



Gutter and Downspout Ice/Snow Prevention System INSTALLATION INSTRUCTIONS

Snow and ice-prevention systems are essential for making clear of snow and icicles, safer and therefore reducing liability for falls and injuries.

Due to Perfectly Clear Gutter Heat amorphous metal heating technology, installing and operating gutters ice/snow melting systems has become practical and affordable.

Perfectly Clear Gutter heated ice melting system is not complicate to install. Nevertheless it is essential to follow the installation instructions in order to guarantee the best possible results, while working in the most comfortable manner and still following the needed safety precautions.

Product description- gutters ice prevention

Intended for use in outdoor exposed environment, form applications like gutters and downspouts snow/ice melting. The product is manufactured with UV and FR additives to withstand direct sunlight exposure and resistance to fire. In both 240 Volt “Commercial Use Only” and 120 Volt “Residential Use”

Note that power is fed to each gutter element through one end only. There is no need for out and return cable. The element cannot be cut or modified. This will void the warranty.

Mechanical considerations in the planning stage:

1. The minimum-bending diameter of the cable is 5/8 inch.
2. If the gutter is wider than 6 inches, multiple runs of heating cable are required.
3. Heating cable in downspouts should extend beyond the frost line if tied into a drainage system.
4. All power connection boxes should be located in a protective area (such as under eaves) and entry should be at the bottom of the box. In all cases a drip loop should be provided.
5. The installation of the heating system should not affect the overall integrity of the gutter.
6. Mounting hardware should be made of corrosion resistance material and should not have sharp edges or burrs that could damage the heater cable.

Special Considerations:

1. The maximum exposure temperature (not working) of the gutter element is 203F.
2. For any application that is not mentioned in this document, consult your distributor for recommendations.

Controls:

For simple small applications, a manual on/off switch is an adequate solution. It is recommended to use a timer based switch in order to ensure that the system will not be left under power unnecessarily. More sophisticated applications will require a controller system such as a Calorique recommended controller based on a combination of ambient temperature and moisture sensors. The temperature sensor should be installed at the coldest area around the gutter, in a place that is not exposed to direct sun.

The moisture sensor should be located at the lowest point of the gutter, to ensure that when it is dry, the whole gutter is dry.

Installation

A circuit protection unit must be included in the system rated @ 20 amps with the load not to exceed 16 amps. A GFCI is mandatory with a nominal 30mA trip rating, or, for adjustable GFCI's, the setting will be 30mA above any inherent capacitive characteristic level as measured by a certified electrician.

Install in Gutters and Downspouts

Installation procedure:

1. Prior to installation of the heat tracing cable:
 - a. Verify that you use the correct product in terms of catalog number, wattage output and voltage rating.
 - b. Clean the gutter and downspout from any debris
 - c. Inspect the mounting surface for sharp edges where the heating cable will be located.
2. During installation:
 - a. Begin the installation at the power connection by unrolling product.
 - b. Anchor the gutter cable at every 6 feet or as necessary, using corrosion free metallic or plastic clips.
 - c. All penetrations of clips mounting to the gutter should be silicone sealed.
 - d. Location of power connections should be in a protected area when possible.
3. Testing:
 - a. After installation perform a resistance check at each power connection to ensure integrity of the cable. Note and record the measured value.
 - b. Perform an insulation resistance test at each power connection. The test should be done with 500 Vdc. The measured value should not be less than 20 MOhm. Note and record the measured value.
4. Recording
 - a. Record all length installed on a schematic drawing or enclosed Warranty Registration Form

Maintenance:

Perform yearly inspection that will cover the following:

1. Check the electrical junction boxes to verify that they are free of moisture and water. Inspect and repair (if necessary) the thermal insulation.
2. Clear the gutters and downspouts of any debris.
3. Check the functionality of the electrical protection device.
4. Check the controller's set point.
5. Test and record the electrical insulation resistance.

For More Information, contact:

Calorique LLC

2380 Cranberry Hwy

West Wareham, MA 02576

800-922-9276

info@calorique.com