

Service bulletin

Condensation and rain prevention requirements



BOSCH

Purpose

Bosch Thermotechnology requires the installation of an external condensate drain (in addition to the one supplied with the heater). This bulletin is an addendum to the Venting section of your current installation manual. This bulletin, as well as the printed instructions in the manual, must be followed to ensure the proper operation and longevity of your Bosch water heater. Any failure to do so will void your product warranty. External condensate drains must be installed under the following conditions:

- ▶ All vent installations terminating vertically
- ▶ Vent installations terminating horizontally where the total vent length is greater than 5 feet
- ▶ Vent installations where any section of the exhaust vent pipe passes through an unconditioned space such as an unheated attic, basement or crawl space

Note: Straight pipe length equivalency for a 90° elbow is 2.5 ft. and for a 45° elbow is 1.25 ft.

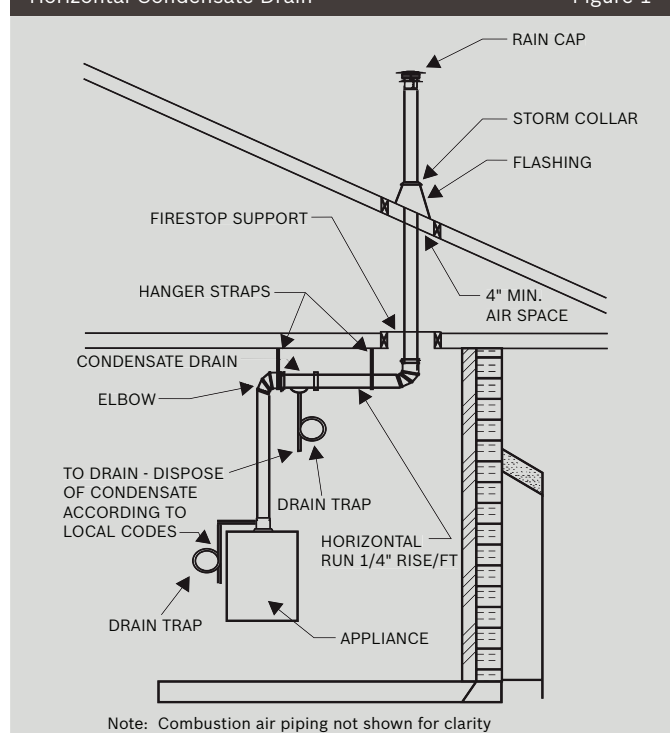
External Condensate Drain installation tips

1. Install condensate drain as close as possible to the heater with vent run sloping back to the appliance $\frac{1}{4}$ " per foot of lateral run.
Note: Last horizontal section of venting (including terminator) must slope down $\frac{1}{4}$ " per foot of lateral run to the termination to prevent rain from entering the venting system.
2. Do not route condensate drain piping through areas where it may freeze.
3. Use $\frac{3}{8}$ " ID high temperature silicone tubing to connect to drain port.
4. Form a condensate trap in silicone tubing by means of a 3" loop partially filled with mineral oil or water. Locate trap as low as possible.
5. To increase drain tube length, connect the end of the high temperature silicone tubing to vinyl tubing, PVC or CPVC pipe. Do not use copper piping for any portion of the condensate drain. Do not reduce the internal diameter. Connection fitting and additional piping must be at least $\frac{3}{8}$ " ID.

Note: Condensate must be disposed of according to local codes.

Horizontal Condensate Drain

Figure 1



Note: Combustion air piping not shown for clarity

For horizontal venting less than 5 feet in length

Vent runs should slope down $\frac{1}{4}$ " per foot of lateral run towards termination to eliminate the danger of rain from entering the venting system. For specific information on venting and the use of condensate drains, consult the vent manufacturer.

Vent manufacturer contact information

Company	Contact information
Z-flex	800-654-5600 www.z-flex.com
ProTech Industries	800-766-3473 www.protechinfo.com
Heat-Fab	800-772-0739 www.heatfab.com

Condensate drain part numbers

	Z-flex	Protech	Heat Fab
3" 90° Drain Tee	2SVEVWCFO3 *	FST3 & FSDF3	93PPLSTEE
3" Horizontal Drain	2SVEDWCF03 *	FSHDT3	9321
4" 90° Drain Tee	2SVEVWCFO4 *	FST4 & FSDF4	9416 & 9417D
4" Horizontal Drain	2SVEDWCF04 *	FSHDT4	9421
Drain Tubing	2SVEDTK *	N/A	7000TUBE

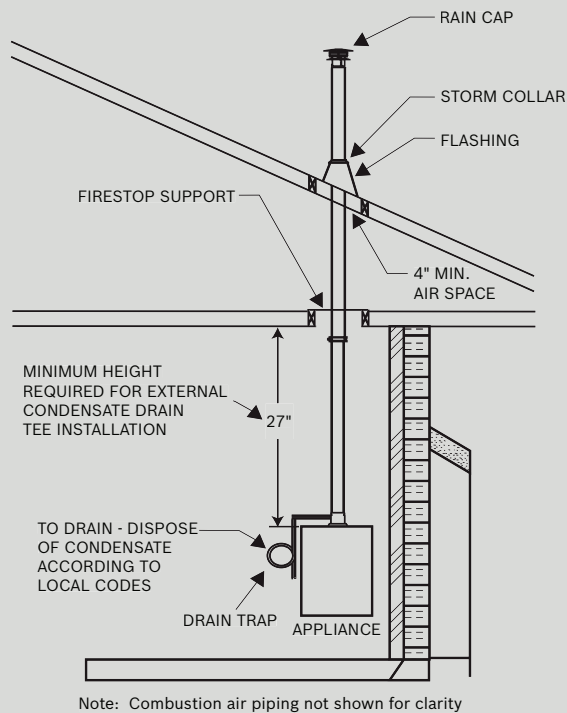
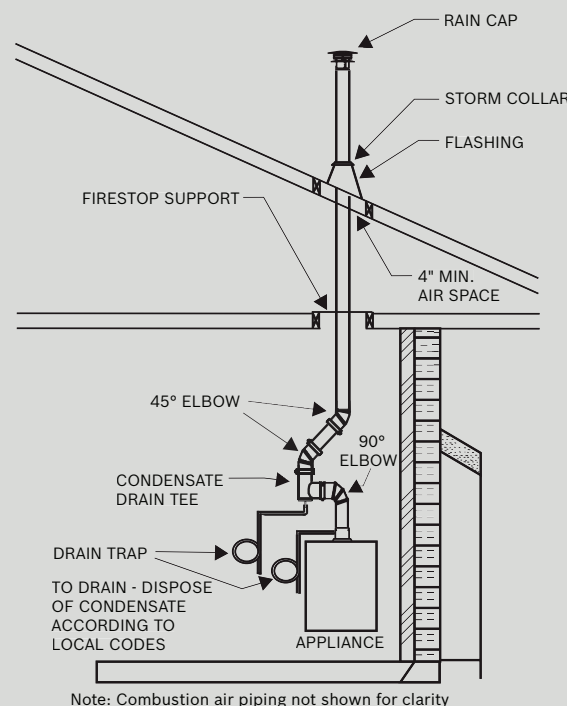
* Currently stocked by Bosch Thermotechnology. Consult your local wholesaler or retailer to order.

Installing condensate drain without relocating the heater

If a vertically vented water heater needs the installation of a external condensate drain and moving the water heater is not an option, the following may be an alternative:

1. This method requires a clearance of at least 27" from the top of the heater to the ceiling or roof penetration (See Figure 2).
 2. The existing vertical vent will need to have the following components added (see Figure 3):
 - Condensate drain tee
 - 90° elbow
 - Two 45° elbows
 - 12" straight pipe cut to approximately 8" - 8.5"
 - 3/8" ID high temperature silicone tubing
- Contact your local supplier for parts.

Note: After cutting 12" straight pipe, file ends smooth to prevent internal gasket damage.

Before Condensate Drain Tee Installation**Figure 2****After Condensate Drain Tee Installation****Figure 3****BOSCH**

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