**Standard Roof**

**GMK-RC**

**GMK-RAKE**

**Metal Standing Seam Roof**

**Description**

The GMK-RC roof clip and GM-RAKE hanger bracket kits are for use with Raychem IceStop heating cables. Carefully follow these instructions. Do not use other hardware or techniques which may damage the heating cable and cause electrical hazard, fire damage or poor performance.

**GMK-RC**

The GMK-RC roof clips are used to secure IceStop heating cables to roofs and gutters. For applications where nails and screws will be used to install clips, go to page 2. For applications where adhesive will be used to install clips, go to page 3. A box of 50 clips are included with each IceStop heating cable.

**GM-RAKE**

The GM-RAKE hanger bracket is used to provide mechanical protection to the IceStop heating cable as it goes over sharp edges and to hold the heating cable in place at the top of downspouts. Refer to page 4 for instruction on how to install the GM-RAKE hanger bracket. GM-RAKE hanger bracket is included with each IceStop heating cable.

**Tools Required**

- Hammer
- Pliers
- Caulking Gun
- Recommended Adhesives for Metal Roofs
  - SpeedBonder® H3300 (Methacrylate Adhesive)
  - SpeedBonder H4800 (Methacrylate Adhesive)
  - Plexus® MA300 (Methacrylate Adhesive)
  - Plexus MA310 (Methacrylate Adhesive)
  - GE® Grey RTV 167 Adhesive (Neutral-cure Silicone Adhesive)

**Approvals**

- UL Listed
- 877Z De-icing and Snow Melting Equipment

**GMK-RC Contents:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>50</td>
<td>Roof clips</td>
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</table>

**HGM-RAKE Contents:**

<table>
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<tr>
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<th>Qty</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>B</td>
<td>1</td>
<td>Hanger bracket</td>
</tr>
</tbody>
</table>

**Warning:**

- IceStop roof clips and hanger brackets must be installed properly to ensure proper operation and to prevent the risk of electrical hazard or fire. Follow all design, installation, assembly, and test instructions carefully.
- To minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed, and to comply with the requirements of Pentair Thermal Management and national electrical codes, ground-fault equipment protection must be used on each heating cable branch circuit. Arcing may not be stopped by conventional circuit protection.
- Do not use IceStop roof clip and hanger bracket for installation on slate or tile roofs as damage may occur to roof material. Consult roofing manufacturer for components approved for use on specific roof material.
- Damaged heating cable can cause arcing or fire. Do not energize damaged heating cable. Repair or replace damaged heating cable prior to applying power.
- While using pliers to close clamps on heating cable, heating cable should not be crushed or altered structurally in any way.
1. Determine heating cable layout and clip placement according to IceStop System Design and Installation Guide (H56070).

2. Apply sealant, appropriate for your roof, to back side of clip where nail or screw will be used.

3. Orient the clip as needed. Attach clip to roof using nails or screws.

4. Orient the clip as needed. Spread sealant on top of nail or screw heads.

5. Install heating cable. Use pliers to close clamps, but do not crush the heating cable.
• Determine heating cable layout and clip placement according to IceStop System Design and Installation Guide (H56070)

• Prepare roof surface per adhesive manufacturer’s specifications
• Apply a liberal amount of adhesive to back side of GMK-RC

• Place clip on prepared surface. Press down to ensure adhesive flows through holes.
• Do not trim back adhesive beads because they help hold the clip down.

• Allow adhesive to cure per manufacturer’s specifications.
• Install heating cable.

• Completed installation.
1
- Bend the GM-RAKE to approximately 90°
- Insert cable ties through holes on the GM-RAKE

2
- Position the GM-RAKE and tighten the cable ties
- Trim off excess cable tie

3A Installing H915 in Downspout
- The GM-RAKE should be centered on the edge of the downspout to prevent mechanical damage and to support the heating cable

3B Installing H915 for Mechanical Protection
- Use the GM-RAKE to protect the heating cable from sharp edges

4
- The GM-RAKE can also be used in one of two orientations in a wide gutter as a spacer

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