NOTICE

Condensate Trap Assembly Installation Instructions

The following instructions summarize proper installation of the condensate drain assembly. See manual for more detailed information and full vent assembly.

Overview

- Install Drain Elbow with high temp caulk to seal.
- Attach orienter part with Union 'A', point in direction most convenient.
- Attach trap portion with Union 'B', level trap by adjusting unions.
- Attach exhaust vent.
- Adjust trap to confirm level.
- Run hard drain line and include condensate pump/neutralizer if necessary.

Instructions

The drain elbow shall be connected to the 3" exhaust pipe such that the arrow (showing flow direction on elbow) is pointing vertically (90° ± 5°), and the drain is parallel to the floor. Prior to mounting, apply a bead of silicone around the inside of the socket connection on the elbow. For maximum durability and sealing, use a high heat silicone caulk appropriate for direct vent appliances (rated for at least 150°F). Apply a bead around the end of the exhaust pipe as well. Push the end of the 3" drain elbow on the exhaust pipe as far as the elbow allows.
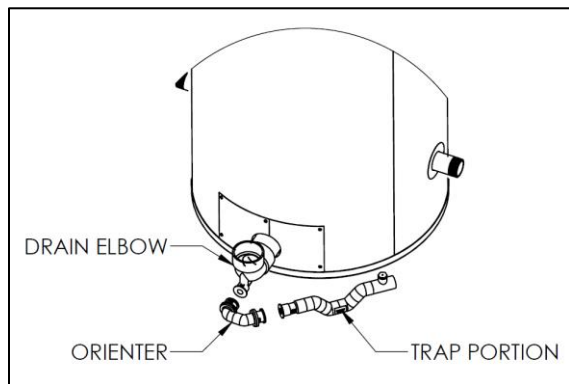

Figure 1: Installation of the Condensate Trap. Orienter shown is 135° style.

The condensate trap is made up of three parts and connected by two unions, labeled 'A' and 'B'. The drain elbow has already been installed. There are two orienters included; one with an angle of 135° and another with an angle of 90°, choose whichever one minimizes the number of fittings required for proper drainage. Figure 2 shows the difference between the two options. Install the orienter of your choice by connecting the union portions labeled 'A'.
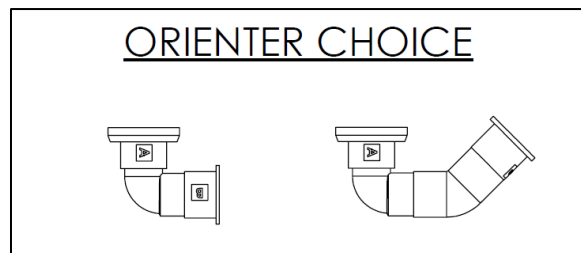

Figure 2: 135° and 90° orienter choice. Use whichever style minimizes number of fittings in the drain line.

Determine which direction minimizes the length of the condensate drain line, and point the orienter in that direction. Install the trap portion by connecting the union parts labeled 'B' so that it is pointing in the proper direction. See Figure 1 for a view of how the condensate trap is assembled, and Figure 3 for the top view of both orientation options. All images depict the 135° orienter.

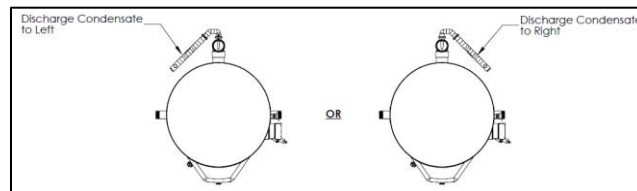
Figure 3: Orientation of the Condensate Trap with the 135° orienter.

The orientation of the trap portion of the drain is critical for proper venting of gas and drainage of

condensate. This portion must be level after both unions are fully tightened. See Figure 4 for proper final orientation of the assembly.
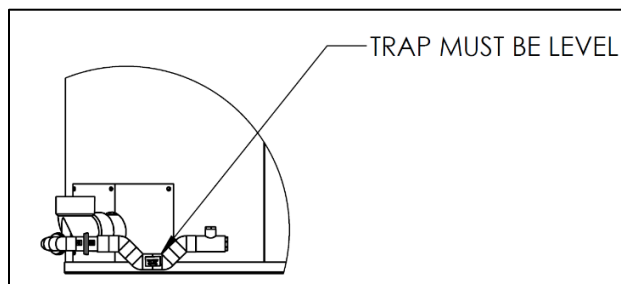

Figure 4: Levelness of Trap

After the assembly is properly mounted to the exhaust pipe apply more silicone caulk between the elbow and exhaust pipe. Caulk all the way around the pipe. If a proper seal is not made, combustion gas will leak into the room and condensate will collect on the floor. See Figure 5 for location of seal.
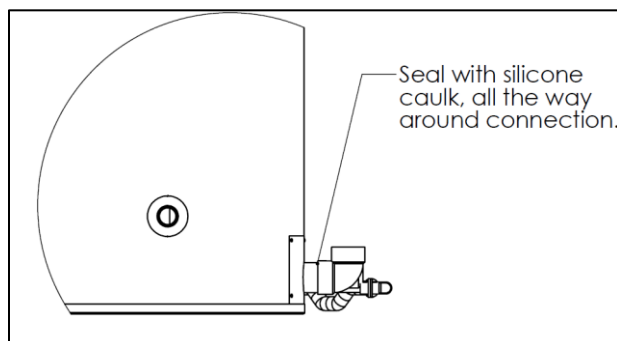

Figure 5: Sealing the Connection

A detailed view of the condensate trap is shown in Figure 6. The discharge portion of the trap is designed with a vent and threaded ¾" female NPT connection. The trap may be cleaned by disconnecting union 'B' and the threaded connection, then running water through the trap. Use rigid PVC pipe for the condensate drain line. The line must slope down, 1/8" per foot, away from the point of connection towards the drain. If there is insufficient clearance between the connection point and the floor to maintain slope, the heater should be installed on a concrete slab or use a low-profile condensate pump.
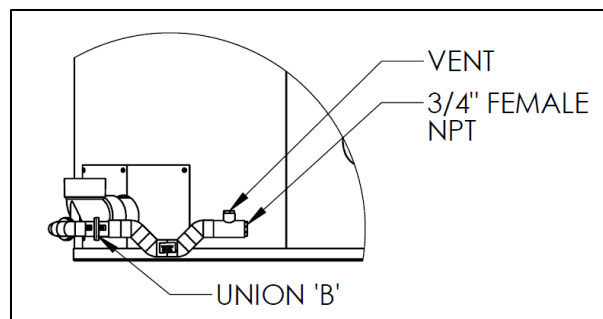

Figure 6: Detailed View

Some installations require the use of a condensate neutralizer to reduce the acidity of the condensate prior to reaching the drain. Figure 7 shows the connection of a condensate line to a neutralizer. It is recommended that a low profile condensate pump is installed between the heater and neutralizer to facilitate flow through the neutralizer. For further details, refer to the instructions provided with the pump and neutralizer.
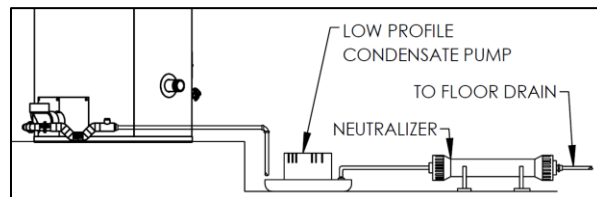

Figure 7: Pump and Neutralizers

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