Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

End Seal Kit

Description

The ET12/ET-ES/ITS-ES/JWI-ES/WA-ES end seal kit is suitable for use only with the HTLe/TLC and HTR/MVP series heating cables. The kit provides material for one end seal. These cables can be used for pipe freeze protection and/or roof and gutter de-icing.

Item	Qty	Description
A	1	Heat Shrink tube (5" longx3/4 " Dia)
B	1	WovenBraid Sleeving (4" longx1/2 " Dia)
C	1	Heat Shrink Cap (1/2" Dia)

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46DV PIPE HEATING CABLE
& 4FB1 DE-ICING & SNOW MELTING EQUIPMENT

Figure 1

WARNING:

ELECTRIC SHOCK HAZARD. Disconnect all power before installing or servicing heating cable and accessories. A qualified person must perform installation and service of heating cable and accessories. Heating cable must be effectively grounded in accordance with the National Electrical Code. Failure to comply can result in personal injury or property damage.

Note: All electrical wiring, including GFCI(ground fault circuit interrupter), must be done according to National Electrical or local codes by a qualified person. Article 426 of ANSI/NFPA 70 of National Electrical code (section 6Z of CAN/CSA-C22.2, Canadian electrical code part 1 (CEC) governes this installation of this heating system.

Assembly Tools Needed

Utility knife, wire cutter, needle-nose pliers, adjustable wrench, pen, screw- driver, heat gun, and measuring tape.

Other Material Required

ET02/03/ITS02/03 tape for pipe applic.
ET13/ET14/ET-50RC/ITS-50RCroof clips
ET15/ET-DS/ITS-DS downspout hangers for roof & gutter de-icing.

General Safety information: Read and understand all instructions in this manual and the following installation instructions and safety warnings. Electrical cables, if not installed correctly or are damaged, can present a fire, shock and arcing hazard.

1. Use 30-mA ground fault protection on each heating cable branch circuit for maximum protection.
2. Keep ends of heating devices and kit component dry before and during installation
3. The black heating-cable core is conductive and can short. It must be properly insulated and kept dry.
4. The conductive layer of this Heating device must have a suitable grounding/earthing terminal Keep components and ends of heating cable dry before installation.
5. Do not break braid or bus wire strands when scoring the jacket or core. Damaged bus wires can overheat or short.
6. Keep bus wires separated. Bus wires will short if they touch each other Replace damaged parts. Heat-damaged components can short.
7. Use heat gun or torch with a soft, yellow, low-heat flame, not a blue flame. Keep the flame moving to prevent overheating or blistering the heat-shrinkable tubes.
8. Do not heat other components.
9. Use only fire-resistant insulation materials such as fiberglass wrap.
10. De-energize all circuits before installation or service.
11. The heating cable should not be embedded in insulation or roofing material.
12. Do not twist cable during installation.
13. Save all instructions for future references.

⚠ CAUTION ***Charring or burning the heat-shrinkable tubes in this kit will produce fumes that may cause eye, skin, nose, and throat irritation.***

WARNING:

ELECTRIC SHOCK HAZARD. To prevent short circuits, do not connect the bus wires together. Keep braid out of heat shrink cap

Limited Warranty

All products sold are warranted by ELECTRACE/ELECTRACE INDUSTRIAL only to customers for resale or for use in business, or to original equipment manufacture, against defects in workmanship or materials under normal use for five (5) years after date of purchase from ELECTRACE/ELECTRACE INDUSTRIAL. Extended warranty available.

END SEAL KIT INSTALLATION INSTRUCTIONS

1. Score the outer jacket 2 in. from the end of the cable. Remove the jacket to expose the braid.
   CAUTION: When removing the outer jacket, be careful not to damage the braid or the base cable insulation.

Figure 1

2. Push the braid back and cut ¾ in. off the end of the base cable.

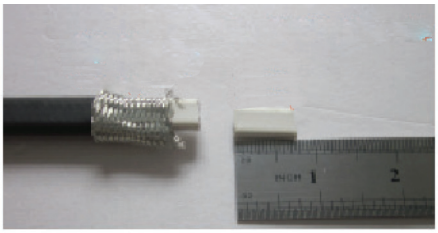

Figure 2

3. Slide the heat-shrink cap over the end of the cable. Apply heat evenly until it shrinks around the cable.

Figure 3

Figure 4

4. Pull the pushed-back braid over the sealed end cap and twist the braid end together.

Figure 5

5. Slide the 4 in. woven braid sleeving over the end of the cable, allowing at least ½ in. to extend past the end of the cable.

Figure 6

6. Slide the 5-in. heat-shrink tube over the woven braid piece, allowing ½ in. to extend past the end of each end of the woven sleeving.

7. Apply heat evenly to the heat shrink tube until it shrinks around the cable.

Figure 7

8. While the shrink tubing is still hot, gently squeeze the end of the shrink tube with pliers and hold until cool. The end must remain visibly sealed when the pliers are removed. If the tube does not remain sealed, then repeat steps 7 and 8.

Figure 8-1

Figure 8-2

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