HeatDefender Specification Sheet
Heat Trace Cable Concealer for Roof, Gutter and Drain Deicing

PART 1 – GENERAL

1.1 SUMMARY

A. WORK INCLUDES

1. HeatDefender® heat trace cable concealer system attaches directly to roof deck, gutter, valley, or low-slope drainage area.
2. Coordinate with the roofing material installation to ensure proper placement of heat trace cable.
3. Provide appropriate concealed heat trace cable components; fasteners and adhesives shall be sourced separately by the installing contractor.

B. RELATED SECTIONS

1. Section 077100:Roof Specialties	MasterFormat 2016 07 70 00
2. Section 077123: Gutters and Downspouts	MasterFormat 2016 07 71 00
3. Section 077200:Roof Accessories	MasterFormat 2016 07 70 00
4. Section 221426.13:Roof Drains	MasterFormat 2016 22 14 00
5. Section 073100:Shingles and Shakes	MasterFormat 2016 07 30 00
6. Section 073200:Roof Tiles	MasterFormat 2016 07 30 00
7. Section 074200:Wall Panels	MasterFormat 2016 07 40 00
8. Section 074400:Faced Panels	MasterFormat 2016 07 40 00
9. Section 076000:Flashing and Sheet Metal	MasterFormat 2016 07 60 00

1.2 SYSTEM DESCRIPTION

A. COMPONENTS

HeatDefender® uses aluminum extrusions to house and protect heat trace cables, enhancing performance for roof, gutter, and low-slope roof drainage de-icing applications.

1. HS-800 3 cable system – Eave Heat Trace Cable Concealer, a 5” wide, up to 3 heating cable run system
    a. HS-801 Base of 3 cable housing (choose one)
        i. Cable channels to fit Raychem GMX1 & GMX2
        ii. Cable channels to fit Chromalox CPR8, CPR10 & CPR15, and Thermon RGS
    b. b. HS-802 Cover of 3 cable housing
    c. HS-803-C Coupling for 3 cable housing (not required when installed with HS-802-FL)
    d. HS-800-END HOLLOW (includes HS-801-H and HS-802-H components)
        i. HS-801-H End Cable Return Hollow Base for 3 cable housing
        ii. HS-803-H End Cable Return Hollow Cover for 3 cable housing
    e. HS-802-FL Cover flashing for shingle roofing (optional)
    f. HS-800-END 3 cable end plug (optional)
    g. HS-800-EP plugs for 3 cable end assembly (optional)
2. HS-700 2 cable system – Eave, Gutter or Valley Heat Trace Cable Concealer, a 3.125”, up to 2 heating cable run system
    a. HS-701 Base of 2 cable housing (choose one)
        i. Cable channels to fit Raychem GMX1 & GMX2
        ii. Cable channels to fit Chromalox CPR8, CPR10 & CPR15, and Thermon RGS
    b. HS-702 Cover of 2 cable housing
3. BUSHING B-100-S bushing for compression-fit seal at roof attachment points must be used with HS-801 and HS-701 when mechanically fastened. Not applicable for adhered applications.
4. W-NEO SS-.25 bonded washer to be used with HS-BUSHING for sealing mechanical attachment.
5. HeatDefender® DrainMelt Kits – 3 different drain sizes available (uses HS-700 2 cable system), a 3.125” wide extrusion cut to 2’ sections and positioned around the drain in a spoke or fan pattern.
    a. HS-DRAIN10IN-KIT
        i. HS-701, QTY 6 Base of 2 cable housing (choose one)

1. Cable channels to fit Raychem GMX1 & GMX2
2. Cable channels to fit Chromalox CPR8, CPR10 & CPR15, and Thermon RGS

ii. HS-702, QTY 6 Cover of 2 cable housing
iii. HS-DRAIN-END CAP, QTY 12
iv. HS-DRAIN10-TEMPLATE, QTY 1 (installation tool only)

b. HS-DRAIN16IN-KIT
i. HS-701, QTY 8 Base of 2 cable housing (choose one)
1. Cable channels to fit Raychem GMX1 & GMX2
2. Cable channels to fit Chromalox CPR8, CPR10 & CPR15, and Thermon RGS
ii. HS-702, QTY 8 Cover of 2 cable housing
iii. HS-DRAIN-END CAP, QTY 16
iv. HS-DRAIN16-TEMPLATE, QTY 1 (installation tool only)

c. HS-DRAIN18IN-KIT
i. HS-701, QTY 10 Base of 2 cable housing (choose one)
1. Cable channels to fit Raychem GMX1 & GMX2
2. Cable channels to fit Chromalox CPR8, CPR10 & CPR15, and Thermon RGS
ii. HS-702, QTY 10 Cover of 2 cable housing
iii. HS-DRAIN-END CAP, QTY 20
iv. HS-DRAIN18-TEMPLATE, QTY 1 (installation tool only)

Fasteners (not supplied):

a. To be of metal compatible with HeatDefender Heat Trace Cable Concealer systems.
b. Fasteners should be selected for compatibility with roof deck.
c. Fastener strength should exceed or equal that of the HeatDefender Heat Trace Cable Concealer systems.

B. DESIGN REQUIREMENTS

1. Spacing is to be recommended by the manufacturer, building engineer, or electrician.
2. Install two fasteners per 2’ of HeatDefender® base when mechanically fastened to roof deck (not applicable for non-penetrating adhered low-slope membrane applications). Install three fasteners per End Cable Return Hollow base.
3. Install 2 rivets per Coupling on one side (left or right) of the extrusion. Install 2 rivets per 6’ run into the HeatDefender cover on the upslope side. Install 2 rivets per 8’ run into Flashing if using optional flashing.
4. HeatDefender Heat Trace Cable Concealer requires a self-regulating heating cable. A plug-in constant-watt heat trace cable is not acceptable.
5. A self-regulating heating cable must be a two-conductor system, meaning the cable does not have to return to its start point. One-conductor cables are not acceptable for this application.
6. A heating cable with an outer polyolefin jacket is required. Cables without an outer jacket are not for wet applications and, therefore, cannot be used in this application.
7. The heating cable must allow the installer to cut to length in the field without developing cold zones. Heat trace cable systems that cannot be cut to length are unacceptable for this application.
8. Self-regulating heating cable must be installed with a system controller capable of managing the length and wattage of heat trace cable used.

1.3 SUBMITTAL

A. Submit manufacturer's specifications, standard detail drawings, and installation instructions.

1.4 QUALITY ASSURANCE

A. Installer must have at least five years' experience installing roof heat trace systems in the project area.
B. A licensed electrician shall complete all electrical rough-ins and connections required to install the system.

1.5 DELIVERY / STORAGE / HANDLING

A. Inspect material upon delivery and order replacements for any missing or defective items.
Keep material dry, covered, and off the ground until installed.

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PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Alpine SnowGuards®, a Division of Vermont Slate & Copper Services, Inc.
289 Harrel St., Morrisville, VT 05661 | 888-766-4273 | www.alpinesnowguards.com

2.2 MATERIALS

A. HS-801 –6000 series aluminum
B. HS-802 – 6000 series aluminum
C. HS-803-C – 6000 series aluminum
D. HS-801-H – 6000 series aluminum
E. HS-803-H – 6000 series aluminum
F. HS-802-FL – .032 3000 series aluminum
G. HS-802-FL-C – .032 3000 series aluminum
H. HS-800-END – TPU
I. HS-800-EP – EPDM rubber
J. HS-701 – 6000 series aluminum
K. HS-702 – 6000 series aluminum
L. BUSHING B-100-S – EPDM rubber
M. W-NEO SS-.25 – neoprene and stainless steel
N. HS-DRAIN-END CAP – TPU
O. HS-DRAIN(10,16,18)-TEMPLATE- 5000 Series Aluminum (installation tool only)

2.3 FINISH (choose one)

6000 series aluminum components:
A. Mill Finish – standard
B. Powder Coated – optional and available at additional cost (HS-DRAIN Kits, HS-702 is powder-coated, no additional cost)

.032 3000 series aluminum components:
A. Kynar 500® pre-painted coil

PART 3 – EXECUTION

3.1 EXAMINATION

A. Substrate
1. Inspect the structure on which HeatDefender is to be installed and verify it will allow the system to be securely fastened. Notify general contractor of any deficiencies before installing Alpine SnowGuards' products.
2. Verify roofing material has been installed correctly before installing HeatDefender.

3.2 INSTALLATION

A. Comply with architectural drawings and heat trace cable manufacturer's recommendations for the location of the system. Comply with the manufacturer's written installation instructions for installation.
B. A complete installation must conform to the appropriate manufacturer's instructions, the National Electrical Code, and the relevant local codes.