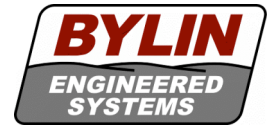


## **Bylin Engineered Systems**

4800 Golden Foothill Parkway

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# General Specification

## Roof and Gutter De-Icing

### Part 1 . . . General

#### 1.00 References

- A. Requirements of the General Conditions, Supplementary Conditions and Section 01001, Basic Requirements, apply to the work of this Section.

#### 1.01 Section Includes

- A. Roof Ice Melt (RIM) System Materials and Components. RIM System designs shall be supplied for Class 1 - Large Snow Load Accumulation Areas and RIM2 System designs shall be supplied for Class 2 - Moderate Snow Load Accumulation Areas. This project is in a Class (Select 1 or 2) Snow Load Accumulation Area.
- B. SRH / WFP Heating Cable and Accessories for Gutters and Downspouts.
- C. Control Panel including Ambient Sensing Thermostat, Temperature Controllers, Load Center with Ground Fault Circuit Breakers, Solid State Relays, Switches Lights and Accessories.

#### 1.02 Related Work In Other Sections

- A. Section \_\_\_\_\_: Roof Design Details
- B. Section \_\_\_\_\_: Gutter and Downspout Details

#### 1.03 Quality Assurance

- A. The RIM System, SRH / WFP Heating Cables and Control Panel shall be manufactured and supplied in conformance with Bylin Engineered System's quality assurance program.
- B. The manufacturer shall have at least ten (10) years experience in the design and supply of Roof and Gutter De-Icing Systems.

#### 1.04 Submittals

- A. Furnish detail drawings showing layouts for each RIM Section, cross section drawings, control panel drawings, and installation instructions.
- B. Furnish Installation Check-Out Forms to be completed after the installation is finished.

#### 1.05 Product Delivery, Storage And Handling

- A. RIM System Equipment, SRH / WFP Heating Cables and Control Panel shall be delivered in undamaged condition. The jobsite supervisor will inspect the materials when delivered and notify the trucking company and manufacturer of any damage within 24 hours of receipt of materials.

#### 1.06 Warranty

- A. The SRH / WFP Heating Cables shall be warrantied against defects in material and workmanship for a period of two (2) years from date of final acceptance.
- B. The Control Panel components shall be warrantied against defects in material and workmanship for a period of one (1) year from date of acceptance.
- C. The manufacturer, at his option, shall either repair or supply replacement materials if that material is defective per the above warranty definitions.

## **Part 2 . . . Products**

### 2.01 Roof Ice Melt (RIM) System

- A. Custom engineered RIM System manufactured by Bylin Engineered Systems, 4800 Golden Foothill Parkway El Dorado Hills, CA, (1-888-313-5666).
- B. RIM Cover Panels to be 20oz copper or 40 mil aluminum with Kynar-based paint finish.

### 2.02 SRH / WFP Heating Cable

- A. The heating cable shall be UL and CSA listed specifically as electric roof and gutter de-icing and snow-melting equipment.
- B. The heating cable shall be of parallel resistance construction capable of being cut to length and terminated in the field.
- C. The heating cable shall consist of two parallel nickel-plated copper bus wires embedded in a radiation cross-linked self-regulating conductive polymer core specifically designed for snow and ice melting. The heating cable shall be capable of varying its heat output along its entire length. The heating cable shall include a polyolefin dielectric jacket rated 300 VAC at 105°C, a tinned-copper braid (14 AWG equivalent wire size), and a UV stabilized polyolefin overjacket.
- D. SRH / WFP Heating Cable supplied by Bylin Engineered Systems, El Dorado Hills, CA (1-888-313-5666).

### 2.03 Control Panel

- A. Custom engineered high efficiency control panel to control the operation of the RIM System and gutter and downspout SRH / WFP heating cables. The control panel shall include a load center with 30ma ground fault circuit breakers, temperature controllers, solid state relays, terminal block and accessories.
- B. Control Panel supplied by Bylin Engineered Systems, El Dorado Hills, CA (1-888-313-5666).

### 2.04 Junction Box / Power Termination

- A. The heating cable circuits shall be connected to the power wiring in an approved junction box with approved termination components.

## **PART 3 . . . Execution**

### 3.01 Inspection

- A. The Contractor shall inspect the materials supplied against the Packing List and Design and Installation Manual. The Contractor shall note any discrepancies and work with the manufacturer to resolve.

### 3.02 Installation

- A. The RIM System, SRH / WFP Gutter / Downspout Heating System and Control Panel shall be installed in accordance with the manufacturer's Design and Installation Manual. Any deviations shall be reviewed and approved by the manufacturer.
- B. Coordinate with the RIM System and SRH / WFP heating cable installers, the gutter and downspout installers and the control panel wiring and section conduit and junction box wiring installers.
- C. The electrical contractor shall test the SRH / WFP heating cables, complete the test forms and submit them to Bylin Engineered Systems for review and approval.