### **APPLICATION**

Freeze protection 5°C of steam lines. Continuous exposure to 593°C. TubeTrace HTX is a pre-engineered electric traced tube bundle for steam sample lines and impulse lines to pressure transmitters. TubeTrace HTX will provide water freeze protection in ambient conditions down to -45°C with 40 kph wind conditions.

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 measurments are often required. TubeTrace HTX solves this with Thermon parallel resistance HPT heat trace isolated from direct contact with high temperature tubing.

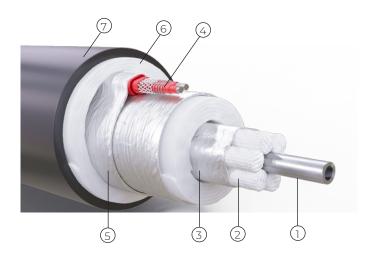
TubeTrace HTX bundles are designed to withstand continuous 593°C superheat steam temperature even when power is applied to the heat trace during ambient conditions of 5°C.

### **RATINGS**

| Watt density                   | 33 W/m @ 10°C           |
|--------------------------------|-------------------------|
| Supply voltages <sup>1</sup>   | 120 or 240 Vac Nominal  |
| Maintain temperature           | 5°C (Freeze protection) |
| Minimum design ambient         | -45°C                   |
| Max. continuous exposure temp. | 593°C                   |
| Minimum bend radius            | 508 mm                  |

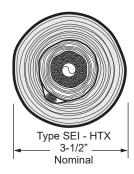
# **PRODUCT FEATURES**

- $\cdot$  "Touch safe" jackets protect personnel
- · "Cut-to-length" for faster installation
- Rated for 593°C continuous exposure temperatures
- Designed for ambient sensing control at +5°C
- · Freeze protect in ambient of -45°C



### CONSTRUCTION

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



### **BASIC ACCESSOIRES**

# **END SEAL KIT**

# **FAK-SSHT/HTX-1**

- · Up to 3.50" o.d.
- · Single tube, single tracer

# FAK-SSHT/HTX-2

- · Up to 3.50" o.d.
- · Dual tube, single tracer



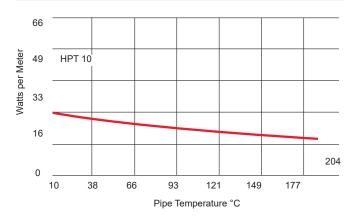
### Note

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.

| Catalog<br>Number<br>120 Vac | Zone<br>Length<br>cm | Catalog<br>Number<br>240 Vac | Zone<br>Length<br>cm | Power Output<br>at 10°C |
|------------------------------|----------------------|------------------------------|----------------------|-------------------------|
| HPT 10-1                     | 46                   | HPT 10-2                     | 61                   | 33                      |



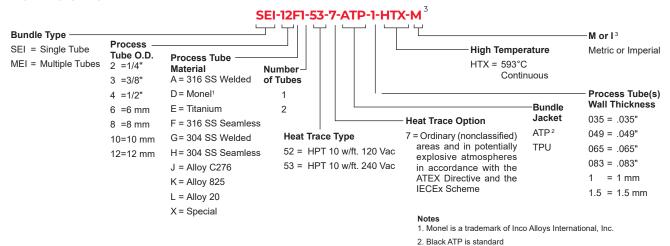
### **CIRCUIT BREAKER SIZING**

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.

| 120 Vac Service Voltage |                         | Max. C | Max. Circuit Length vs. Breaker Size |     |     |  |
|-------------------------|-------------------------|--------|--------------------------------------|-----|-----|--|
| Catalog<br>Number       | Start-Up<br>Temperature |        | m                                    |     |     |  |
|                         | °C                      | 20A    | 30A                                  | 40A | 50A |  |
| HPT 10-1                | 10                      | 47     | 73                                   | 91  |     |  |
|                         | -18                     | 44     | 66                                   | 91  |     |  |
|                         | -29                     | 41     | 64                                   | 88  | 91  |  |
|                         | -40                     | 40     | 61                                   | 84  | 91  |  |

| 240 Vac Service Voltage |                         | Max. Circuit Length vs. Breaker Size |     |             |      |
|-------------------------|-------------------------|--------------------------------------|-----|-------------|------|
| Catalog<br>Number       | Start-Up<br>Temperature | ert-Up m<br>erature                  |     | vo. Broaker | 0.20 |
|                         | °C                      | 20A                                  | 30A | 40A         | 50A  |
| HPT 10-2                | 10                      | 95                                   | 148 | 183         |      |
|                         | -18                     | 85                                   | 133 | 183         |      |
|                         | -29                     | 82                                   | 128 | 177         | 183  |
|                         | -40                     | 79                                   | 122 | 168         | 183  |

# **HOW TO SPECIFY**



# **CERTIFICATIONS/APPROVALS**



Certificate FM13 ATEX 0052 in accordance with the EU ATEX Directive 94/9/EC





International Electrotechnical Commission IEC Certification Scheme for Explosive Atmospheres FMG 13.0020

BSX has additional hazardous area approvals including:

• DNV • Lloyd's • TIIS • CCE/CSIR • GOST-R Contact Thermon for additional approvals and specific information.



FM Approvals Ordinary and Hazardous (Classified) Locations

3. Ensure distinction between metric and imperial tubing are noted



Underwriters Laboratories Inc. Hazardous (Classified) Locations