TubeTrace® & ThermoTube



Product Reference Legend (Metric Units)

T = PTFE Teflon

X = Special

For design assistance contact Thermon or visit www.thermon.com and download CompuTrace® IT Computer Design Software for Instrument Tubing

Typical Steam Traced Bundles Typical Electrically Heat Traced Bundles SP-12F1-10F1-ATP-1/1-M SE-12 F1-63-7-ATP-1-M⁷ M or I (Metric or Imperial) **Bundle Type Process Tube(s)** SI = Single Isolated Tube Tracer Tube(s) **Bundle Type** M or I O.D. **Process Tube Material** Light Steam Traced Process Tube(s) Wall Thickness (inches) **Process Tube O.D.** Process Tube(s) Metric or Imperial SE = Single Tube Number A = 316L SS Welded **Wall Thickness** MI = Multiple Isolated Tubes 035 = .035**Process Tube Material** <u>Metric</u> **Jacket Type** Wall Thickness (inches) ME = Multiple Tubes As = 316Ti SS Welded 6 = 6 mmLight Steam Traced 035 = .035Number Process Tube(s) **Heater Cable Option** 040 = .040(Plastic Only) A = 316L SS WeldedATP 5 **Tracer Tube** 6 = 6 mmof Tubes ⁶ B = B68 CopperSP = Single Tube 8 = 8 mm040 = .040 (Plastic Only) 1=BN (HPT Only) O.D. 047 = .047(Plastic Only) As = 316Ti SS Welded 8 = 8 mm032 = .032 (Copper Only) $C = PFA Teflon^2$ Heavy Steam Traced 10 = 10 mm**Tracer Tubes** (Plastic Only) 047 = .047Metric 3 = OJ (BSX Only)049 = .049B = B68 Copper10 = 10 mm035 = .035 $D = Monel^3$ MP= Multiple Tubes 12 = 12 mm049 = .049 $6 = 6 \, \text{mm}$ 7=OJ/Fluoropolymer 062 = .062 $C = PFA Teflon^2$ (Plastic Only) 12 = 12 mm040 = .040 (Plastic Only) Heavy Steam Traced E = Titanium **Imperial** 10 = 10 mm062 = .062(Plastic Only) 8=Division 1 Approved 4 065 = .065 $D = Monel^3$ 047 = .047 (Plastic Only) <u>Imperial</u> F = 316L SS Seamless 1 = 1/8" 12 = 12 mm065 = .0651 = 1 mm1 = 1/8" E = Titanium Fs = 316Ti SS Seamless 2 = 1/4" **Imperial** $1 = 1 \, \text{mm}$ $1.5 = 1.5 \text{ mm}^{7}$ F = 316L SS Seamless 2 = 1/4" 062 = .062 (Plastic Only) **Tracer Tube Material Heat Trace Type** (See Heat Trace Application Below) G = 304 SS Welded2 = 1/4" 3 = 3/8" 1.5= 1.5 mm 3 = 3/8" Fs = 316Ti SS Seamless **Self-Regulating Cables** 065 = .065A = 316 SS Welded H = 304 SS Seamless3 = 3/8" 4 = 1/2" 4 = 1/2" G = 304 SS Welded41 = BSX 9 W/m 230 V51 = HPT 14 W/m 230 V $1 = 1 \, \text{mm}$ B = 122 Copper J = Hastaloy C276 4 = 1/2" 6 = 3/4" H = 304 SS Seamless53 = HPT 28 W/m 230 V43 = BSX 15 W/m 230 V $1.5 = 1.5 \, \text{mm}^{\,7}$ F = 316 SS Seamless K = Alloy 825J = Hastaloy C276 45 = BSX 25 W/m 230 V55 = HPT 42 W/m 230 VM = FEP TeflonK = Alloy 82547 = BSX 32 W/m 230 V57 = HPT 57 W/m 230 VP = Polyethylene M = FEP TeflonT = PTFE Teflon61 = HTSX 9 W/m 230 VThermoTube® Type SL Pre-Insulated Tubing X = Special P = Polyethylene 63 = HTSX 18 W/m 230 V(For Steam Supply and Condensate Return-Not Heated) T = PTFE Teflon65 = HTSX 27 W/m 230 V**SL-12B1-01-ATP-M**⁷ X = Special 67 = HTSX 37 W/m 230 V69 = HTSX 48 W/m 230 V- **M or I** (Metric or Imperial) 71 = HTSX 64 W/m 230 V**Jacket Type Tube Material** 91 = VSX-HT 16 W/m 230 VATP 5 **Tube Wall** A = 316LSSWelded93 = VSX-HT 33 W/m 230 VThickness (inches) TPU 1. Contact factory for options of tubing 25 mm (1") O.D. (not available in all materials). As = 316Ti SS Welded 95 = VSX-HT 49 W/m 230 V30 = .030 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. 10 = 10 mm32 = .032 (Copper Only) 4. Contact factory for design review. 35 = .03512 = 12 mm5. Black ATP is standard, other jacket materials include TPU (Urethane) $D = Monel^3$ 40 = .040 (Plastic Only) 6. Maximum number of tubes dependent on tube size. Imperial 7. Ensure distinction between metric and imperial tubing are noted. E = Titanium 47 = .047 (Plastic Only) 2 = 1/4" 49 = .049F = 316L SS Seamless A complete line of accessories for TubeTrace and ThermoTube are available. 3 = 3/8" 62 = .062 (Plastic Only) Fs = 316Ti SS Seamless 4 = 1/2" 65 = .065G = 304 SS Welded $1 = 1 \, \text{mm}$ H = 304 SS Seamless $1.5 = 1.5 \, \text{mm}^{\frac{7}{2}}$ J = Hastaloy C276 K = Alloy 825**Typical TubeTrace Type MP** M = FEP TeflonTypical TubeTrace Type ME Typical ThermoTube Type SL P = Polyethylene

Electrical Heat Trace Application For Freeze Protection or Maintain 65°C NO STEAM OUTS For Freeze Protection or Maintain 121°C For Freeze Protection or Maintain 200°C For Freeze Protection or Maintain 205°C Heat Trace Exposure* Limited to 85°C Heat Trace Exposure* to 215°C Exposure** to 260°C Heat Trace Exposure* to 250°C BSX Self-Regulating Heat Tracing (All BSX includes braid & overjacket. Standard overjacket is polyolefin, VSX-HT Self-Regulating Heat Tracing (All VSX-HT cables include braid & overjacket BNOJ) **HTSX Self-Regulating Heat Tracing** (All HTSX cables include braid & overjacket BNOJ) HPT Power-Limiting Heat Tracing (All HPT cables include BN braid & may include OJ) also available with an optional fluoropolymer overjacket.) 57 = HPT 57 W/m 230 V61 = HTSX 9 W/m 230 V65 = HTSX 27 W/m 230 V69 = HTSX 48 W/m 230 V91 = VSX-HT 15 W/m 230 V95 = VSX-HT 48 W/m 230 V 97 = VSX-HT 64 W/m 230 V51 = HPT 14 W/m 230 V55 = HPT 42 W/m 230 V41 = BSX 9 W/m 230 V45 = BSX 25 W/m 230 V47 = BSX 32 W/m 230 V63 = HTSX 18 W/m 230 V67 = HTSX 37 W/m 230 V93 = VSX-HT 32 W/m 230 V53 = HPT 28 W/m 230 V71 = HTSX 64 W/m 230 V

^{**} Standard TubeTrace and ThermoTube bundles have a maximum tube temperature rating of 204°C if outer jacket is to remain below 60°C in a max ambient of 27°C with no wind. Extra insulation (bundle option "XINS") maybe considered if tube temperatures approach HPT Power-limiting heating cable limits of 260°C, power off. For higher exposures (up to 588°C) consider TubeTrace HT or HTX bundles.



43 = BSX 15 W/m 230 V



^{*} Exposure temperatures are generally with cable de-energized (off). Exceptions are for HTSX and VSX-HT self-regulating heat tracing ratings which allow intermittent exposure, on or off.