

HSX[®] Self-Regulating Heating Cable

Product Specifications

Application: Hot Water Temperature Maintenance

HSX heating cables, the heart of Thermon's WarmTrace™ system, are specifically designed to maintain hot water supply piping at desired nominal maintenance temperatures. With 2.3mm² bus wires (larger than any other system available), HSX can reduce the number of circuits required to install an electric heat-traced system. A WarmTrace hot water maintenance system delivers instant hot water at the fixtures eliminating water waste as the user waits for the hot water to come through.

Easy to Design . . .

A WarmTrace system replaces the complex recirculation network of return pipes, circulating pumps and balancing valves. For each hot water supply line, simply match the hot water maintenance temperature with the corresponding color-coded cable and insulate per the design guide.

HSX self-regulating cable automatically maintains desired water temperatures. Changes in pipe diameters, flow rates and use patterns will not affect the design. Even variations in ambient or water temperature are compensated for as the cable adjusts its heat output along the entire length of a heat-traced pipe.



Easy to Install . . .

HSX heating cable is cut to length and installed directly on the supply piping under conventional thermal insulation with ordinary hand tools. Kits for power connection, end termination and splicing, plus other accessories, are designed for quick and easy installation. Increased circuit lengths with HSX mean less circuits to fabricate and fewer total circuits.

Economical to Operate and Maintain . . .

Because a WarmTrace system replaces recirculation, it also eliminates the costs of continuously operating pumps, deliberately overheating the water and maintaining the recirculation system. Potential water savings can also be realized since the heat tracing can be installed up to the point of use; i.e., no waiting or wasting hot water.

Certifications/Approvals . . .



THERMON . . . The Heat Tracing Specialists[®]
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Characteristics . . .

- 1 2.3mm² Nickel-Plated Copper Bus Wire
- 2 Radiation Cross-Linked Polyolefin Heating Core
- 3 Radiation Cross-Linked Polyolefin Primary Dielectric Insulation
- 4 Polyester Aluminum Laminate
- 5 2.3mm² (equivalent size) Tinned Copper Metallic Braid
- 6 Polyolefin Outer jacket

Ratings . . .

- 13 mm Minimum Bend Radius
- 30 mA Ground-Fault Protection Mandatory
- 240 Vac Supply Voltage



Cable Selection . . .

Catalog Number	Outer Jacket Color	Operating Voltage ¹	Nominal Maintain Temperature	Operating (A/m)	Cold Start (A/m)	Max. Circuit Length vs. Breaker Size 15 Amp	vs. Breaker Size 20 Amp
HSX 45-2	Blue	240 Vac	45°C	0.016	0.038	395 m	525 m
HSX 50-2	Green	240 Vac	50°C	0.023	0.071	210 m	280 m
HSX 60-2	Red	240 Vac	60°C	0.0327	0.120	110 m	150 m

Notes . . .

1. All circuit breakers to include 30mA leakage protection.
2. Maximum circuit lengths are based on C type breaker trip curves.

Specify Insulation Thickness . . .

The following information should be made part of the thermal insulation specification. Variations to this insulation schedule may result in different maintain temperatures.

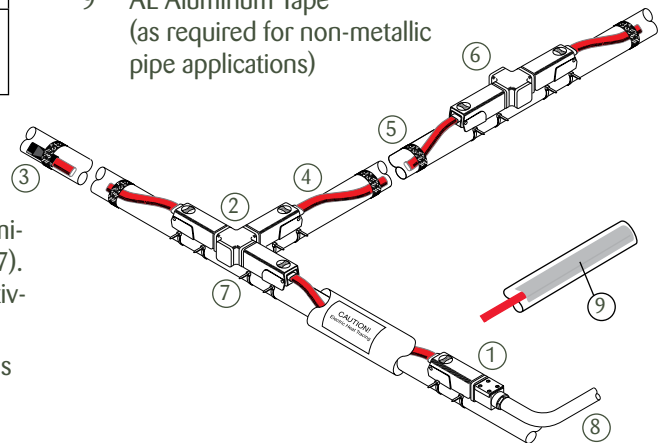
Nominal Pipe Size	Insulation Thickness	Nominal Insulation Size (I.D.)	
15 mm 20 mm 25 mm	25 mm	20 mm 25 mm 32 mm	
32 mm 40 mm 50 mm		38 mm	40 mm 40 mm 50 mm
65 mm 80 mm 100 mm			50 mm

Notes . . .

1. This insulation schedule is applicable for 45°C, 50°C and 60°C WarmTrace systems.
2. All selections are based on using fiberglass insulation with an aluminum foil moisture vapour barrier (consistent with ASTM Std C-547). Other types of thermal insulation with equivalent thermal conductivity properties may also be used, contact Thermon.
3. To accommodate the heating cable on piping that is 32 mm or less in diameter, the thermal insulation will need to be one line size larger than the nominal pipe diameter.
4. Allowances are based on one single pass of heating cable. Extra cable should be allowed for areas with additional heat loss (pipe supports, floor penetrations, valves, etc.).
5. If installing on non-metallic piping, aluminum tape should be installed over the entire length of the heater cable to increase heat transfer into pipe walls.

Typical Installation with Quick Connection Kits . . .

- 1 PowerSnap 1
- 2 TeeSnap
- 3 ET-6 End Cap
- 4 HSX Heating Cable
- 5 Attachment Tape
- 6 SpliceSnap
- 7 Pipe Attachment Straps
- 8 Incoming Power
- 9 AL Aluminum Tape (as required for non-metallic pipe applications)



Components . . .

Thermon provides a full range of components for sealing and connecting these cables. Contact Thermon for full details.

Installation Instructions . . .

Detailed installation instructions Form No. CPD1014AP are available on request.

