



Jeff Levine, AICP, Director
Planning & Urban Development Department

Tammy Munson,
Inspections

Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 01/21/15

Electronic Signature and Fee Payment Confirmation

Notice: Your electronic signature is considered a legal signature per state law.

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a **legal signature** per Maine state law. You are also signifying your intent on paying your fees by the opportunities below.

I, the undersigned, intend and acknowledge that no permit application can be reviewed until payment of appropriate permit fees are **paid in full** to the Inspections Office, City of Portland Maine by method noted below:



Within 24-48 hours, once my complete permit application and corresponding paperwork has been electronically delivered, I intend to **call the Inspections Office** at 207-874-8703 and speak to an administrative representative and provide a credit/debit card over the phone.



Within 24-48 hours, once my permit application and corresponding paperwork has been electronically delivered, I intend to **hand deliver** a payment method to the Inspections Office, Room 315, Portland City Hall.



I intend to deliver a payment method through the U.S. Postal Service mail once my permit paperwork has been electronically delivered.

Applicant Signature: *Dale A Brown*

Date: *12/19/14*

I have provided digital copies and sent them on:

Date:

NOTE: All electronic paperwork must be delivered to buildinginspections@portlandmaine.gov or by physical means ie; a thumb drive or CD to the office.



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APPROX YENIT LOCATION

41096

PINE TREE



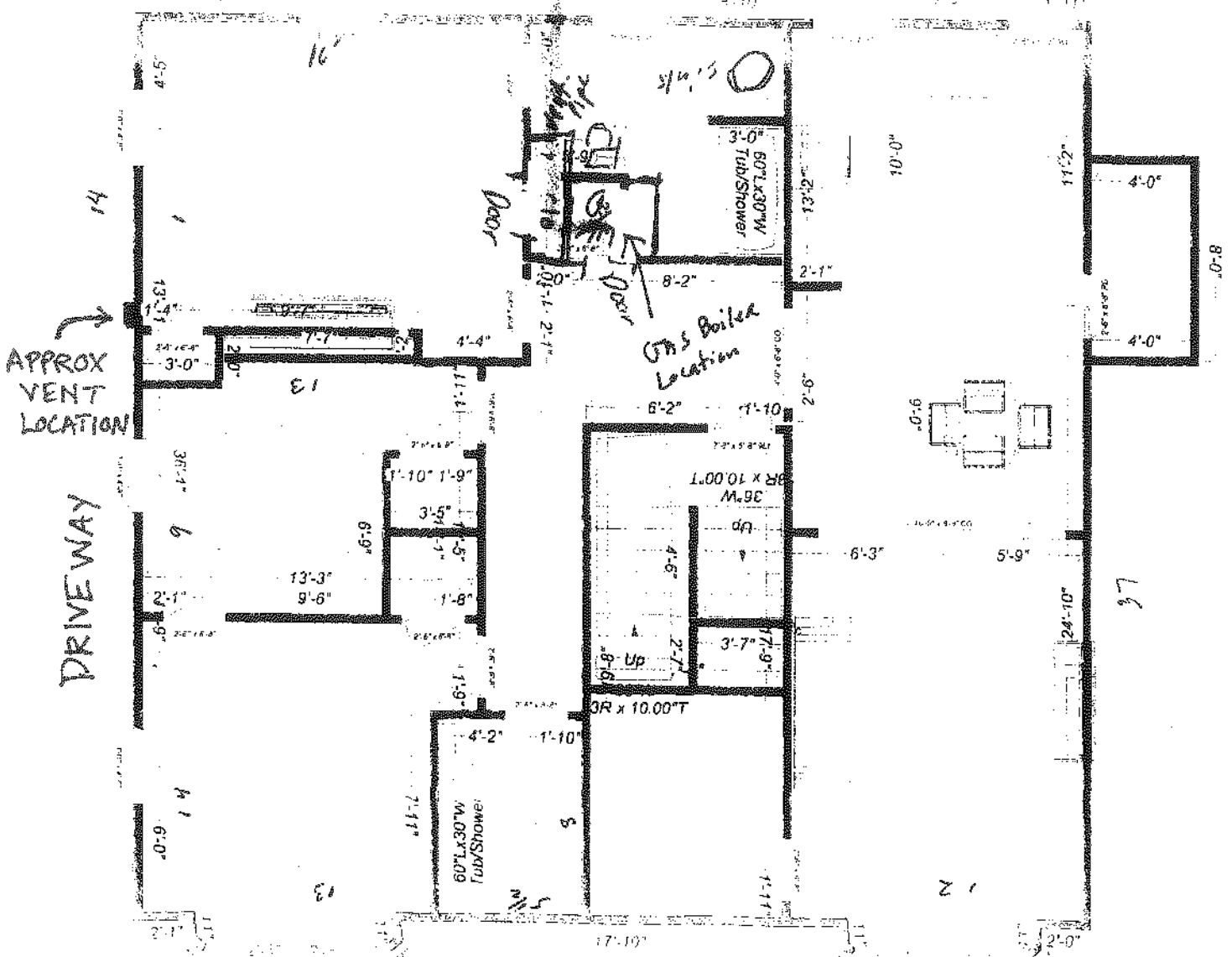
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Back of building

Deck out
Back

2'-6" Bay window



ETSUN Rinnai
75,000 BTU

BASEBOARD Heat Each Room.

Emery St

Heat pipes
water lines
Gas lines
Electrical

To Brought up
Through Chaseway
in utility room

From Basement



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HVAC / Power Equipment Application & Checklist

All of the following information is required and must be submitted. Checking off each item as you prepare your application package will ensure your package is complete and will help to expedite the permitting process.

- A floor plan that includes structural details, size and dimensions of the floor and location where the equipment is going to be installed.
- Information on how the unit is being vented & hanging details if appropriate.
- Details of the specific equipment being installed; ie; specifications and any heating technical specifications. (Often this information can be obtained from the manufacturer's spec sheet or retail advertisements.)
- A plot plan showing the shape and dimension of the lot, with the distance from the actual property lines, and the principal structure may be required.
- Proof of ownership is required if it is inconsistent with the assessors records.
- All documents as individual PDFs and named appropriately

All HVAC installations must be conducted in compliance with the IRC 2009 Building Code

Separate permits are required for plumbing and electrical installations, as required.

Separate permits are also required based on different properties
(different Chart, Block and Lot.)

Permit Fee: \$30.00 for the first \$1000.00 construction cost, \$10.00 per additional \$1000.00 cost

This is not a Permit; you may not commence any work until the Permit is issued.



FILL IN AND SIGN WITH INK

25
056



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Application for Heating, Ventilation, Air Condition (HVAC) Cooking or Power Equipment

To the Inspector of Buildings, Portland Maine:

Date: 01/21/15

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

Address/CBL: 87 Emery st Use of Building: Apartments Date: 12/19/14
 Name and Address of Owner: Louise Murphy (Seawater LLC Corp)
212 ST John St PORTLAND, ME 04101 207 956-0013
 Installer's Name and Address: Dale A Brown Dale's Burner Service
17 Reserve Circle Saco, ME 04072 E-Mail: DaleaBrown@Live.Com

Location of Appliance: <input type="checkbox"/> Basement <input checked="" type="checkbox"/> Floor <input type="checkbox"/> Attic <input type="checkbox"/> Roof Type of Fuel: <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Oil <input type="checkbox"/> Solid Appliance Name: <u>Rinnai E75CN Condensing Boiler</u> UL Approved: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Will appliance be installed in accordance with the manufacturer's installation instructions? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Type of License of Installer: Master Plumber #: _____ Solid Fuel #: <u>MS10007472</u> Oil #: <u>MS10007472</u> Gas #: <u>PNT 2464</u> Other: <u>ESCO Institute EPA 0428246432400</u> <u>Rectifier</u>	Type of Venting: (Plan required for submittal) <input type="checkbox"/> Masonry Lined <input type="checkbox"/> Factory Built: _____ <input type="checkbox"/> Metal <input type="checkbox"/> Factory Built UL Listing: _____ <input checked="" type="checkbox"/> Direct Vent Type: <u>PVC seg 40</u> UL #: _____ # of Tanks: _____ Type of Fuel Tank: <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Oil Size of Tank: <u>NA</u> Distance from tank to center of flame: _____ Cost of Work: \$ <u>8,000.00</u> Permit Fee: \$ <u>102.00</u>
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Fire: _____

See attached letter or requirements

Electric: _____

Building: _____

Inspector's Signature

Date Approved

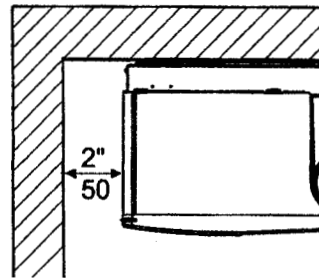
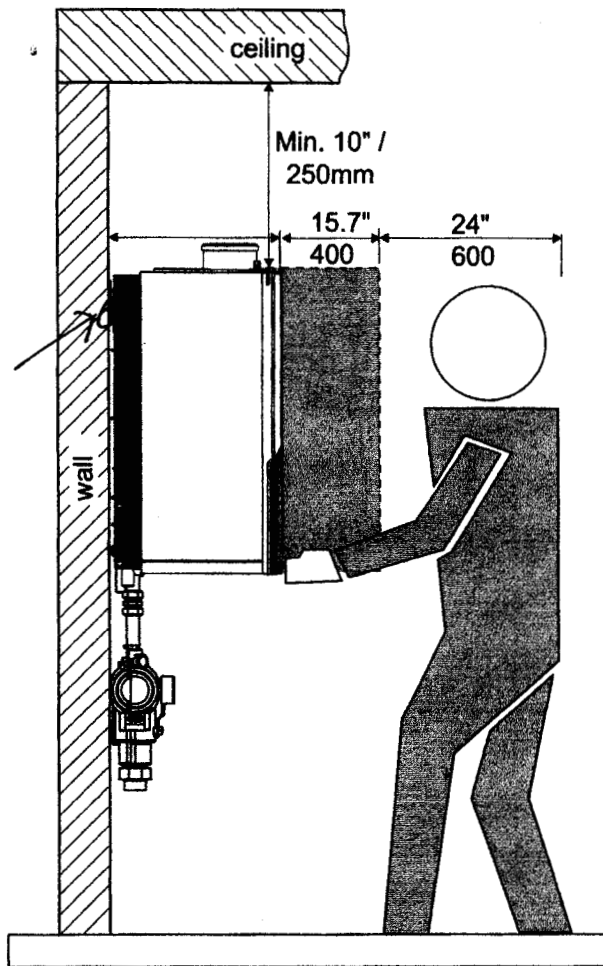
Signature of Installer: Dale A Brown

E-Mail: DaleaBrown@Live.Com



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*HT Arrow
 Install mounting Bracket
 with Lag Bolts.
 Boiler Hanges on wall.*

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	16" / 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"

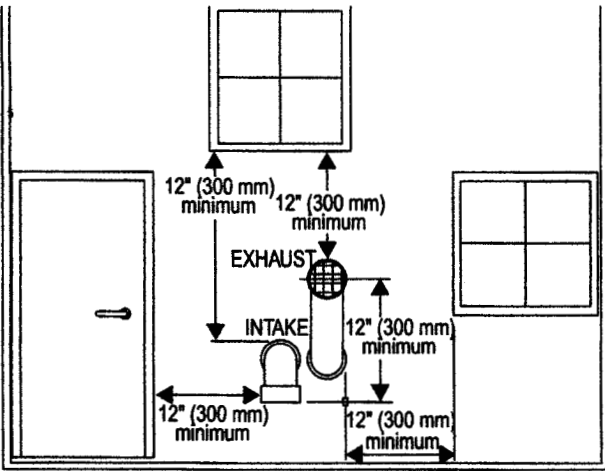
clearances to the boiler

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.



Terminal positions PVC

figure 16

- 45 degree elbow
- 90 degree elbow
- plastic pipe per foot
- concentric vent kit

Equivalent friction loss of PVC



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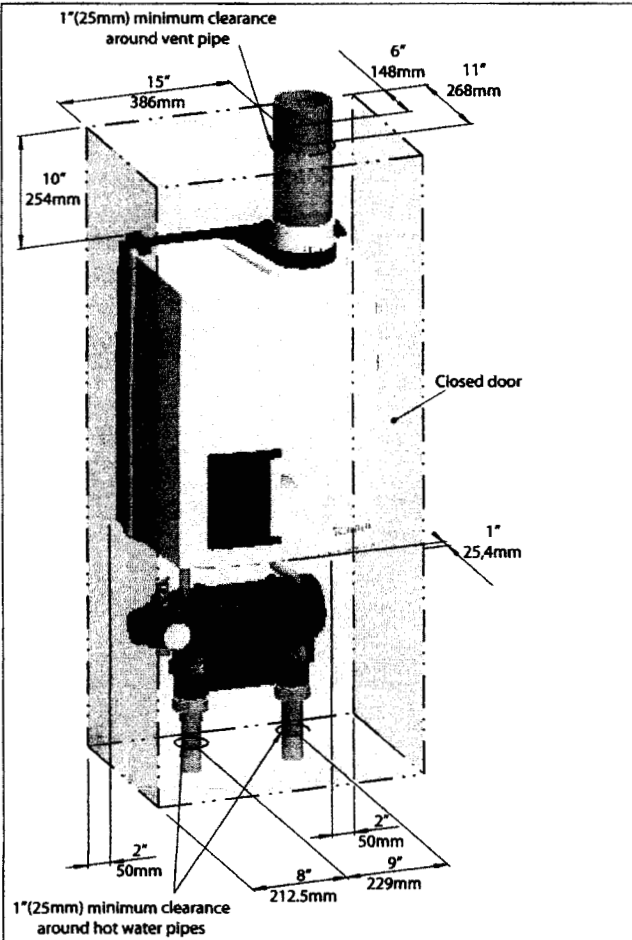
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WARNING

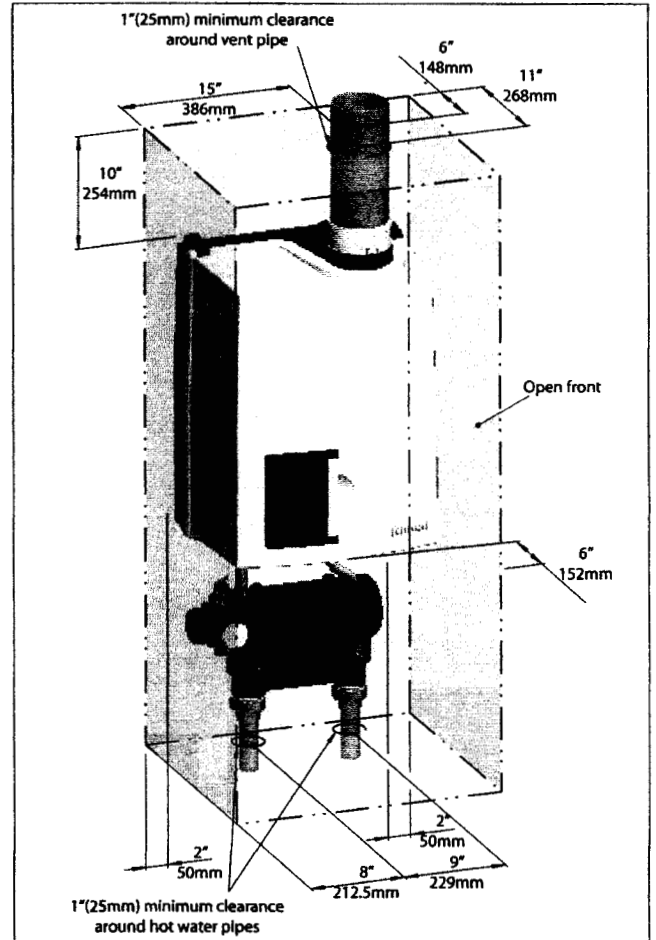
For closet and alcove installation, CPVC material, instead of PVC, must be used in a closet/alcove structure. Failure to follow this warning could result in fire, personal injury, or death.

Rinnai strongly suggests the use of concentric venting for all closet and alcove installations. For non direct vent room air applications see sections 6.7.6 and 6.7.9.



Closet installation

figure 17



Alcove installation

figure 18

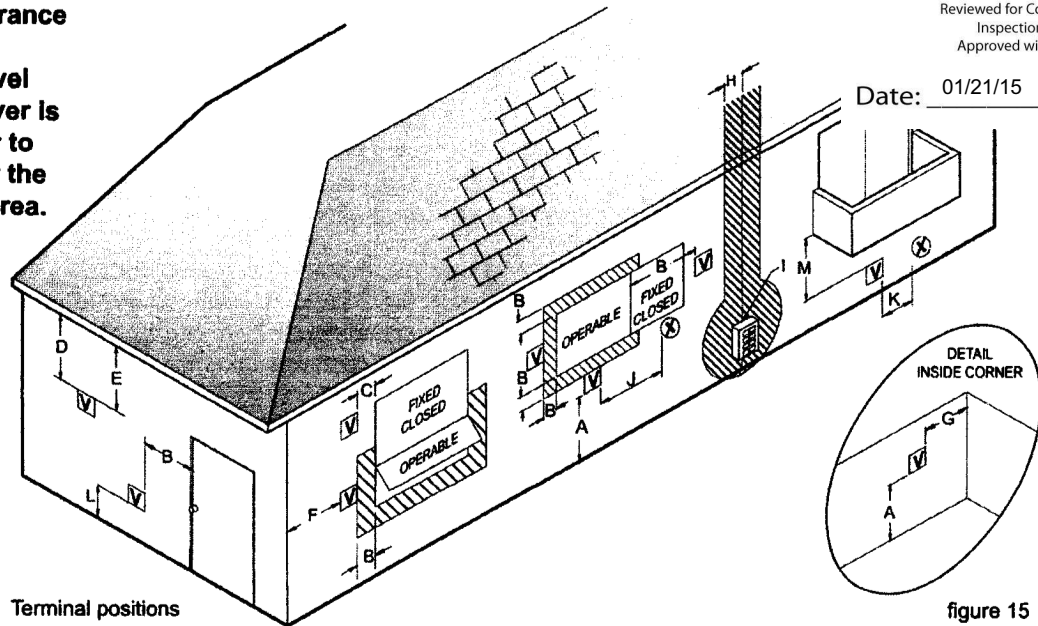


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Terminals should be positioned as to avoid products of combustion entering openings into building

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]	10'	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.

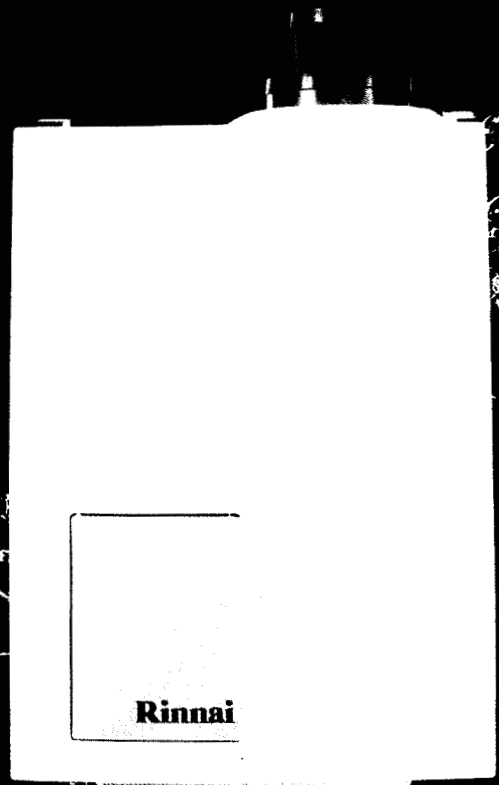


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FOR THE APPLICATION
AND THE BUDGET.

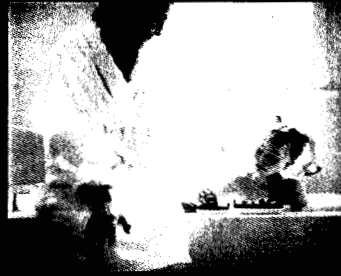
Rinnai Combi Boiler





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Specifically designed for multi-family applications with up to 1.5 baths, the new E50C delivers all the home heating and water heating customers need, while keeping installation and operation costs down and efficiency at its highest.

- Most efficient combi boiler on the market – 95.6% AFUE
- Cost-effective, simplified installation—fewer components needed
- No primary secondary piping or closely spaced tees required*
- No system pumps required—reduces install time and cost
- Fewer maintenance intervals required than the competition—
 Inspection every two years or 4,000 hours; Service every four years or 8,000 hours
- 13,600 to 50,000 BTU heating load
- Proprietary stainless steel heat exchanger for unmatched performance and durability
- Greater control—system temperature adjustable in two degree increments
- Automatic de-aeration at start-up

E50C SPECIFICATION CHART

AFUE	95.6%
Heating Input	50,000 BTU
Minimum Input	13,600 BTU
Gas Pressure	3.0" W.C.
Gas Line Size**	1/2"
DHW at 75° Rise	2.1
Turn-Down Ratio	6.25:1
Low Loss Header Kit	As Accessory
Gas Type	NG (propane conversion kit)
Venting Type	2 Pipe/Concentric
High Altitude	10,000 ft
Canada Approved	Q1 2014

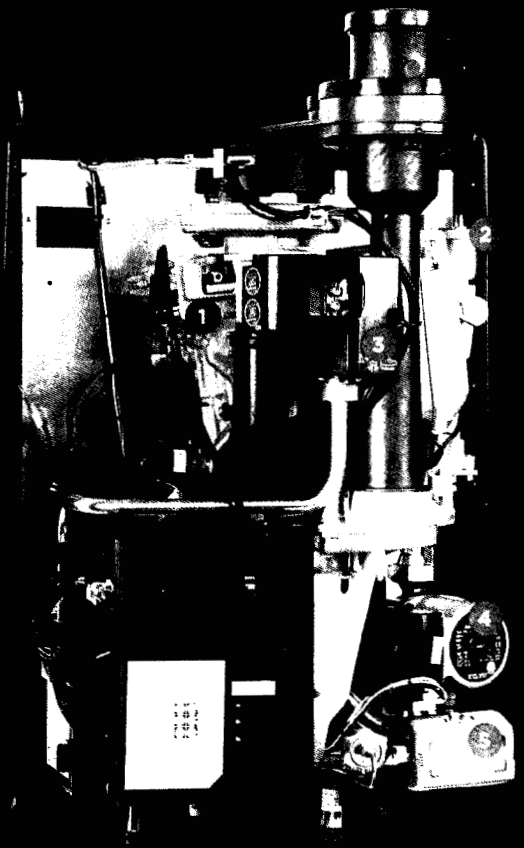


Figure 1: E50C Boiler Unit
 E50C (1) (2) (3) (4) (5)

- | | | | |
|---|--------------------------------|---|---------------------------|
| 1 | Stainless Steel Heat Exchanger | 4 | Single-Speed Boiler Pump |
| 2 | Air Vent | 5 | Three-Way Motorized Valve |
| 3 | Gas Valve | | |

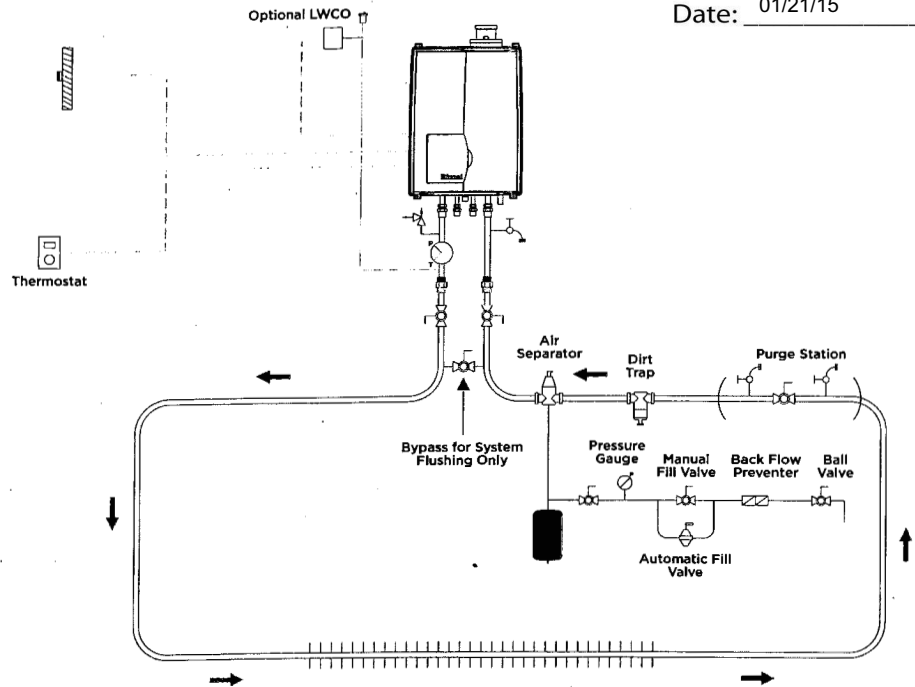


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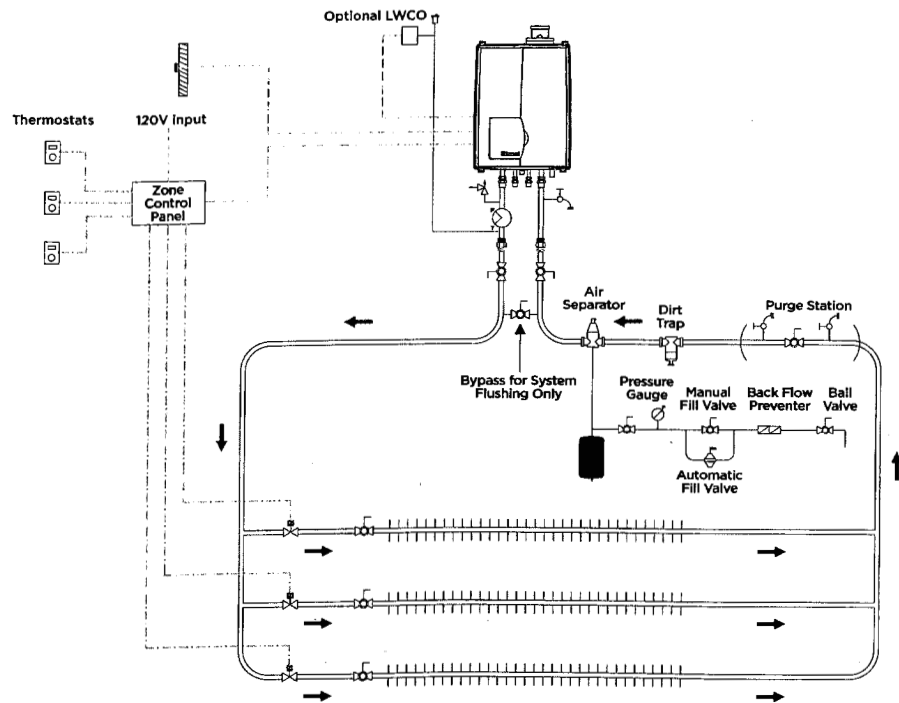
Piping Drawings

Single-zone,
serial flow,
baseboard heat
application†



Three-zone
baseboard heat
application with
three zone valves†

When the E50C is used
with zone valves instead
of zone pumps, it can be
installed without closely
spaced tees.



†The maximum allowable pressure drop through system loop is 4.6 feet of head at 4.5 GPM flow rate.

The drawings in this section represent only a few of the piping options and system concepts the boiler can be connected to and are not intended to serve as engineering or design drawings. For more information, see E50C System Piping and Application Design Manual.



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The new E50C. A smart choice all around.

Keeping costs down, efficiency up, and everyone satisfied. The E50C may be small, but it accomplishes some pretty tall orders. It's the kind of quality engineering you can count on during installation and long after—the kind you've come to expect from Rinnai.

To learn more, contact your local distributor.

Rinnai®

Rinnai America Corporation • 103 International Drive, Peachtree City, GA 30269
Toll-Free: 1-800-621-9419 • Phone: 678-829-1700 • www.rinnai.us

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