PRODUCT SPECIFICATIONS

TubeTrace® Type SE/ME

ELECTRICALLY HEATED INSTRUMENT TUBING

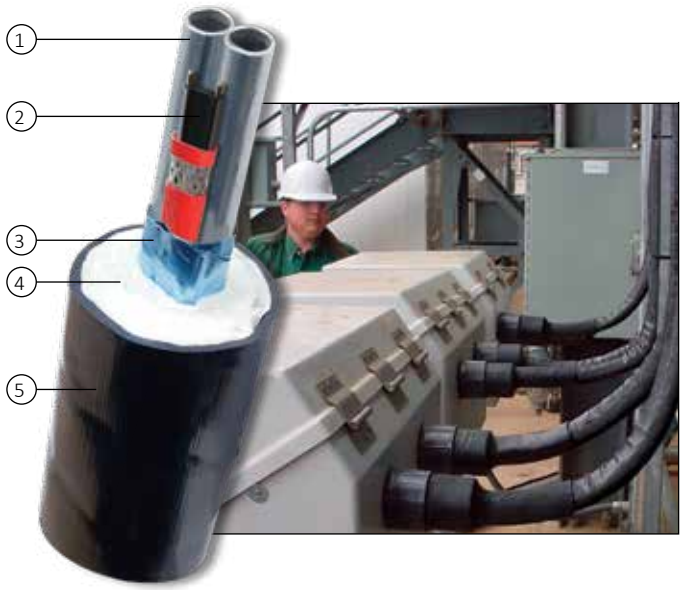
with **VSX™-HT** Self-Regulating Heat Tracing

APPLICATION

TubeTrace, with "cut-to-length" VSX-HT self-regulating heat tracing, is designed to provide freeze protection or temperature maintenance from 5°C (40°F) to 149°C (300°F) for tubing where high temperature exposure capability is possible. VSX-HT withstands intermittent temperature exposures of 232°C (450°F).

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



RATINGS

VSX-HT	Ratings
Available watt densities	16, 33, 49, 66 w/m @ 10°C 5, 10, 15, 20 w/ft @ 50°F
Supply voltages	110-120 or 208-277 Vac
Tube temperature range	5°C to 149°C (40°F to 300°F)
Max. exposure temperature [1] Intermittent power-on or off	250°C (482°F)
T-rating 16, 33 w/m (5, 10 w/ft.) 49, 66 w/m (14, 20 w/ft.) Based on stabilized design [2]	 T3 200°C (392°F) T2C 230°C (446°F) T2 to T6

CONSTRUCTION

1 Process tube(s)

2 VSX-HT 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-HT and other Thermon heat tracing products and services, visit www.thermon.com.

Note

1. This reflects maximum exposure for heater. If bundle jacket is to remain below 60°C (140°F) in 27°C (+80°F) ambient (in consideration of personnel burn risk) tube temperature must remain below 205°C (400°F). Alternative designs to keep jacket below 60°C (140°F) in higher ambients and/or with higher tube temperatures are available. Contact Thermon.
2. Thermon heating cables are approved for the listed T-ratings using the stabilized 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.

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PRODUCT SPECIFICATIONS

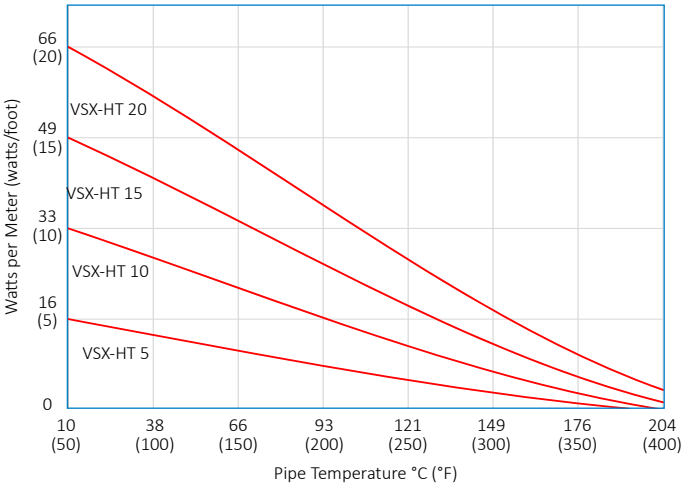
TubeTrace® Type SE/ME

ELECTRICALLY HEATED INSTRUMENT TUBING

with **VSX™-HT** Self-Regulating Heat Tracing

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.

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- 4F1-97-7-ATP-035

Bundle Type
- SE = Single Tube
- ME = Multiple Tubes

Process Tube O.D.
- 1 = 1/8”
- 2 = 1/4”
- 3 = 3/8”
- 4 = 1/2”
- 5 = 5/8”
- 6 = 3/4”
- 8 = 1” [1]

Process Tube Material
- A = 316 SS Welded
- B = #122 Copper
- C = PFA Teflon [2]
- D = Monel [3]
- E = Titanium
- F = 316 SS Seamless
- G = 304 SS Welded
- H = 304 SS Seamless
- J = Alloy C276
- K = Alloy 825
- L = Alloy 20
- M = FEP Teflon
- N = Nylon
- P = Polyethylene
- T = TFE Teflon
- X = Specia

Number of Tubes
- 1
- 2
- 3
- 4

Heat Trace Type
- 90 = VSX-HT 5 w/ft. 120 Vac
- 91 = VSX-HT 5 w/ft. 240 Vac
- 92 = VSX-HT 10 w/ft. 120 Vac
- 93 = VSX-HT 10 w/ft. 240 Vac
- 94 = VSX-HT 15 w/ft. 120 Vac
- 95 = VSX-HT 15 w/ft. 240 Vac
- 96 = VSX-HT 20 w/ft. 120 Vac
- 97 = VSX-HT 20 w/ft. 240 Vac

Heat Trace Option
- 7 = OJ/Fluoropolymer

Bundle Jacket
- ATP [4]
- TPU

Process Tube(s) Wall Thickness
- 025 = .028” (SS Only)
- 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)

Notes

1. Contact factory for availability of long length coils 1” O.D.
2. Teflon is a trademark of E.I. du Pont de Nemours & Co., Inc.
3. Monel and Inconel are trademarks of Inco Alloys International, Inc.
4. Black ATP is standard, other jacket materials are available.

CERTIFICATIONS/APPROVALS

FM Approved

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
- Class I, Zones 1 and 2, AEx eb IIC, AEx tb IIIC

Canadian Standards Association
Ordinary Locations
Hazardous (Classified) Locations
- Class I, Division 1, Groups A, B, C and D
- Class II, Division 1, Groups E, F and G
- Class I, Division 2, Groups A, B, C and D
- Class II, Division 2, Groups E, F and G
- Ex eb IIC, Ex tb IIIC