

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

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

Permit No: 09-0980	Issue Date:	CBL: 045 B006001
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Location of Construction: 104 Park St	Owner Name: Plumb Peter S &	Owner Address: 104 Park St	Phone: 207-799-2228
Business Name:	Contractor Name: Caron & Waltz	Contractor Address: 321 Lincoln Street South Portland	Phone: 2077992228
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone: R-4

Past Use: Single Family	Proposed Use: Single Family / Install 275 Horizontal oil tank in the basement.	Permit Fee: \$110.00	Cost of Work: \$8,450.00	CEO District: 2
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FIRE DEPT: <input type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: R3 Type: SB IRC 2003 ST ME OIL + Solid Fuel Burns
Signature:	Signature: <i>DM</i> 9/10/09

Proposed Project Description:  
Install 275 Horizontal oil tank in the basement.

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

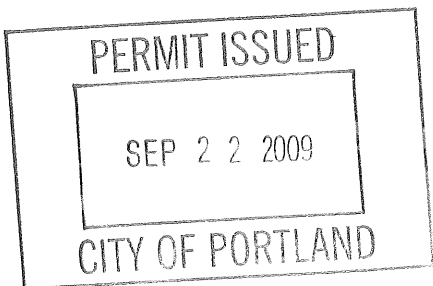
Action:  Approved  Approved w/Conditions  Denied

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Permit Taken By: gg	Date Applied For: 09/04/2009
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Zoning Approval		
Special Zone or Reviews	Zoning Appeal	Historic Preservation
<input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan  Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/>	<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	<input 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
Date: <i>9/9/09</i>	Date: _____	Date: <i>Requires separate review &amp; approval</i>

- This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
- Building permits do not include plumbing, septic or electrical work.
- 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..



SCANNED

**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

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Lessee/Buyer's Name	Phone:	Permit Type: HVAC	

Proposed Use: Single Family / Install 275 Horizontal oil tank in the basement.	Proposed Project Description: Install 275 Horizontal oil tank in the basement.
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**Dept:** Zoning      **Status:** Approved with Conditions      **Reviewer:** Marge Schmuckal      **Approval Date:** 09/08/2009

**Note:** **Ok to Issue:**

- 1) ANY exterior work requires a separate review and approval thru Historic Preservation. This property is located within an Historic District.
- 2) Separate permits shall be required for future decks, sheds, pools, and/or garages.
- 3) This is NOT an approval for an additional dwelling unit. You SHALL NOT add any additional kitchen equipment including, but not limited to items such as stoves, microwaves, refrigerators, or kitchen sinks, etc. Without special approvals.
- 4) This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.
- 5) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

**Dept:** Building      **Status:** Approved with Conditions      **Reviewer:** Tom Markley      **Approval Date:** 09/10/2009

**Note:** **Ok to Issue:**

- 1) Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approval prior to work.
- 2) Installation shall comply with 2003 International Mechanical Code and State of Maine Oil and Solid Fuel Board Laws and Rules

Please mail,  
Thanks  
Tom  
9/10/09



FILL IN AND SIGN WITH INK

#090974  
PERMIT ISSUED  
SEP 22 2009  
CITY OF PORTLAND

# APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT

045 Boob

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 104 PARK STREET Use of Building RESIDENTIAL Date 9/1/09  
Name and address of owner of appliance PETER PLUMB  
104 PARK STREET, PORTLAND, ME 04101  
Installer's name and address CAROL WALTZ, 321 LINCOLN STREET, SO. PORTLAND, ME 04106  
Telephone 799-2228

### Location of appliance:

- Basement
- Attic
- Floor
- Roof

### Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: BURNHAM V88 (V88)

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 # MS20005690
- Gas # \_\_\_\_\_
- Other \_\_\_\_\_

### Type of Chimney:

Masonry Lined  
Factory built \_\_\_\_\_

Metal  
Factory Built U.L. Listing # \_\_\_\_\_

Direct Vent  
Type \_\_\_\_\_

### Type of Fuel Tank

- Oil
- Gas

DEPT. OF PERMITTING & INSPECTION  
CITY OF PORTLAND, ME  
UL# \_\_\_\_\_  
SEP - 4 2009

Size of Tank 275 HORIZONTAL

Number of Tanks 1

Distance from Tank to Center of Flame 12 feet.

Cost of Work: \$ 8,450.00

Permit Fee: \$ 110.00

Approved

Approved with Conditions

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

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

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

See attached letter or requirement

Inspector's Signature

Date Approved

Signature of Installer [Signature] JOB # 81542 ON 9/9/09

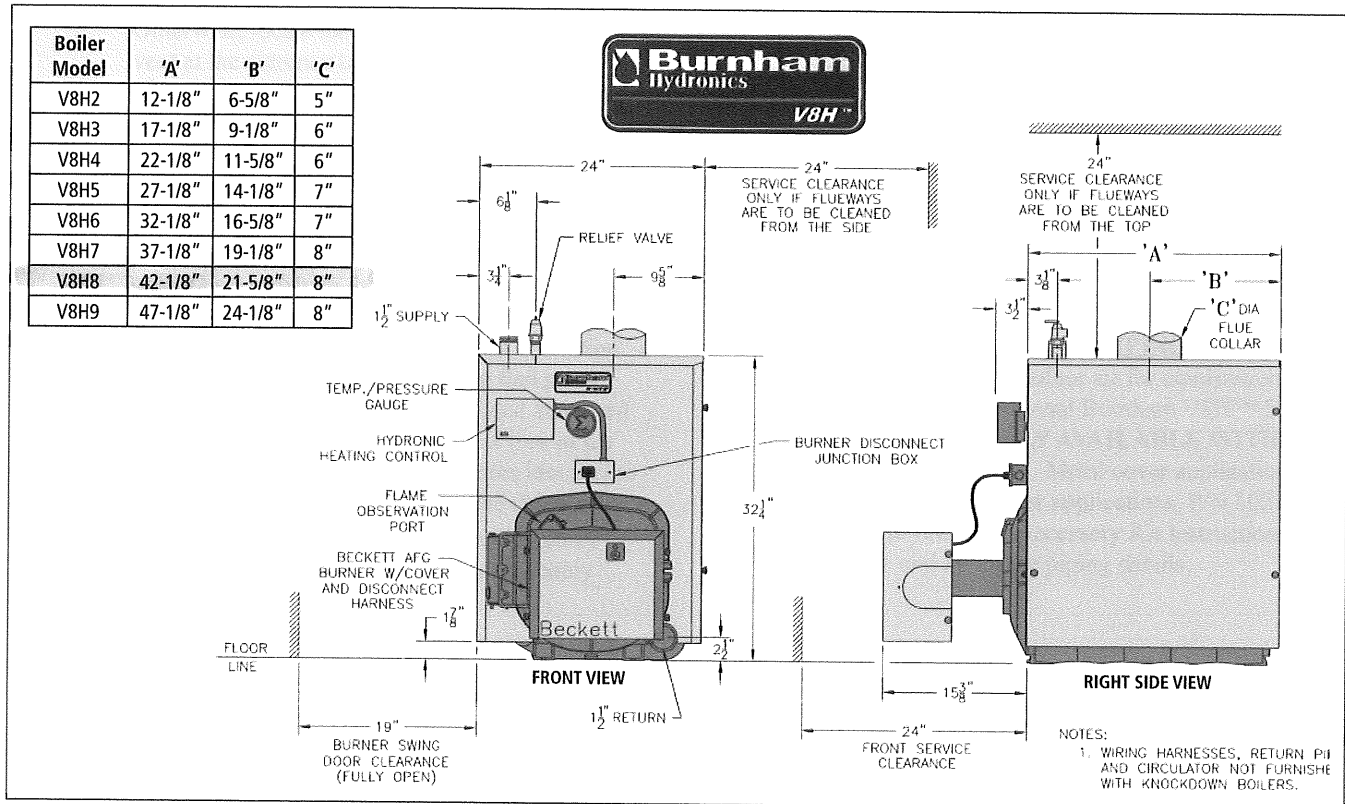
# Ratings



Boiler Model	Burner Capacity (GPH) <sup>(2)</sup>	DOE Heating Capacity (MBH) <sup>(3)</sup>	I=B=R Net Ratings			Flue Collar Dia. (In) <sup>(6)</sup>	Minimum Chimney Req.			AFUE %		Approx. Shipping Weight (Lbs)
			Water (MBH) <sup>(4)</sup>	Steam (MBH) <sup>(5)</sup>	Steam (Sq. Ft.)		Round Dia.	Rectangle In x In	Height Feet	Steam	Water	
V8H2 Water	0.60	70	61	—	—	5	6	8 x 8	15	—	82.1	450
V8H3 Steam	0.75	91	—	68	283	6	6	8 x 8	15	85.1	—	542
V8H3 Water	1.05	125	109	—	—	6	6	8 x 8	15	—	85.0	542
V8H4 Steam	1.05	127	—	95	396	6	6	8 x 8	15	85.3	—	634
V8H4 Water	1.35	162	141	—	—	6	7	8 x 8	15	—	85.3	634
V8H5 Steam	1.35	164	—	123	512	7	7	8 x 8	15	85.4	—	726
V8H5 Water	1.65	198	172	—	—	7	7	8 x 8	15	—	85.3	726
V8H6 Steam	1.65	201	—	151	629	7	7	8 x 8	15	85.7	—	818
V8H6 Water	1.90	228	198	—	—	7	8	8 x 8	15	—	85.3	818
V8H7 Steam	2.10	252	219	189	787	8	8	8 x 8	15	84.7	85.0	910
V8H7 Water	2.10	252	219	189	787	8	8	8 x 8	15	84.7	85.0	910
V8H8 Steam	2.35	275*	239	—	—	8	8	8 x 12	15	—	—	1002
V8H8 Water	2.35	266*	—	200	833	8	8	8 x 12	15	—	—	1002
V8H9 Steam	2.60	299*	260	—	—	8	9	8 x 12	15	—	—	1094
V8H9 Water	2.60	298*	—	224	933	8	9	8 x 12	15	—	—	1094

\*I=B=R Gross Outputs

- V8H2 is available as a packaged water boiler only and is not available with tankless heater.
- The I=B=R Burner Capacity is based on oil having a heating value of 140,000 BTU/GAL.
- DOE Heating Capacity and Annual Fuel Utilization Efficiency (AFUE) are based on U.S. Government tests at 13.0% CO<sub>2</sub> with No. 1 maximum smoke and 0.02 inches water column over fire draft on standard equipment package.
- Net I=B=R Ratings are based upon a pick-up allowance of 1.15. Consult manufacturer with unusual piping and pickup requirements before selecting boiler.
- Net I=B=R Ratings are based upon a pick-up allowance of 1.333. Consult manufacturer with unusual piping and pickup requirements before selecting boiler.
- As an ENERGY STAR® partner, Burnham has determined that those models with an AFUE of 85% and higher meet the ENERGY STAR® guidelines for energy efficiency.
- Used for sizing flue connection materials. Maximum Working Pressure: 15 PSI steam; 30 PSI water, standard; 40 psi water optional; 50 psi water optional— USA only.



www.burnham.com

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Phone: 1-888-432-8887

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## SECTION VII: VENTING AND AIR INTAKE PIPING

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### A. GENERAL VENTING GUIDELINES

1. Vent system installation must be in accordance with these instructions and applicable provisions of local building codes. Contact local building or fire officials about restrictions and installation inspection in your area.
2. The V8H is designed to be vented into a fireclay tile-lined masonry chimney or chimney constructed from type L vent or a factory built chimney that complies with the type HT requirements of UL103. The chimney and vent pipe shall have a sufficient draft at all times, to assure safe proper operation of the boiler. See Figure 16 for recommended installation.
  - a. Install a draft regulator (supplied with boiler) following the instructions furnished with the regulator. See Figure 17 for alternate draft regulator locations.
  - b. For the V8H2W, V8H4W and V8H6W the minimum recommended chimney size from Table 1B (in the Installation, Operating & Services Instructions manual) is one size larger than the smokebox outlet. For a vertical vent, place the increaser on the smokebox outlet collar. Otherwise, locate the increaser in the horizontal vent at the entrance to the chimney.
  - c. With any new or replacement installation the chimney has to be considered. Chimneys that have a high heat loss may become less suitable as the heat loss of the home goes down and the efficiency of the boiler installed goes up. Most homes have a chimney appropriate for the fuel and the era in which the home was built. That may have been a coal fired or an inefficient oil fired boiler built into a home without insulation or storm windows. With increasing fuel prices that home probably has been insulated and fitted with storm windows so that the heat loss of the home has been reduced. This requires less fuel to be burned and sends less heat up the chimney. A new boiler probably has a higher efficiency than the boiler being replaced. That probably

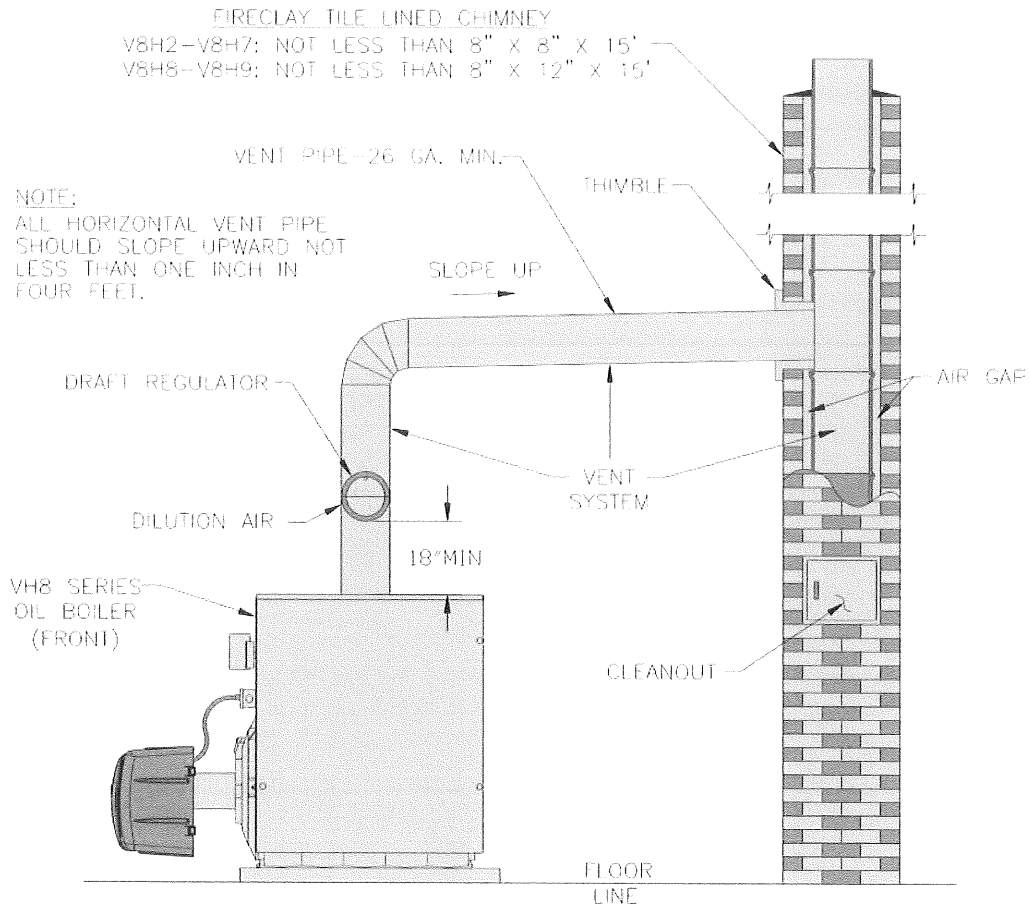
means that the stack temperature from the new boiler will be lower than that from the old boiler and with less room air being drawn up the chimney to dilute the stack gases. The combination of a large uninsulated chimney, reduced firing rate, reduced firing time, lower stack temperature and less dilution air can, in some cases, contribute to the condensing of small amounts of water vapor in the chimney. Such condensation, when it occurs, can cause chimney deterioration. In extreme cases, the chimney may have to be lined to insulate the chimney and thus prevent the condensation. The addition of dilution air into the chimney may assist in drying the chimney interior surfaces.

A massive chimney on a cold, or exposed outside wall may have produced adequate draft when it was fired with a higher input and greater volumes of heated gases. With reduced input and volume, the draft may be severely affected. In one instance our research showed a new chimney of adequate sizing produced only .035" W.C. after 30 minutes of continuous firing at 13.0% CO<sub>2</sub>. Outside wall chimneys take longer to heat up and can have .00" W.C. draft at burner start-up. You may have to consider a special alloy chimney flue liner with insulation around it and a stabilizing draft cap or even a draft inducing fan in severe cases.

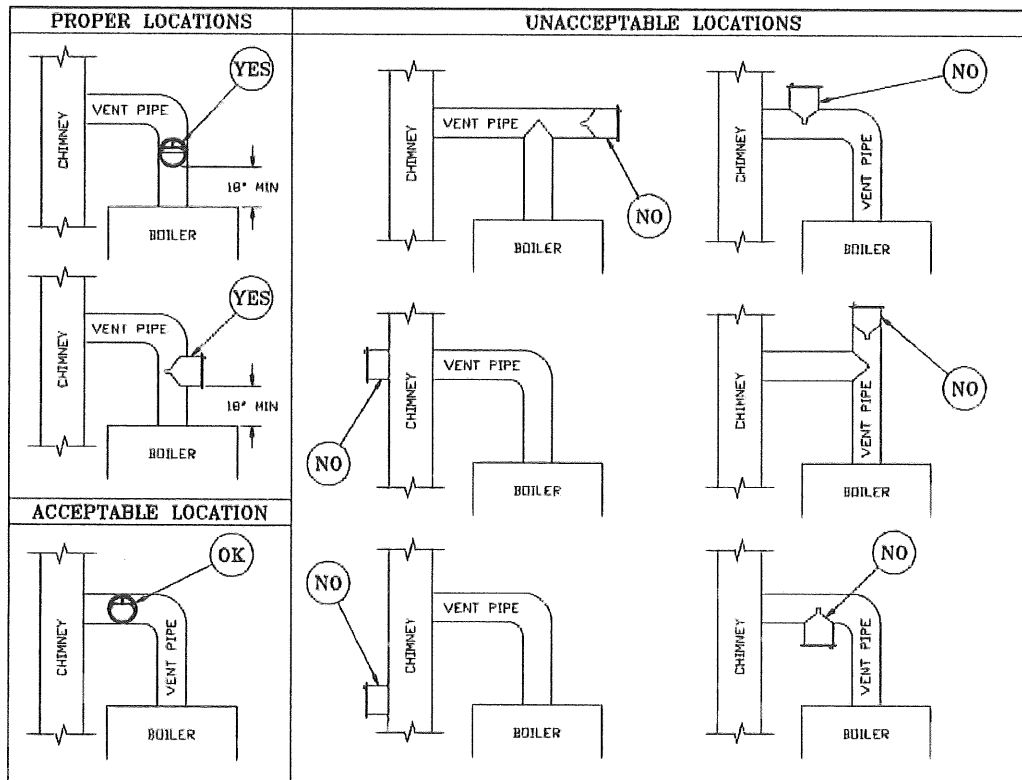
- d. For the same reasons as in c. above, heat extractors mounted into the breeching are not recommended.
3. For minimum clearances to combustibles refer to Figure 2.

### B. OPTIONAL AIR INTAKE PIPING

**INSTALLATION** - Outdoor air for combustion may be provided with an optional Burnham V8H™ Fresh Air Accessory Kit (**ONLY AVAILABLE WITH BECKETT BURNER**). Metal cover applications, P/N 611280031. Plastic cover applications, P/N 102119-01. Refer to Fresh Air Accessory Kit Instructions for installation and air intake piping details.



**Figure 16: Recommended Vent Pipe Arrangement and Chimney Requirements**



**Figure 17: Proper and Improper Locations of Draft Regulator**