

# TubeTrace® Type SE/ME

## Electrically Heated Instrument Tubing with HTSX™ Self-Regulating Heat Tracing

Product Specifications

### Application . . .

#### Freeze Protection or Process Temperature Maintenance Range: 5°C to 121°C

TubeTrace, with “cut-to-length” HTSX self-regulating heat tracing, is designed to provide freeze protection or temperature maintenance for tubing where high temperature exposure capability is possible. HTSX withstands temperature exposures of 215°C.

#### Self-regulating HTSX heat tracing

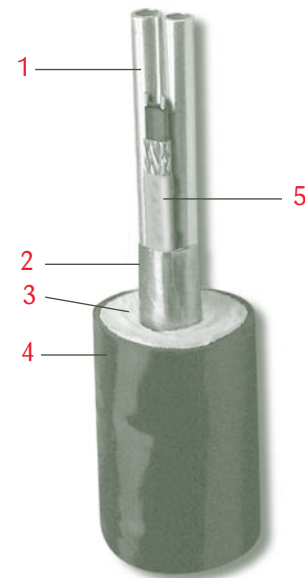
- Varies in response to the surrounding conditions along the entire length of a circuit.
- Lower risk of overheating the tube or product.
- Installed cost is lower because “cut-to-length” HTSX makes end connections easy with minimal waste.
- HTSX cables are certified for use in ordinary (nonclassified) areas and in potentially explosive atmospheres in accordance with the ATEX Directive and the IEC Ex Scheme.

### Ratings/Specifications . . .

HTSX	Ratings
Available watt densities	9, 18, 27, 37, 48, 64 W/m @ 10°C
Supply voltages	230 Vac
Tube temperature range	5°C to 121°C
Max. exposure temperature <sup>1</sup>	215°C
Intermittent power-on	250°C
Intermittent power-off	205°C
Continuous power-off	205°C
T-rating <sup>2</sup>	
HTSX 3-2, 6-2, 9-2, 12-2, 15-2	T3
HTSX 20-2	T2
Based on stabilised design <sup>3</sup>	T3 to T6

#### Note . . .

1. This reflects maximum exposure for heater. If bundle jacket is to remain below 140°F (60°C) in +80°F (27°C) ambient (in consideration of personnel burn risk) tube temperature must remain below 400°F (205°C). Alternative designs to keep jacket below 140°F (60°C) in higher ambients and/or with higher tube temperatures are available. Contact Thermon.
2. T-rating per internationally recognised testing agency guidelines.
3. Thermon heating cables are approved for the listed T-ratings using the stabilised design method. This enables the cable to operate in hazardous areas without limiting thermostats. The T-rating may be determined using CompuTrace® Electric Heat Tracing Design Software or contact Thermon for design assistance.



### Construction . . .

- 1 Process Tube
- 2 Heat Reflective Tape
- 3 Non-Hygroscopic Glass Fiber Insulation
- 4 Polymer Outer Jacket (ATP or TPU available)
- 5 HTSX Self-Regulating Electrical Heat Tracing

### HTSX Product Features . . .

- Self-Regulating
- “Cut-to-Length”
- Hazardous Area Approvals

For additional information on HTSX and other Thermon heat tracing products and services, visit [www.thermon.com](http://www.thermon.com).



**THERMON . . . The Heat Tracing Specialists®**  
[www.thermon.com](http://www.thermon.com)

European Headquarters  
Boezemweg 25 • PO Box 205  
2640 AE Pijnacker • The Netherlands  
Phone: +31 (0) 15-36 15 370

Corporate Headquarters  
100 Thermon Dr. • PO Box 609  
San Marcos, TX 78667-0609 • USA  
Phone: +1 512-396-5801

For the Thermon office nearest you  
visit us at . . .  
[www.thermon.com](http://www.thermon.com)

ISO 9001  
REGISTERED

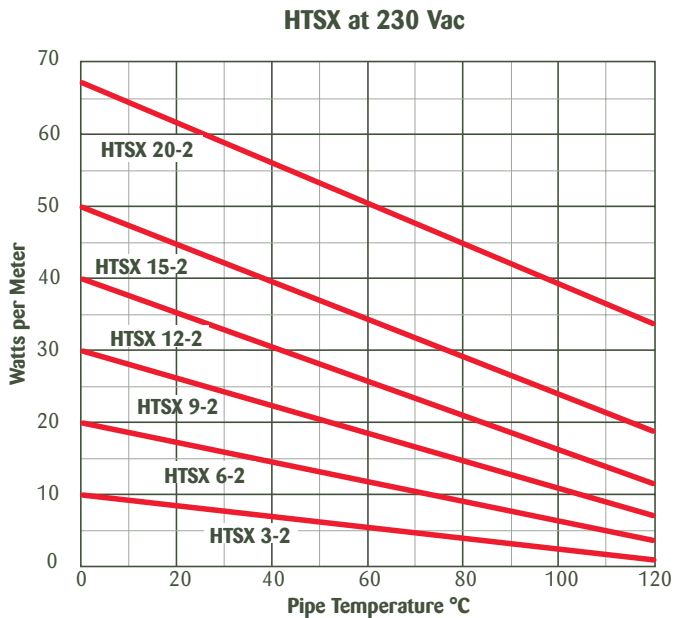
# TubeTrace® Type SE/ME

## Electrically Heated Instrument Tubing with HTSX™ Self-Regulating Heat Tracing

## Product Specifications

### Power Output Curves . . .

The power outputs shown apply to HTSX heat tracing installed on insulated metallic pipe (using the procedures outlined in IEEE Standard 515-2004). Power output may be slightly higher due to the thermal efficiency of TubeTrace.



### Design Tools . . .

Technical Design Information and CompuTrace® - IT computer design program for TubeTrace heated instrument tubing are available online at [www.thermon.com](http://www.thermon.com).

### TubeTrace Accessories . . .

Sealing the ends of pre-insulated tubing bundles ensures their efficient and reliable performance. A variety of termination kits and accessories are available and can be found on Form CLX0020.

### Electrical Heat Trace Accessories . . .

Thermon manufactures every type of electrical resistance heat tracing available in the world today. Power connection and termination kits (Form CLX0024) and a variety of controls are all available for heated instrument tubing applications.

### How to Specify . . .

**SE-6A1-63-7-ATP-035-M**

<b>Bundle Type</b>	<b>Process Tube O.D.</b>	<b>Process Tube Material<sup>1</sup></b>	<b>Number of Tubes</b>	<b>Heat Trace Option</b>	<b>Bundle Jacket</b>	<b>M or I</b>
SE = Single Tube ME = Multiple Tubes	2 = 1/4" 3 = 3/8" 4 = 1/2" 6 = 6 mm 8 = 8 mm 10 = 10 mm 12 = 12 mm	A = 316 SS Welded A <sub>s</sub> = 316L SS Welded B = #068 Copper C = PFA Teflon <sup>2</sup> D = Monel <sup>3</sup> E = Titanium F = 316 SS Seamless F <sub>s</sub> = 316T SS Seamless G = 304 SS Welded H = 304 SS Seamless J = Alloy C276 K = Alloy 825 M = FEP Teflon P = Polyethylene T = TFE Teflon X = Special	1 2 3 4	7 = OJ/Fluoropolymer 8 = Division 1 Approved	ATP <sup>4</sup> TPU	Metric or Imperial Indication <b>Process Tube(s) Wall Thickness</b> 030 = .030" 032 = .032" (Copper Only) 035 = .035" 040 = .040" (Plastic Only) 047 = .047" (Plastic Only) 049 = .049" 062 = .062" (Plastic Only) 065 = .065" 083 = .083" (SS Only) 1 = 1 mm 1.5 = 1.5 mm
			<b>Heat Trace Type</b>			
			61 = HTSX 3 230 Vac 63 = HTSX 6 230 Vac 65 = HTSX 9 230 Vac 67 = HTSX 12 230 Vac 69 = HTSX 15 230 Vac 71 = HTSX 20 230 Vac			

### Notes . . .

- Seamless tubing has a standard quality K3, other qualities are available on special request. Tubing meets the ASTM standards, tubing that meets DIN standards is available on special request.
- Teflon is a trademark of E.I. du Pont de Nemours & Co., Inc.
- Monel and Inconel are trademarks of Inco Alloys International, Inc.
- Black ATP is standard, other jacket materials are available.

### Heat Trace Certifications/Approvals . . .



**European Organisation for Electrotechnical Standardisation**  
Ordinary and Hazardous (Classified) Locations



II 2 G/D Ex e II T3 DEMKO 02 ATEX 0120790



**International Electrotechnical Commission**  
IEC Certification Scheme for Explosive Atmospheres  
UL 06.0004



**Factory Mutual Research**  
Ordinary and Hazardous (Classified) Locations



**Underwriters Laboratories Inc.**  
Hazardous (Classified) Locations

HTSX has additional hazardous area approvals including:

- DNV • Lloyd's • JIS • CCE/CMRS • GGTN

Contact Thermon for additional approvals and specific information.

