Locations
  - Class I, Division 1, Groups B, C and D
  - Class II, Division 2, Groups E, F and G

*CL. II, Div. 2 requires Thermon design review.

**Notes**
1. Monel is a trademark of Inco Alloys International, Inc.
2. Black ATP is standard.