

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



# CITY OF PORTLAND BUILDING PERMIT



**This is to certify that**

MCGEACHEY MICHELE A /Caron & Waltz

**Located at**

24 ARBOR ST

**PERMIT ID:** 2013-00239

**CBL:** 146 C013001

has permission to **HVAC; install Rinnai E110C**

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise clsoed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be procured prior to occupancy.

\_\_\_\_\_  
**Fire Prevention Officer**

  
\_\_\_\_\_  
**Code Enforcement Officer / Plan Reviewer**

**THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY  
THERE IS A PENALTY FOR REMOVING THIS CARD**

**PERMIT ID:** 2013-00239

**Located at:** 24 ARBOR ST

**CBL:** 146 C013001

**BUILDING PERMIT INSPECTION PROCEDURES**  
Please call 874-8703 (ONLY)  
or email: [buildinginspections@portlandmaine.gov](mailto:buildinginspections@portlandmaine.gov)

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

**REQUIRED INSPECTIONS:**

Close-in Plumbing/Framing  
Final Inspection

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

**City of Portland, Maine - Building or Use Permit**

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

<b>Permit No:</b> 2013-00239	<b>Date Applied For:</b> 02/05/2013	<b>CBL:</b> 146 C013001
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<b>Location of Construction:</b> 24 ARBOR ST	<b>Owner Name:</b> MCGEACHEY MICHELE A	<b>Owner Address:</b> 24 ARBOR ST	<b>Phone:</b>
<b>Business Name:</b>	<b>Contractor Name:</b> Caron & Waltz	<b>Contractor Address:</b> 321 Lincoln Street South Portland	<b>Phone:</b> (207) 799-2228
<b>Lessee/Buyer's Name</b>	<b>Phone:</b>	<b>Permit Type:</b> HVAC	

<b>Proposed Use:</b> Single Family	<b>Proposed Project Description:</b> HVAC; install Rinnai E110C
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**Dept:** Zoning      **Status:** Approved      **Reviewer:** Marge Schmuckal      **Approval Date:** 02/07/2013  
**Note:**      **Ok to Issue:**

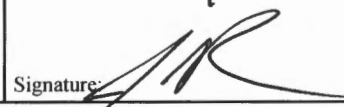
**Dept:** Building      **Status:** Approved w/Conditions      **Reviewer:** Jon Rioux      **Approval Date:** 02/11/2013  
**Note:**      **Ok to Issue:**

- 1) The installation must comply with UL, the Manufacturers' Listing, MUBEC (IRC, 2009), and State of Maine Gas Regulations.
- Separate permits are required for any electrical: plumbing, sprinkler, fire alarm, HVAC systems, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.
- Maintain proper setback(s) from property lines/buildings and proper clearances from vertical openings when direct venting
- A Carbon Monoxide (CO) alarm shall be installed in each area within or giving access to bedrooms. That detection must be powered by the electrical service (plug-in or hardwired) in the building and battery.
- M1804.2.5 Direct vent terminations. Vent terminals for direct-vent appliances shall be installed in accordance with the manufacturer's installation instructions.

**City of Portland, Maine - Building or Use Permit Application**

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 2013-00239	Issue Date:	CBL: 146 C013001
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Location of Construction: 24 ARBOR ST	Owner Name: MCGEACHEY MICHELE A	Owner Address: 24 ARBOR ST PORTLAND, ME 04103	Phone:
Business Name:	Contractor Name: Caron & Waltz	Contractor Address: 321 Lincoln Street South Portland ME 04106	Phone (207) 799-2228
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone: R5
Past Use: Single Family	Proposed Use: Single Family	Permit Fee: \$110.00	Cost of Work: \$9,000.00
Proposed Project Description: HVAC; install Rinnai E110C		FIRE DEPT: <input type="checkbox"/> Approved <input type="checkbox"/> Denied <input checked="" type="checkbox"/> N/A	INSPECTION: Use Group: HVAC Type: ME Gas Regulations
		Signature:	Signature: 
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.): Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Signature: _____ Date: _____			

Permit Taken By: bjs	Date Applied For: 02/05/2013	<b>Zoning Approval</b>
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<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..</p>	<p><b>Special Zone or Reviews</b></p> <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan <p>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p>Date: 2/7/13</p>	<p><b>Zoning Appeal</b></p> <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied <p>Date: _____</p>	<p><b>Historic Preservation</b></p> <input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied <p>Date: _____</p>
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**CERTIFICATION**

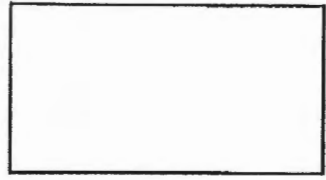
I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE



FILL IN AND SIGN WITH INK

# APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL 24 ARDEN STREET Use of Building \_\_\_\_\_ Date \_\_\_\_\_  
 Name and address of owner of appliance GREG FEENEY  
24 ARDEN STREET PORTLAND ME 04103  
 Installer's name and address CAREN + WALTZ 321 LINCOLN ST  
SO. PORTLAND, ME 04106 Telephone 799-2228

### Location of appliance:

- Basement
- Attic
- Floor
- Roof

### Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: RINNAI E110C  
 U.L. Approved  Yes  No

Will appliance be installed in accordance with the manufacture's installation instructions?  Yes  No

IF NO Explain: \_\_\_\_\_

### The Type of License of Installer:

- Master Plumber # \_\_\_\_\_
- Solid Fuel # \_\_\_\_\_
- Oil # \_\_\_\_\_
- Gas # PNT1881
- Other \_\_\_\_\_

RECEIVED  
 FEB 05 2013  
 Dept. of Building Inspections  
 City of Portland Maine

### Type of Chimney:

- Masonry Lined  
 Factory built \_\_\_\_\_
- Metal  
 Factory Built U.L. Listing # \_\_\_\_\_
- Direct Vent  
 Type PVC UL# \_\_\_\_\_

### Type of Fuel Tank

- Oil
- Gas

Size of Tank NA

Number of Tanks NA

Distance from Tank to Center of Flame NA feet.

Cost of Work: \$ 9,000.00

Permit Fee: \$ 110.00

### Approved

### Approved with Conditions

- See attached letter or requirement

Fire: \_\_\_\_\_

Ele.: \_\_\_\_\_

Bldg.: \_\_\_\_\_

Signature of Installer [Signature] \_\_\_\_\_

Inspector's Signature \_\_\_\_\_

Date Approved \_\_\_\_\_

## E75C / E110 Condensing Boiler

### Standard Features

- Onboard outdoor reset control system with sensor standard
- Prebuilt plumbing kit with insulated Low Loss Header
- Priority DHW standard
- Built in DHW plate heat exchanger
- Domestic hot water plate warming
- Modulating Ceramic premix burner
- 5:1 turn down ratio
- Spark ignition
- Exceeds SCAQMD 1146.2 Low NO<sub>x</sub> requirements
- Stainless Steel Water tube condensing heat exchanger
- Direct Vent sealed combustion
- Concentric and twin pipe venting adapters included
- Approved for room and closet installations

### Optional Accessories

- RS100 Single zone controller
- Flue Gas temperature sensor
- Room Air Filter
- NG to LP conversion Kit
- LP to NG Conversion Kit

## SPECIFICATIONS

### General Specifications

	Units	Boiler Model	Boiler Model
		E75C	E110C
Water content	gal	0.9	1.3
Max. supply boiler temperature	°F	176	176
Max operating pressure	psi	45	45
Relief valve rating	MBH	375	375
Relief valve pressure rating	psi	30	30
Dry weight	lbs	91	101
Min inlet gas pressure NG	"W.C.	4.0"	4.0"
Max inlet gas pressure NG	"W.C.	10.5"	10.5"
Min inlet gas pressure LP	"W.C.	8.0"	8.0"
Max inlet gas pressure LP	"W.C.	14.0"	14.0"
Max equivalent exhaust vent length	ft	100	100
Max equivalent combustion air vent length	ft	100	100
Approved venting materials		Polypropylene, Stainless Steel, PVC, CPVC	

### Performance Specifications

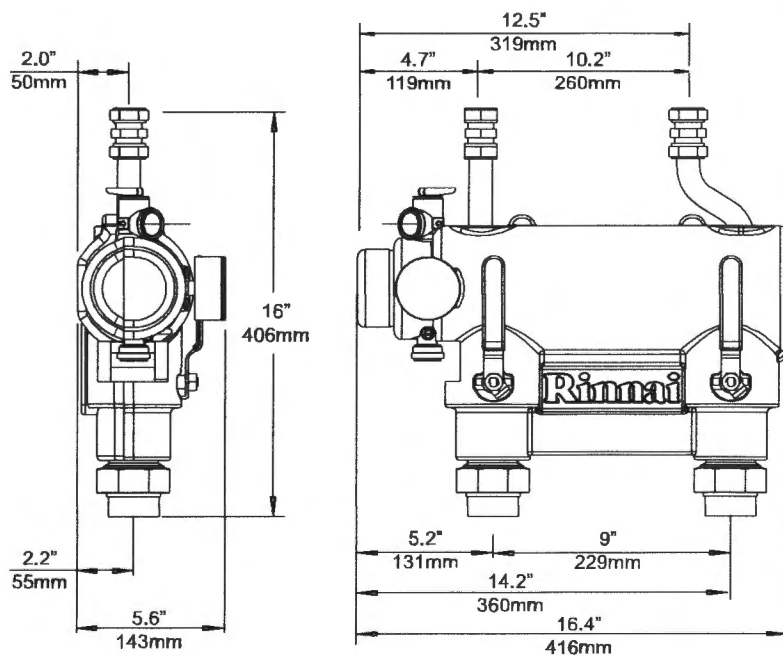
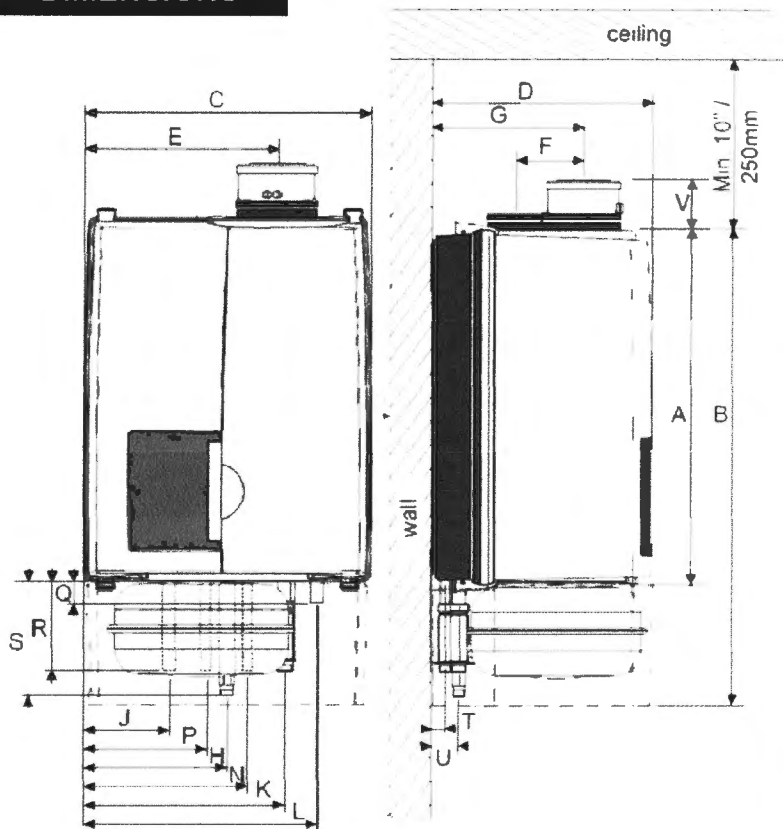
	Units	Boiler Model	
		E75C	E110C
Fuel Type		NG/LP	NG/LP
Input	MBH	75	110
Heating Capacity	MBH	69	101
AFUE (I=B=R)	%	96.5	96.1
Part Load Efficiency (EN677)	%	98.8	99.0
DHW flow rate 75°F ΔT	gpm	2.1	3.2

### Electrical Specifications

	Units	Boiler Model	
		E75C	E110C
Electrical Voltage Mains	V/Hz	120/60	120/60
Electrical Voltage Controls	V	24	24
Power Consumption Max Load	W	145	145
Power Consumption Stand by Load	W	14	14
Recommended Circuit breaker rating	A	15	15

*Rinnai is continually updating and improving products; therefore, specifications are subject to change without prior notice. Local, state, provincial and federal codes must be adhered to prior to installation.*

### DIMENSIONS

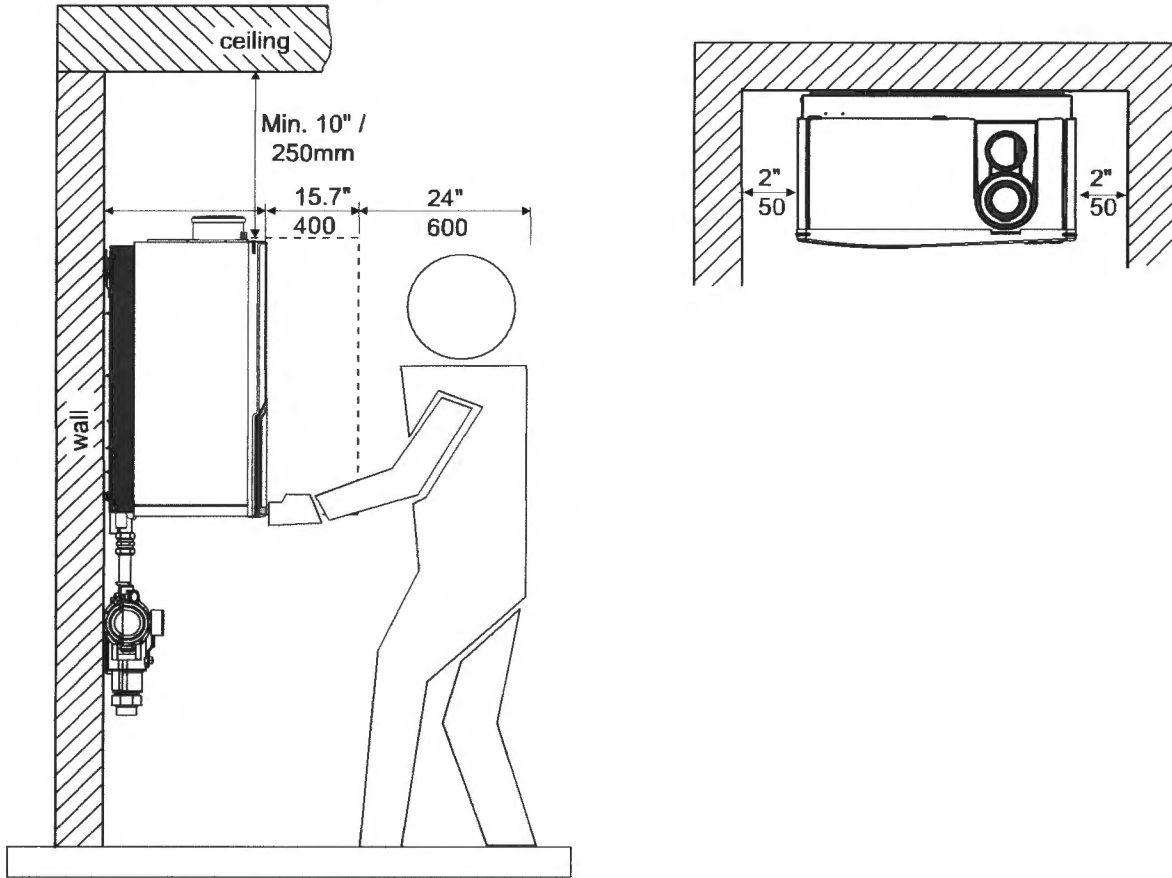


		E75C	E110C
		inch / mm	
A	Height	25.6 / 650	
B	Height with expansion tank	NA	34.3 / 870
C	Width	19.7 / 500	
D	Depth	15.6 / 395	
E	Left side / vent	13.2 / 335	
F	Center to center / vent and air supply	4.7 / 120	
G	Back / vent	10.6 / 270	
H	Left side / gas pipe	9.8 / 250	
J	Left side / supply pipe	5.9 / 150	
K	Left side / return pipe	13.8 / 350	
L	Left side / condensate pipe	15.9 / 405	
N	Left side / cold water pipe	11.2 / 285	
P	Left side / hot water pipe	8.5 / 215	
Q	Pipe length of g	0.7 / 19	8.5 / 215
R	Pipe length of c	1.6 / 40	
S	Pipe length of f, k, r, and w	2 / 50	6.3 / 160
T	Back / center of pipe c, k, and w	1 / 26	
U	Back / Center of pipe f, g, and r	2 / 50	
V	Pipe length vent co-axial Pipe length vent parallel	3.7 / 95 7 / 177	

### Clearances

	Minimum required clearance to combustibles and non-combustibles	Recommended service clearances
	inch / mm	inch / mm
Top	2 / 50	10 / 250
Back	0	0
Front	6 / 150	24 / 600
Left side	2 / 50	2 / 50
Right side	2 / 50	2 / 50
Floor / Ground	12 / 300	30 / 762
Vent	0	0

### 5.3.2 Clearances from boiler



service clearances to the boiler

figure 4

	Minimum required clearances to combustibles	Minimum required clearances to non-combustibles	Recommended service clearances
	All types inch / mm	All types inch / mm	All types inch / mm
Top of boiler	2" / 50	2" / 50	10" / 250
Back of boiler	0"	0"	0
Front of boiler	6" / 150	6" / 150	24" / 600
Left side of boiler	2" / 50	2" / 50	2" / 50
Right side of boiler	2" / 50	2" / 50	2" / 50
Floor / Ground to bottom of boiler	12" / 300	12" / 300	30" / 762
Floor/ Ground to bottom Low loss header	0"	0"	12" / 300
Vent	0"	0"	0"

clearances to the boiler

table 3

For closet installation: clearance is 1" / 25mm from the front.

#### Low Loss Header

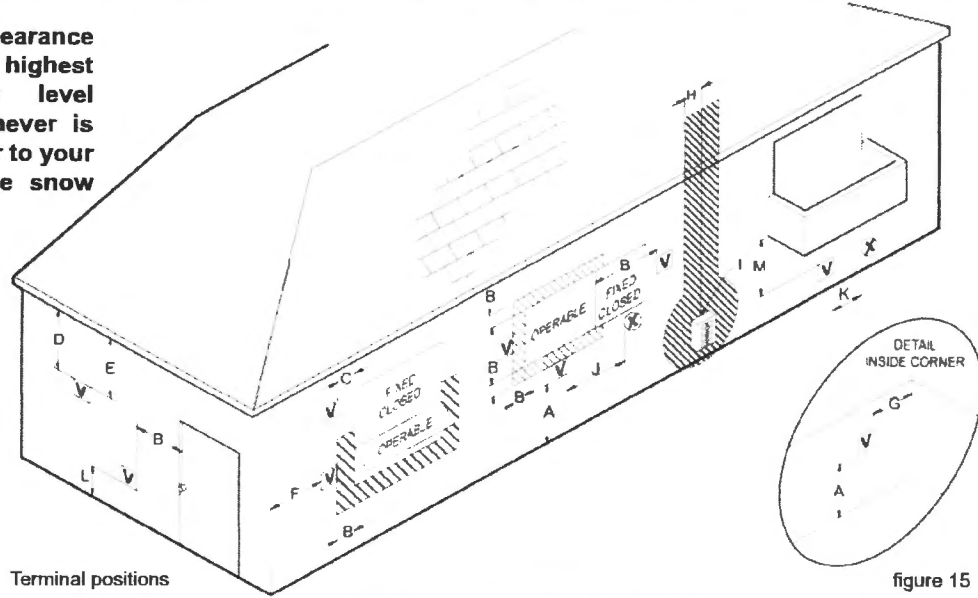
Clearances to combustible and non-Combustible is 0 inch for sides, top, front and floor/ground  
The recommended service clearance to the bottom of the low loss header is 12 inches.



## 6.7.4 Recommended vent/air intake terminal position

Terminals should be positioned as to avoid products of combustion entering openings into buildings or other vents.

**Maintain 12" of clearance above the highest anticipated snow level or grade or, whichever is greater. Please refer to your local codes for the snow level in your area.**



Terminal positions

figure 15

Ref	Description	Canadian Installations - Direct Vent and non Direct Vent	US Installations Direct Vent	US Installations non Direct Vent
A	Clearance above grade, veranda, porch, deck, or balcony	12 inches (30 cm)	12 inches (30 cm)	12 inches (30 cm)
B	Clearance to window or door that may be opened	6 inches (15 cm) for appliances ≤ 10,000 Btuh (3 kW), 12 inches (30 cm) for appliances > 10,000 Btuh (3 kW) and ≤ 100,000 Btuh (30 kW), 36 inches (91 cm) for appliances > 100,000 Btuh (30 kW)	6 inches (15 cm) for appliances ≤ 10,000 Btuh (3 kW), 9 inches (30 cm) for appliances > 10,000 Btuh (3 kW) and ≤ 50,000 Btuh (30 kW), 12 inches (91 cm) for appliances > 50,000 Btuh (30 kW)	4 feet (1.2 m) below or to side of opening; 1 foot (300 mm) above opening
C	Clearance to permanently closed window	*	*	*
D	Vertical clearance to ventilated soffit, located above the terminal within a horizontal distance of 2 feet (61 cm) from the center line of the terminal	*	*	*
E	Clearance to unventilated soffit	*	*	*
F	Clearance to outside corner	*	*	*
G	Clearance to inside corner	*	*	*
H	Clearance to each side of center line extended above meter/regulator assembly	3 feet (91 cm) within a height 15 feet (4.5 m) above the meter/regulator assembly	*	*
I	Clearance to service regulator vent outlet	36 inches (91 cm)	*	*
J	Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance	6 inches (15 cm) for appliances ≤ 10,000 Btuh (3 kW), 12 inches (30 cm) for appliances > 10,000 Btuh (3 kW) and ≤ 100,000 Btuh (30 kW), 36 inches (91 cm) for appliances > 100,000 Btuh (30 kW)	6 inches (15 cm) for appliances ≤ 10,000 Btuh (3 kW), 9 inches (30 cm) for appliances > 10,000 Btuh (3 kW) and ≤ 50,000 Btuh (30 kW), 12 inches (91 cm) for appliances > 50,000 Btuh (30 kW)	4 feet (1.2 m) below or to side of opening; 1 foot (300 mm) above opening
K	Clearance to a mechanical air supply inlet	6 feet (1.83 m)	3 feet (91 cm) above if within 10 feet (3 m) horizontally	3 feet (91 cm) above if within 10 feet (3 m) horizontally
L	Clearance above paved sidewalk or paved driveway located on public property	7 feet (2.13 m) [1]	*	7 feet (2.13 m)

[1] A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

[2] Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

\* For clearances not specified in ANSI Z223.1/NFPA 54 or CSA B149.1, clearances are in accordance with local installation codes and the requirements of the gas supplier.

clearances of venting system terminals

table 6