

INSTALLATION & MAINTENANCE MANUAL

CONDENSATE NEUTRALIZATION SYSTEM

FOR USE WITH CONDENSING WATER HEATERS AND BOILERS

IMPORTANT: THIS MANUAL CONTAINS INFORMATION REQUIRED FOR INSTALLATION, OPERATION AND MAINTENANCE OF THIS DEVICE. READ AND FOLLOW THE INFORMATION IN THIS MANUAL AND ALL OTHER PROVIDED INSTRUCTIONS, LABELS AND MARKINGS BEFORE INSTALLING, OPERATING OR SERVICING THIS DEVICE.



TO THE INSTALLER: After installation, these instructions must be given to the equipment user or left near the appliance.

SPECIAL INSTRUCTIONS TO THE OWNER: Retain this manual for future reference. These instructions contain important information that will help you in maintaining this device.



CONDENSATE NEUTRALIZATION SYSTEM

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CONDENSATE NEUTRALIZATION SYSTEM

1 CONDENSATION NEUTRALIZATION SYSTEM

1.1 CONDENSATE

This system is used to neutralize condensate from condensing water heaters and boilers that use natural or propane gas. Although this condensate is only slightly acidic (3-5 PH), some "authorities having jurisdiction" require condensate neutralization before disposing of condensate through a suitable drain. Additionally, there is a potential risk of corrosion of unprotected piping systems. These harmful effects can be reduced by routing condensate through the neutralization system. Any acidic condensate that may form is neutralized by slowly flowing through the neutralizer filled with renewable crushed limestone. The condensate neutralizer reduces or avoids the need for separate chemical treatment or dilution using substantial quantities of tap water.

1.2 Condensate Bypass Tube

A bypass line is supplied in case circumstances arise that cause the condensate neutralization system to become clogged. If condensate is noticed running through this tube action must be taken to remove any foreign objects effecting the systems operation.

1.3 Condensate Trap

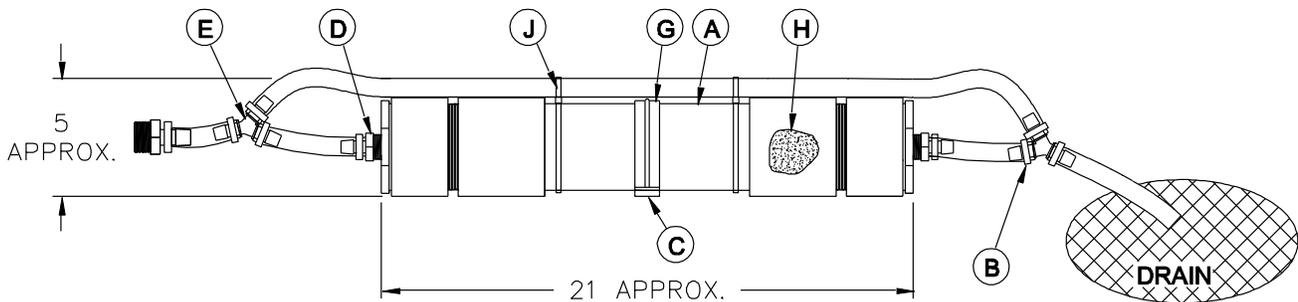
All condensing water heaters and boilers require the use of a condensate trap to provide a barrier to prevent potentially dangerous products of combustion from escaping through the condensate line into the living space. Follow the water heater or boiler manufacturer's instructions to provide a properly sized condensate trap before condensate reaches the condensate neutralizer. This condensate neutralization system DOES NOT provide the required flue gas trap.

WARNING: A condensate trap must be located in the condensate line before the condensate neutralizer system and must be properly sized, installed and filled with water or condensate following the boiler or water heater manufacturer's instructions. This trap is required to keep hazardous products of combustion from continually entering the installed space where the condensate piping terminates. Failure to properly install this trap can cause exposure to hazardous materials, personal injury or loss of life.

2 CONDENSATE NEUTRALIZATION SYSTEM ASSEMBLY

2.1 The condensate neutralization system box contains the following parts:

Item	Part Number	Qty.	Description
A	122225	1	PVC Condensate Neutralization Tank
B	120334	8	Nylon Hose Clamps
C	122343	4	Nylon Flat Washers
D	121769	3	PVC Adapter, 3/4 MPT X 1/2 Hose Barb
E	121766	2	PVC WYE Connectors, 1/2 Hose Barb
F	121763	1	Clear Vinyl Tubing, 1/2 ID X 3/4 OD X 10 Feet
G	121731	1	PVC Conduit Clamp, 3 Inch
H		8 lbs	Crushed Limestone Charge, 3/4 Inch
J	106518	4	Wire Tie, 15 Inch



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2.2 Notes to follow during installation

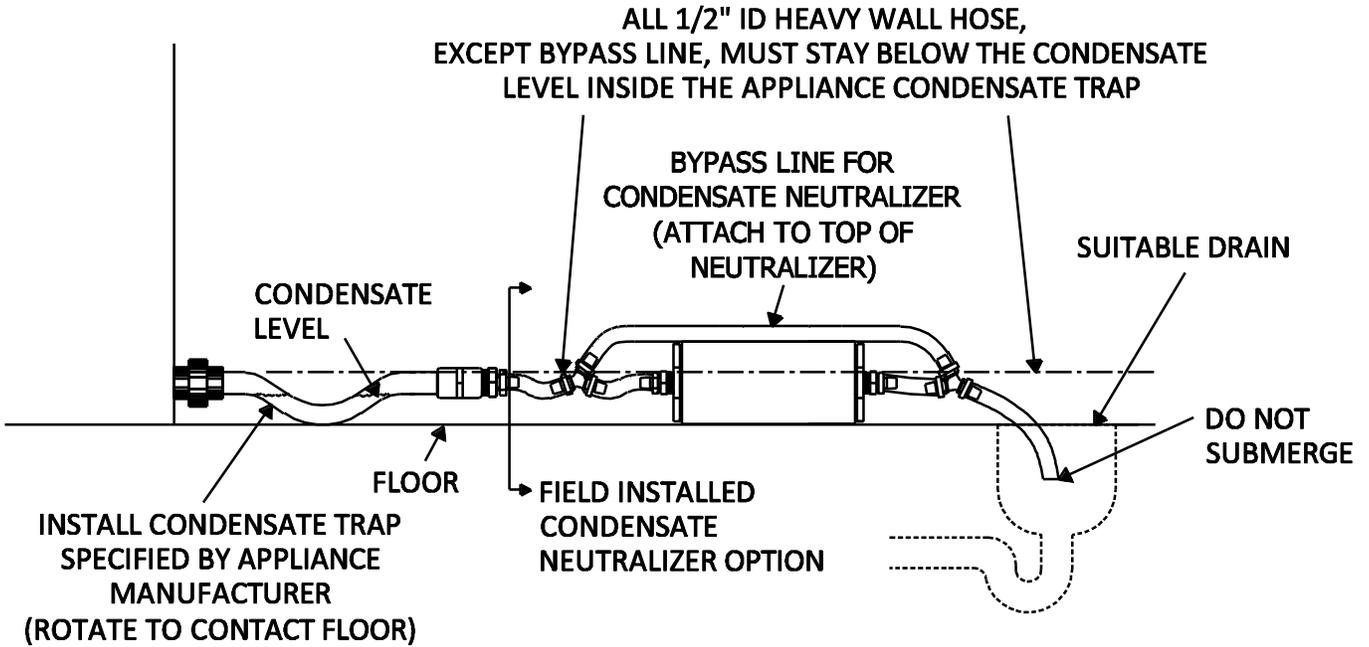
1. Do not combine condensate drains from multiple condensing appliances into a single drain line. Route each drain line into a suitable drain and make certain the end of the drain lines are not submerged or otherwise blocked. If multiple condensing appliances are routed to a single floor drain, ensure the floor drain is large enough to handle the condensate flow from all appliances.
2. All condensate plumbing must be protected from freezing. Do not locate the condensate piping such that an ice dam of frozen condensate can block condensate from leaving the outlet.
3. The condensate is only slightly acidic (3-5 PH), however, local codes may require it to be neutralized prior to entering the drainage system. An optional, field installed, Condensate Neutralization System is available from the factory.
4. Connect a condensate drain line or the Condensate Neutralization System to the barbed hose connection, sized for 1/2" ID heavy wall PVC tubing, located at the end of the condensate trap. All piping from the condensate trap to the suitable drain must remain below the condensate level maintained inside the properly attached condensate trap (see installation drawings).

2.3 Assembly steps:

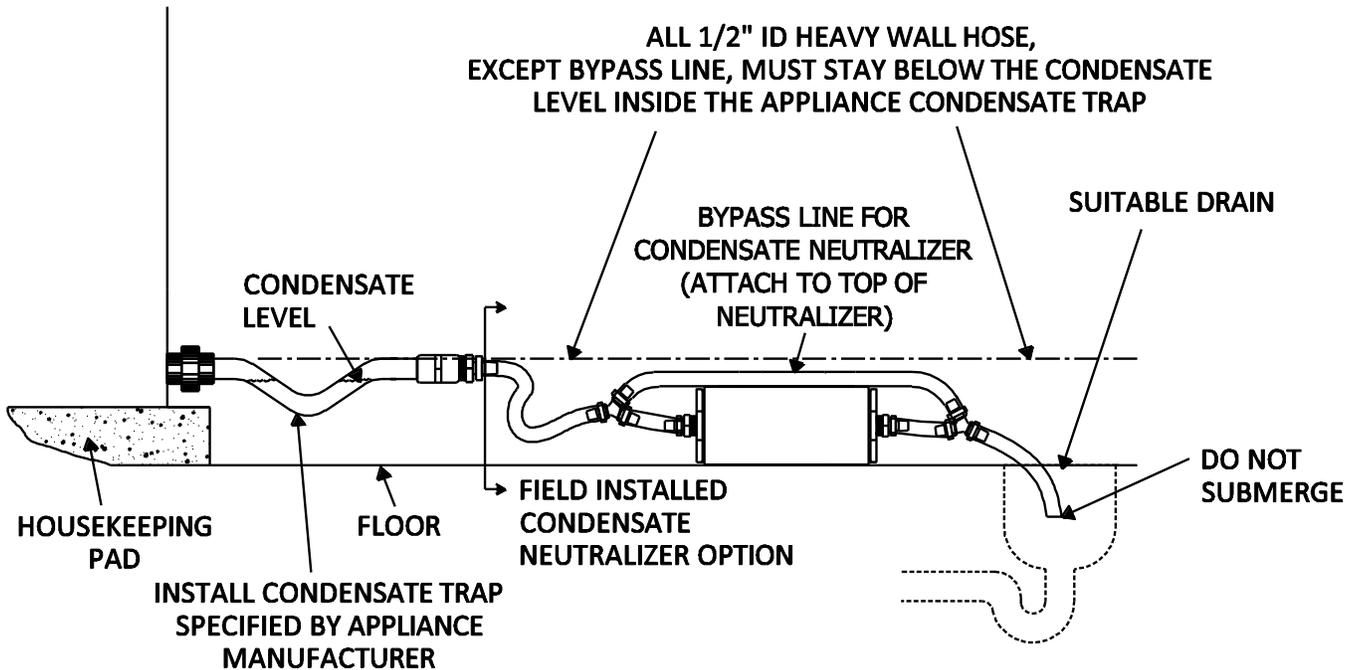
1. Remove all parts from box and from the plastic parts bag.
2. Uncoil and straighten the Vinyl tubing.
3. Apply Teflon tape thread sealant and install a PVC 3/4 MPT X 1/2 hose barb into each end of the PVC condensate neutralization tank.
4. Cut two pieces of Vinyl tubing 7 inches long and one piece 40 inches long
5. Slip a Nylon hose clamp over one of the 7 inch length of Vinyl tube and install onto the 1/2 hose barb on one end of the PVC condensate neutralization tank then tighten the hose clamp. Repeat on the other end of the tank.
6. Slip a Nylon hose clamp over the free end of the 7 inch length of Vinyl tube and install a PVC wye barb connector oriented as shown in the condensate neutralization system drawing below then tighten the hose clamp. Repeat on the other end of the tank.
7. Slip a Nylon hose clamp over one end of the 40 inch length of Vinyl tube (condensate bypass tube) and install onto the PVC wye connector facing toward the PVC condensation neutralization tank then tighten the hose clamp. Repeat to connect the other end of the condensate bypass tube to the opposite wye barb connector as shown in the condensate neutralization system drawing below.
8. Use two of the 15 inch wire ties to secure the condensate bypass tube to each end of the PVC condensation neutralization tank as shown in the condensate neutralization system drawing below. Do not deform or collapse the tube by over-tighten the wire ties.
9. Locate the condensate neutralizer system near the condensate flue gas trap specified or provided by the water heater or boiler manufacturer and rotate the assembly so the condensate bypass tube is on the top. Condensate neutralizer tank must be positioned such that the inlet and discharge are at a lower elevation than the condensate drain from the appliance. See Fig. 2 and 3.
10. Slide the 3 inch PVC hose clamp beneath the condensate bypass tube and over the condensate neutralizer tank. Place two Polycarbonate washers under each foot of the 3 inch PVC hose clamp and attach the clamp to the floor with a removable fastener to allow the tank to be disconnected for refilling with limestone when necessary. If the clamp is not attached to the floor, it can be attached to the condensate neutralizer tank with PVC cement so the clamp feet hold it in the upright position (condensate bypass tube exactly on top of the tank).
11. Cut a length of Vinyl hose to reach from the condensate neutralizer system PVC wye connector to the water heater or boiler condensate flue gas trap.
12. Slip a Nylon hose clamp over each end of this hose. Attach one end of the hose to the PVC wye connector and the other end to the water heater or boiler condensate flue gas trap then tighten the hose clamps.
13. Cut a length of Vinyl hose to reach from the condensate neutralizer system PVC wye connector to a suitable drain.
14. Slip a Nylon hose clamp over one end of this hose. Attach the end of the Vinyl hose with the hose clamp to the remaining PVC wye connector and the secure the other end into a suitable floor drain and tighten the hose clamp.

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2.4 Condensate Trap With Optional Condensate Neutralizer Located On Same Level As Appliance



2.5 Condensate Trap With Optional Condensate Neutralizer Located Below Appliance



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3 MAINTENANCE

Monitor the level of the neutralization media in the condensate neutralization tank periodically. Check the pH level at the outlet of the neutralizing kit every three months for the first year. Use a suitable pH test strip paper or an electronic pH meter for precise measurement. The frequency of checking the pH level can be reduced to every six months or every year depending on the readings obtained compared to local water authority requirements. The neutralizing media should be replaced when the pH level drops below the minimum level of the local water authority. For replacement media contact your local sales representative.

The replacement neutralization media consists of crushed limestone approximately ¾" in size. Approximately 7 lbs. is required for each neutralizer tank.

4 WARRANTY

This unit is warranted against defects in materials and workmanship for one year.

4.1 Disclaimer

Installation and service must be performed by a qualified installer or service agency, who must read and follow the supplied instructions before installing, servicing or removing this appliance. The information contained in this manual is subject to change without notice. Not liable for errors appearing in this manual, or for incidental or consequential damages occurring in connection with the appliance, performance, or use of this material.