



Ultra *Gas-fired water boiler*

Vent Addendum W-M Vent termination



Installation of:

- Vent piping
- Air piping

Ultra
with **PhD** PRECISION HYDRONIC DATA technology



WARNING

This document must only be used by a qualified heating installer/service technician. Read all instructions, including this Addendum, the Vent Supplement and the Boiler Manual, before installing. Perform steps in the order given. This document is intended only as an addendum to the Ultra Vent Supplement. Follow all requirements of the Vent Supplement and Boiler Manual in addition to the requirements of this addendum. Failure to comply could result in severe personal injury, death or substantial property damage.

4 Vent/air termination — sidewall

WARNING Follow all Ultra Vent Supplement instructions and instructions below when determining vent location to avoid possibility of severe personal injury, death or substantial property damage.

WARNING A gas vent extending through an exterior wall shall not terminate adjacent to the wall or below building extensions such as eaves, parapets, balconies or decks. Failure to comply could result in severe personal injury, death or substantial property damage.

NOTICE Installation must comply with local requirements and with the National Fuel Gas Code, ANSI Z223.1 for U.S. installations or CSA B149.1 or B149.2 for Canadian installations.

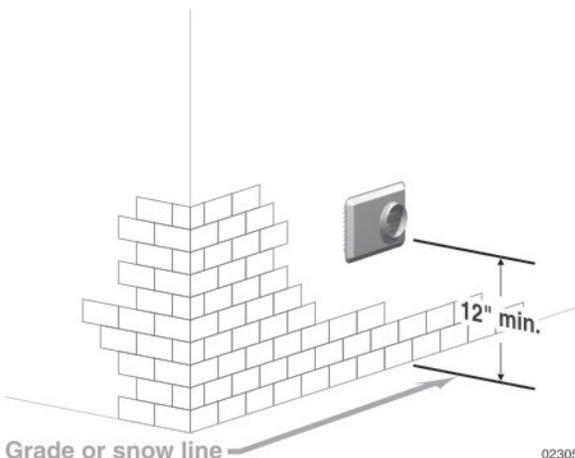
Determine location

Locate the vent/air terminations using the following guidelines:

1. The total length of piping for vent or air must not exceed the limits given in the Ultra Vent Supplement.
2. You must consider the surroundings when terminating the vent and air:
 - a. Position the vent termination where vapors will not damage nearby shrubs, plants or air conditioning equipment or be objectionable.
 - b. The flue products will form a noticeable plume as they condense in cold air. Avoid areas where the plume

- c. could obstruct window views.
- c. Prevailing winds could cause freezing of condensate and water/ice buildup where flue products impinge on building surfaces or plants.
- d. Avoid possibility of accidental contact of flue products with people or pets.
- e. Do not locate the terminations where wind eddies could affect performance or cause recirculation, such as inside building corners, near adjacent buildings or surfaces, window wells, stairwells, alcoves, courtyards or other recessed areas.
- f. Do not terminate above any door or window. Condensate can freeze, causing ice formations.
- g. Locate or guard vent to prevent condensate damage to exterior finishes.
3. Maintain clearances as shown in Figures 1, 4, 5 and 6, pages 2 and 4. Also maintain the following:
 - a. Vent must terminate:
 - At least 6 feet from adjacent walls.
 - No closer than 5 feet below roof overhang.
 - At least 7 feet above any public walkway.
 - At least 3 feet above any forced air intake within 10 feet.
 - No closer than 12 inches below or horizontally from any door or window or any other gravity air inlet.
 - b. Air inlet must terminate at least 12" above grade or snow line
 - c. Do not terminate closer to 4 feet horizontally (above or below) from any electric meter, gas meter, regulator, relief valve or other equipment.
4. Locate terminations so they are not likely to be damaged by foreign objects, such as stones or balls, or subject to buildup of leaves or sediment.
5. Do not connect any other appliance to the vent pipe or multiple boilers to a common vent pipe.

Figure 1 Sidewall termination location — at least 12 inches above grade or snow line



Prepare wall penetrations

NOTICE The inside and outside plates are stamped to identify the exhaust (vent) and intake (air) openings. Make sure to orient the plates correctly.

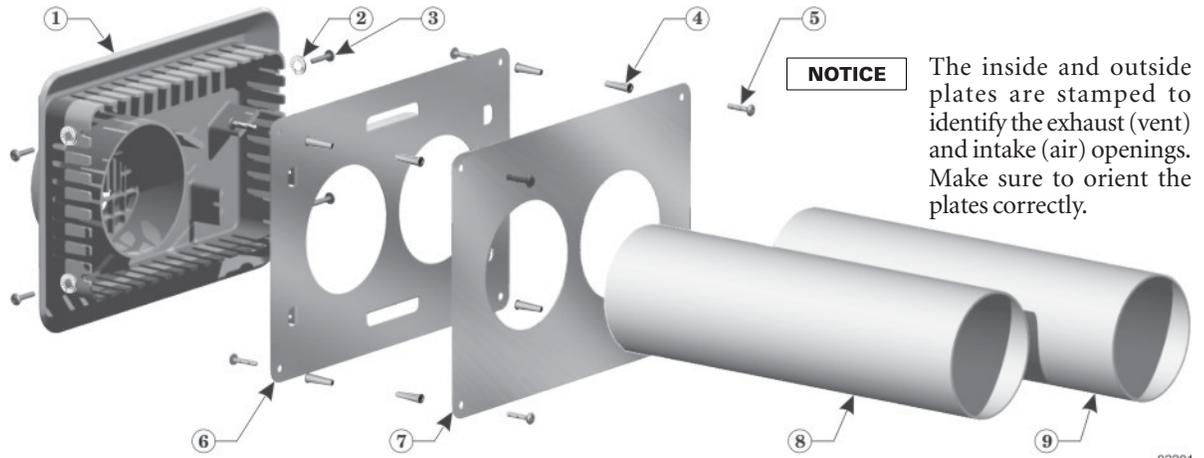
1. Locate termination opening and AVOID OBSTRUCTIONS:
 - a. Use the template supplied with the termination kit.
 - b. Locate the template on the outside building surface where the penetration is to be made.
 - c. Make sure there will be no obstructions that might prevent proper placement of the termination.
 - d. Use the template to mark the locations for the four mounting holes, flue pipe and air pipe. Level the template with a spirit level.

WARNING The template must be level to ensure the flue and air pipe will be side-to-side, as shown in Figure 3. Failure to comply could result in severe personal injury, death or substantial property damage.

- e. Cut holes in the wall as shown in Figure 3, using the location marks made with the template. For best results, use a small-diameter, long drill bit to drill centering holes for the flue and air pipe openings. Then drill the large openings from both the inside and outside.

4 Vent/air termination — sidewall *(continued)*

Figure 2 Sidewall termination assembly



NOTICE

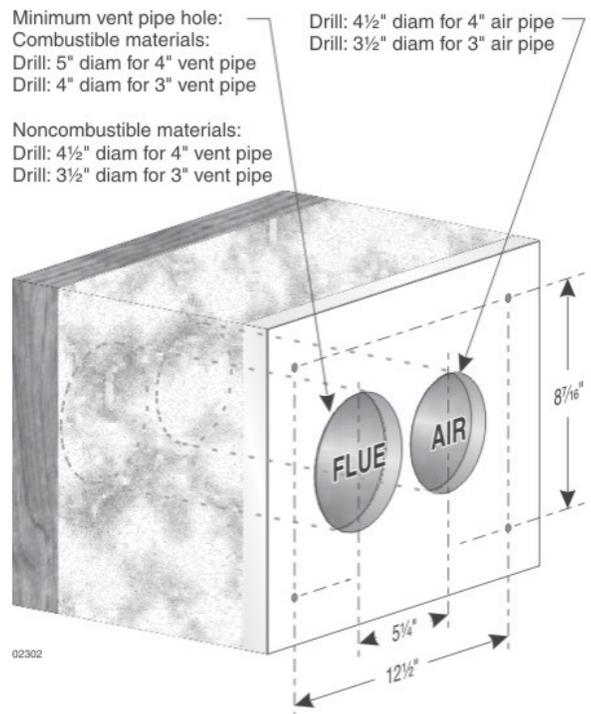
The inside and outside plates are stamped to identify the exhaust (vent) and intake (air) openings. Make sure to orient the plates correctly.

- | | | |
|------------------------------------|-----------------------------------|---|
| ① Vent termination (3" or 4") | ④ Plastic wall anchor (8) | ⑦ Inner mounting plate |
| ② Lock washer, #10 (4) | ⑤ Sht metal screw, #10 x 1¼" (8) | ⑧ Vent pipe (butt to screen in termination) |
| ③ Sheet metal screw, #10 x ½" (4) | ⑥ Outer mounting plate | ⑨ Air pipe (butt to stops in termination) |

Prepare wall penetrations *(continued)*

- f. The flue pipe and air pipe may be run through a rectangular cutout (as marked on the template) in lieu of two separate holes if desired.
2. Drill holes for the screws or plastic anchors to secure the outside plate. Install the outside plate and mount the termination on the plate (temporarily).
3. Cut the flue pipe so the extension through the wall will cause the vent pipe to fully extend into the termination socket.
4. Cut the air pipe so the extension through the wall will butt the air pipe against the stops inside the termination.
5. When using 3-inch vent piping with a 4-inch termination (Ultra-230 applications), increase the flue pipe size to 4 inch **before** the pipe passes through the wall. This is required to obtain a seal between the flue pipe and the termination.
6. Temporarily slide the flue and air pipes through the opening(s). Slide the inside wall plate over the two pipes and into position on the inside wall.
7. Position the inside plate so the flue pipe and air pipe slope downward slightly toward the boiler (½" per foot).
8. Mark the four (4) mounting holes for the plate.
9. Remove the vent and air pipe, drill the four mounting holes, and mount the inside plate.

Figure 3 Hole preparation in walls



Dimension shown for reference only. Use template supplied with vent kit to locate holes.

4 Vent/air termination — sidewall *(continued)*

Termination and fittings

1. Test fit the vent/air termination on the vent pipe. Make sure the vent pipe fully penetrates the termination socket and the air pipe butts against the interior stops.
2. Apply silicon RTV sealant to the interior of the vent termination and slide onto vent pipe. Rotate slightly to spread the silicon to ensure a tight seal around the vent pipe.
3. Secure the termination in place using the four #10 x ½” sheet metal screws and lock washers (see Figure 2, page 3).

Figure 4 Clearance to gravity air inlets

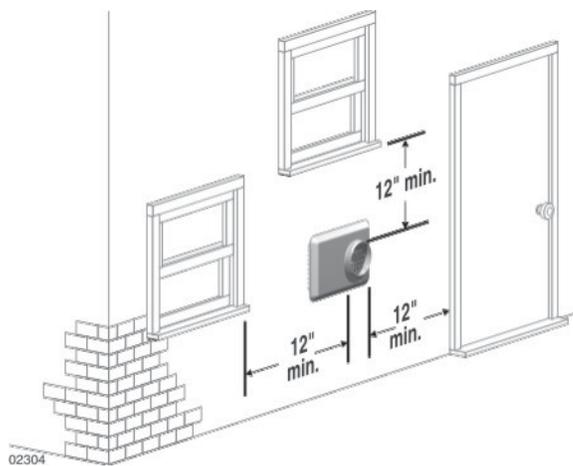
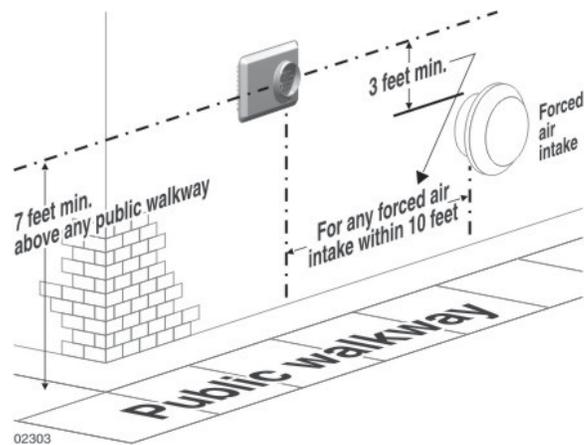


Figure 5 Clearance to forced air inlets



Multiple vent/air terminations

1. When terminating multiple Ultra boilers, terminate each vent/air connection as described in this supplement.

WARNING All vent pipes and air inlets must terminate at the same height to avoid possibility of severe personal injury, death or substantial property damage.

2. Place wall penetrations to obtain minimum clearance as shown in Figure 6 for U. S. installations. For Canadian installations, provide clearances required by CSA B149.1 or B149.2 Installation Code.
3. The air inlet of an Ultra boiler is part of a direct vent connection. It is not classified as a forced air intake with regard to spacing from adjacent boiler vents.

Figure 6 Multiple vent/air terminations (must also comply with other clearances for individual terminations)

