

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND **BUILDING PERMI** City of Portland

This is to certify that MICHAELA PIECHOWSKI

Job ID: 2011-03-509-HVAC

Located At 23 SAVOY

CBL: 428 - - K - 015 - 001 - - - - -

has permission to Install Peerless / Burnham in Basement

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 closed-in. 48 HOUR NOTICE IS REQUIRED.	A final inspection must be completed by owner hefore-this building or part thereof is occupied. If a certificate of occupancy is required, it must be
	ATA
Fire Prevention Officer	Code Enforcement Officer / Plan Reviewer
THIS CARD MUST BE POSTED ON THE ST	RELT SIDE OF THE PROPERTY.
PENALTY FOR REMOV	ING THIS CAR

PERMIT ISSUED

BUILDING PERMIT INSPECTION PROCEDURES Please call 874-8703 or 874-8693 (ONLY) or email: buildinginspections@portlandmaine.gov City of Portland

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.

1.

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 OCCU0PIED.



Strengthening a Remarkable City, Building a Community for Life . www.portlandmaine.gov

Director of Planning and Urban Development Penny St. Louis

Job ID: 2011-03-509-HVAC

Located At: 23 SAVOY

CBL: <u>428 - - K - 015 - 001 - - - - -</u>

Conditions of Approval:

Zoning

- 1. 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.
- 2. This property shall remain a three (3) family dwelling. Any change of use shall require a separate permit application for review and approval.

Fire

Fire Conditions:

Installation shall comply with City Code Chapter 10.

Installation shall comply with NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances;

NFPA 31, Standard for the Installation of Oil-Burning Equipment,

NFPA 54, National Fuel Gas Code,

Install shall follow the manufacturer's published instructions.

Capt. Gautreau

Building

- 1. Installation shall comply with 2003 International Mechanical Code and State of Maine Oil and Solid Fuel Board Laws and Rules.
- 2. This appliance/stove shall be installed, operated and maintained per the manufacturers specifications and the UL listing.

City of Portland, Maine - Building or Use Permit Application

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

PERMIT ISSUED

Job No:	Date Applied:		CBL:				
2011-03-509-HVAC	3/1/2011		428 K - 015 - 001		MAR 182	011	
Location of Construction:	Owner Name:		Owner Address:			Phone:	
23 SAVOY ST	MICHAEL A PIECHOW	MICHAEL A PIECHOWSKI		MAINE 04103	City of Portla	and	
Business Name:	Contractor Name: Fusco, Tony		Contractor Addre	04101	Phone: 831-2910		
Lessee/Buyer's Name:	Phone:		Permit Type: HVAC - HVAC		Zone: R-5		
Past Use:	Proposed Use:		Cost of Work: 4000.00			CEO District:	
Three residential unit	SAME: Three reside	ential unit	Fire Dept:	Dent: /			
Proposed Project Descriptio	building - to replace boller			V Approved W/CONDITIONS Use Group: Denied N/A Signature: CAPT, R. Hautent			
23 Savoy- To replace boiler	ш.		Fedestrian Activ	ines District (P.A.	.D.)		
Permit Taken By:				Zoning Appro	oval		
		Special Zo	one or Reviews	Zoning Appeal	Historic P	reservation	
 This permit application Applicant(s) from meet 	does not preclude the ing applicable State and	Shorelan	s	Variance	Not in D	ist or Landmark	
 Building Permits do not 	t include plumbing,	Flood Zo	one	Miscellaneous	Does not	Require Review	
septic or electrial work.Building permits are void if work is not started		Subdivis	sion	Conditional Us	e Approve	d	
within six (6) months of False informatin may in	f the date of issuance.	Site Plan	1	Approved	Approve	d w/Conditions	
permit and stop all worl	к.	Maj	Min MM _ Approved _ Approved w/Condition			\cap	
		Date: OK	with 1	Data	Date:	\leq	
		Condut	~ h~ 3/3/	11		/	
		CERTIF	IGATION /				

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

FILL IN AND S APPLICATION HEATING OR PON	FOR PERMIT NER EQUIPMENT
To the INSPECTOR OF BUILDINGS, PORTLAND, ME. The undersigned hereby applies for a permit to insta accordance with the Laws of Maine, the Building Code of th	429 - k - 15 Il the following heating, cooking or power equipment in the City of Portland, and the following specifications:
Location / CBL 23 SAUGY Name and address of owner of appliance MIKE Dischler PORTUME Installer's name and address TONY FUSCO 15	Use of Building RENTAL Date 3/1/2011 DWSKI 23 SAVOY ST 5 EKEANOR ST
PORTLAND 112 0410	Telephone 831-2778
Location of appliance: Basement I Floor Attic Roof	Type of Chimney: Masonry Lined Factory built
Type of Fuel: Gas D Oil D Solid	Metal Factory Built U.L. Listing #
Appliance Name: FEERLESS BURNHAM U.L. Approved Pres D No	Direct Vent TypeUL#
Will appliance be installed in accordance with the manufacture's installation instructions? Yes INO	Type of Fuel Tank Oil Gas
IF <u>NO</u> Explain:	Size of Tank 275 MAR
The Type of License of Installer:	Number of Tanks
 Master Plumber # Solid Fuel # <u>Ms 30012787</u> Oil # Gas # Other 	Distance from Tank to Center of Flame feet. Cost of Work: <u>S</u> Permit Fee: <u>S</u>
Approved Fire: Ele.:	Approved with Conditions □ See attached letter or requirement
Bldg.:	Inspector's Signature Date Approved Date Approved ink - Applicant's Gold - Assessor's Copy

Fire Conditions:

Installation shall comply with City Code Chapter 10.

Installation shall comply with NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel–Burning Appliances;

NFPA 31, Standard for the Installation of Oil-Burning Equipment;

NFPA 54, National Fuel Gas Code,

Install shall follow the manufacturer's published instructions.

Capt. Gautreau

Job Summary Report Job ID: 2011-03-509-HVAC

Report generate	ed on Mar 3, 201	1 9:31:04 AM							Page
Job Type:		HVAC		Job Descript	ion:	23 Savoy	Job Year:	201	1
Building Job	Status Code:	Initiate Plan R	eview	Pin Value:		769	Tenant Na	ame:	
Job Applicati	on Date:			Public Buildi	ng Flag:	N	Tenant Nu	imber:	
Estimated Va	lue:	4,000		Square Foot	age:				
Related Part	elated Parties: MICHAEL PIECHOWSKI Property Owner								
Tony Fusco MECHANICAL CONTRAC									TRACTOR
				Job C	harges				
Fee Code Description	Charge Amount	Permit Charge Adjustment	Net Charge Amount	Payment Date	Receipt Number	Payment Amount	Payment Adjustment Amount	Net Payment Amount	Outstanding Balance
Job Valuation Fee	es \$60.00		\$60.00) 3/2/11	1611	\$60.00		\$60.00	\$0.00
Location ID:	43588								
				Locatio	on Details				
Alternate Id	Parcel Number	Census Tract GI	SX GISY GIS	Z GIS Reference	Longitude	Latitude			
C72655	428 K 015 001	М			-70,261533	43.683561			
			Location Ty	pe Subdivision C	ode Subdiv	vision Sub Code	Related Persons	Address(es)	
			1				23 S/	AVOY STREET WEST	

Location Use Code Va	riance Code Use Zone Code	Fire Zone Code Inside Outs	ide Code District Code	General Location Code	Inspection Area Code	Jurisdiction Code			
THREE FAMILY	NOT APPLICABLE	R-5			DISTRICT 5	EAST DEERING			
		Struc	ture Details						
Structure: Single I	Structure: Single Family Home								
Occupancy Type Coo	le:								
Structure Type Code	Structure Status Type Square	e Footage Estimated Value	Address						
Single Family	0		23 SAVOY STREET WEST						
Longitude Latitude	GIS X GIS Y GIS Z GIS Ref	ference		User Defined Pro	operty Value				

Permit #: 20111613

					Data	Permit			
1.	0	Expiration Date	te	Reissue Dat	Issue Date	Permit Description	rmit Status	Structure Description	Location Id
pean	STAM		5	- 6	(Install Peerless / Burnham in Basement	tialized	Single Family Home	43588
X	21111	rel.)		1.51		per-	Week Zum	
	2111		X	m	NO	2	17-W	The Jan	
	21 - 1 - 1		2		1 NO		Frin	mich	

Job Summary Report Job ID: 2011-03-509-HVAC

Report generated on Mar 3, 2011 9:31:04 AM

			Inspec	ction Detail	S			_
Inspection Id	Inspection Type	Inspection Result Status	Inspection Status Date	Scheduled S	tart Timestamp	Result Statu	s Date Final Inspection Flag	
			Fee	s Details				

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City of Portland, Maine Memorandum

To: Marge Schmuckal, Zoning Administrator

From: Mary P. Davis, Loan Officer Mary Q.

Subject: Verification of Legal Number of Units

Date: 10/27/99 C-B-L- Number: 428-K-15

We have received an application for housing assistance for the property located at:

23 Savoy Street

The applicant's name is: Michael Piechowski (current owner: Gregory Curran)

In completing the application the applicant has indicated that the number of units currently in use at this property is _____3__.

Please verify that the number of units are legal under the current code. Yes, the number of units are legal. No, the number of units do not coincide with City records or the Land Use Code. According to City records the legal number of units for this property is ______ The property is a single family dwelling. Verified By: Maga Ahma Title: The Admin, 1/19/9.9

SECTION I: PRE-INSTALLATION

- A. **INSPECT SHIPMENT** carefully for any signs of damage.
 - 1. 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. <u>LOCATE BOILER</u> in front of final position before removing crate. See Figure 1.
 - 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.
 - 3. 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.
 - 4. PROVIDE RECOMMENDED SERVICE CLEARANCE, if applicable, as follows:
 - a. Clearance from Jacket Front Panel -
 - 24" for servicing burner
 - 24" for flueway cleaning (MST288 & MST396)

- 30" for flueway cleaning (MST513)
- 36" for flueway cleaning (MST629)
- b. 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.
- c. Clearance from Jacket Right Side Panel -
 - 6" minimum from external Electrical Enclosure if left side clearance is 12" or larger to access and service rear of the boiler
 - 24" minimum from rear tanklesss heater (if equipped) for servicing and removal of the heater
 - d. 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 14.)
- 5. For minimum clearances to combustible materials. See Figure 2.





- Listed clearances comply with American National Standard ANSI/NFPA 31, Installation of Oil Burning Equipment.
- MegaSteam[™] 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.

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.

C. <u>PROVIDE COMBUSTION AND VENTILATION</u> <u>AIR.</u> Local and National Codes may apply and should be referenced.

WARNING

Adequate combustion and ventilation air must be provided to assure proper combustion and to maintain safe ambient air temperatures.

Do not install boiler where gasoline or other flammable vapors or liquids, or sources of hydrocarbons (i.e. bleaches, fabric softeners, etc.) are used or stored.

Do not install boiler in laundry room, or, in vicinity of clothes dryer to prevent inadequate air supply to burner and lint contamination of burner air intake openings.

1. Determine volume of space (boiler room). Rooms communicating directly with the space in which the appliances are installed, through openings not furnished with doors, are considered a part of the space.

 $Volume(ft^3) = Length(ft) \times Width(ft) \times Height(ft)$

- 2. Determine total input of all appliances in the space. Add inputs of all appliances in the space and round the result to the nearest 1000 BTU per hour.
- 3. Determine type of space. Divide Volume by total input of all appliances in space. If the result is greater than or equal to 50 ft³/1000 BTU per hour, then it is considered an *unconfined space*. If the result is less than 50 ft³/1000 BTU per hour then the space is considered a *confined space*.
- 4. For boiler located in an *unconfined space of a conventionally constructed building*, the fresh air infiltration through cracks around windows and doors normally provides adequate air for combustion and ventilation.
- For boiler located in a confined space or an unconfined space in a building of *unusually tight construction*, provide outdoor air.

a. Outdoor air for combustion may be provided with an optional Burnham Inlet Air Accessory Kit, Part Number 611280031 (only available and suitable for use on Beckett AFG with burner enclosure cover burner). See Section for installation details.

or

- b. Outdoor air may be provided with the use of two permanent openings which communicate directly or by duct with the outdoors or spaces (crawl or attic) freely communicating with the outdoors. Locate one opening within 12 inches of top of space. Locate remaining opening within 12 inches of bottom of space. Minimum dimension of air opening is 3 inches. Size each opening per following:
 - *i*. **Direct communication with outdoors.** Minimum free area of 1 square inch per 4,000 BTU per hour input of all equipment in space.
 - *ii.* Vertical ducts. Minimum free area of 1 square inch per 4,000 BTU per hour input of all equipment in space. Duct cross-sectional area shall be same as opening free area.
 - iii. Horizontal ducts. Minimum free area of 1 square inch per 2,000 BTU per hour input of all equipment in space. Duct cross-sectional area shall be same as opening free area.
 Alternate method for boiler located within confined space. Use indoor air if two permanent openings communicate directly with additional space(s) of sufficient volume such that combined volume of all spaces meet criteria for unconfined space. Size each opening for minimum free area of 1 square inch per 1,000 BTU per hour input of all equipment in spaces, but not less than 100 square inches.
- 6. Louvers and Grilles of Ventilation Ducts
 - a. All outside openings should be screened and louvered. Screens used should not be smaller than 1/4 inch mesh. Louvers will prevent the entrance of rain and snow.
 - b. Free area requirements need to consider the blocking effect of louvers, grilles, or screens protecting the openings. If the free area of the louver or grille is not known, assume wood louvers have 20-25 percent free area and metal louvers and grilles have 60-75 percent free area.
 - Louvers and grilles must be fixed in the open position, or interlocked with the equipment to open automatically during equipment operation.

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TABLE 1A: DIMENSIONAL DATA (SEE FIGURE 1)

Boiler	Di Se	mensior e Figure	ns e 1	Water Content (To Normal Water Line) - Gallons		Heat Transfer	Actual	
Model No.	"A"	"B"	"C"	With Tankless Heater	Non-Heater	Sunace Area - Sq. Ft.	Weight (LB.	
MST288	22-5/8"	24"	6"	15.3	14.9	20.29	607	
MST396	22-5/8"	24"	6"	15.3	14.9	20.29	607	
MST513	28-5/8"	30"	6"	19.7	19.3	27.29	744	
MST629	34-5/8"	36"	7"	*24.1	- 23.8	34.29	881	
NOTE: 1: Maximum Working Pressure: Steam - 15 PSI								

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TABLE 1B: RATING DATA

Boiler	er Burner Capacity		Burner Capacity I=B=R NET Ratings		Mir F	AFUE %			
No. GP	GPH	мвн	DOE Heating Capacity MBH	Steam MBH	Steam Sq. Ft.	Round In. Dia.	Rectangle In. x In.	Height Ft.	Steam Boiler
MST288	0.75	105	92	69	288	6	8 X 8	15	86.0
MST396	1.05	147	127	95	· 396	6	8 X 8	15	86.0
MST513	1.35	189	164	123	513	7	8 X 8	15	86.0
MST629	1.65	231	201	151	629	7	8 X 8	15	86.0

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PIPING AND CONTROLS



Do not pipe boiler before jacket is installed.

A. PRESSURE TEST BLOCK ASSEMBLY

- 1. Make up cold water supply connection to the boiler.
- Install pressure gauge or pressure-temperature gauge in tapping provided. See Boiler Dimensional drawing, Figures 7.1 and 7.2 (Section 7)
- Plug all open tappings in the boiler and fill with water. Apply approximately thirty (30) psig pressure. Check to make certain that all joints and fittings are water tight.
- 4. After all joints and connections have been proven, tight, remove cold water supply and plugs from all tappings that are to be used. See Figures 7.1 and 7.2 (Section 7) for tapping locations.

B. BOILER RETURN CLEARANCE

Return piping must allow for opening and closing Burner Mounting Plate. PB Heat, LLC suggests installing a 1-1/4 NPT tee, a 90° elbow, and a 1-1/4 NPT x 5" long nipple in the return tapping before a vertical stand pipe is used.

C. WATER BOILER PIPING

- Refer to the Water Installation Survey and Hydronics Institute Residential Hydronic Heating Installation/Design Guide for guidance.
- The supply and return connections should be sized to suit the system. A 1-1/2" to 1-1/4" reducing coupling may be used where the system piping is 1-1/2".
- The supply should be out the top of the back section and return to the bottom of the front section as shown in Figure 3.1. There is a 3/4" tapping in the top of the back section for air elimination.



Figure 3.1: Water Boiler Piping

- 4. When the return temperature from the system will be below 150°F on oil boilers for extended periods (heat pump systems, outdoor reset, snow melt, etc.), provide piping and controls to protect the boiler from condensation. Condensation will damage the boiler and will lead to shortened boiler life and maintenance problems.
- If using a Partner indirect fired water heater or other, see Figure 3.6 for typical piping. Also refer to additional instructions supplied with the Partner.
- 6. If the boiler is to be used in conjunction with a refrigeration system, the chilled medium shall be piped in parallel with boiler and proper valves applied to prevent the chilled medium from entering the boiler. Refer to Figure 3.5.
- 7. If the boiler is connected to heating coils located in air handling units, the boiler piping system must be equipped with flow control valves or other automatic devices to prevent gravity circulation of the boiler water during the cooling cycle.

D. STEAM BOILER PIPING

- 1. Refer to the Steam Installation Survey and Hydronics Institute Residential Hydronic Heating Installation/Design Guide for assistance.
- 2. See table below for pipe sizing. The return loop from system should always enter equalizer through the Hartford Loop, 2" to 4" below normal water line. See Figure 3.2.

Boiler Model No.	Model Supply Riser lo. "A" Header "B"		odel Supply Riser "A" Header "B"		Equalizer "C"
WBV-03	(1) 2"	2" or 3"	1-1/4"		
WBV-04	(1) 2"	2" or 3"	1-1/4"		

- 3. Use swing joints to attach header to avoid damage to the boiler due to thermal expansion and contraction of steam header pipe.
- 4. Pipe the steam header a minimum of 24" above the normal water line using swing joints to attach the risers into the steam header.





PIPING AND CONTROLS

E. TANKLESS HEATER OR COVERPLATE

 If a tankless coil is used (item 9), install as pictured. On water boilers, install in opening in front section. On steam boilers, install in opening in rear section. For suggested piping of tankless water heaters refer to Figures 3.3 and 3.4.

Install anti-scald device in hot water supply piping. Water temperature above 125F can cause severe burns Instantly or death from scalds.

NOTICE

X1019R, X1020R, and PP1011R coils installed in WBV boilers have internal flow controls installed. Do not use external flow controls with these coils.



Figure 3.3: Tankless Coil Piping, Steam Boiler





Figure 3.4: Tankless Coil Piping, Water Boiler

2. If not using a tankless coil, cover the heater opening with cover plate (item 7 or 16).

NOTICE

CE Be sure rubber gasket is in place between cover plate or water heater plate and boiler section.

F. CONTROLS

CAUTION

Pipe the discharge of the safety valve or relief valve to prevent injury in the event of pressure relief. Pipe the discharge to a drain. Provide piping that is the same size as the relief valve.

- 1. Water Boiler Controls:
 - a. Install the limit / operating control, pressuretemperature gauge and safety relief valve. See Figure 7.1 (Section 7) for proper location. For installations subject to UL726, a second operating control that senses water temperature is also required (not provided). Use an L4080B or equivalent. Install in the supply piping near the boiler.
- 2. Steam Boiler Controls:
 - a. Install the limit / operating control, pressure gauge, gauge glass trim and safety relief valve. See Figure 7.2 (Section 7), Figure 3.7 (float boilers) and cover photo (probe boilers).
 - b. For installations subject to UL726, a second operating control that senses steam pressure is required (not provided). Use a PA404A or equivalent. On probe boilers, install the additional pressure control opposite the standard PA404A using a cross instead of a tee along with a second brass siphon (not provided). On float boilers, install the additional pressure control in the 1/4" tapping on the top of the float low water cut-off using a vertical (360°) brass siphon (not provided).
 - c. For application of a probe low-water cut-off, use only Hydrolevel CG450. See Figure 7.2 (Section 7) for location. See also control manufacturers instruction sheet.
 - d. See Figure 3.7 for application of float low water cut-offs.
- For complete information on servicing and adjustment of controls, refer to the attached control specification sheets.

PIPING AND CONTROLS





Figure 3.5: Piping to Isolate Boiler from Chilled Medium on Chiller Systems

Figure 3.7: Float Low Water Cut-off



