



July 19, 2011

Re: Power Vents, Condensate in the vent

To whom it may concern:

There is no condensate collection and disposal required for Rheem water heaters under most conditions. Installations where the vent run is short or it runs through conditioned space in the home, such as basements or interior walls, do not typically cause condensate accumulation and will not require any condensation disposal methods regardless of vent pipe slope. See instructions and Figure 1 on the following pages.

A few vent piping configurations, when combined with certain environmental conditions, may produce enough condensate to require collection and disposal. When a slope away from the water heater cannot be achieved and condensate handling is required in a horizontal vent system, the vent pipe should be sloped toward the water heater and include a condensation collection and disposal system. See instructions and Figures 2 through 5 on the following pages.

If you have any further questions, please feel free to contact our Technical Service Department.

Best regards,

A handwritten signature in black ink that reads "Bryan K. Collar".

Bryan K. Collar
Sr. Product Manager

Condensation Management & Vent Risers for PowerVent Water Heaters

There is no condensate collection and disposal required for Rheem water heaters under most conditions. Installations where the vent run is short or it runs through conditioned space in the home, such as basements or interior walls, do not typically cause condensation and will not require any condensation disposal methods regardless of vent pipe slope. Figure 1 shows the recommended vent pipe slope of no less than 1/8 inch per foot away from the water heater. Any condensation in the venting system will drain toward the vent termination. The blower pipe coupling features a capped drain port which is not needed in this case.

CAUTION: Make sure drain port cap is securely in place.

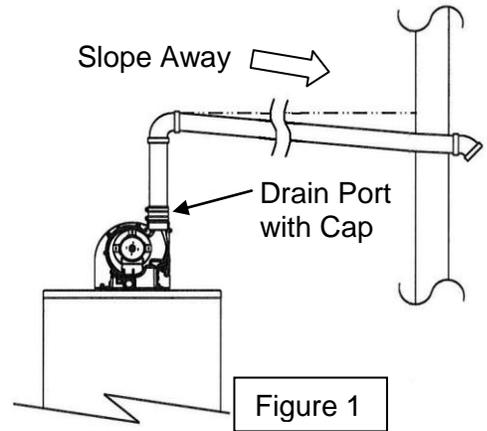


Figure 1

There are vent piping configurations, when combined with certain environmental conditions that can produce enough condensate to require collection and disposal. When a slope away from the water heater cannot be achieved and condensate handling is required in a horizontal vent system, the vent pipe should be sloped toward the water heater as shown in Figure 2.

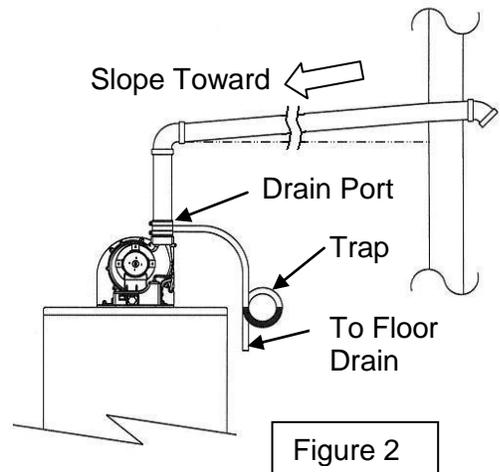


Figure 2

- Remove drain port cap.
- Connect flexible condensate drain tube to the blower drain port.
- Loop the drain tube so that it has a circular trap. See Figure 3.
- Secure the top and bottom of the loop with wire ties or plastic zip ties as shown.
- Do not restrict any portion of the circular drain tube.
- Loop must be smooth and not collapse the tube.
- Fill circular drain tube with water to make sure combustion gases cannot vent into the room.
- Route drain tube to a floor drain or outside the building.
- Refer to local codes for any condensation requirements.

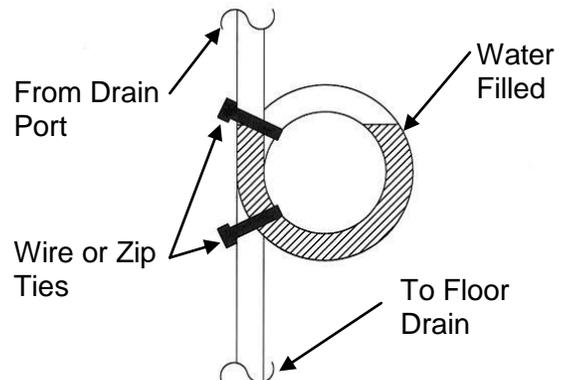


Figure 3

If the venting system is vertical and condensation handling is required, then the blower coupling drain port and tube must be used as described previously. Any horizontal portion of the vent pipe must slope toward the water heater at a minimum of 1/8 inch per foot so a water trap is not created. See Figures 4 & 5 as examples of a vertical installations with condensation removal tube and trap.

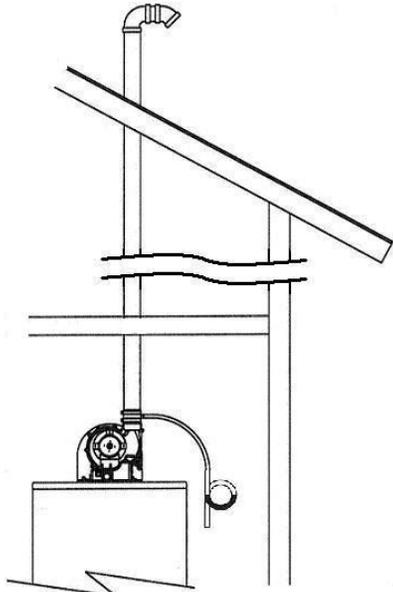


Figure 4

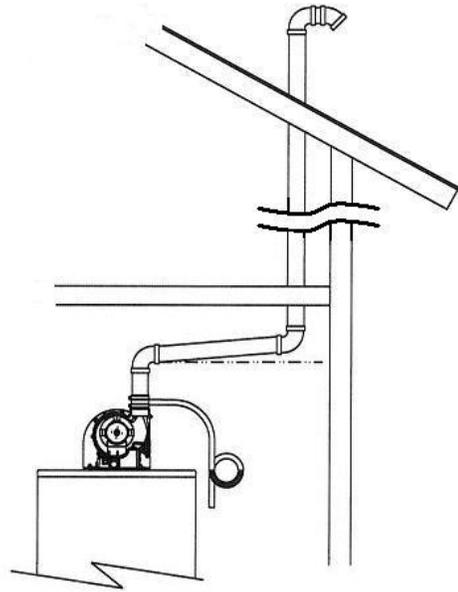


Figure 5



**Condensate Removal from PowerVent and Power Direct Vent Water Heaters
(Residential and Commercial)**

1.	Make sure power is off to the water heater.	
2.	Find the yellow (or black) nipple on the EXHAUST side of the venting. Remove the nipple cap.	
3.	<p>Attach a length of ½ inch I.D. silicone hose to the nipple. Silicone is better than plastic. Silicone retains its flexibility. Make sure the hose is long enough for the condensate liquid to be evacuated to a floor drain or outside the building. You will also need enough length to make a “P” trap in the hose line. See step 5.</p> <p><i>Maintenance Tip: Check the water level in the ‘p’ trap every 3 months.</i></p>	
4.	Secure the rubber hose to the drain nipple with a clamp, plastic flex tie or some other method that prevents easy removal.	



**Condensate Removal from PowerVent and Power Direct Vent Water Heaters
(Residential and Commercial)**

5.	Route the hose toward the floor drain or outside location. About 12 inches below the top of the water heater, make a loop to form a 'p' trap. Secure the top and bottom of the loop with wire ties or plastic zip ties. This prevents the loop from unfolding.	
6.	Place enough water in the loop to make sure combustion gases cannot vent into the room. Water with food coloring is a good idea. It shows the level of the liquid; and it a good visual aid to see if there is still water in the trap.	
7.	Route tube to floor drain or outside the building. Local code may require the liquid condensation to be neutralized or filtered.	

Here is what is happening. The water vapor from the exhaust gases will cool and form water vapor on the inside of the PVC venting. This is the same thing that happens on a cold drink outside in the summer time.

This liquid will condense into larger drops and roll down the inside of the vent pipe. Gravity will take the liquid to as low a point as it can flow.

Eventually, the liquid will collect in the rubber coupling. The coupling is designed to allow the condensation to flow into a small space and be drained by the nipple.

