

## Installation Instructions

### HP-LE-1R / HP-LE-2R

### High Profile Lighted End Seal – 120 Volts / 277 Volts



These installation instructions are only for use with the following Drexan HeatTracer Self-Regulating heater products:

PipeGuard® Warm (PGW), MultiTrace® (MT) and PipeGuard Hot (PGH)

This kit may be installed in temperatures as low as -40°F/-40°C.



**WARNING:** This is an electrical device and in order to ensure proper operation and prevent shock or fire it must be installed correctly. Read these important warnings. Follow all installation instructions.

**CAUTION:** Ground-fault equipment protection shall be provided to de-energize all normally ungrounded conductors of electrical heating cable sets, with ground fault settings sufficient to allow normal operation of the heater unless applicable codes permit otherwise, and to minimize the danger of fire from sustained electrical arcing if the heating cable is damaged or improperly installed and to comply with Drexan requirements, agency certifications and national electrical codes. Conventional circuit breakers may not stop arcing.

Do not use substitute parts or substitute electrical tape. Component approvals and performance characteristics are based on Drexan specific parts only. Substitution will void warranty, approvals and performance claims.

The heating cable core is conductive and can short if not properly insulated and kept dry.

Heating cable core bus wires can overheat and short when damaged. When cutting the cable jacket or core do not break bus wire strands.

Component and heating cable ends must be kept dry before and during installation. Fire-resistant thermal insulation materials should be used.

#### APPROVALS



Class I, Div. 2, Groups A, B, C, D

HP-LE-1R – 120 Volts

HP-LE-2R – 277 Volts

231572

PGH only: 5 – 20 W/ft., Maximum 40A. Maximum intermittent exposure temperature +446°F/230°C. Minimum bend radius: 1.72 in. (44 mm) @ -40°F/-40°C

All other cables: 3 – 10 W/ft., Maximum 32A. Maximum continuous exposure temperature +150°F/65°C. Minimum bend radius: 1.18 in. (30 mm) @ 68°F/20°C

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## KIT CONTENTS

- Enclosure with Pilot Light and Hub
- Strain Relief (cap, washer, grommet, base)
- Bracket with sealing ring, coupling and nipple
- Warning Label
- Cold applied Core Sealer
- (2) Pipe Straps
- Installation Instructions
- 3/16" tube (for PGW/MT only)

## REQUIRED BUT NOT PROVIDED

### Materials

- Cable Lubricant
- Glass Fiber Cloth Tape, Drexan Cat. TAPE-GCR-HT / TAPE GCS-LT or equivalent

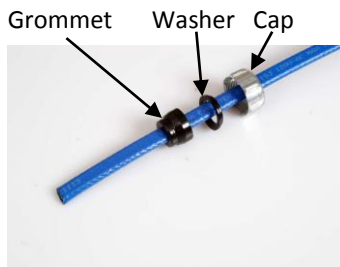
### Equipment

- Utility Knife
- Wire Cutter
- Multi-head Screwdriver
- Heat Gun
- Wire Stripper
- Crimp Tool
- Pipe Wrench
- Needle Nose Pliers

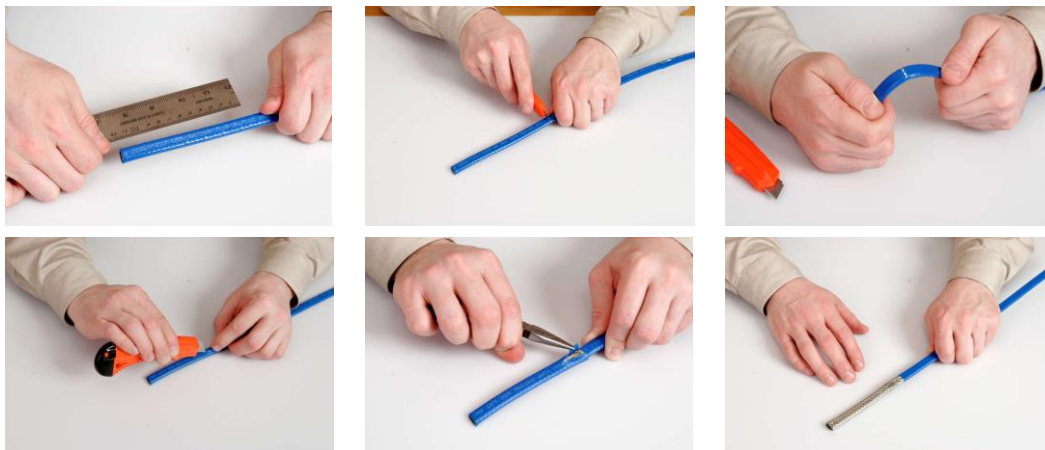
## ASSEMBLY INSTRUCTION DETAILS

### PIPEGUARD WARM (PGW) / MULTITRACE (MT)

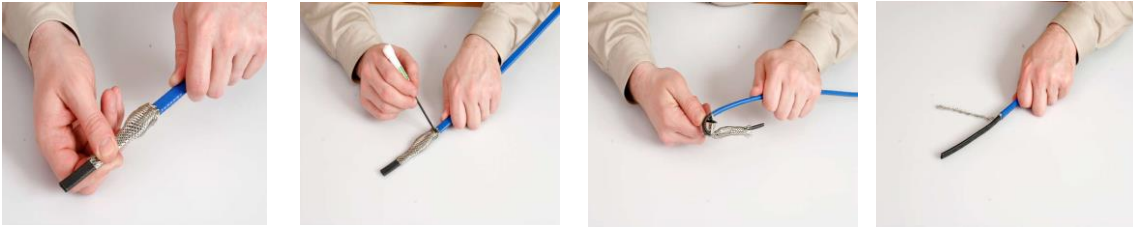
1. Allow approximately 24" (61 cm) of heating cable for installation from the pipe.
2. Screw nipple into housing hub. Attach rigid coupling to the base of the nipple.
3. Disassemble the strain relief and cut heater on approximately a 45° angle. Lubricate heater with cable lubricant and thread through strain relief cap, washer and grommet (wide end towards washer) respectively until 8" (20.3 cm) of the heater end is exposed. Put strain relief base aside.



4. Taking care not to cut the Ground Braid, remove 6" (15.2 cm) of outer jacket from the Heater.



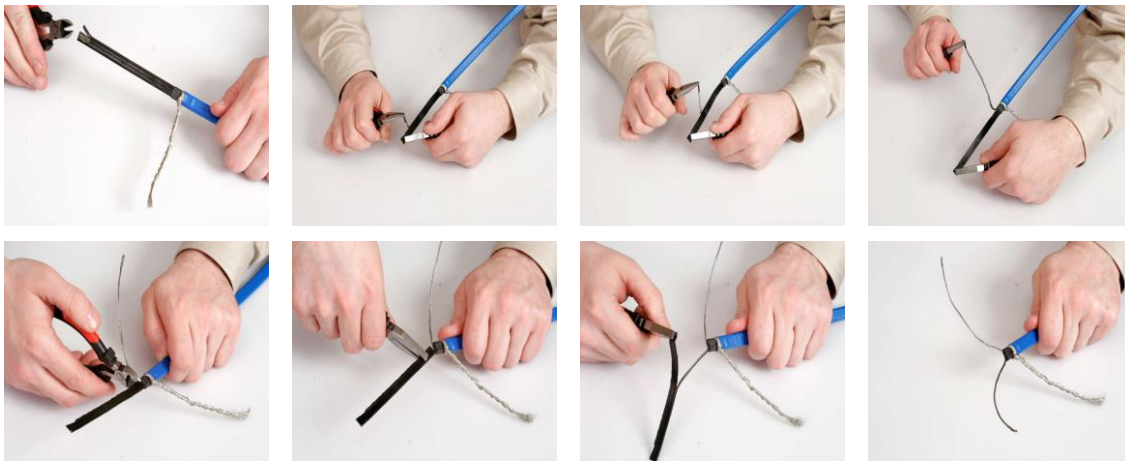
5. Push Ground Braid back towards the outer jacket cut-back. Make a buckle in the braid. With a screwdriver, create an opening in the Ground Braid without cutting it, big enough to pull the cable through. Bend cable enabling it to push through the opening in the Ground Braid. Twist the Ground Braid into a solid ground lead.



6. Strip back inner jacket and clear membrane within ½" (13 mm) of the outer jacket cut-back.



7. Notch core. Peel one of the conductors from the core. Score core between the conductors as close as possible to cut-back end. Peel core from remaining conductor. Clean conductor wires until wires are completely exposed.



8. Place the supplied tube over one bus wire prior to sliding the core sealer over the bus wires (PGW / MT only). This will provide added protection from a short between the two bus wires.

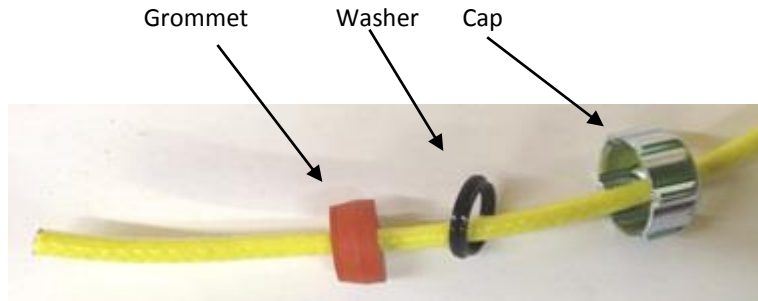
Then slide the core sealer over the bus wires of the cable, over the inner core until as close to the braid as possible.

**Note:** Ensure the crotch of the core sealer is tight up to the inner jacket separating the two bus wires.



### PIPEGUARD HOT (PGH)

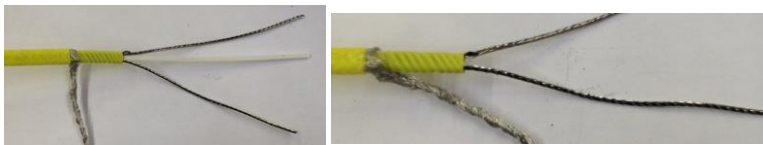
1. Allow approximately 24" (61 cm) of heating cable for installation from the pipe.
2. Disassemble the Strain Relief assembly, cut heater on approximately a 45° angle. Thread heater through Strain Relief cap, washer and grommet (wide end towards washer) respectively until 8" (20.3 cm) of the heaters end is exposed. Put Strain Relief base aside.



3. Taking care not to cut the Ground Braid, remove 7" (17.8 cm) of outer jacket from the Heater



4. Push ground braid back towards the outer jacket cut back. Make a buckle in the braid. With a screw driver, create an opening in the ground braid without cutting it, big enough to pull the cable through. Bend cable enabling it to push through the opening in the ground braid. Twist the ground braid into a solid ground lead.
5. Strip back inner jacket to within 1½" (38 mm) of the outer jacket cut back exposing the bus wires. Trim the fiber heating element and spacer.



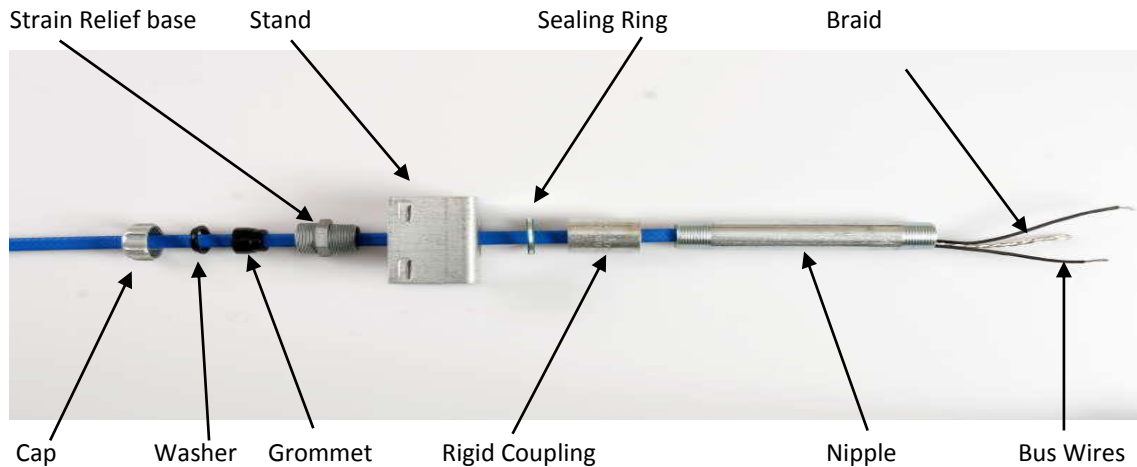
6. Slide the core sealer over the bus wires of the cable, over the inner core until as close to the braid as possible.

**Note:** Ensure the crotch of the core sealer is tight up to the inner jacket separating the two bus wires.



## FINAL ASSEMBLY

1. Assemble the Stand by placing it between the Rigid Coupling, Sealing Ring and the Strain Relief base. Tighten the Housing, Nipple, Rigid Coupling, Stand and Strain Relief base until all are snug using appropriate tools.



2. Remove the enclosure lid (topped with the LED) and set aside.
3. Remove the nut from the hub to connect the ground braid to the ground screw on the hub.
4. Connect the wires to the base block of the LED terminals and secure lid to the enclosure with the 4 screws taking care not to damage the bus wires.
5. Retighten Strain Relief Nuts ( $\frac{1}{4}$  turn) with a wrench.
6. Install lid on Housing making sure not to pinch conductors.
7. Attach to the pipe using SS Straps through the pipe bracket ensuring pipe straps are underneath cable, not over top.
8. Find a suitable location and affix the Electrical Warning Label. The presence of the trace heaters shall be made evident by the posting of caution signs or markings at appropriate locations and/or at frequent intervals along the circuit.

