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# STANDATA bulletin 20-GCB-02(REV2)

## Gas

### Sidewall vent terminations

Date Issued: November 2021

Page 1 of 3

### Purpose

This bulletin, jointly developed by Alberta Municipal Affairs and the Safety Codes Council, informs designers, vendors, builders, contractors and owners of the minimum code requirements to ensure safe and effective venting of gas-fired appliances.

### Background

Traditionally, gas appliances were designed with a draft hood or a draft diverter and depended on natural buoyancy to effectively vent products of combustion to the outdoors through the roof. Current efficiency requirements are resulting in more appliances with many different vent termination options. As the number of homes using appliances with sidewall vent termination options increases, so have the issues with combustion products at those locations.

### Discussion

The issues that could be affected by frost and ice accumulations due to side yard vent terminations include adjoining property air inlets, appliance performance, windows, doors, building openings, property surfaces, mould, and moisture.

The items to consider for sidewall vent terminations are:

1. Vents from category III or category IV appliances or appliances with special venting systems exceeding 35 000 Btuh.
2. Appliances that have some means of redirecting the exhaust plume.
3. Measurements
  - (a) unobstructed distances to property lines of less than 4 ft. (1.2 m),

Unless stated otherwise, all Code references in this STANDATA are to CSA-B149.1 Natural gas and propane installation code.

Issued by the Provincial Gas Administrator

*[Original Signed]*  
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- (b) distances of 4 ft. (1.2m) and up to 8 ft. (2.4m), and
- (c) distances beyond 8 ft. (2.4m).

4. Alcove installations.

**B149.1 – Natural gas and propane installation code states:**

**8.14.8** A vent shall not terminate

- (a) where it could cause hazardous frost or ice accumulations on adjacent property surfaces;
- (b) less than 7 ft (2.1 m) above a paved sidewalk or a paved driveway that is located on public property;
- (c) within 6 ft (1.8 m) of a mechanical air-supply inlet to any building;
- (d) above a regulator within 3 ft (1 m) horizontally of the vertical centreline of the regulator vent outlet to a maximum vertical distance of 15 ft (4.5 m);
- (e) except as required by Clause 8.14.8(d), any distance less than that of any gas pressure regulator vent outlet as detailed in Table 5.3;
- (f) less than 1 ft (300 mm) above grade level;
- (g) within the following distances of a window or door that can be opened in any building, of any non-mechanical air-supply inlet to any building, or of the combustion air inlet of any other appliance;
  - (i) 6 in (150 mm) for inputs up to and including 10 000 Btuh (3 kW);
  - (ii) 12 in (300 mm) for inputs from 10 000 Btuh (3 kW) up to and including 100 000 Btuh (30 kW); and
  - (iii) 3 ft (900 mm) for inputs exceeding 100 000 Btuh (30 kW); and
- (h) underneath a veranda, porch, or deck unless
  - (i) the veranda, porch, or deck is fully open on a minimum of two sides beneath the floor; and
  - (ii) the distance between the top of the vent termination and the underside of the veranda, porch, or deck is greater than 1 ft (300 mm).

8.14.8(a) is an objective requirement that has no reference to caps, directional diversion, property line or building separations.

**National Building Code - 2019 Alberta Edition states:**

**9.32.3.13. Outdoor Intake and Exhaust Openings**

**3)** The distance separating air intakes from *building* envelope penetrations that are potential sources of contaminants, such as *gas vents* or oil fill pipes, shall be not less than 900 mm.

**Interpretation - Sidewall vent terminations require:**

- A vent from a category III or category IV appliance or an appliance with a special venting system exceeding 35 000 Btuh must not extend through an exterior wall and terminate adjacent to the exterior wall unless there is a minimum unobstructed distance of 4 ft. (1.2 m) or greater from the foundation to the property line.
- This is further revised to better reflect installation variations and concerns expressed by inspectors, contractors to address all sidewall vented appliances not just category IV. This allows for unrestricted sidewall terminations of special vent systems up to 35 000 Btuh. These appliances that have less than 4 ft. (1.2 m) clearance, such as fireplaces and garage heaters under 35 000 Btuh usually have shorter run times and lower plume production.
- A vent from a Category III or Category IV appliance or an appliance with a special venting system exceeding 35 000 Btuh that terminates into a side yard which measures not less than 4 ft. (1.2 m) from the foundation

wall to property line, must have a means of redirecting the vent plume with a certified fitting such as a “T”, a 90-degree elbow, or termination acceptable to the Authority Having Jurisdiction, installed in accordance to the manufacturer’s installation instructions.

- In an alcove installation, the depth of the vent termination from the exterior face cannot exceed the separation between the two opposing walls.
- Distances greater than 8 ft. (2.4 m) will have no restriction.

**Note:** These requirements do not apply to locations where adjoining properties are public spaces such as roadways, alleyways, walkways or parks where structures would not normally be erected.