DESCRIPTION
The nVent RAYCHEM HWT-HST is used with nVent RAYCHEM HWAT Systems to make splice and tee connections. Materials for 2 splice or tee connections are included in each kit. These installation instructions should be used in conjunction with the HWAT System Installation and Operation Manual (H57548). For technical support contact your nVent representative or call nVent at (800) 545-6258.

TOOLS REQUIRED
- Diagonal cutters
- Needle nose pliers
- Utility knife
- Heat gun or torch
- Crimp tools (Ideal 30-425 and T&B WT112M or WT2000)
- Tape measure

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APPROVALS

HC-50, UL Listed, CSA Certified, FM Approved

HWAT heating cables are UL Listed, CSA Certified, and FM Approved when used with the appropriate agency-approved Raychem components and accessories. The components are intended for use in dry and accessible locations.

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.
- Use fire-resistant insulation materials.
- Do not damage cable jackets or braid. Remove any damaged cables or connections from service.
- Do not use aluminum feed wires.
- Leave these instructions with end user for reference and future use.

CAUTION:

HEALTH HAZARD: Overheating heat-shrinkable tubes will produce fumes that may cause irritation. Use adequate ventilation and avoid charring or burning. Consult included MSDS for further information.

CHEMTREC 24-hour emergency telephone: 800-424-9300.
Non-emergency health and safety information: 800-545-6258.
Instructions are shown for a tee connection. Splice connections are done the same way, without the third heating cable section.

1 HWAT

- Allow 36 in of extra heating cable as shown.

1A Splice

- Allow 36 in of extra heating cable as shown.

1B Tee

- Allow 48 in of extra heating cable as shown.

2

- Lightly score completely around and then down outer jacket.
- Bend heating cable to break jacket at score then peel off outer jacket.

3

- Carefully slide screwdriver underneath the braid and poke tip of screwdriver up through 2-3 bundles of the braid wire.
- Slowly pull back on screwdriver to unravel braid.
- Straighten out braid wire
- Repeat until entire length of braid is unraveled.

Do not cut metal braid or inner jacket.
• Straighten the braid and position it on same side of each heating cable section.
• Do not shorten the braid.

• Using wire cutters, cut away aluminum wrap.

• At the end of each heating-cable section lightly score completely around and down inner jacket.

• Bend heating cable to break jacket at score, then peel off inner jacket.

• Notch core at the end.
• Twist back and peel bus wires from core.

• Score between bus wires at base jacket.
• Bend core to break free at base jacket.

• Peel core and any remaining material from bus wires.

Repeat steps 2 through 8 for other heating cable sections.
9

- Remove release paper from mastic strip (Item D).
- Wrap a piece of mastic around the outer jacket and position as shown on each heating cable section.

10

- Remove release paper from mastic strip (Item D).
- Wrap a piece of mastic around the end of each heating cable section and position as shown.
- Pinch the mastic in the center to completely seal the core at the end of each heating cable.

11

- Carefully align the heating cable sections and place them together.
- Press mastic strips firmly together.
- Fasten with a cable tie at each of the two positions shown.

12

- Twist the braid bundles together.
- Slide uninsulated crimp (Item B) over braid to within 1/4 in of heating cable as shown.
- Crimp the braid, using the Ideal crimp tool.
- Cut off the extra braid.
13

- Fold the crimped braid back against the heating cables.
- Wrap black cloth tape evenly around crimp and heating cables. Cover crimp completely.

14

- Select one bus wire from each cable section and twist the wires together.
- Repeat with remaining bus wires.

- IMPORTANT: Be careful not to twist together bus wires from the same heating cable.
  - Cut 1/4 in from each bus wire.

15

- Use insulated bus wire crimps (Item A) and T&B crimp tool to crimp each set of bus wires together.

16

- Slide heat-shrinkable cap (Item H) over bus wire crimps.
- It is not necessary to shrink cap.

- Position the heat-shrinkable tube (Item F) as shown.

17

- Shrink the tube completely. Start at end farthest from the cap and work toward the open end.
- Ensure that ring of mastic and adhesive is present after shrinking down tube.
- Insufficient heating may result in improper sealing

- IMPORTANT: Keep heating after tube has shrunk to melt adhesive and mastic inside tube. Total heating time should be about 5 minutes.
- CAUTION: Health Hazard. Consult included material safety data sheet.
- IMPORTANT: If using a torch, be careful not to overheat, char or damage the tube.
• Immediately after shrinking, pinch the end of the tube with needle-nose pliers until the end stays sealed; this normally takes 10 seconds.

⚠️ CAUTION: To avoid burns allow heated sections to cool before touching.
End Seal Installation for HWAT Heating Cables

1
- Score down and around outer jacket 1 inch from the end.
- Remove the outer jacket.
- Do not cut or damage inner jacket.

2
- Remove exposed braid.

3
- Using wire cutters, cut away aluminum wrap close to braid and outer jacket.

4
- Push end seal completely onto heating cable.
- Wipe off excess gel that may ooze out after you insert the heating cable.

Note: The end seal can be installed only once; it cannot be removed from the heating cable.

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