



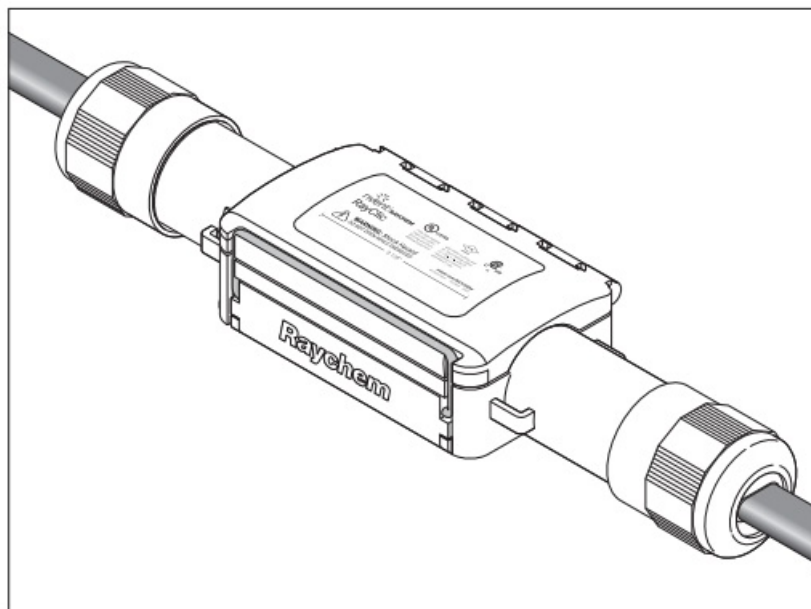
# nVent RAYCHEM Self Regulating and power limiting Heating Cable System Installation Guide

[Home](#) » [nVent](#) » nVent RAYCHEM Self Regulating and power limiting Heating Cable System Installation Guide



## RAYCHEM




Self-regulating  
and power limiting  
heating cable systems  
Installation and maintenance manual



## Contents [ [hide](#) ]

- 1 APPROVALS
- 2 DESCRIPTION
- 3 TOOLS REQUIRED
- 4 KIT CONTENTS
- 5 Splice, Tee, and Cross Installation
- 6 Roof Installation
- 7 End Seal Installation
- 8 Troubleshooting Guide
- 9 Heating Cable Circuit Testing
- 10 Documents / Resources
  - 10.1 References
- 11 Related Posts

## APPROVALS

	718K Pipe Heating Cable
	877Z De-Icing and Snow Melting Not UL Listed with XL-Trace Edge heating cable for buried piping
	For HWAT and IceStop only Hazardous Locations: For IceStop (GM-XT) only Class I, Div. 2, Groups A, B, C, D

## DESCRIPTION

nVent RAYCHEM RayClic-PC Power Connection and End Seal Kit

nVent RAYCHEM RayClic-PS Powered Splice and End Seal Kit

nVent RAYCHEM RayClic-PT Powered Tee and End Seal Kit

These kits are for use with nVent RAYCHEM IceStop,

XL-Trace Edge and HWAT heating cables. The connection is designed to be strapped to the pipe or mounted on the wall at the start of the heating cable circuit. These installation instructions should be used in conjunction with the IceStop, XL-Trace Edge, and HWAT System Installation and Operation Manuals. For technical support, contact your nVent representative or call nVent (800) 545-6258.

## TOOLS REQUIRED

• TORX T20 screwdriver	• Utility knife
• Wire cutters	

## OPTIONAL ACCESSORIES (NOT INCLUDED IN THIS KIT)



- nVent RAYCHEM RayClic-SB-02 Wall mounting bracket
- nVent RAYCHEM RayClic-SB-04 Pipe mounting bracket



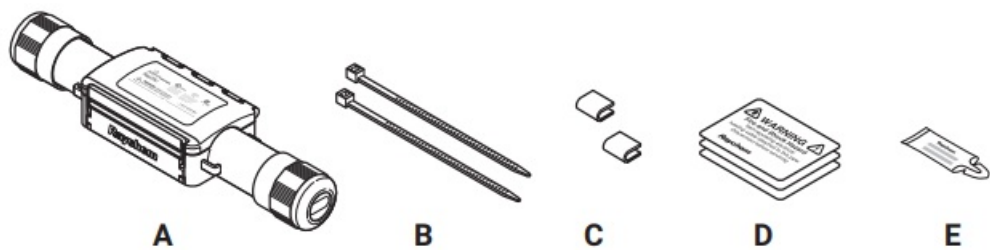
**WARNING:**

This component is an electrical device that must be installed correctly to ensure proper operation and to prevent shock or fire. Read these important warnings and carefully follow all the installation instructions.

- 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 nVent, agency certifications, and national electrical codes, ground fault equipment protection must be used. Arcing may not be stopped by conventional circuit breakers.
- Bus wires will short if they contact each other. Keep bus wires separated.
- Keep components and heating cable ends dry before and during installation.
- The black heating cable core is conductive and can short. It must be properly insulated and kept dry.
- Component approvals and performance are based on the use of nVent-specified parts only. Do not use substitute parts or vinyl electrical tape.
- Leave these instructions with the end user for reference and future use.

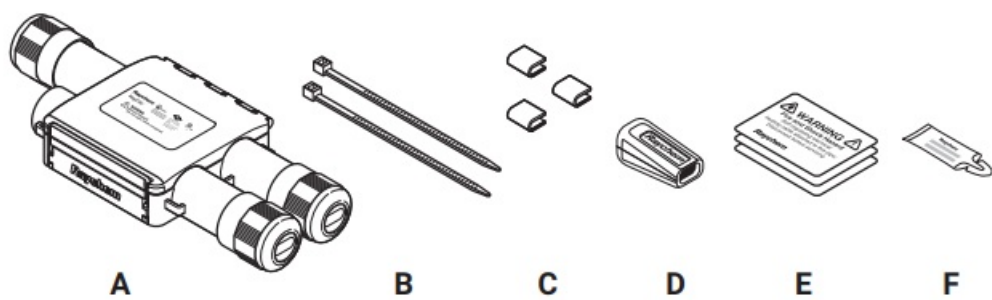
**KIT CONTENTS**

**RAYCLIC-S SPLICE KIT**



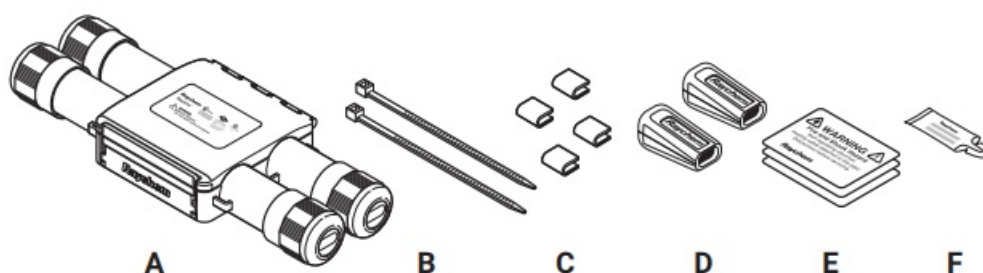
Item	Qty	Description
A	1	Splice
B	2	Plastic cable ties
C	2	Clips
D	3	Labels (1 splice, 2 warning)
E	1	Cable lubricant

**RAYCLIC-T TEE KIT**



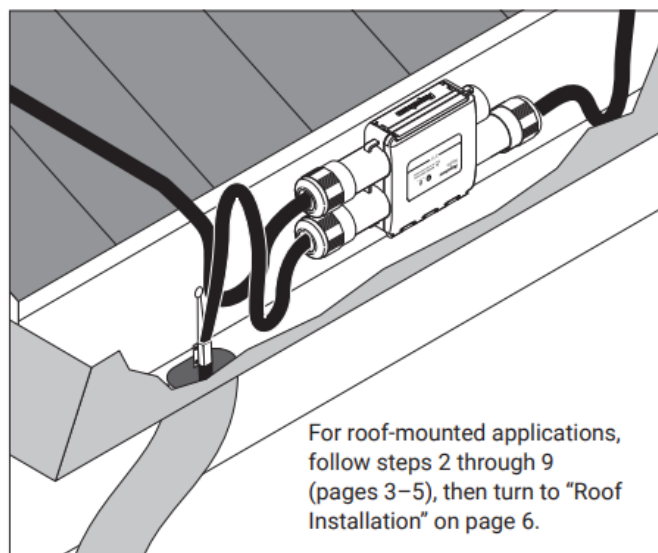
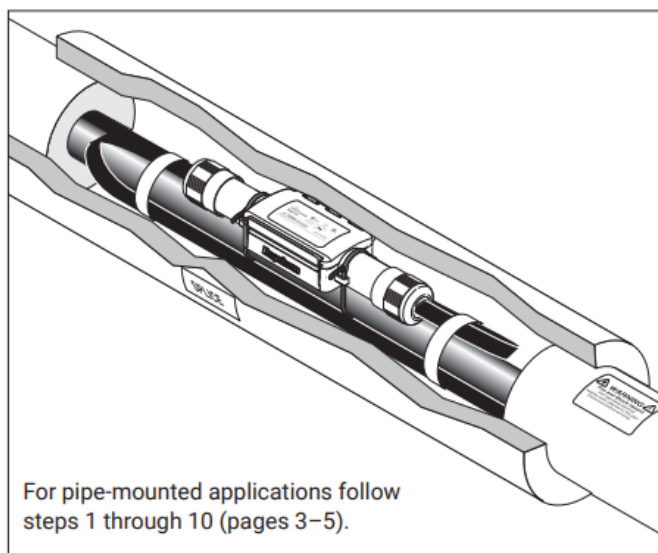
Item	Qty	Description
A	1	Tee
B	2	Plastic cable ties
C	3	Clips
D	1	End seal
E	3	Labels (1 splice, 2 warning)
F	1	Cable lubricant

## RAYCLIC-X CROSS KIT

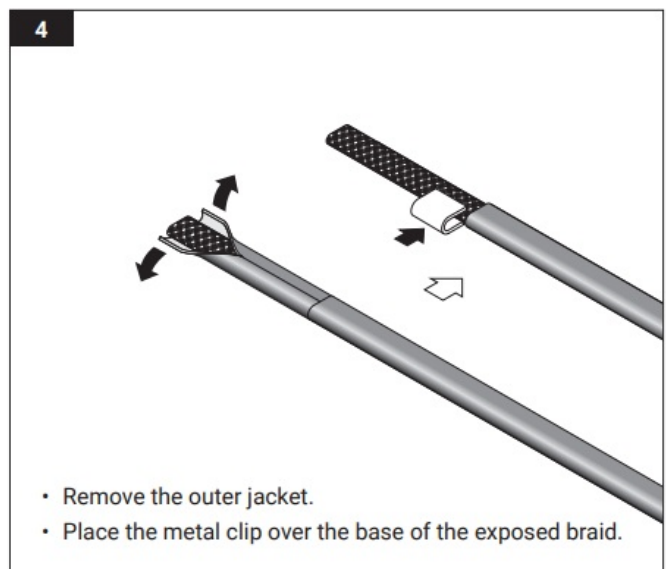
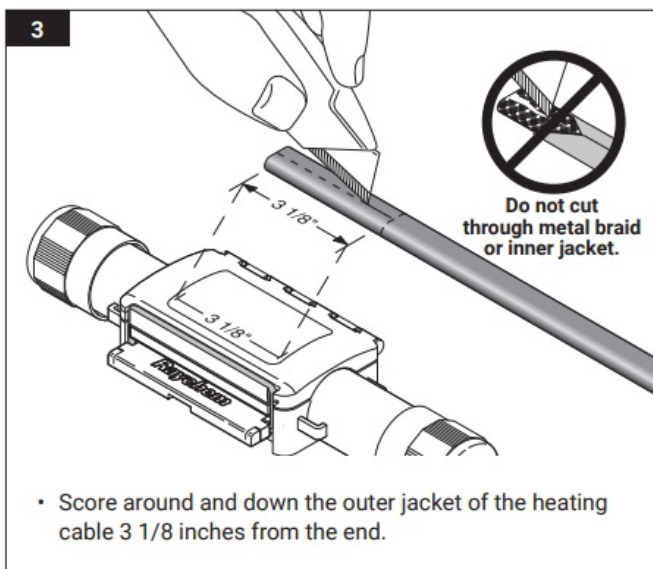
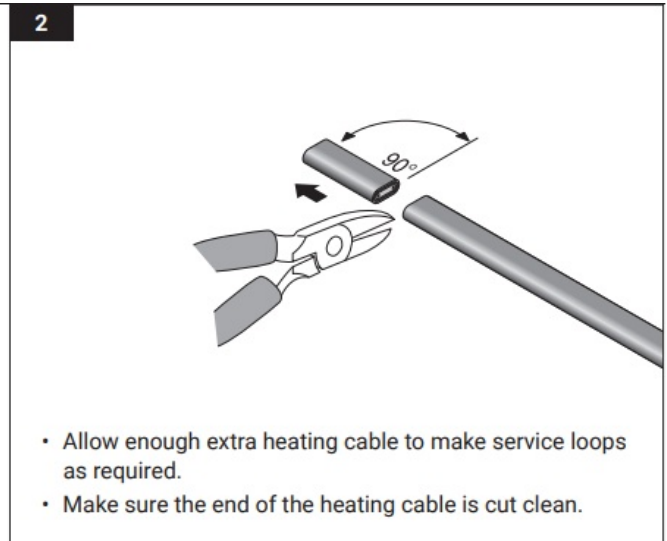
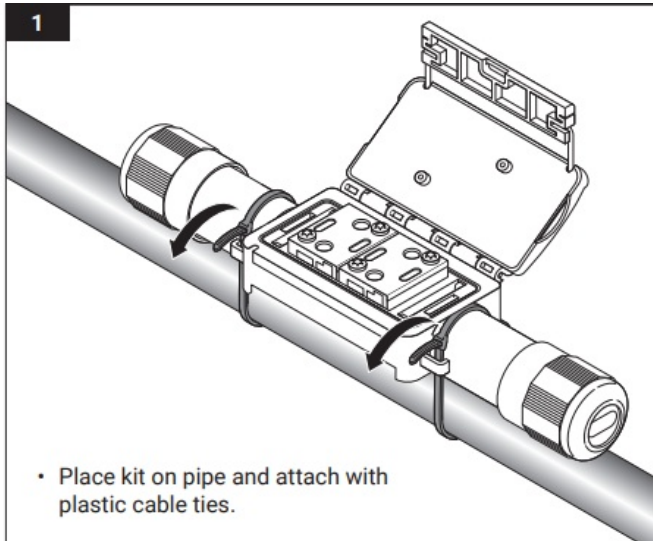


Item	Qty	Description
A	1	Cross
B	2	Plastic cable ties
C	4	Clips
D	2	End seals
E	3	Labels (1 splice, 2 warning)
F	1	Cable lubricant

If you experience difficulty during installation, refer to the “Troubleshooting Guide” on page 8.

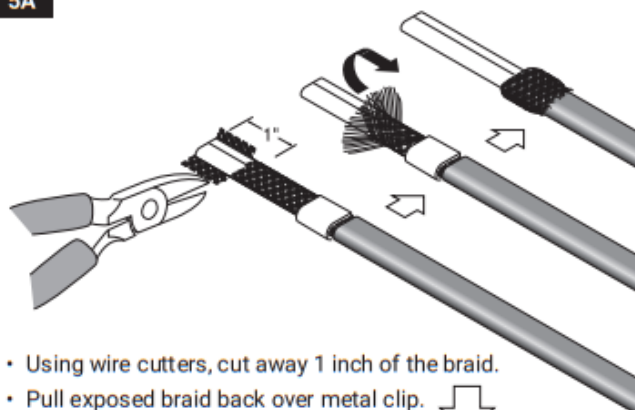


## Splice, Tee, and Cross Installation

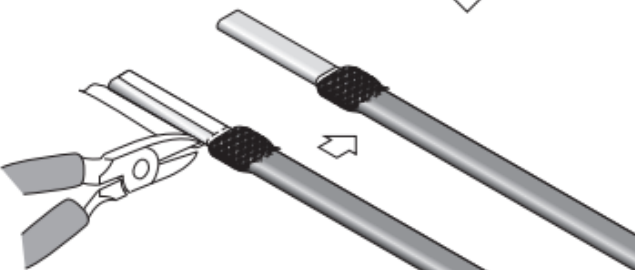


# HWAT Only

5A



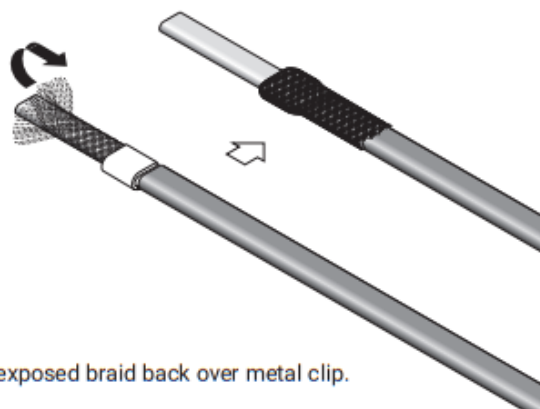
- Using wire cutters, cut away 1 inch of the braid.
- Pull exposed braid back over metal clip.



- Using wire cutters, cut away aluminum wrap.

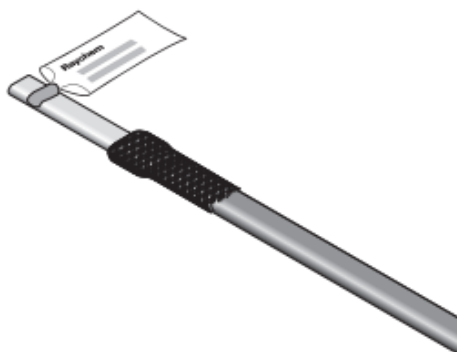
# IceStop and XL-Trace Edge Only

5B



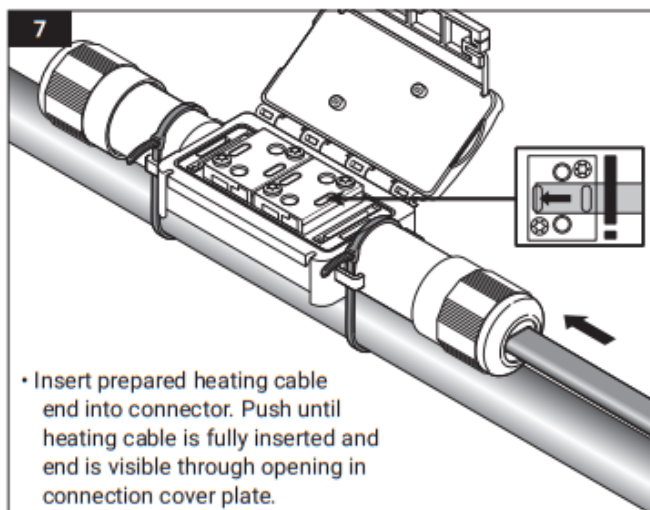
- Pull exposed braid back over metal clip.

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- Apply a small amount of lubricant to the jacket surface near the end of the cable.
- Avoid using large amounts of lubricant on the exposed end of the cable.

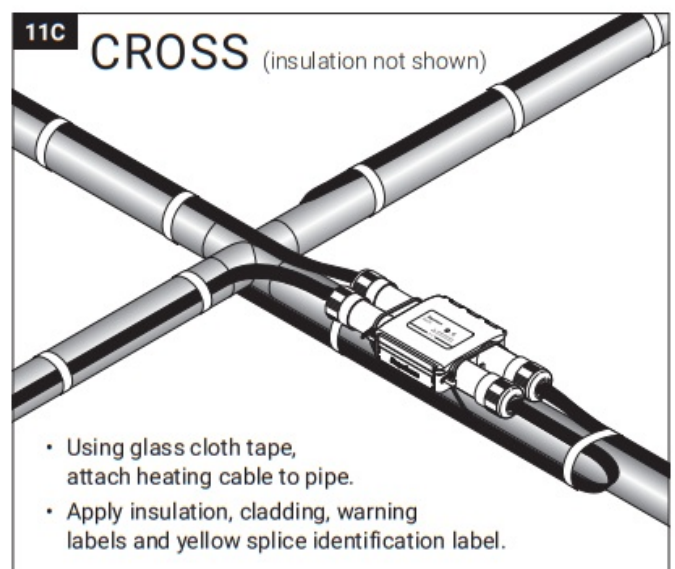
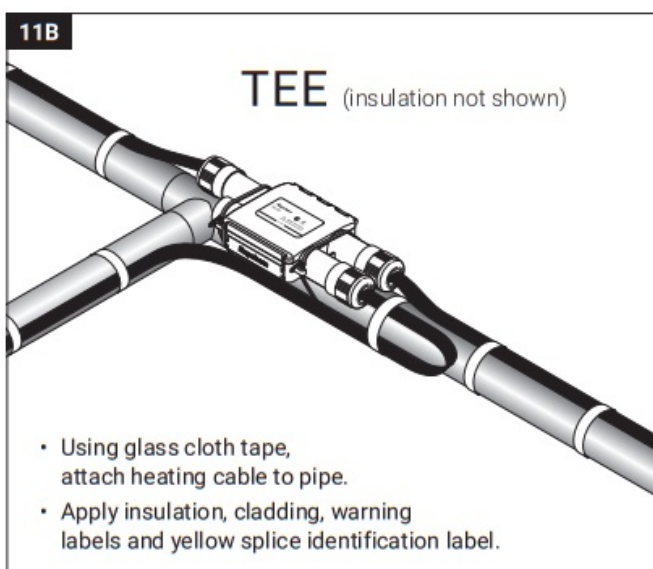
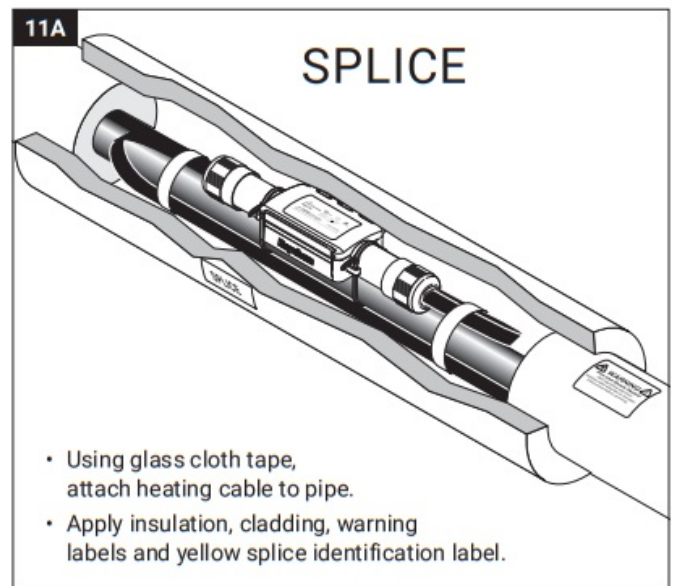
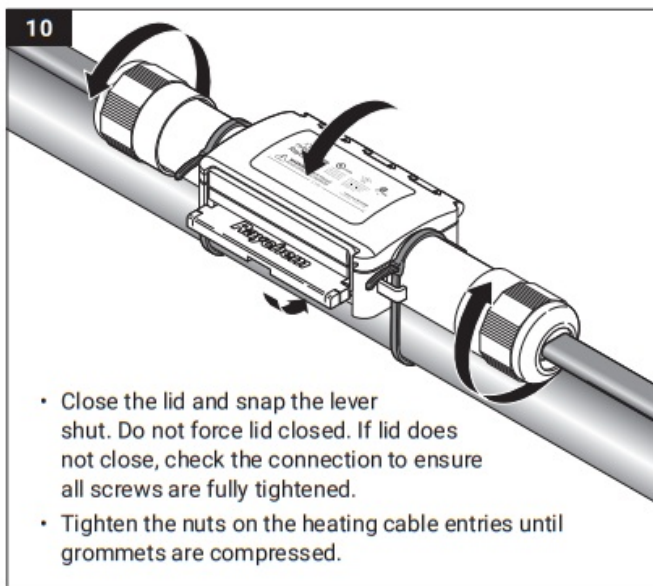
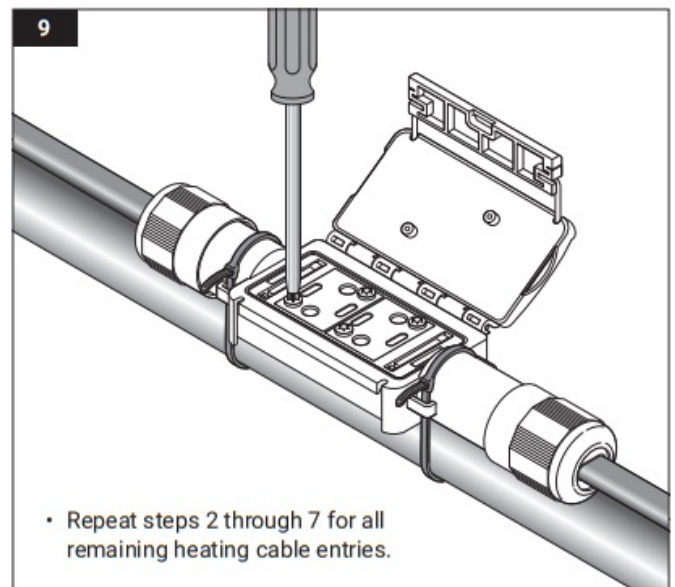
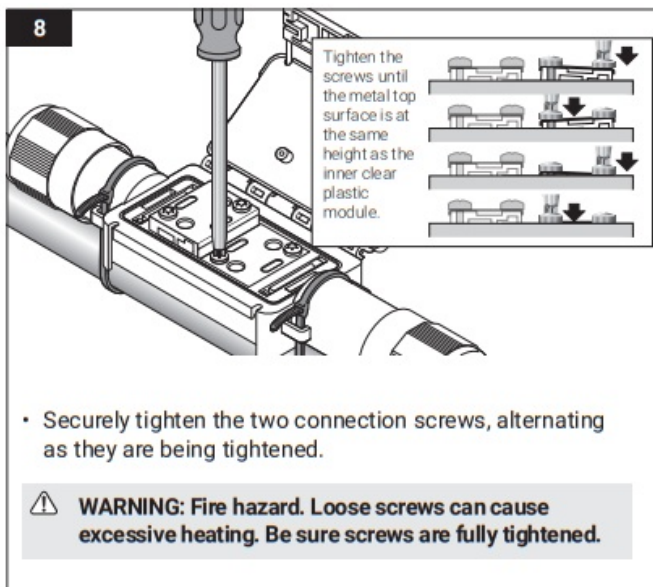
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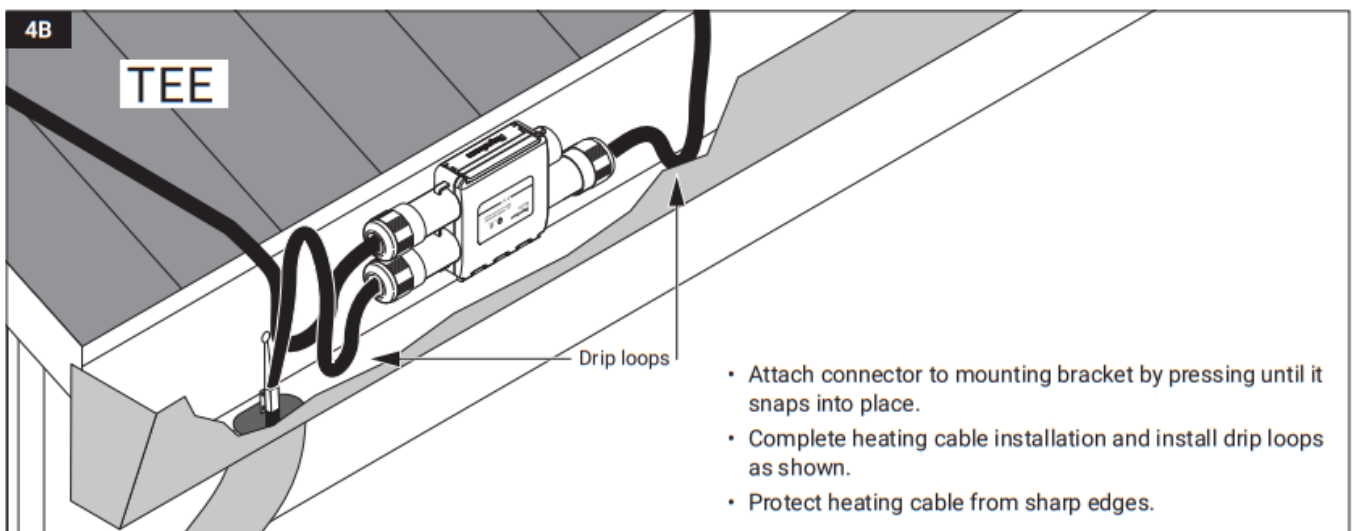
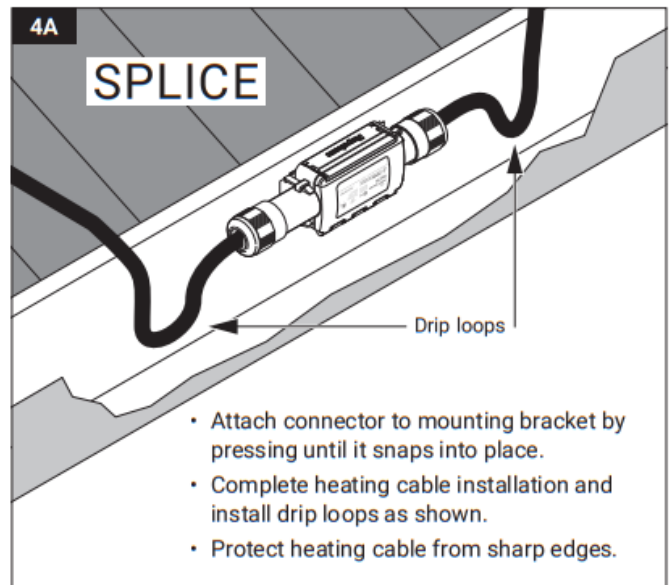
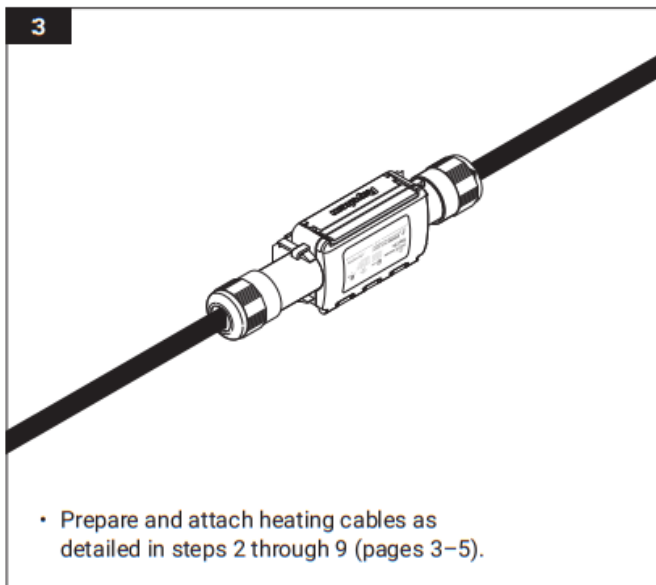
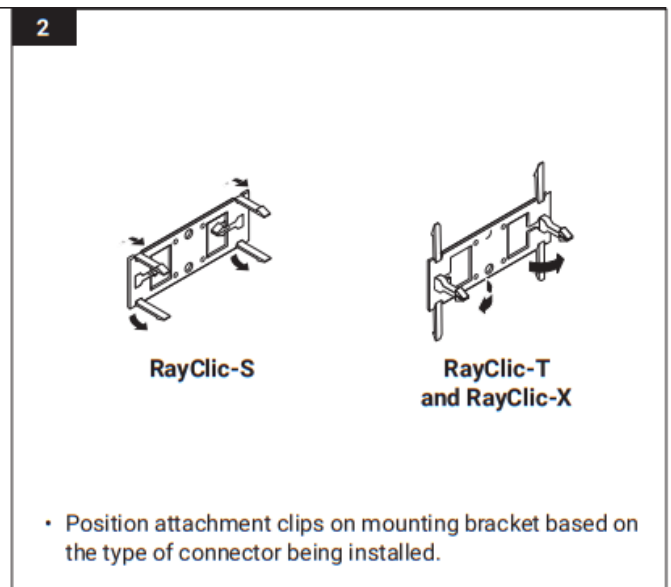
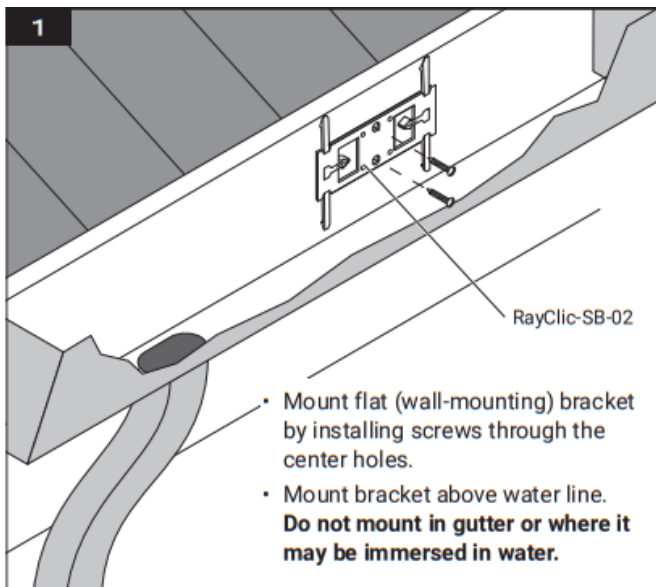
- Insert prepared heating cable end into connector. Push until heating cable is fully inserted and end is visible through opening in connection cover plate.

**Note: Heating cable cannot be removed.** The connection and end seal are designed to be installed only once; the heating cable cannot be removed once installed.



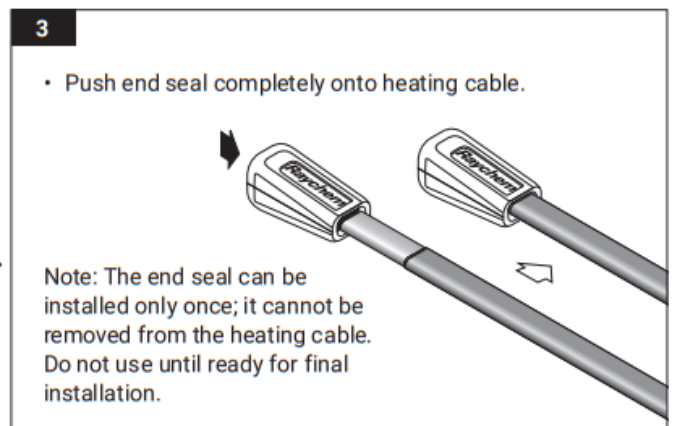
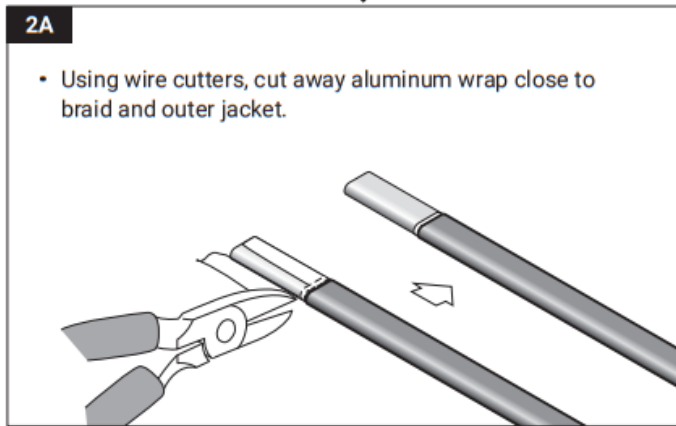
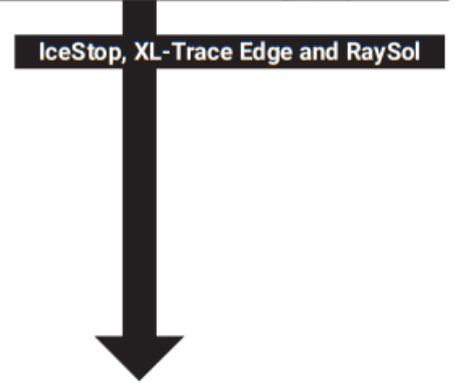
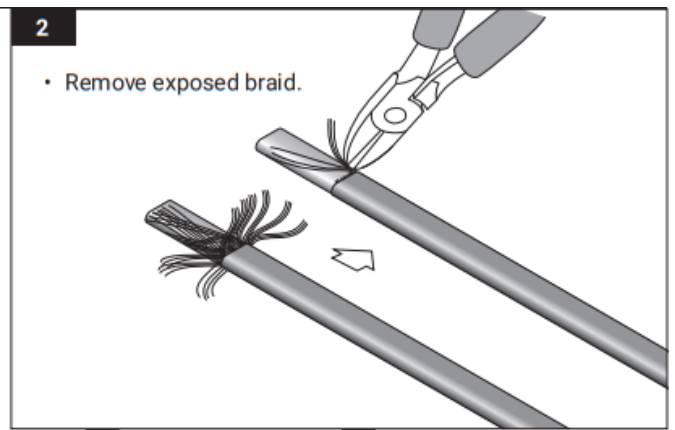
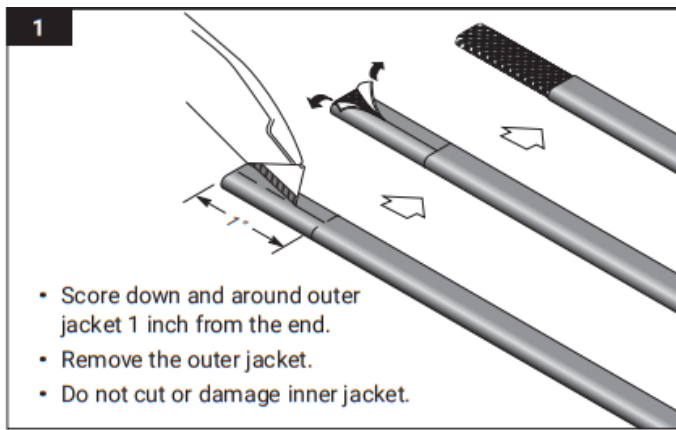


## Roof Installation



## End Seal Installation





## Troubleshooting Guide

PROBLEM	SOLUTION
Braid clips are missing.	The braid clips are attached to the cardboard packing insert under the lid. The braid clips must be used to ensure a ground connection. If clips are missing or lost, call nVent at (800) 545-6258.
The mounting bracket is missing.	A mounting bracket is not included in the splice, tee, and cross kits. One can be ordered using one of the catalog numbers listed under "Optional Accessories" on the front page of these instructions when you place your order.
The connector does not snap onto the bracket.	The bracket has two sets of attachment clips. Fold up the four outer clips for the splice kit. Fold up only the center clips for the tee and cross kits.
Heating cable type not mentioned.	nVent RAYCHEM RayClic connection kits are approved for use only with HWAT, XL-Trace Edge, and IceStop heating cables. Do not use it with other heating cables.
The braid clip does not fit.	Be sure the clip is installed on the metal braid, not on the outer jacket.
The heating cable does not have an aluminum wrap.	Only HWAT heating cables have the aluminum wrap under the braid. Skip the aluminum wrap removal step for XL-Trace Edge and IceStop heating cables.
The heating cable cannot be inserted into the connector.	Check for the following: <ul style="list-style-type: none"> <li>• Apply cable lubricant to the heating cable primary (white) jacket.</li> <li>• Outer jacket strip length is 31/8 inches.</li> <li>• Braid clip is installed on top of the metal braid, not on the outer jacket.</li> <li>• Braid is pulled back over braid clip.</li> <li>• For HWAT, 1 inch of braid is removed.</li> <li>• Sealing nut is loose (but not removed).</li> <li>• Connection screws are loose.</li> </ul>
The lid does not close.	Be sure all screws are fully tightened before closing the lid.
The heating cable cannot be inserted into the end seal.	The outer jacket must be removed from the heating cable before the end seal is installed (see the End Seal Installation instructions on page 7). Make sure 1 inch of the outer jacket, braid, and aluminum wrap (HWAT only) are removed.
The heating cable cannot be removed.	The connection and end seal are designed to be installed only once; the heating cable cannot be removed once installed. Additional nVent RAYCHEM RayClic-E end seals can be ordered from nVent.

## Heating Cable Circuit Testing

The RayClic-T now includes test ports in the blank module.

Voltage can be measured at these points to confirm the continuity of power to the installed heating cable circuit. For detailed heating, and cable operation refer to the appropriate installation and operating manual.

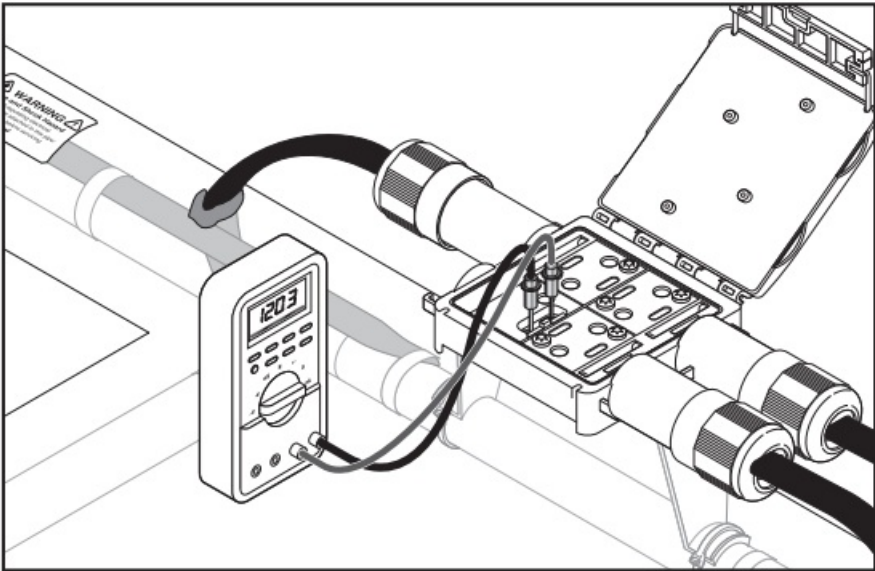
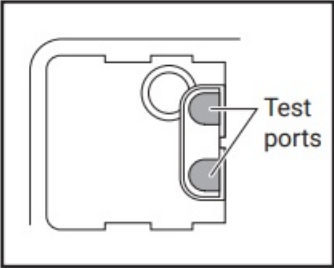
### Instructions:

1. Open the RayClic cover.
2. Set multimeter to AC voltage function.
3. Insert multimeter test probes into the two test ports.



**WARNING:** To avoid shock do not cross the test probes or touch them with the metal pressure plate when

measuring voltage.



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RAYCHEM-IM-H55092-RayClicConnectionSystem-EN-2111

[nVent.com/RAYCHEM](https://www.nVent.com/RAYCHEM)

Documents / Resources

 <small>Self-regulating and power limiting heating cable systems Installation and maintenance manual</small>	<a href="#">nVent RAYCHEM Self Regulating and power limiting Heating Cable System</a> [pdf] Installation Guide RAYCHEM Self Regulating and power limiting Heating Cable System, RAYCHEM, Self Regulating and power limiting Heating Cable System, Heating Cable System
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References

-  [Electrical Heat Tracing](#) | [Heat Tracing](#) | [nVent RAYCHEM](#)

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