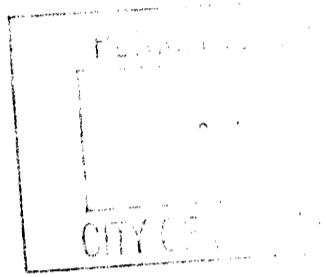


**City of Portland, Maine - Building or Use Permit Application**  
 389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 08-1295 Issue Date: CBL: 046 A013002

Location of Construction: 27 DEERING ST	Owner Name: JOHNSON GRETCHEN & DAVID	Owner Address: 27 DEERING ST # 2	Phone:
Business Name:	Contractor Name: Caron & Waltz	Contractor Address: 321 Lincoln Street South Portland	Phone: 2077992228
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone: R7
Past Use: Single Family Condo unit#2	Proposed Use: Single Family Condo unit#2 - install a Burnham MPO231 in basement	Permit Fee: \$140.00	Cost of Work: \$11,250.00
Proposed Project Description: Single Family Condo unit#2 - install a Burnham MPO231 in basement		FIRE DEPT: <input type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: R3 Type: SB IMC 2003
		Signature: <i>Jm 10/14/08</i>	
		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: ldobson	Date Applied For: 10/10/2008	<b>Zoning Approval</b>			
1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules. 2. Building permits do not include plumbing, septic or electrical work. 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..	Special Zone or Reviews <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"/> Date: <i>Jm 10/14/08</i>	Zoning Appeal <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 Date:	Historic Preservation <input checked="" type="checkbox"/> Not in District or Landmark <input checked="" 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>Jm 10/14/08</i>		
	(NA)				



**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

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: 6 A 13 Use of Building: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name and address of owner of appliance: GRETCHEN JOHNSON, 27 DEERING ST, PORTLAND 04101  
 Installer's name and address: CARON WALTZ, 321 LINCOLN ST, SOUTH PORTLAND, ME 04066 Telephone: 799

**Location of appliance:**  
 Basement  Floor  
 Attic  Roof

**Type of Fuel:**  
 Gas  Oil  Solid

Appliance Name: BURNHAM MPO231  
 U.L. Approved  Yes  No

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

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

**Type of Chimney:**  
 Masonry Lined BY OTHERS  
 Factory built \_\_\_\_\_  
 Metal  
 Factory Built U.L. Listing # \_\_\_\_\_  
 Direct Vent  
 Type \_\_\_\_\_ UL# \_\_\_\_\_

**Type of Fuel Tank**  
 Oil  Gas

Size of Tank: 275  
 Number of Tanks: 1  
 Distance from Tank to Center of Flame: 5+ feet.  
 Cost of Work: \$ 11,250  
 Permit Fee: \$ \_\_\_\_\_

**The Type of License of Installer:**  
 Master Plumber # \_\_\_\_\_  
 Solid Fuel # \_\_\_\_\_  
 Oil # MS30005275  
 Gas # \_\_\_\_\_  
 Other \_\_\_\_\_

**Approved**  
 Fire: \_\_\_\_\_  
 Ele.: \_\_\_\_\_  
 Bldg.: \_\_\_\_\_

**Approved with Conditions**  
 See attached letter or requirement

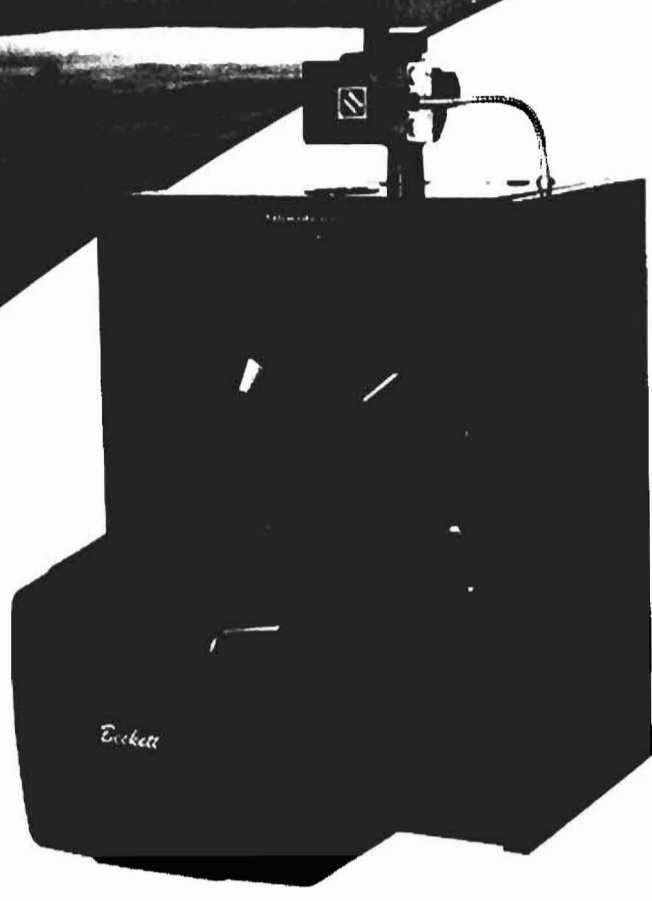
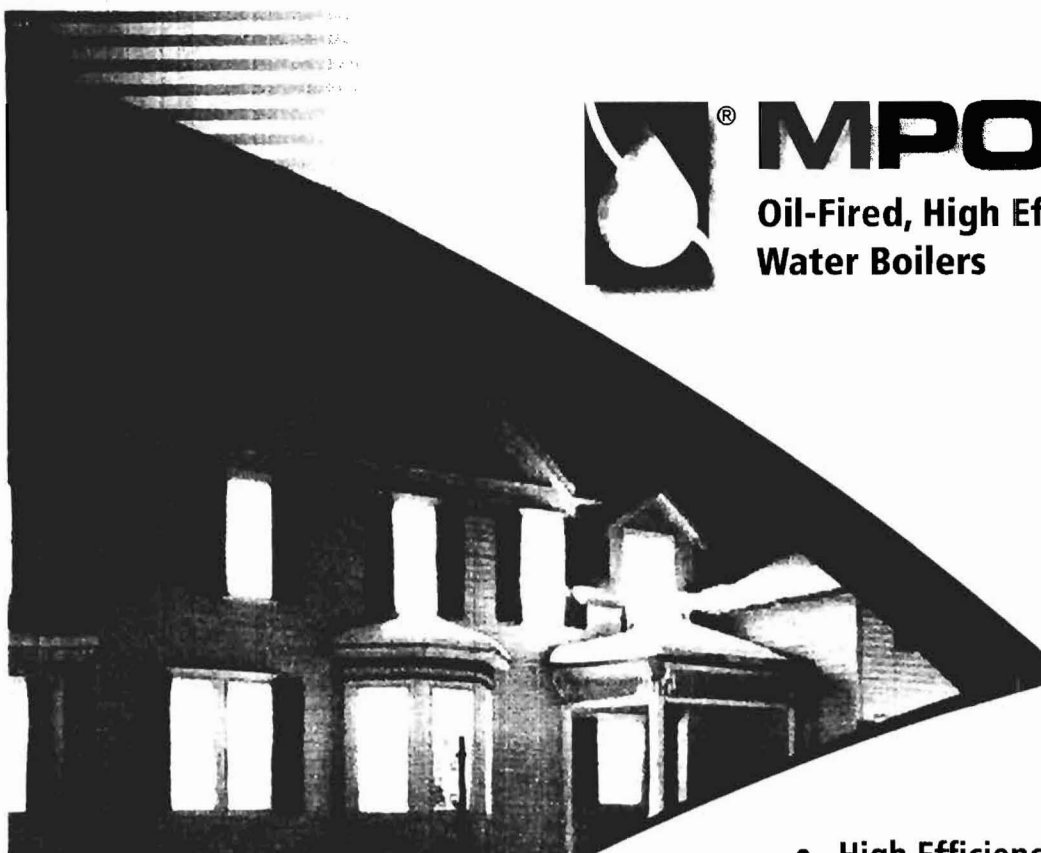
Signature of Installer: *[Signature]* Inspector's Signature: \_\_\_\_\_ Date Approved: \_\_\_\_\_

White - Inspection Yellow - File Pink - Applicant's Gold - Assessor's Copy



# MPO™ Series

Oil-Fired, High Efficiency, 3-Pass  
Water Boilers



- High Efficiency 87% AFUE
- 3-pass Cast Iron Sectional Design
- Natural Draft Oil Boiler  
- Five Sizes Available, 0.60-1.65 gallons
- Direct Vent Option Kit  
- Three Sizes Available, 1.05-1.65 gallons
- Easy Installation and Servicing  
with Reversible Swing Door  
and no Target Wall or  
Blanket Required
- Multiple Burner Options



**Burnham**  
Hydronics

# MPO™ Series

Oil-Fired, High Efficiency,  
3-Pass Water Boilers



## Burnham's MPO Boiler

### Unique 3-Pass Cast Iron Design

The MPO boiler has been exclusively designed by Burnham engineers to use a 3-pass cast iron sectional design that is unequalled in the industry. MPO sections are produced in Burnham's own state-of-the-art foundry in Zanesville, Ohio, and are the primary reason why the MPO is able to attain an ENERGY STAR-certified 87% AFUE.

### Built-in Return Water Boiler Protection

Every MPO boiler comes equipped with a unique return water blending device that automatically mixes hot boiler water with cool return water. This device also aids in keeping temperatures consistent within the boiler which provides greater operational efficiencies and allow the boiler to operate with virtually any type of hot water system.

### Easy to Install, Maintain, and Service

From installation to service, the MPO has been designed with the contractor in mind. Installation features include a plug-and-play wiring junction box with easy plug-in control and accessory connections, and a reversible swing-away door with an easy connect power cord for the burner. The MPO includes a Honeywell electronic high-limit aquastat and provisions for optional plug-in accessories, such as a low water cutoff or an additional high-limit. For maintenance and servicing, the MPO comes equipped with reversible stainless steel flueway baffles, rear cleanout access plates, and ample flueway clearance for easy cleaning.

### Multiple Burner Options

Burnham offers the flexibility of multiple burner choices for the MPO boiler. A selection of burners from industry-leading manufacturers is available for all MPO sizes\*.

### MPO Direct Vent Kit

No chimney? The MPO-DV (Direct Vent) Option Kit is the perfect solution! The venting kit includes a stainless steel sidewall concentric vent/air intake termination. To connect the boiler flue connects to this piece, a flexible stainless steel, double wall, insulated pipe is also available in 5, 10, 15, and 20 foot lengths. Intake air for combustion connects directly from the burner housing to the vent terminal with a 4" galvanized single wall pipe.

### Additional Venting Options

MPO-DV Option Kit's flexible stainless steel pipe permits installation in just about every application where a chimney is not available. For added convenience in installations where there is little clearance behind the boiler, optional stainless steel "starter tees" are now available. These tees fit directly to the rear of the boiler and allow for the pipe to be connected vertically. This dramatically reduces the footprint of the boiler installation, by allowing the MPO to be installed close to a wall. Featuring welded stainless steel construction, the tees are equipped with a convenient, handle-operated, removable bottom cleanout plate.

\* Direct Vent boilers require the use of dedicated direct-vent compatible burners, such as the Beckett NX. Additional burners may be available, please contact your Burnham supplier for details.



**Honeywell Aquastat**

The standard Honeywell L7248 electronic aquastat, includes digital display and interface capability to provide diagnostic information.

**Plug-In Connectors, Concealed Wiring Harness**

Provides easy hook-up of additional controls, Wiring harness is hidden beneath the jacket, providing a clean appearance.

**3" Insulation**

Surrounds boiler block which reduces heat loss through the boiler jacket.

**3-Pass Cast Iron Heat Exchanger**

Flue gases are recirculated through the heat exchanger, extracting the maximum BTUs possible from the combustion process.



**Removable Flueway Baffles**

Allow the MPO to be installed in a variety of chimney applications and permit easy cleaning

**Large, Geometric Combustion Chamber**

Without a target wall or blanket, increases heat transfer and reduces costs on repair parts.

**Reversible Swing-Away Burner Door**

Offers easy access to combustion chamber for cleaning.



**Integrated Boiler Door Support**

Holds weight of boiler swing door in closed position, reducing stress & wear on hinges.



**Burnham Alliance SL™**

**Indirect-fired Water Heaters**

The Alliance SL water heaters are designed with an effective hydrastone lining that offers superior corrosion resistance and outstanding performance in a wide variety of water conditions.



Water heaters are available in five sizes from 27-119 gallons, and come with a unique 10/2/1 warranty – 10 years on the tank and coil, 2 years labor and 1 year on parts.



# Ratings



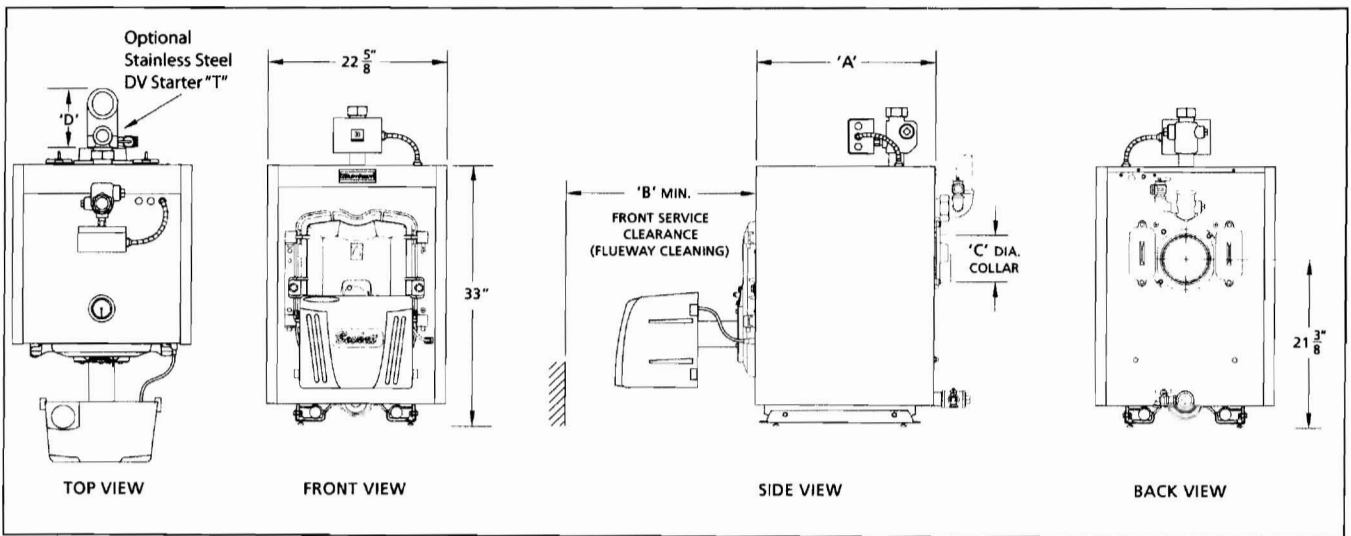
Model Number	Burner Capacity (GPH)	DOE Heating Capacity (MBH)	I=B=R Water Ratings	AFUE%
MPO84	.60	74	64	87
MPO115	.80	98	85	87
MPO147	1.05	129	112	87
MPO189	1.35	167	145	87
MPO231	1.65	203	177	87

# Specifications

Model Number	Dimensions (inches)			Water Content (gal.)	Natural Vent Approximate Shipping Weight (lbs.)	Direct Vent Approximate Shipping Weight (lbs.)
	'A'	'B'	'C'			
MPO84	16-5/8	24	5	7.70	475	N/A
MPO115	16-5/8	24	5	7.70	475	N/A
MPO147	22-5/8	24	6	11.08	567	579
MPO189	28-5/8	30	6	14.46	659	692
MPO231	34-5/8	30	7	17.84	751	807

# MPO Direct Vent Kit

Model Number	Vent Connector Diameter (inches)	Optional Starter "T" Depth 'D' (Inches)
MPO147	5	14
MPO189	5	14.5
MPO231	6	14.5



[www.burnham.com](http://www.burnham.com)

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 Phone: 1-888-432-8887  
[www.burnham.com](http://www.burnham.com)

Form No. PL81401301000-9/08-10M

Printed in the U.S.A.

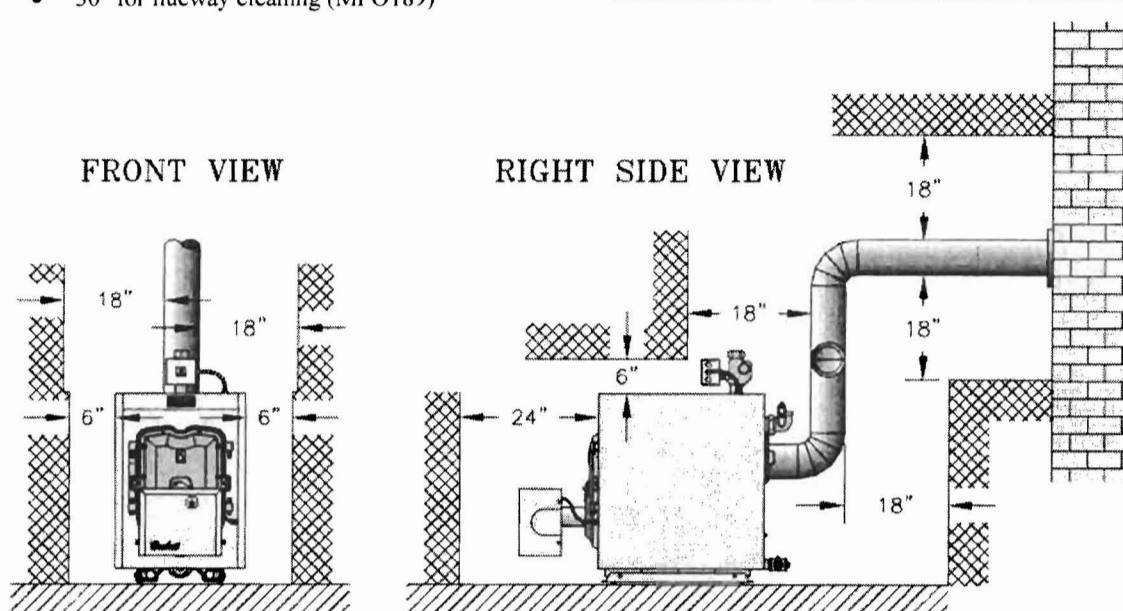
## SECTION I: PRE-INSTALLATION

- A. INSPECT SHIPMENT** carefully for any signs of damage.
- All equipment is carefully manufactured, inspected and packed. Our responsibility ceases upon delivery of crated boiler to the carrier in good condition.
  - Any claims for damage or shortage in shipment must be filed immediately against the carrier by the consignee. No claims for variances from, or shortage in orders, will be allowed by the manufacturer unless presented within sixty (60) days after receipt of goods.
- B. LOCATE BOILER** in front of final position before removing crate. See Figure 1.
- LOCATE so that vent pipe connection to chimney will be short and direct.
  - BOILER IS SUITABLE FOR INSTALLATION ON COMBUSTIBLE FLOOR. Boiler cannot be installed on carpeting.
  - FOR BASEMENT INSTALLATION, provide a solid elevated base, such as concrete, if floor is not level, or if water may be encountered on floor around boiler.
  - PROVIDE RECOMMENDED SERVICE CLEARANCE, if applicable, as follows:
    - Clearance from Jacket Front Panel -
      - 24" for servicing burner
      - 24" for flueway cleaning (MPO84 & 147)
      - 30" for flueway cleaning (MPO189)

- 36" for flueway cleaning (MPO231)
- Clearance from Jacket Left Side Panel -
    - 19" for burner swing door, if opened fully with burner mounted, otherwise 1" with burner removed
    - 12" access clearance to service rear of boiler if right side clearance is less than 12"
    - 1" minimum if right side clearance is 12" or larger to access and service rear of boiler.
  - Clearance from Jacket Right Side Panel -
    - 3" minimum if left side clearance is 12" or larger to access and service rear of boiler.
  - Clearance from Jacket Rear Panel -
    - 12" minimum for rear smokebox cleaning (Note: This dimension will also be controlled by horizontal to vertical to horizontal smokepipe arrangement - See Figures 2 and 16.)
5. For minimum clearances to combustible materials. See Figure 2.

### NOTICE

**Clearance to venting is for single wall vent pipe. If Type L vent is used, clearance may be reduced to the minimum required by the vent pipe manufacturer.**



**Figure 2: Minimum Installation Clearances To Combustible Materials (Inches)**

**NOTES:**

- Listed clearances comply with American National Standard ANSI/NFPA 31, Installation of Oil Burning Equipment.
- MPO boilers can be installed in rooms with clearances from combustible material as listed above. Listed clearances cannot

be reduced for alcove or closet installations.

- For reduced clearances to combustible material, protection must be provided as described in the above ANSI/NFPA 31 standard.