



PRODUCT DATASHEET

WarmTrace HSX

SELF-REGULATING HEAT TRACING

APPLICATION: HOT WATER TEMPERATURE MAINTENANCE

HSX trace heaters, the heart of Thermon's WarmTrace™ system, are specifically designed to maintain hot water supply piping at desired nominal maintenance temperatures. With 1.9 mm² 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 heat trace and insulate per the design guide.

HSX self-regulating trace heaters 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 trace heater adjusts its heat output along the entire length of a heat-traced pipe.

EASY TO INSTALL

HSX 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

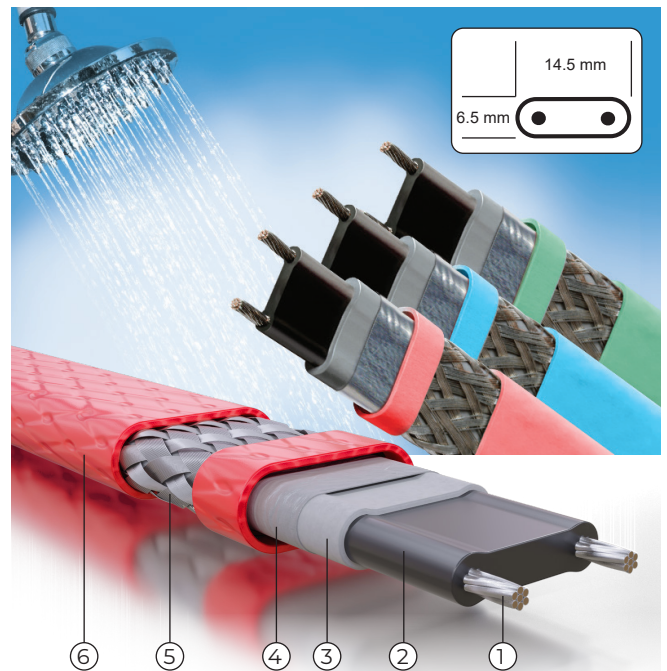
A WarmTrace system replaces recirculation and eliminates the costs of continuously operating pumps, deliberately overheating the water and maintaining a recirculation system. Potential water savings can also be realized since the heat tracing can be installed up to the point of use—no waiting for hot water!

COMPONENTS

Thermon offers system accessories designed specifically for rapid, trouble-free installation of Thermon heat tracing. All trace heaters require a connection kit to comply with approval requirements. Information on accessories to complete a heater circuit installation can be found in the WarmTrace Systems Accessories product specification sheet (Form CPD1006AP).

INSTALLATION INSTRUCTIONS

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



CHARACTERISTICS

1. 1.9 mm² Nickel-Plated Copper Bus Wire
2. E-Beam Cross-Linked Polyolefin Semiconductive Heating Matrix
3. E-Beam Cross-Linked Polyolefin Primary Dielectric Insulation
4. Aluminized Mylar Foil
5. Tinned Copper Metallic Braid
6. Polyolefin Outer jacket

RATINGS

Supply voltage.....240 Vac
 Minimum bend radius
 @ -15°C (5°F).....10 mm (0.38")
 @ -51°C (-60°F).....32 mm (1.25")
 30 mA Ground-Fault Protection Required ¹

TYPICAL INSTALLATION WITH QUICK CONNECTION KITS

1. HSX Trace Heater
2. HSX Power-1
3. HSX Splice
4. HSX Splice
5. ET-6 End Cap
6. Attachment Tape
7. CL-COM Caution Label
8. Insulation
9. Incoming Power
10. AL Aluminum Tape (as required for non-metallic pipe applications)



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TRACE HEATER 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	
						10 Amp	15 Amp
HSX 45-2	Blue	240 Vac	45°C	0.016	0.038	230 m	350 m
HSX 50-2	Green	240 Vac	50°C	0.023	0.071	125 m	185 m
HSX 60-2	Red	240 Vac	60°C	0.0327	0.120	70 m	110 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	65 mm 80 mm 100 mm

Design Considerations

- This insulation schedule is applicable for 45°C, 50°C and 60°C WarmTrace systems.
- 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.
- To accommodate the trace heater 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.
- Allowances are based on one single pass of heat trace. Extra heat trace should be allowed for areas with additional heat loss (pipe supports, floor penetrations, valves, etc.).
- If installing on non-metallic piping, aluminum tape should be installed over the entire length of the trace heater to increase heat transfer into pipe walls.

CERTIFICATIONS/APPROVALS



No. 2043400