



PRODUCT SPECIFICATIONS

# TubeTrace® Type SE/ME

ELECTRICALLY HEATED INSTRUMENT TUBING  
with VSX™ Self-Regulating Heat Tracing

## APPLICATION

TubeTrace, with “cut-to-length” VSX self-regulating heat tracing, is designed to provide freeze protection or temperature maintenance from 5°C to 149°C for tubing where high temperature exposure capability is possible. VSX withstands intermittent temperature exposures of 232°C.

Self-regulating VSX 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” VSX makes end connections easy with minimal waste.
- VSX is approved for use in ordinary (non-classified) areas and hazardous (classified) areas.

## RATINGS

| VSX                                    | Ratings                   |
|--|---------------------------|
| Available watt densities               | 16, 33, 49, 66 w/m @ 10°C |
| Supply voltages                        | 110-120 or 208-277 Vac    |
| Tube temperature range                 | 5°C to 149°C              |
| Max. exposure temperature <sup>1</sup> |                           |
| Intermittent power-on                  | 232°C                     |
| Intermittent power-off                 | 250°C                     |
| Continuous power-off                   | 204°C                     |
| T-rating                               | T3 200°C                  |

### Note

1. This reflects maximum exposure for heater. If bundle jacket is to remain below 60°C in +27°C ambient (in consideration of personnel burn risk) tube temperature must remain below 205°C. Alternative designs to keep jacket below 60°C in higher ambients and/or with higher tube temperatures are available. Contact Thermon.



## CONSTRUCTION

- 1 Process tube(s)
- 2 VSX self-regulating electrical heat tracing
- 3 Heat reflective tape
- 4 Non-hygroscopic glass fiber insulation
- 5 Polymer outer jacket (ATP or TPU available)

## PRODUCT FEATURES

- Self-regulating
- “Cut-to-length”
- Hazardous area approvals

For additional information on VSX and other Thermon heat tracing products and services, visit

[www.thermon.com](http://www.thermon.com).

## THERMON The Heat Tracing Specialists®

ISO 9001  
REGISTERED

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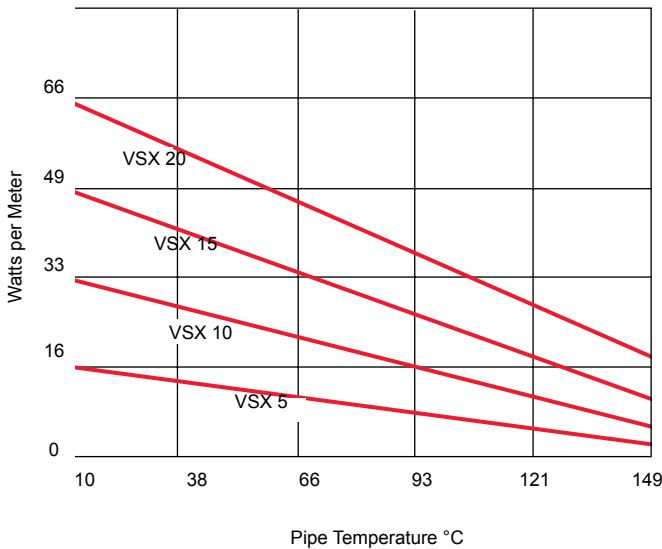
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## POWER OUTPUT CURVES

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.



## 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 CLX0020U.

## ELECTRICAL HEAT TRACE ACCESSORIES

Thermon manufactures every type of electrical resistance heat tracing available in the world today. Power connection and termination kits (Form CLX0024U) and a variety of controls are all available for heated instrument tubing applications.

## HOW TO SPECIFY

**SE-4F1-37-7-ATP-035**

|   |  |  |  |   |  |   |  |
|---|--|--|--|---|--|---|--|
| <b>Bundle Type</b><br>SE = Single Tube<br>ME = Multiple Tubes | <b>Process Tube O.D.</b><br>2 = 1/4"<br>3 = 3/8"<br>4 = 1/2"<br>6 = 6 mm<br>8 = 8 mm<br>10 = 10 mm<br>12 = 12 mm | <b>Process Tube Material</b><br>A = 316 SS Welded<br>B = #122 Copper<br>C = PFA Teflon <sup>2</sup><br>D = Monel <sup>3</sup><br>E = Titanium<br>F = 316 SS Seamless<br>G = 304 SS Welded<br>H = 304 SS Seamless<br>J = Alloy C276<br>K = Alloy 825<br>L = Alloy 20<br>M = FEP Teflon<br>N = Nylon<br>P = Polyethylene<br>T = TFE Teflon<br>X = Specia | <b>Number of Tubes</b><br>1<br>2<br>3<br>4 | <b>Heat Trace Type</b><br>31 = VSX 5 w/ft. 240 Vac<br>33 = VSX 10 w/ft. 240 Vac<br>35 = VSX 15 w/ft. 240 Vac<br>37 = VSX 20 w/ft. 240 Vac | <b>Heat Trace Option</b><br>7 = OJ/Fluoropolymer | <b>Bundle Jacket</b><br>ATP <sup>4</sup><br>TPU | <b>Process Tube(s) Wall Thickness</b><br>025 = .028" (SS Only)<br>030 = .030"<br>032 = .032" (Copper Only)<br>035 = .035"<br>040 = .040" (Plastic Only)<br>047 = .047" (Plastic Only)<br>049 = .049"<br>062 = .062" (Plastic Only)<br>065 = .065"<br>083 = .083" (SS Only) |
|---|--|--|--|---|--|---|--|

### Notes

- Contact factory for availability of long length coils 1" O.D.
- 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.

## CERTIFICATIONS/APPROVALS

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

FM Approvals  
Ordinary and Hazardous (Classified) Locations

International Electrotechnical Commission  
IEC Certification Scheme for Explosive Atmospheres  
FMG 13.0020

Underwriters Laboratories Inc.  
Hazardous (Classified) Locations

BSX has additional hazardous area approvals including:

- DNV • Lloyd's • TIIS • CCE/CSIR • GOST-R

Contact Thermon for additional approvals and specific information.