TubeTrace® & ThermoTube



Product Reference Legend (Metric Units)

P = Polyethylene

T = PTFE Teflon

X = Special

For design assistance contact TC-E 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-M⁷ **SE-12 F1-63-7-ATP-1-M**⁷ - **M or I** (Metric or Imperial) **Bundle Type Process Tube(s)** SI = Single Isolated Tube Tracer Tube(s) **Bundle Type** O.D. **Process Tube Material** Wall Thickness (inches) Light Steam Traced Process Tube(s) Process Tube O.D. SE = Single Tube Process Tube(s) Metric or Imperial Number Metric A = 316L SS Welded **Wall Thickness** MI = Multiple Isolated Tubes 035 = .035**Process Tube Material** Metric **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 Welded **Tracer Tube** ATP 5 $6 = 6 \, \text{mm}$ of Tubes 6 B = B68 Copper $8 = 8 \, \text{mm}$ SP = Single Tube 040 = .040 (Plastic Only) 1=BN (HPT Only) O.D. 047 = .047As = 316Ti SS Welded (Plastic Only) $8 = 8 \, \text{mm}$ 032 = .032 (Copper Only) $C = PFA Teflon^2$ Heavy Steam Traced 10 = 10 mm047 = .047 (Plastic Only) **Tracer Tubes** Metric 3=OJ (BSX Only) 049 = .049B = B68 Copper 10 = 10 mm035 = .035MP= Multiple Tubes $D = Monel^3$ 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 (Plastic Only) 10 = 10 mm062 = .0628=Division 1 Approved 4 065 = .065 $D = Monel^3$ <u>Imperial</u> 047 = .047 (Plastic Only) F = 316L SS Seamless 1 = 1/8" 12 = 12 mm065 = .065 $1 = 1 \, \text{mm}$ E = Titanium 1 = 1/8" Fs = 316Ti SS Seamless 2 = 1/4" Imperial $1 = 1 \, \text{mm}$ $1.5 = 1.5 \text{ mm}^{7}$ 2 = 1/4" F = 316L SS Seamless 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 <u>Self-Regulating Cables</u> 065 = .065A = 316 SS Welded H = 304 SS Seamless3 = 3/8" 4 = 1/2" 4 = 1/2" G = 304 SS Welded51 = HPT 14 W/m 230 V41 = BSX 9 W/m 230 V $1 = 1 \, \text{mm}$ B = 122 Copper J = Hastaloy C276 4 = 1/2" 6 = 3/4" H = 304 SS Seamless $1.5 = 1.5 \, \text{mm}^7$ 43 = BSX 15 W/m 230 V53 = HPT 28 W/m 230 VF = 316 SS Seamless K = Alloy 825J = Hastaloy C276 55 = HPT 42 W/m 230 V45 = BSX 25 W/m 230 VM = FEP Teflon K = Alloy 82557 = HPT 57 W/m 230 V47 = BSX 32 W/m 230 VP = Polyethylene M = FEP Teflon T = PTFE Teflon 61 = HTSX 9 W/m 230 VThermoTube® Type SL Pre-Insulated Tubing P = Polyethylene X = Special 63 = HTSX 18 W/m 230 V(For Steam Supply and Condensate Return-Not Heated) T = PTFE Teflon 65 = 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 = 316L SS Welded 93 = VSX-HT 33 W/m 230 V Thickness (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 = .0302. 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 TC-E 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 $1.5 = 1.5 \text{ mm}^{7}$ J = Hastaloy C276 K = Alloy 825Typical TubeTrace Type MP M = FEP Teflon Typical TubeTrace Type ME Typical ThermoTube Type SL

				Electrical Heat 1	Trace Application					
For Freeze Protection or Maintain 65°C NO STEAM OUTS Heat Trace Exposure* Limited to 85°C		For Freeze Protection or Maintain 121°C Heat Trace Exposure* to 215°C			For Freeze Protection or Maintain 200°C Heat Trace Exposure* to 250°C			For Freeze Protection or Maintain 205°C Exposure** to 260°C		
BSX Self-Regulating Heat Tracing (All BSX includes braid & overjacket. Standards also available with an optional fluoropolymer overjacket.) 41 = BSX 9 W/m 230 V 45 = BSX 25 W/m 230 V 43 = BSX 15 W/m 230 V	ard overjacket is polyolefin, 47 = BSX 32 W/m 230 V	HTSX Self-Regulating Heat Tracin 61 = HTSX 9 W/m 230 V 63 = HTSX 18 W/m 230 V	ng (All HTSX cables include braid & ove 65 = HTSX 27 W/m 230 V 67 = HTSX 37 W/m 230 V	rjacket BNOJ) 69 = HTSX 48 W/m 230 V 71 = HTSX 64 W/m 230 V	VSX-HT Self-Regulating Heat Tra 91 = VSX-HT 15 W/m 230 V 93 = VSX-HT 32 W/m 230 V	acing (All VSX-HT cables include braid & 95 = VSX-HT 48 W/m 230 V	overjacket BNOJ) 97 = VSX-HT 64 W/m 230 V	HPT Power-Limiting Heat Tracin 51 = HPT 14 W/m 230 V 53 = HPT 28 W/m 230 V	ng (All HPT cables include BN braid & ma 55 = HPT 42 W/m 230 V	y include OJ) 57 = HPT 57 W/m 230

^{*} 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.



^{**} 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") may be 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.