

TubeTrace® Pre-Insulated & Heat Traced Tubing

Freeze Protection and Temperature Maintenance for the Process Industries

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

Typical Electrically Heat Traced Bundles

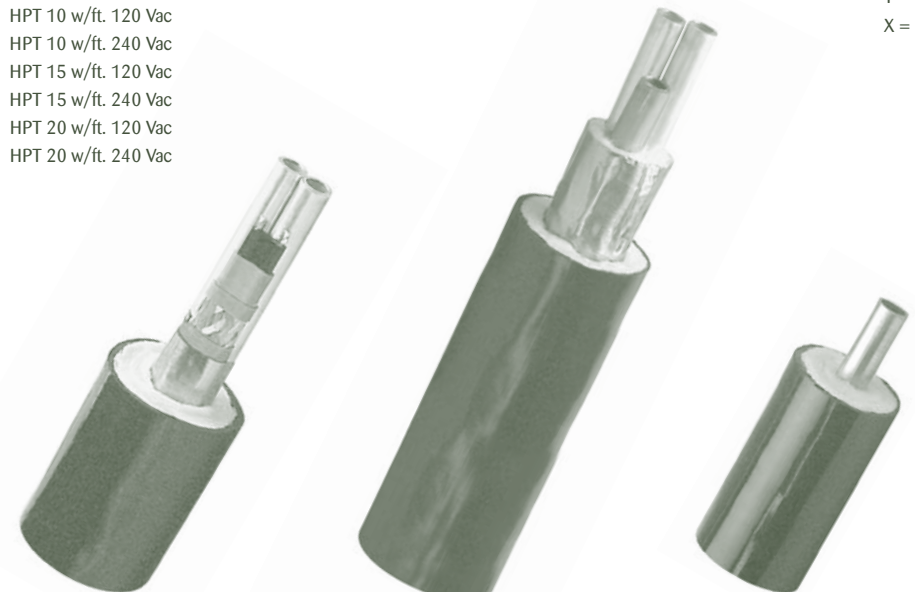
Bundle Type	Process Tube O.D.	Process Tube Material	Number of Tubes ⁶	Heat Trace Option	Jacket Type	Process Tube(s) Wall Thickness	
SE = Single Tube	1 = 1/8"	A = 316 SS Welded	1	1 = BN (HPT Only)	ATP ⁵	028 = .028"	
ME = Multiple Tubes	2 = 1/4"	B = #122 Copper		2	3 = OJ (BSX Only)	TPU	030 = .030"
	3 = 3/8"	C = PFA Teflon ²			3	7 = OJ/Fluoropolymer	
	4 = 1/2"	D = Monel ³		4		8 = Division 1 Approved ⁴	
	5 = 5/8"	E = Titanium	3				040 = .040" (Plastic Only)
	6 = 3/4"	F = 316 SS Seamless			4		
	8 = 1"	G = 304 SS Welded					
		H = 304 SS Seamless				062 = .062" (Plastic Only)	
		J = Alloy C276				065 = .065"	
		K = Alloy 825				083 = .083" (SS Only)	
		L = Alloy 20					
		M = FEP Teflon					
		N = Nylon					
		P = Polyethylene					
		T = TFE Teflon					
		X = Special					
		(i.e. passivated, polished, etc.)					

Heat Tracing Type (See [Heat Trace Application](#) Below). Contact Thermon for TubeTrace SE/ME instrument tubing bundles with alternative heat trace options such as parallel constant watt and series constant watt including mineral insulated heat tracing.

Self-Regulating Heat Trace	Power-Limiting Heat Trace
30 = VSX 5 w/ft. 120 Vac	50 = HPT 5 w/ft. 120 Vac
31 = VSX 5 w/ft. 240 Vac	51 = HPT 5 w/ft. 240 Vac
32 = VSX 10 w/ft. 120 Vac	52 = HPT 10 w/ft. 120 Vac
33 = VSX 10 w/ft. 240 Vac	53 = HPT 10 w/ft. 240 Vac
34 = VSX 15 w/ft. 120 Vac	54 = HPT 15 w/ft. 120 Vac
35 = VSX 15 w/ft. 240 Vac	55 = HPT 15 w/ft. 240 Vac
36 = VSX 20 w/ft. 120 Vac	56 = HPT 20 w/ft. 120 Vac
37 = VSX 20 w/ft. 240 Vac	57 = HPT 20 w/ft. 240 Vac
40 = BSX 3 w/ft. 120 Vac	
41 = BSX 3 w/ft. 240 Vac	
42 = BSX 5 w/ft. 120 Vac	
43 = BSX 5 w/ft. 240 Vac	
44 = BSX 8 w/ft. 120 Vac	
45 = BSX 8 w/ft. 240 Vac	
46 = BSX 10 w/ft. 120 Vac	
47 = BSX 10 w/ft. 240 Vac	
60 = HTSX 3 w/ft. 120 Vac	
61 = HTSX 3 w/ft. 240 Vac	
62 = HTSX 6 w/ft. 120 Vac	
63 = HTSX 6 w/ft. 240 Vac	
64 = HTSX 9 w/ft. 120 Vac	
65 = HTSX 9 w/ft. 240 Vac	
66 = HTSX 12 w/ft. 120 Vac	
67 = HTSX 12 w/ft. 240 Vac	
68 = HTSX 15 w/ft. 120 Vac	
69 = HTSX 15 w/ft. 240 Vac	
70 = HTSX 20 w/ft. 120 Vac	
71 = HTSX 20 w/ft. 240 Vac	

Notes . . .

- Contact factory for availability of 1" O.D. coils. (Not available in all materials.)
- Teflon is a trademark of E.I. du Pont de Nemours & Co., Inc.
- Monel is a trademark of Inco Alloys International, Inc.
- Contact factory for design review.
- Black ATP is standard, other jacket materials include TPU (Urethane).
- Maximum number of tubes dependent on tube size.
- Complete line of accessories for TubeTrace and ThermoTube are available.



Typical TubeTrace Type ME

Typical TubeTrace Type MP

Typical ThermoTube Type SL

Typical Steam Traced Bundles

Bundle Type	Process Tube(s) O.D.	Process Tube(s) Material	Number of Process Tube(s) ⁶	Tracer Tube O.D.	Number of Tracer Tube(s)	Jacket Type	Process Tube(s) Wall Thickness	Tracer Tube(s) Wall Thickness		
SI = Single Isolated Tube Light Steam Traced	1 = 1/8"	A = 316 SS Welded	1	2 = 1/4"	1	ATP ⁵	028 = .028"	035 = .035"		
MI = Multiple Isolated Tubes Light Steam Traced	2 = 1/4"	C = PFA Teflon ²		2		3 = 3/8"	2	TPU	035 = .035"	049 = .049"
SP = Single Tube Heavy Steam Traced	3 = 3/8"	D = Monel ³				2		4 = 1/2"	2	
MP = Multiple Tubes Heavy Steam Traced	4 = 1/2"	E = Titanium								
	5 = 5/8"	F = 316 SS Seamless					049 = .049"			
		G = 304 SS Welded					062 = .062" (Plastic Only)			
		H = 304 SS Seamless					065 = .065"			
		J = Alloy C276					083 = .083" (SS Only)			
		K = Alloy 825								
		L = Alloy 20								
		M = FEP Teflon								
		T = TFE Teflon								
		X = Special								

Tracer Tube Material
 A = 316 SS Welded
 B = 122 Copper
 F = 316 SS Seamless

ThermoTube® Type SL Pre-Insulated Tubing (Not Heated)

Bundle Type	Tube O.D.	Tube Material	Number of Tubes	Tube Wall Thickness	Jacket Type
SL = Single Tube	1 = 1/8"	A = 316 SS Welded	1	30 = .030"	ATP ⁵
	2 = 1/4"	B = #122 Copper		32 = .032" (Copper Only)	TPU
	3 = 3/8"	C = PFA Teflon ²		35 = .035"	
	4 = 1/2"	D = Monel ³		49 = .049"	
	5 = 5/8"	E = Titanium		65 = .065"	
	6 = 3/4"	F = 316 SS Seamless		83 = .083" (SS Only)	
	8 = 1"	G = 304 SS Welded			
		H = 304 SS Seamless			
		J = Alloy C276			
		K = Alloy 825			
		L = Alloy 20			
		M = FEP Teflon			
		N = Nylon			
		P = Polyethylene			
		X = Special			

Electrical Heat Trace Application

For Freeze Protection or Maintain 150°F (65°C) NO STEAM OUTS

Heat Trace Exposure* Limited to 185°F (85°C)

BSX Self-Regulating Heat Tracing (All BSX includes braid & overjacket. Standard overjacket is polyolefin, also available with an optional fluoropolymer overjacket.)

40 = BSX 3 w/ft. 120 Vac	43 = BSX 5 w/ft. 240 Vac	46 = BSX 10 w/ft. 120 Vac
41 = BSX 3 w/ft. 240 Vac	44 = BSX 8 w/ft. 120 Vac	47 = BSX 10 w/ft. 240 Vac
42 = BSX 5 w/ft. 120 Vac	45 = BSX 8 w/ft. 240 Vac	

For Freeze Protection or Maintain 250°F (121°C)

Heat Trace Exposure* to 420°F (215°C)

HTSX Self-Regulating Heat Tracing (All HTSX includes braid & overjacket BNO)

60 = HTSX 3 w/ft. 120 Vac	64 = HTSX 9 w/ft. 120 Vac	68 = HTSX 15 w/ft. 120 Vac
61 = HTSX 3 w/ft. 240 Vac	65 = HTSX 9 w/ft. 240 Vac	69 = HTSX 15 w/ft. 240 Vac
62 = HTSX 6 w/ft. 120 Vac	66 = HTSX 12 w/ft. 120 Vac	70 = HTSX 20 w/ft. 120 Vac
63 = HTSX 6 w/ft. 240 Vac	67 = HTSX 12 w/ft. 240 Vac	71 = HTSX 20 w/ft. 240 Vac

For Freeze Protection or Maintain 300°F (149°C)

Heat Trace Exposure* to 450°F (232°C)

VSX Self-Regulating Heat Tracing (All VSX includes braid & overjacket BNO)

30 = VSX 5 w/ft. 120 Vac	33 = VSX 10 w/ft. 240 Vac	36 = VSX 20 w/ft. 120 Vac
31 = VSX 5 w/ft. 240 Vac	34 = VSX 15 w/ft. 120 Vac	37 = VSX 20 w/ft. 240 Vac
32 = VSX 10 w/ft. 120 Vac	35 = VSX 15 w/ft. 240 Vac	

For Freeze Protection or Maintain 400°F (205°C)

Exposure** to 500°F (260°C)

HPT Power-Limiting Heat Tracing (All HPT includes BN braid & may include OJ)

50 = HPT 5 w/ft. 120 Vac	53 = HPT 10 w/ft. 240 Vac	56 = HPT 20 w/ft. 120 Vac
51 = HPT 5 w/ft. 240 Vac	54 = HPT 15 w/ft. 120 Vac	57 = HPT 20 w/ft. 240 Vac
52 = HPT 10 w/ft. 120 Vac	55 = HPT 15 w/ft. 240 Vac	

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

** Standard TubeTrace and ThermoTube bundles have a maximum tube temperature rating of 400°F (204°C) if outer jacket is to remain below 140°F (60°C) in a max ambient of 80°F (27°C) with no wind. Extra insulation (bundle option "XINS") maybe considered if tube temperatures approach HPT Power-limiting limits of 500°F (260°C), power off. For higher exposures [up to 1100°F (588°C)] consider TubeTrace HT or HTX bundles.

