

Installation Instructions

DREX0003AL LP-T-AL Metallic Low Profile Tee



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

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

This kit may be installed in temperatures as low as -40°F/°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. Each heating device branch circuit or each heating device shall have ground fault equipment protection.

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

The heating cable core is conductive and can short if not properly insulated and kept dry. Component and heating cable ends must be kept dry before and during installation. Fire-resistant thermal insulation materials should be used.

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

Bond the metallic braid of the self-regulating heating cable to a suitable grounding (earth) terminal. De-energize before installation or servicing.

HEATING CABLE RATINGS

120 – 277 Volt

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/°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

*APPROVALS



231572

Class I, Div. 2, Groups A, B, C, D
Class II, Div. 2, Groups F, G
Class III



E471335

**E484945

Class I, Div. 2, Groups A, B, C, D
Class II, Div. 2, Groups F, G
Class III

** General Purpose/Ordinary Location UL File

*This kit is not UL Listed for use with PGH/HotTape products

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KIT CONTENTS

- Metallic Conduit box with cover and gasket
- (3) Metallic Strain Reliefs (cap, washer, grommet, base)
- Warning Label
- (2) Insulated Crimp Sleeves
- (3) Cold applied Core Sealers
- (3) 3/16" tube (for PGW, MT, HT only)
- Installation Instructions

REQUIRED BUT NOT PROVIDED

Materials

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

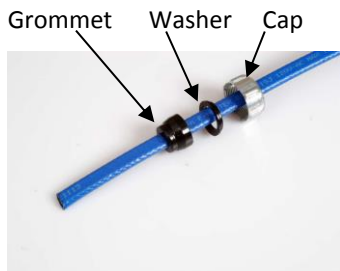
Equipment

- Utility Knife
- Wire Cutter
- Multi-head Screwdriver
- Wire Stripper
- Crimp Tool
- Pipe Wrench

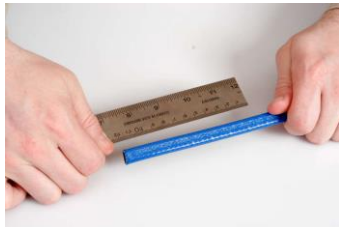
ASSEMBLY INSTRUCTION DETAILS

PIPEGUARD WARM (PGW) / MULTITRACE (MT) / HOT TAPE (HT)

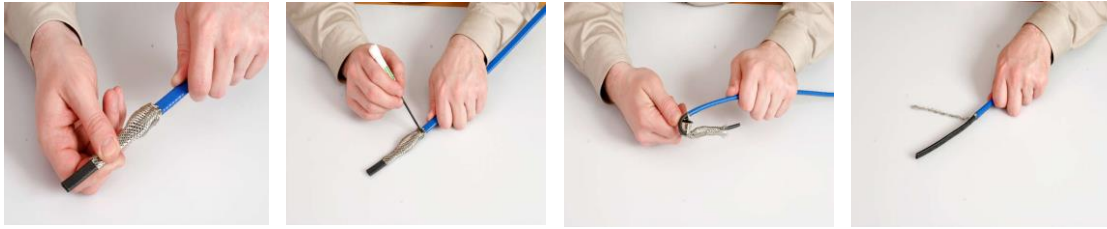
1. Allow approximately 24" (61 cm) of heating cable for installation from the pipe.
2. Disassemble 3 Strain Reliefs and cut heaters on approximately a 45° angle. Lubricate heaters with cable lubricant and thread heaters through Strain Relief cap, washer and grommet (wide end towards washer) respectively until 8" (20.3 cm) of the heaters ends are exposed. Put Strain Relief bases aside.



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



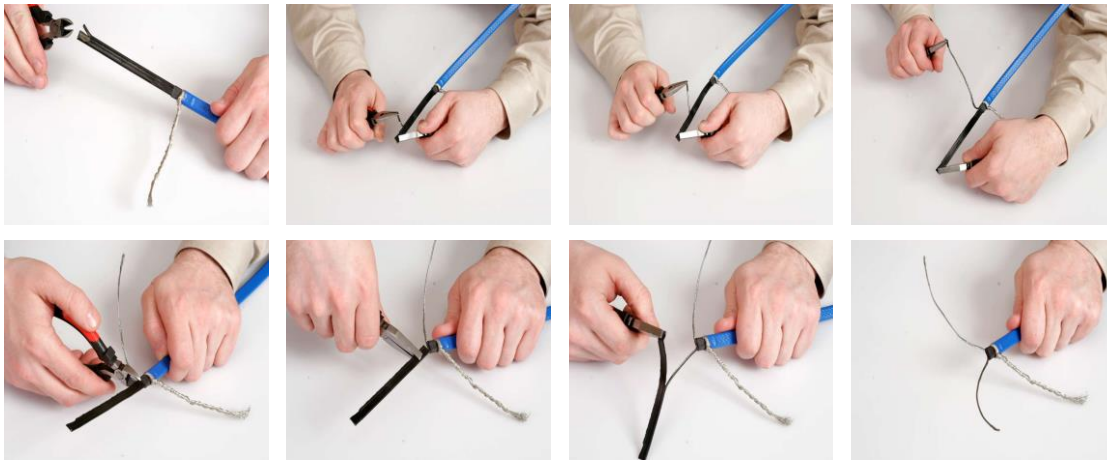
4. Push Ground Braid back towards the outer jacket cut-back. Make a buckle in the Braid. With a screwdriver, create an opening in the Ground Braid without cutting it, big enough to pull the cable through. Bend cable enabling it to push through the opening in the Ground Braid. Twist the Ground Braid into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



5. Strip back inner jacket and clear membrane within 1½" (38 mm) of the outer jacket cut-back.



6. Notch cores. 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.



7. Place the supplied tube over one bus wire prior to sliding the core sealer over the bus wires (PGW, MT, HT 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.

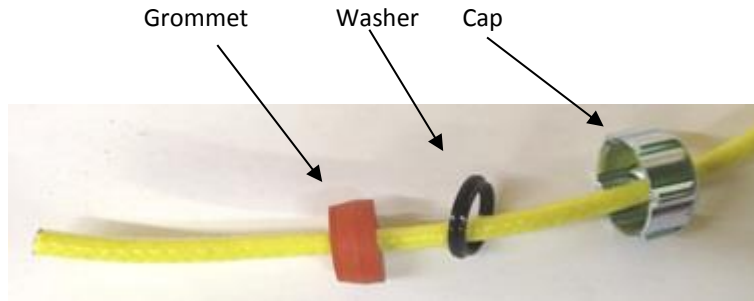


8. Push Heater Strain Relief Grommet to the edge of the insulation, until only the stripped Heater twisted Ground Braid and Conductors are exposed.



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.



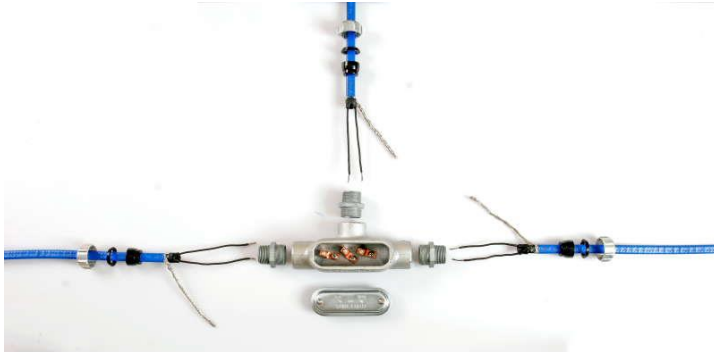
6. Slide the core sealer over the bus wires of the cable, over the inner core until as close to the Braid as possible.

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



7. Push Heater Strain Relief Grommet to the edge of the insulation, until only the stripped Heater twisted Ground Braid and Conductors are exposed.



FINAL ASSEMBLY

1. Install Strain Relief bases into housing and tighten with pipe wrench.
2. Feed heater conductors and ground wires through the Strain Relief bases into the housing and fit each heater Strain Relief Grommet into a Strain Relief base. Hand-tighten each Strain Relief Nut and Washer.
3. Attach heater Ground Lugs to the ground positions in the housing.
4. Taking one Conductor from each of two different heaters, twist the exposed ends together. Repeat with the other two conductors
5. Check that the connections are firm. Cut, strip and splice conductors again if necessary.
6. Check Ground Connections to ensure they are firm.
7. Push conductors into the housing taking care not to kink wires or expose conductors.
8. Retighten Strain Relief Nuts ($\frac{1}{4}$ turn) with a wrench.
9. Install lid on housing making sure not to pinch conductors.
10. Find a suitable location and affix 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.