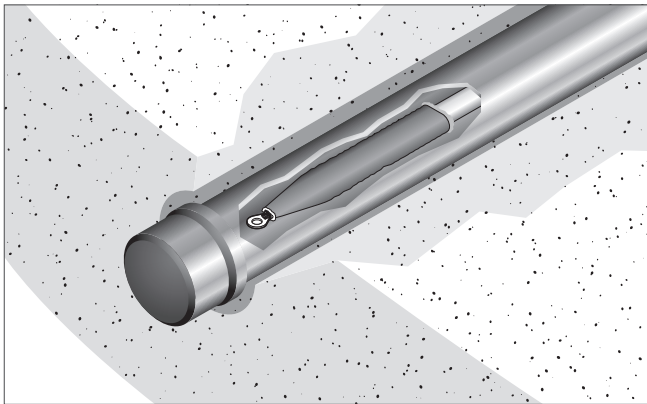




## RAYCHEM

### FHP-PL-E

#### End seal kit with pulling lug for FHP-2, FHP-3 and FHPC heating cables Installation Instructions



#### APPROVALS

##### Hazardous Locations FHPC

Baseefa04ATEX0388X

II 2 GD Ex e II T\* (see schedule)  
Ex tD A21 IP66 T\*\*\*C

IECEX BAS 05.0022X  
Ex e II T\* (see schedule) Ex tD A21 IP66 T\*\*\*C

SP Ex e II T (1)  
-W

(1) T-class by Design

##### FHP-2 and FHP-3

Baseefa06ATEX0187X

II 2 GD Ex e IIC T6 or T4 Gb  
Ex tD A21 IP66 T80°C or T130°C

IECEX BAS 06.0047X  
Ex e IIC T6 or T4 Gb  
Ex tD A21 IP66 T80°C or T130°C

#### TOOLS REQUIRED

- Wire cutters
- Torch or heat gun
- Utility knife
- Thomas & Betts WT2000 crimp tool or equivalent

#### DESCRIPTION

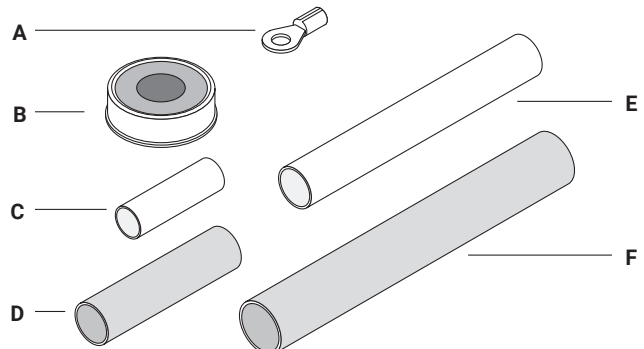
nVent RAYCHEM FHP-PL-E is a heat-shrinkable pulling lug end seal for use with nVent RAYCHEM FHPC constant wattage power density (parallel constant wattage) heating cables and FHP-2 and FHP-3 self-regulating heating cables in frost heave prevention applications. This kit includes materials to make one end seal assembly.

This kit may be installed at temperatures as low as -60°C (-76°F). For easier installation, store above freezing until just before installation.

For technical support, call nVent at (800) 545-6258.

#### KIT CONTENTS

Item	Qty	Description
A	1	Pulling lug
B	1	Teflon® tape
C	1	Adhesive tube 38 mm (1 1/2 in) long
D	1	Heat-shrinkable tube 60 mm (2 3/8 in) long
E	1	Adhesive tube 111 mm (4 3/8 in) long
F	1	Heat-shrinkable tube 135 mm (5 3/8 in) long



#### 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 of 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 Thermal Management, agency certifications, and national electrical codes, ground-fault equipment protection must be used. Arcing may not be stopped by conventional circuit breakers.
- Component approvals and performance are based on the use of nVent Thermal Management-specified parts only. Do not use substitute parts or vinyl electrical tape.

- Conductors will short if they contact each other. Keep conductors separated.
- Keep components and heating cable ends dry before and during installation.
- Heat guns or torches can cause fire or explosion in hazardous areas. Be sure there are no flammable materials or vapors in the area before using these tools.
- Heat-damaged components can short. Use a heat gun or torch with a soft, yellow, low-heat flame. Keep the flame moving to avoid overheating, blistering or charring the heat-shrinkable tubes. Replace damaged end seals or heating cable.

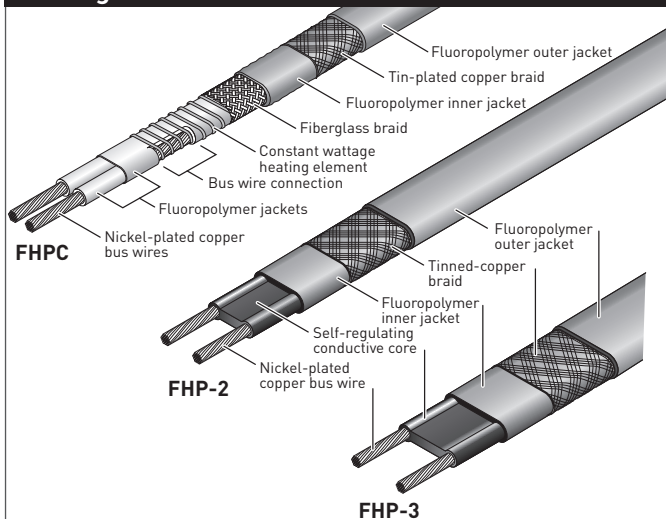
#### CAUTION:

**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.

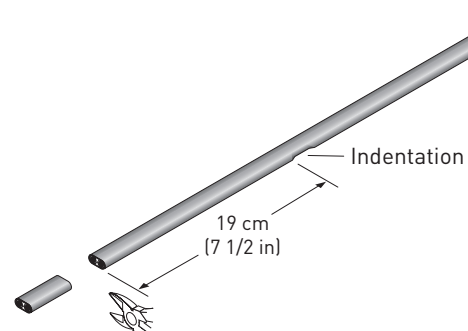
CHEMTREC 24-hour emergency telephone:  
(800) 424-9300

Non-emergency health and safety information:  
(800) 545-6258.

## Heating Cable Construction

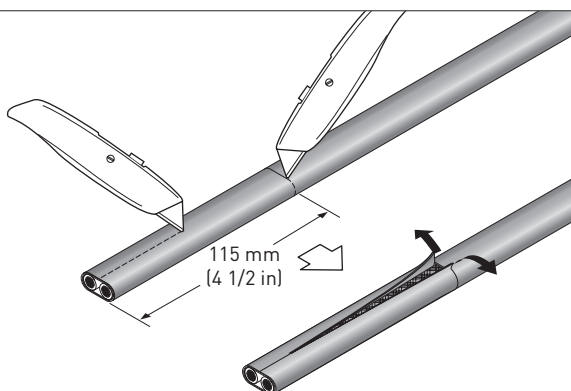


### 1 FHPC only



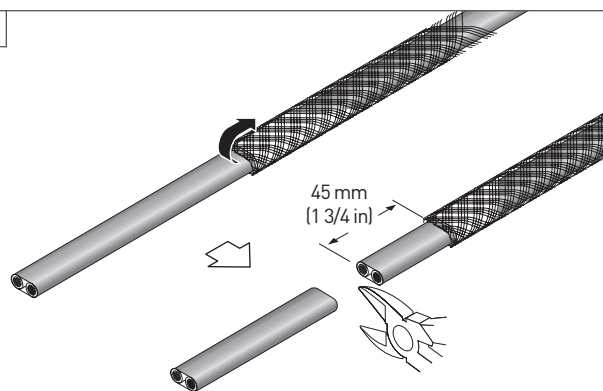
- Cut cable 19 cm (7 1/2 in) from indentation.

### 2



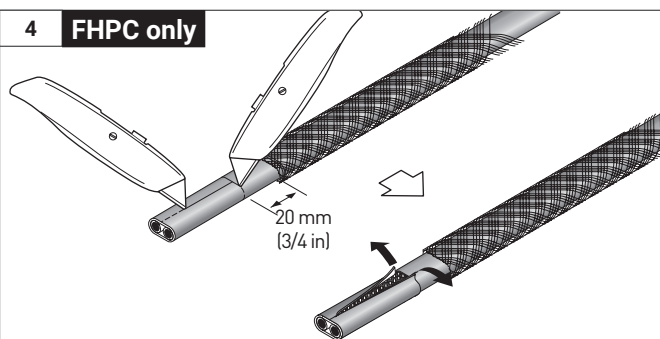
- Lightly score outer jacket around and down as shown.
- Bend the heating cable to break jacket at score, then peel off jacket.

### 3



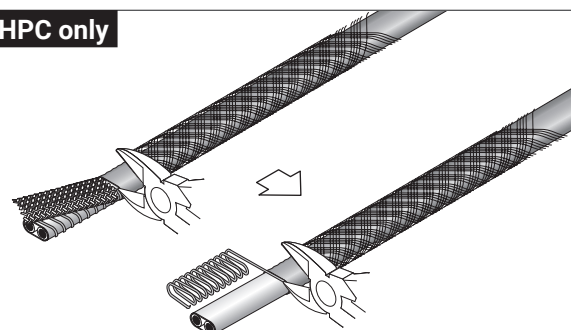
- Pull braid back over outer jacket to expose the inner jacket. Do not cut off the braid wires.
- Cut off end of heating cable as shown.
- For FHP-2 and FHP-3, go to Step 8.

### 4 FHPC only



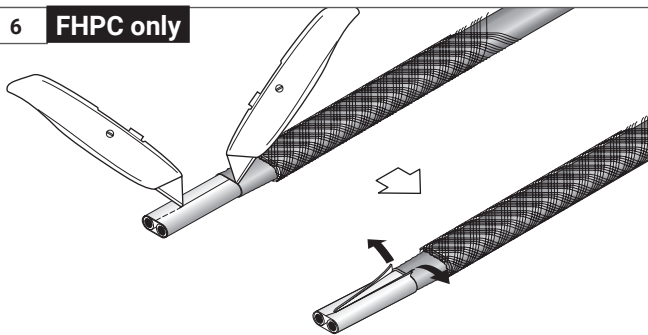
- Lightly score inner jacket around and down as shown.
- Bend the heating cable to break jacket at score, then peel off jacket.

### 5 FHPC only



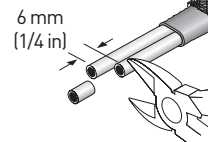
- Remove fiber braid.
- Remove heating element. Cut flush with edge of outer jacket.

## 6 FHPC only



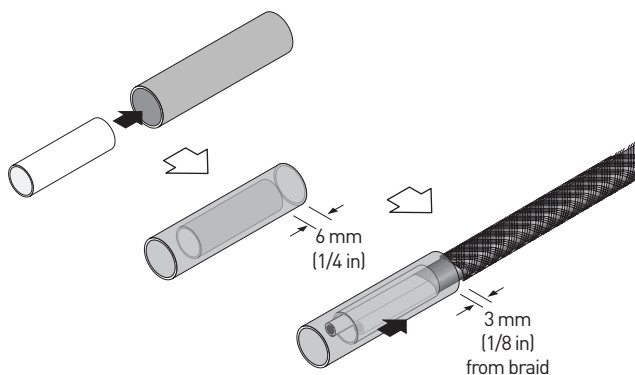
- Lightly score second inner jacket around and down as shown.
- Bend the heating cable to break jacket at score, then peel off jacket.

## 7 FHPC only



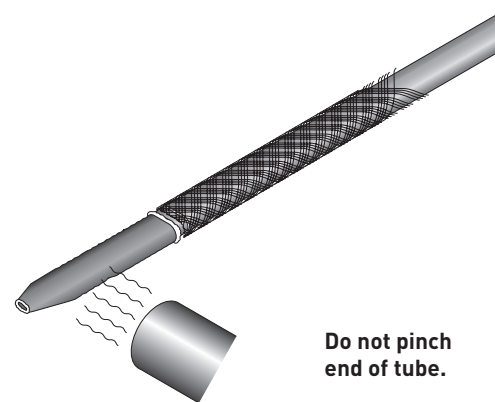
- Cut 6 mm (1/4 in) from the end of one insulated bus wire.

## 8



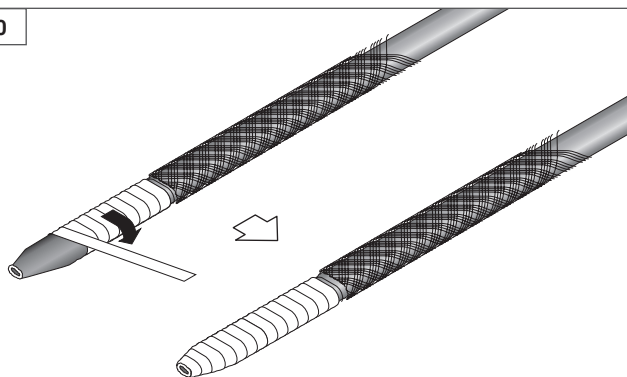
- Position short adhesive tube inside short black tube.
- Position the assembly so that large tube is 3 mm (1/8 in) from braid and outer jacket. Tubing overlaps the inner jacket.

## 9



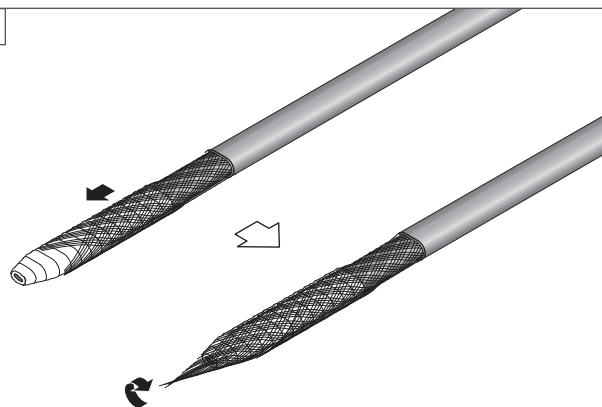
- Heat tubes until they shrink and adhesive flows out of ends.
- **Important:** Do not remove excess adhesive. This could create a leak path.

## 10



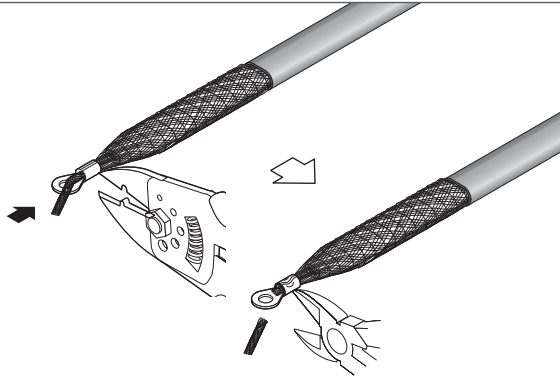
- Wrap heat-shrinkable end seal with Teflon tape.

## 11



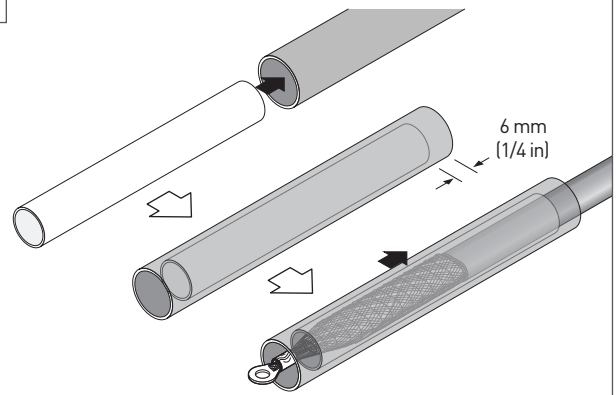
- Pull braid over the wrapped tube and twist the end.
- Smooth down any exposed braid ends.

12



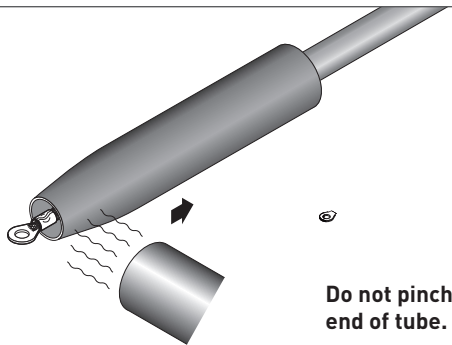
- Use the WT2000 crimp tool to crimp pulling lug onto braid.
- Trim braid after crimping.

13



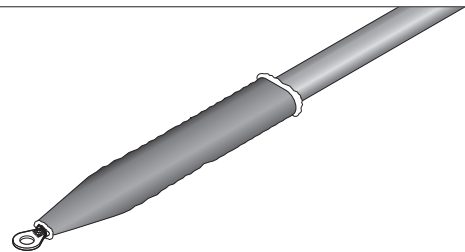
- Slide long adhesive and heat-shrinkable tubing over end of heating cable. Position end of the heat-shrinkable tubing at ring on pulling lug.

14



- Start shrinking at the pulling lug end.
- Continue heating tubes until they shrink completely and adhesive flows out each end.
- Do not cover the pulling lug with heat-shrinkable tubing.

15



- Allow end seal to cool completely.
- Leave these instructions with the end user for future reference.

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