

# INSTALLATION INSTRUCTIONS

## CONDENSATE FREEZE PROTECTION KIT

### NAHA00101HH

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

### SAFETY CONSIDERATIONS

Installing and servicing heating equipment can be hazardous due to gas and electrical components. Only trained and qualified personnel should install, repair, or service heating equipment.

Untrained personnel can perform basic maintenance functions, such as cleaning and replacing air filters. Trained service personnel must perform all other operations. When working on heating equipment, observe precautions in the literature, on tags, and on labels attached to or shipped with the unit, and other safety precautions that may apply.

Follow all safety codes. In the United States, follow all safety codes including the National Fuel Gas Code (NFGC) NFPA 54/ANSI Z223.1–2012. In Canada, refer to the National Standard of Canada, Natural Gas and Propane Installation Codes (NSCNGPIC), CAN/CSA–B149.1.

Wear safety glasses and work gloves. Have a fire extinguisher available during start-up, adjustment Steps, and service calls.

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

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies a hazard 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 for use with high-efficiency condensing furnaces. This kit can be used as a drain line freeze protection for all high-efficiency condensing furnaces. Drain Trap protection kit number **NAHA00201HH** should also be installed to protect the condensate trap from freezing.

### 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 line from freezing when the furnace is installed in an area where temperatures may reach below 32°F (0°C).
- See tape instructions 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.

The condensate freeze protection kit contains the following items:

| DESCRIPTION               | QUANTITY |
|---------------------------|----------|
| Heat Tape                 | 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.

1. Use a ground fault protection device (GFPD) to minimize the danger of fire if heat tape becomes damaged or improperly installed. 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 line.
3. This heat tape is designed for use on dry insulated metal and plastic (PVC and CPVC) pipes. (See **Figure 1** and **Figure 2**)
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-resistance 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 (65.5°C) will shorten the life of the heat tape.
  - a. Wrap field drain pipe with heat tape, approximately one wrap per ft (.3m) maximum or run the heat tape along the condensate drain line. (See **Figure 1** and **Figure 2**)
  - b. Use wire tie(s) to hold heat tape firmly in place. See instructions included for details.

## INSTALLATION FOR HEAT TAPE ON CONDENSATE DRAIN LINE

After heat tape is affixed:

1. Plug heat tape in a properly installed receptacle.

### WARNING

#### FIRE HAZARD

Failure to follow this warning could result in personal injury, property damage, to death.

After heat tape is plugged in do not cut heat tape and/or wire directly.

2. Inspect heat tape to ensure it is free of nicks or cuts. If damaged, replace it.
3. Insulate condensate trap and any drain pipe (with heat tape applied) using 1/2-in (12.7mm) to 1-in (25.4mm) 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.

| Application Ambient Temperature (°F/°C)* | TEMPERATURES                         |                     |
|--|--------------------------------------|---------------------|
|  | Temperature of Heat Tape (°F/°C)*    |                     |
|  | On Folded Section in Condensate Trap | On Straight Section |
| 70/21                                    | 100/38                               | 80/27               |
| 50/10                                    | 90/32                                | 65/18               |
| 30/-1                                    | 80/27                                | 50/10               |

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

