**KGAHT0101CFP** **CONDENSATE FREEZE PROTECTION KIT**

# Installation Instructions

**NOTE**: Read the entire instruction manual before starting the installation

## SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to the individual Installation

Instructions packaged with the kits or accessories.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloth fro brazing operations. Have a fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions attached to unit. Consult local building codes and National Electrical Code (NEC) for special installation requirements.

Recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the unit or in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, CAUTION, and NOTE. The words DANGER, WARNING, and CAUTION are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **may** result in minor personal injury, or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

## INTRODUCTION

This instruction covers the installation of condensate freeze protection kit Part No. KGAHT0101CFP for use with 40-in. (1016 mm) tall furnaces and can be used as a drain line freeze protection for all high-efficiency condensing furnaces.

## DESCRIPTION AND USAGE

This kit may be used for the following purposes:

- The condensate freeze protection (heat tape) kit is designed to protect high-efficiency furnace condensate drain trap from freezing when the furnace is installed in an area where temperatures may be below 32°F (0°C). Use this instruction for installation to trap.
- The heat tape provided in this kit may be used for freeze protection of pipe. See heat tape instruction included with heat tape for this purpose.

**⚠ CAUTION**

**FURNACE MAY NOT OPERATE HAZARD**

Failure to follow this caution may result in furnace operation stoppage and frozen water pipes during cold weather. Additional field supplied protection must be taken to protect drain line from freezing.

**Table 1 – Kit Contents**

| DESCRIPTION | QUANTITY |
|---|---|
| Heat Tape & Instructions | 1 |
| Wire Tie | 5 |
| Installation Instructions | 1 |

**⚠ WARNING**

**ELECTRICAL SHOCK HAZARD**

Failure to follow this warning could result in electrical shock, fire, personal injury or death.

The installation of this heat tape kit on the furnace condensate drain trap must be per these instructions to prevent electrical and fire hazards.

## GENERAL

1. Use a ground fault protection device (GFPD) if heat tape is damaged or improperly installed to minimize the danger of fire. Arcing of the heat tape may not be stopped by conventional circuit protection.
2. This heat tape is designed for freeze protection of the furnace condensate drain trap and a short length of drain line.
3. This heat tape is designed for use on dry insulated metal and plastic (PVC and CPVC) pipes.
4. This heat tape MUST BE connected to a receptacle that has been installed in accordance with the National Electrical Code (NEC) and is protected from all water sources.
5. The heat tape jacket MUST NOT be cut, nicked, or worn down. Therefore:
   a. NEVER cut the heat tape's outer jacket.
   b. DO NOT install heat tape where objects might hit or cut it where it may be damaged by objects rubbing against it.
   c. DO NOT use any metal wire straps or clamps to attach heat tape to pipes or condensate trap. Use only the plastic wire ties provided in this kit.

d. NEVER attempt to splice or repair damaged heat tape. Replace it with a new tape.

e. DO NOT install the heat tape close to flammable materials, liquids, or fumes. If heat tape is cut while it is energized, there is a risk of fire or explosion.

f. USE only fire-resistant insulation materials such as fiberglass to reduce heat tape temperature loss. DO NOT use foil backed insulation.

6. Installation of heat tape in applications above 150°F will shorten the life of the heat tape.

## INSTALLATION

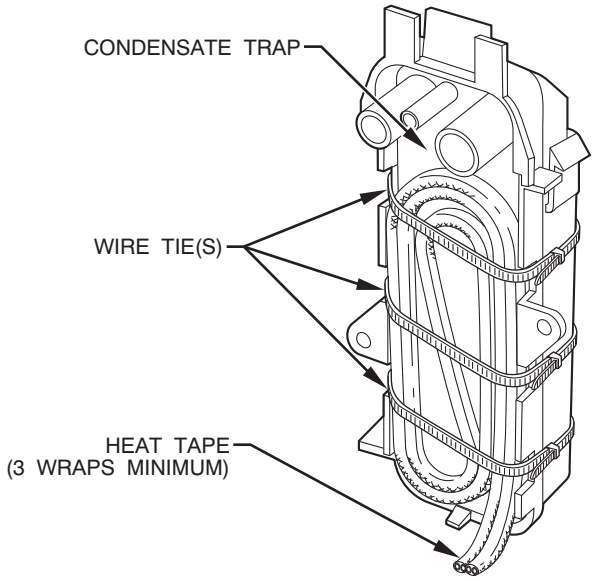


**Fig. 1 - 40-in. (1016 mm) Tall Condensing Furnace Condensate Trap Heat Tape**

1. Fold heat tape in half and wrap on itself 3 times. (See Fig. 1.)
2. Locate folded heat tape between sides of condensate trap. (See Fig. 1.)
3. Use wire ties to secure tape in place. Position wire ties in notches of condensate trap. (See Fig. 1.)
4. Wrap field drain pipe with remaining heat tape, approximately 1 wrap per ft maximum.

**NOTE**: There is no need to use heat tape within the furnace casing since all condensate should drain to the condensate trap.

5. Install condensate trap with heat tape installed at appropriate furnace location. See furnace Installation Instructions for condensate trap installation details.
6. Plug heat tape in a properly installed receptacle.

**⚠ WARNING**

**FIRE HAZARD**

Failure to follow this warning could result in fire, personal injury or death.

NEVER cut heat tape's outer jacket or wiring.

7. Inspect heat tape to ensure it is free of nicks or cuts. If damaged, replace it.
8. Insulate condensate trap and any drain pipe (with heat tape applied) using 1/2 to 1-in. fiberglass insulation or equivalent fire-resistant materials. DO NOT use foil backed insulation.

This heat tape is temperature activated and it is not practical to verify actual heating of the heat tape. Table 1 provides a guide to ensure the heat tape's operation when installing or servicing.

**Table 2 – Temperatures**

| APPLICATION AMBINET TEMPERATURE (°F) | TEMPERATURE OF HEAT TAPE (°F)* | |
|---|---|---|
| | On Folded Section in Condensate Trap | On Straight Section |
| 70 | 100 | 80 |
| 50 | 90 | 65 |
| 30 | 80 | 50 |

* Approximate temperature. Temperature will vary based on voltage to heat tape. Temperature will stabilize within 15 minutes of energized voltage.

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