



# Paladin® PLD-RC Roof Clips

## Installation Instructions

### Description

The PLD-RC roof clips are for use with Heat-Line Paladin 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.

The PLD-RC roof clips are used to secure Paladin heating cables to roofs and gutters.

**Note:** Adhesives, if used, are at the discretion of installing trades

**EVERSEAL (Surebond) SB190 High Strength** adhesive is an excellent product

### Approvals



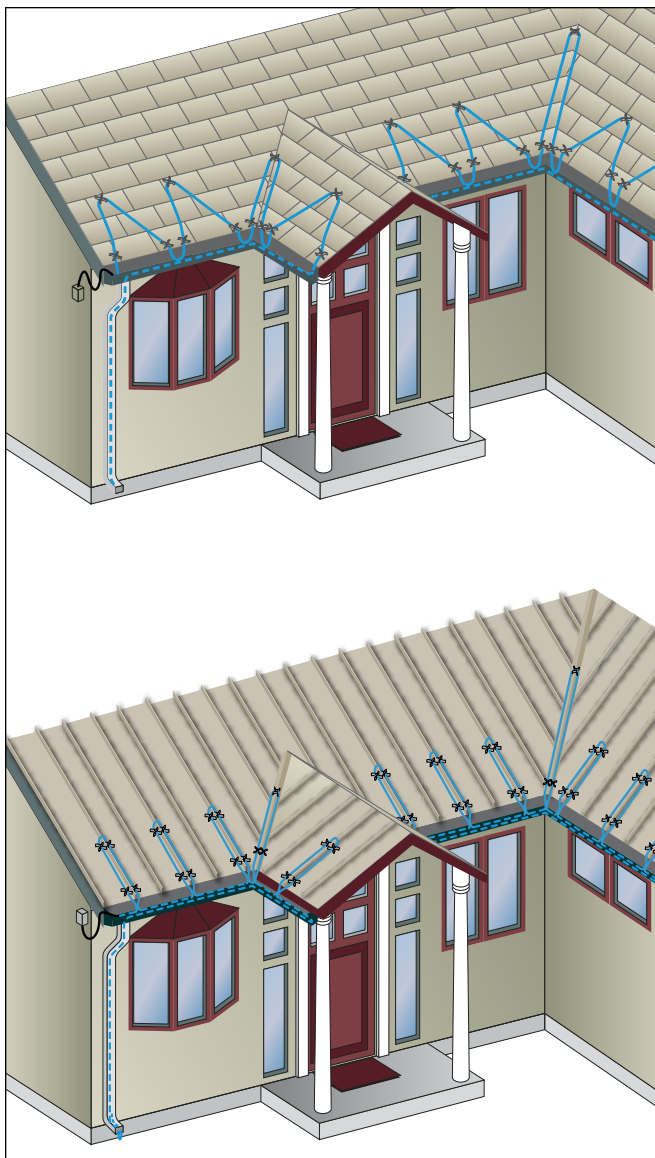
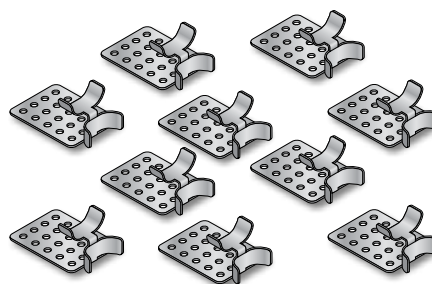
Usage W and S  
Installation Type A USA

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### Kit Contents

PLD-RC Roof clips (package of 10)



### WARNING:

#### Important Safety Instructions and Rules for Safe Installation and Operation

- Read these rules and instructions carefully. Failure to follow them could result in serious bodily injury and/or property damage.
- Check your local building, plumbing and electrical codes before installing. You must comply with their rules.
- Before installing this product have the electrical outlet checked by an electrician to make sure it has been installed in accordance with the National Electrical Code and Canadian Electrical Code. Be certain all electrical connections are protected from rain and other water (dry location). The heating cable must be ground fault protected (included in GFC models, required on site for CS models).
- Before installing or servicing your Paladin system BE CERTAIN that the power source is disconnected.

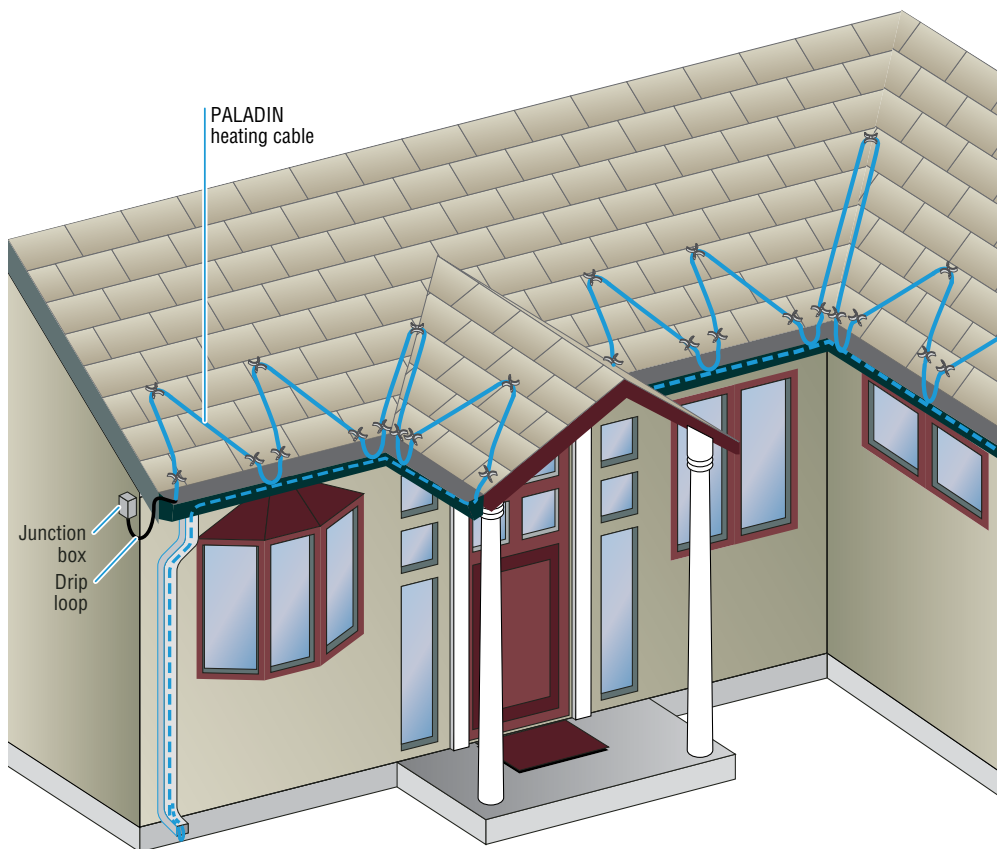
- Do not use extension cords.
- Never tamper with or alter the electrical apparatus associated with your Paladin system.
- Check unoccupied residences regularly to ensure that all systems are operating properly.
- The cable jacket must not be cut, nicked, or worn down, therefore:
  - Never cut the cable's outer jacket.
  - Do not install the cable where objects might hit it or cut it or where it might be damaged by rubbing against rough surfaces.
  - Before installation, file and remove any sharp edges on the installation surface which might damage the cable. Make sure the cables cross only smooth, non-abrasive surfaces.

- Do not use any wire or clamps to attach the cable to the roof. Use roof clips or downspout hangers.
- If you discover a nick or worn spot on your cable, immediately disconnect the system and replace the cable. Inspect the cable periodically for damage.
- Never attempt to splice or repair a damaged cable. Replace it with a new unit. The system is not designed to be repaired and to do so may create a danger of fire or shock.
- The Paladin Roof and Gutter de-icing systems and installations covered in this guide are for normal winter conditions. For extreme weather conditions consult Heat-Line 1-800-574-4944 directly.

**WHEN PERFORMING WORK OR REPAIRS ON YOUR WATER SYSTEM BE SURE TO UNPLUG YOUR Paladin SYSTEM FROM THE POWER SUPPLY.**

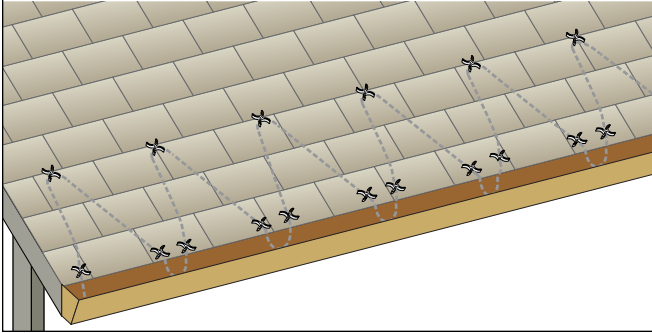
## Standard Roof Installation

- Finished example of heating cable attached to roof in the Standard Roof (serpentine) installation method.
- Perform an annual inspection each year of the following:
  - Check visually to ensure no physical damage has occurred to the heating cable.
  - Check and test the ground-fault protection device for proper operation. For GFC model Paladin systems refer to the electrical system check section of this guide.
  - Make sure that gutters/eavestroughs and downspouts are free from leaves and any other debris.
  - If a control device is installed make sure it operates correctly before each winter season.

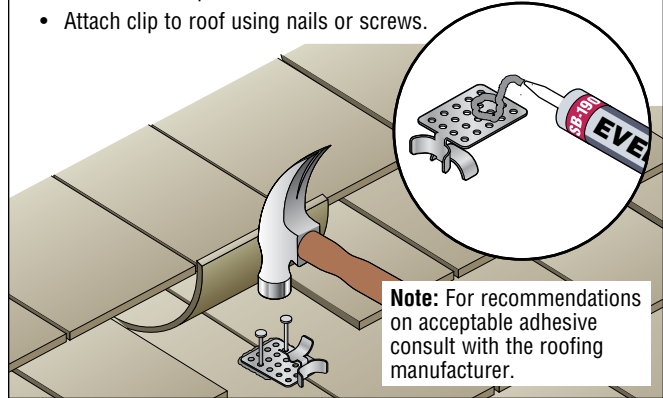


**1 Standard Roof Installation**

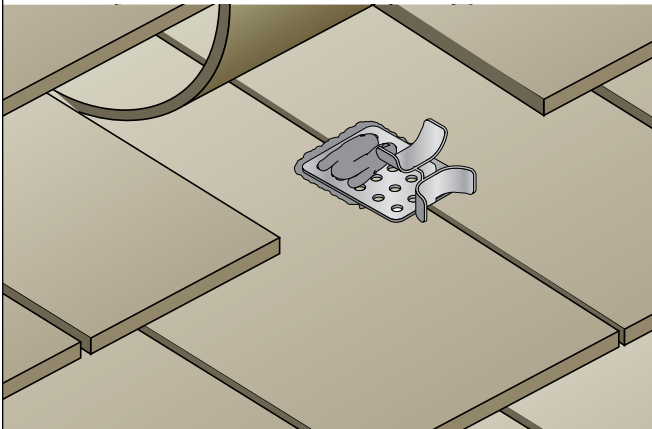
- Position and attach roof clips on the roof so they are ready to accommodate heating cable.
- Install roof clips in a manner that will allow the heating cable to serpentine on the overhang area of the roof. This is the part that extends past the building wall.
- Roof clip layout is based on tracing pattern required.

**2 Standard Roof Installation**

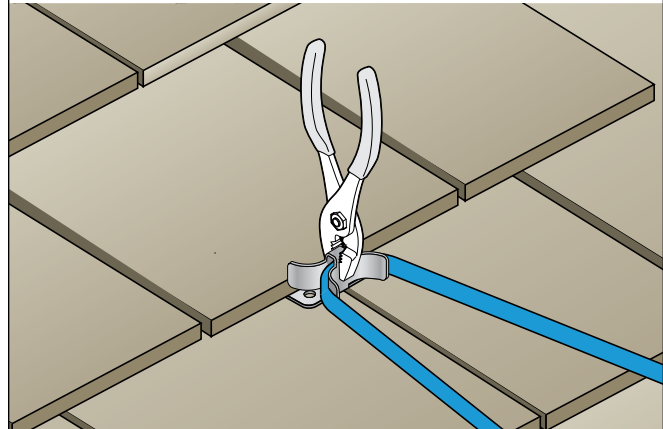
- Lift up shingle to apply roof clip.
- Apply adhesive, appropriate for your roof, to back side of clip where nail or screw will be used.
- Position the clip as needed.
- Attach clip to roof using nails or screws.

**3 Standard Roof Installation**

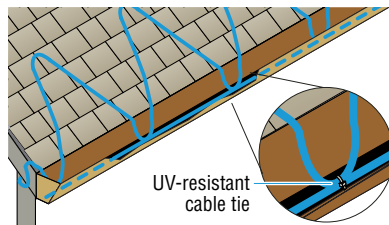
- Spread sealant on top of nail or screw heads and then cover attachment area of clip with roofing material such as shingle.

**4 Standard Roof Installation**

- Install heating cable by gently laying it in the roof clip. Do not pull the heating cable over sharp edges or use excessive pulling force during install.
- Use pliers to close clamps, but do not crush the heating cable.

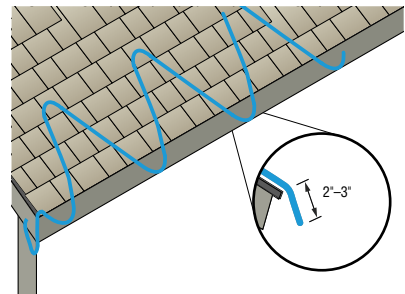
**5A Standard Roof Installation****Roofs with gutters:**

- When laying the heating cable in the clips, extend the bottom of each heating cable loop over the roof edge (approximately 6 inches) and, using a UV-resistant cable tie, connect the bottom of each loop to the cable running in the gutter to ensure a drainage channel off the roof and into the gutter and downspout.
- For residential and small commercial applications a single run of heating cable is often enough. The cable running in the gutter should remain against the bottom of the gutter. No attachment in the gutters is normally required but roof clips may be used every 2 feet (0.60 m) in the gutter to secure heating cable if needed.

**5B Standard Roof Installation****Roof without gutters:**

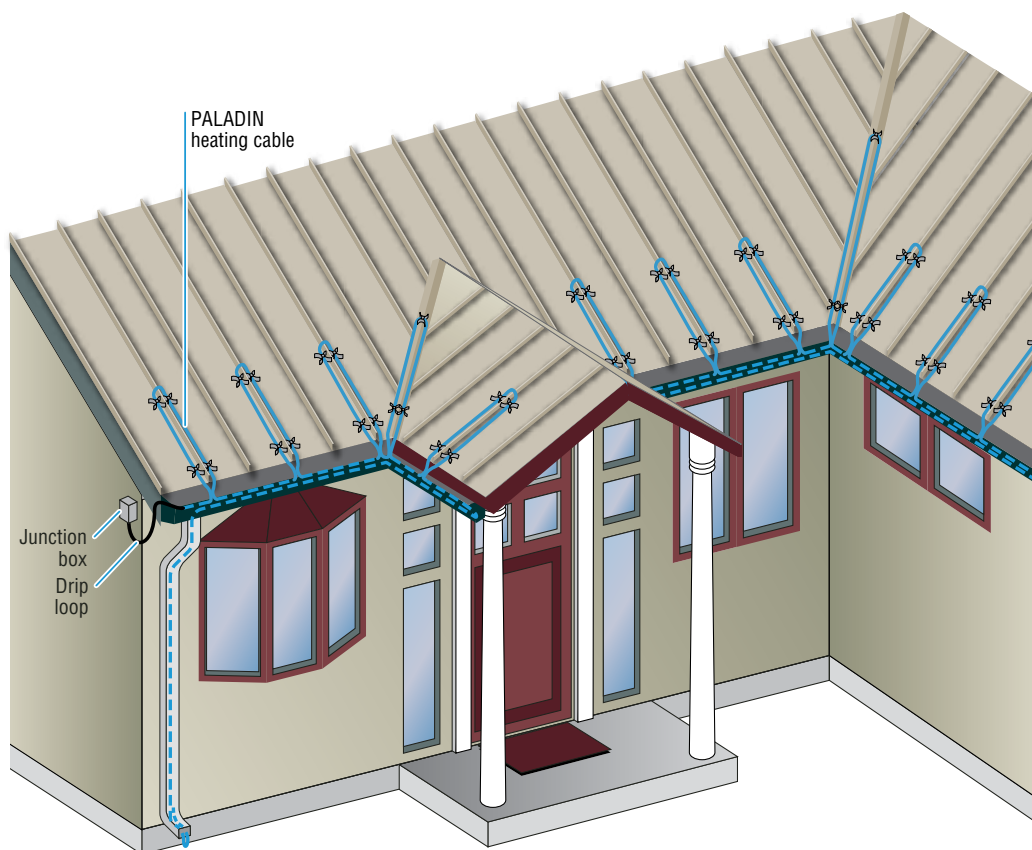
- Route the heating cable to extend the top of each loop beyond where the wall joins the roof and extend past the roof edge slightly. The heating cable running beyond the roof edge creates a drip loop for water to drip free from the roof.

**Note:** The drip loops at the edge must hang below the lip of the roof.



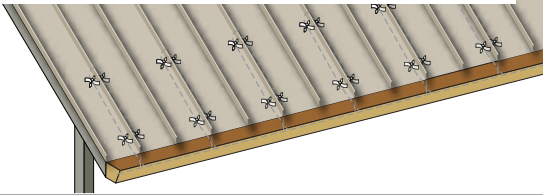
### Standing Seam Roof Installation

- Finished example of heating cable attached to roof in the Standing Seam Metal Roof installation method.
- Perform an annual inspection each year of the following:
  - Check visually to ensure no physical damage has occurred to the heating cable.
  - Check and test the ground-fault protection device for proper operation. For GFC model Paladin system refer to the electrical system check section of this guide.
  - Make sure that gutters/eavestroughs and downspouts are free of leaves and any other debris.
  - If a control device is installed make sure its operates correctly before each winter season.

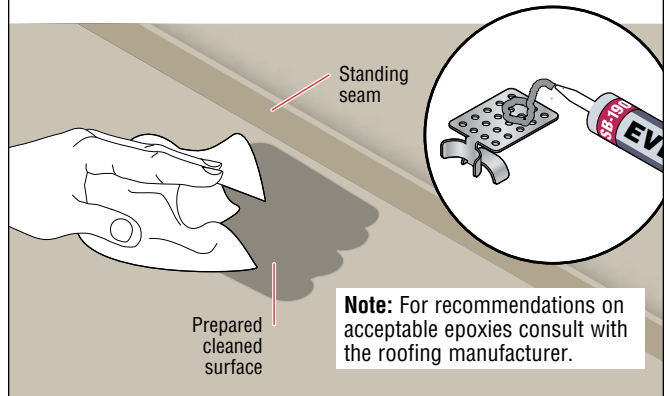


**1 Standing Seam Roof Installation**

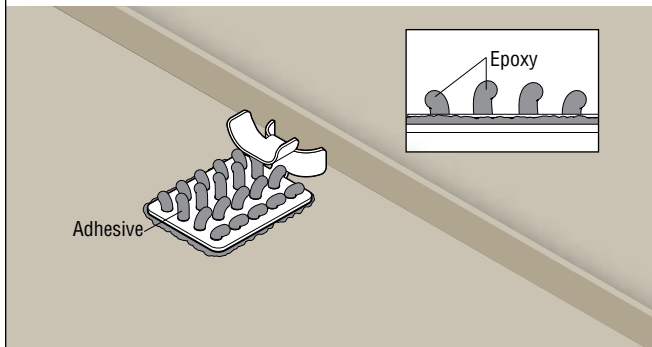
- Position and attach roof clips on the roof so they are ready to allow the heating cable to run up one side of the seam and down the other.
- Install the roof clips in a manner that the heating cable will run up the seam at least 12 inches beyond the non-heated overhang section of the roof, and then so it will run back down and overhang the leading edge of the roof.
- Heating cable is required every other seam on standing seam roofs with seam spaced equal to or less than 24 inches. For seams spaced greater than 24 inches run heating cable up and down each seam.

**2 Standing Seam Roof Installation**

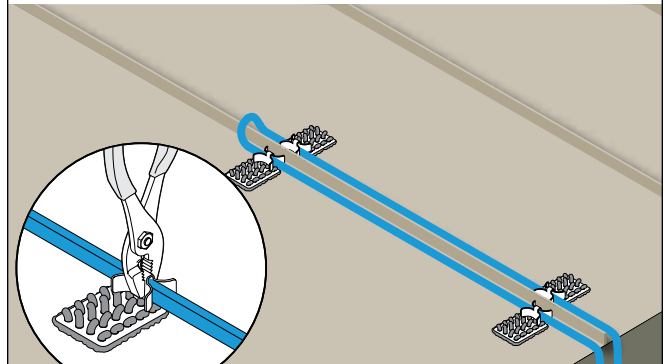
- Prepare roof surface per epoxy manufacturer's specifications
- Apply a liberal amount of epoxy to back side of clip

**3 Standing Seam Roof Installation**

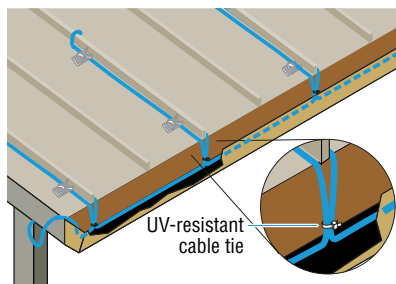
- Place clip on prepared surface. Press down to ensure epoxy flows through holes.
- Do not trim back epoxy beads as they help hold the clip down.
- Allow epoxy to cure per manufacturer's specifications.

**4 Standing Seam Roof Installation**

- Install heating cable by gently laying it in the roof clip. Do not pull the heating cable over sharp edges or use excessive pulling force during install.
- Use pliers to close clamps, but do not crush the heating cable.
- Repeat on each standing seam.

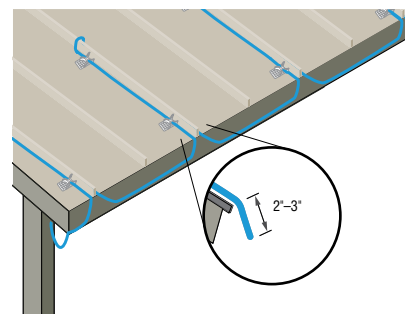
**5A Standing Seam Roof Installation****Roofs with gutters:**

- When laying the heating cable in the clips, extend the bottom of each heating cable loop over the roof edge (approximately 6 inches) and, using a UV-resistant cable tie, connect the bottom of each loop to each other to ensure a drainage channel off the roof and into the gutter and downspout.
- For residential and small commercial applications a single run of heating cable is often enough. The cable running in the gutter should remain against the bottom of the gutter. No attachment in the gutters is normally required but roof clips may be used every 2 feet (0.60 m) in the gutter to secure heating cable if needed.

**5B Standing Seam Roof Installation****Roof without gutters:**

- When laying the heating cable in the clips, route the heating cable to extend the top of each loop beyond where the wall joins the roof and extend past the roof edge slightly. The heating cable running beyond the roof edge creates a drip loop for water to drip free from the roof.

**Note:** The drip loops at the edge must hang below the lip of the roof.



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**Heat-Line Freeze Protection Systems**

1095 Green Lake Road  
Algonquin Highlands, ON Canada  
KOM 1J1  
Tel: 1-705-754-4545  
1-800-584-4944  
Fax: 1-705-754-4567  
info@heatline.com  
[www.heatline.com](http://www.heatline.com)

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