The nVent RAYCHEM HWT-P Power Connection and End Seal Kit is for use with nVent RAYCHEM HWAT heating cables. Materials for one power connection and one end seal are included in this 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
- Screwdriver
- Pen
- Needle-nose pliers
- Diagonal cutters
- Utility knife
- Heat gun or torch
- Channel lock pliers

ADDITIONAL MATERIALS REQUIRED
(NOT PROVIDED IN THIS KIT)
- UL Listed or CSA Certified junction box suitable for the location, with a through hole or threaded hub for 3/4-inch NPT.

APPROVALS
- Heating Cable
- Pipe-G

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

WARNING:
- 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.

HEALTH HAZARD: Overheating heat-shrinkable tubes will produce fumes that may cause irritation. Use adequate ventilation and avoid charring or burning. Consult MSDS RAY3122 for further information.
CHEMTREC 24-hour emergency telephone: (800) 424-9300
Non-emergency health and safety information: (800) 545-6258.
Power Connection Installation

1. Do not cut metal braid or inner jacket.

2. Unscrew cable gland (Item L).
   - Discard white washer and use black washer (Item M) instead.
   - Slide nut, washer and grommet over the cable as shown.
   - Bevel on the washer should face into the nut.

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

4. 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 bus wires.

1/2 in

• Using wire cutters, cut away aluminum wrap.

6 in

• At the end of each heating cable, lightly score completely around and down inner jacket
• Bend heating cable to break jacket at score, then peel off inner jacket

• Do not shorten the braid.

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

1/4 in

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

• Peel core and any remaining material from bus wires

• Slide heat-shrinkable tubes (Item E) over the bus wires.
• Starting from the center of the tube, move the heat source continuously from side to side.

IMPORTANT: If using a torch, be careful not to overheat, char or damage the tube.

CAUTION: Health Hazard. Consult material safety data sheet RAY3122.

• Slide heat-shrinkable tube (Item J) over the stripped portion of the cable, until tube butts up against the outer jacket.

• To prevent the shrink tube from moving, slightly spread the bus wires to hold tube in place while shrinking.
11
• Starting at center of tube, move heat source continuously from side to side.

12
• While tube is still hot, pinch with pliers between bus wires to seal; hold for 10 seconds.

13
• Slip green/yellow tube (item F) over braid and shrink.

14
Note: Ensure junction box is in proper orientation and tighten to pipe mounting bracket (Item C). In some cases, it may be required to install the junction box in the 3 o’clock or 9 o’clock position on the pipe.

15
• Slide grommet until end is 1 1/2” from end of outer jacket

16
• Bring cable into junction box
• Hand tighten nut
• With channel lock pliers tighten nut, but do not exceed more than one (1) turn.
• Use red wire nuts (Item H) to connect the supply with the heating cable bus wires.

• Use gray wire nut (Item I) to connect the ground braid to the supply ground.

• Attach HWAT water heater tag (Item A) to either the water heater or temperature control valve servicing the hot water systems, using the plastic cable tie (Item N).
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.