

City of Portland, Maine - Building or Use Permit Application

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

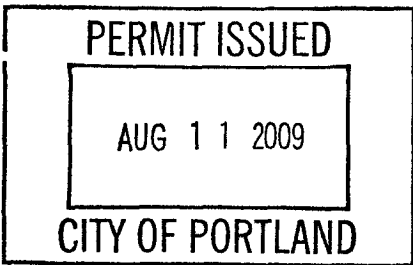
Permit No: 09-0777	Issue Date:	CBL: 040 A013001
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Location of Construction: 53 DANFORTH ST	Owner Name: 53 DANFORTH STREET LP	Owner Address: ONE CITY CENTER 4TH FLOOR	Phone: 207-772-520.
Business Name:	Contractor Name: Southern Maine Plumbing and Heati	Contractor Address: 160 Presumpscot Street Portland	Phone: 2077725203
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone: R-1

Past Use: Multi Unit Residential	Proposed Use: Multi Unit Residential - Install Two Hydrotherm #kn10 Natural Gas Boilers <i>resolvr - 43 dr.</i>	Permit Fee: \$1,580.00	Cost of Work: \$156,000.00	CEO District: 1
Proposed Project Description: Install Two Hydrotherm #kn10 Natural Gas Boilers		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied <i>* See Conditions</i>	INSPECTION: Use Group: <i>U</i> Type: <i>HVAC</i> <i>State Cons Regs</i>	
		Signature: <i>(KG)</i>	Signature: <i>[Signature]</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: lmd	Date Applied For: 07/24/2009	Zoning Approval
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<ol style="list-style-type: none"> 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.. 	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"/> <i>Ok w/cond hng</i> Date: <i>7/27/09</i> <i>ABM</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 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 <i>ABM</i> Date: _____
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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

09.0777
[Empty box]

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT

040-A-013001

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 53 DANFORTH ST. Use of Building APARTMENT Date 7/22/09
Name and address of owner of appliance PORTLAND WORKFORCE HSG
53 DANFORTH ST. PORTLAND, ME
Installer's name and address SOUTHERN MAINE PLBG & HTG INC.
160 PRESUMPSOT ST. PORTLAND, ME 04103 Telephone 207-772-5203

Location of appliance:

- Basement
- Floor (THIRD)
- Attic
- Roof

Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: TWO HYDROTHERM * KN10
U.L. Approved Yes No BOILERS

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 # MS 2288
- Solid Fuel # _____
- Oil # _____
- Gas # PNT 750
- Other _____

Type of Chimney:

- Masonry Lined
Factory built _____

Metal VAN PACKER MODEL CS
Factory Built U.L. Listing # UL 1738

Direct Vent
Type _____ UL# _____

Type of Fuel Tank

- Oil
- Gas (NATURAL)

Size of Tank N. A.

Number of Tanks N. A.

Distance from Tank to Center of Flame N. A. feet.

Cost of Work: \$ 156,000.00

Permit Fee: \$ _____

Approved

Fire: _____
Ele.: _____
Bldg.: _____

Approved with Conditions

- See attached letter or requirement

Inspector's Signature _____

Date Approved _____

Signature of Installer [Signature] SOUTHERN ME PLBG & HTG INC.

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

to schedule your inspections as agreed upon

Permits expire in 6 months, if the project is not started or ceases for 6 months.

The Owner or their designee is required to notify the inspections office for the following inspections and provide adequate notice. Notice must be called in 48-72 hours in advance in order to schedule an inspection:

By initializing at each inspection time, you are agreeing that you understand the inspection procedure and additional fees from a "Stop Work Order" and "Stop Work Order Release" will be incurred if the procedure is not followed as stated below.

A Pre-construction Meeting will take place upon receipt of your building permit.

 X **Final inspection required at completion of work.**

Certificate of Occupancy is not required for certain projects. Your inspector can advise you if your project requires a Certificate of Occupancy. All projects DO require a final inspection.

If any of the inspections do not occur, the project cannot go on to the next phase, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.

CERIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED.

Signature of Applicant/Designee

Date

Signature of Inspections Official

Date



City of Portland, Maine - Building or Use Permit

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Business Name:	Contractor Name: Southern Maine Plumbing and Heati	Contractor Address: 160 Presumpscot Street Portland	Phone (207) 772-5203
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	

Proposed Use: Multi Unit Residential - Install Two Hydrotherm #kn10 Natural Gas Boilers	Proposed Project Description: Install Two Hydrotherm #kn10 Natural Gas Boilers
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Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Ann Machado **Approval Date:** 07/27/2009

Note: **Ok to Issue:**

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

Dept: Building **Status:** Approved with Conditions **Reviewer:** Tammy Munson **Approval Date:** 08/11/2009

Note: **Ok to Issue:**

- 1) The installation must comply with the State of Maine Gas Regulations.

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Capt Keith Gautreau **Approval Date:** 07/28/2009

Note: **Ok to Issue:**

- 1) Install shall comply with NFPA 54.
A compliance letter is required
- 2) Install shall comply with all manufacture's specifications.

Southern Maine Plumbing & Heating Inc.

160 Presumpscot St. Portland, Maine 04103 tel/fax (207) 772-5203

to: <u>PORTLAND CODES OFFICE</u>	date: <u>7/24/09</u>	
attn: <u>CHRIS HANSON</u>	from: <u>LEN DRAPKIN</u>	
<input checked="" type="checkbox"/> cover sheet	<input type="checkbox"/> proposal	<input type="checkbox"/> message
<input type="checkbox"/> request for quote	<input type="checkbox"/> purchase order	<input checked="" type="checkbox"/> FAX TRANSMITTAL
total number of pages including this cover sheet		<u>4</u>

Re: 53 DANFORTH ST. PROJECT - HEATING SYSTEM

- ADDITIONAL INFO ON BOILERS AS REQUESTED BY USA
- LET ME KNOW IF YOU NEED ANYTHING ELSE

If you do not receive all pages, or if they are not legible, please call 772-5203

HydroTherm®

KN SERIES GAS BOILER WITH **HeatNet** CONTROL INSTALLATION & OPERATING INSTRUCTIONS



MEA #444-05-E

MASS Plumbers #G1-06-04-28

DESIGNED AND TESTED ACCORDING TO A.S.M.E. BOILER AND PRESSURE VESSEL CODE, SECTION IV FOR A MAXIMUM ALLOWABLE WORKING PRESSURE OF 100 PSI, 700 kPa, WATER.

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electrical switch. Do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

CAUTION: Do not use automotive anti-freeze in the boiler waterways. If the use of antifreeze is necessary an anti-freeze specifically formulated for hydronic heating systems must be used or damage to the boiler may occur voiding the warranty!

INSTALLER, THESE INSTRUCTIONS TO BE AFFIXED ADJACENT TO THE BOILER / WATER HEATER.
CONSUMER, RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE PURPOSES.

Advanced Thermal Hydronics

 A MESTEK COMPANY

IN UNITED STATES: 200 NORTH ELM ST. • WESTFIELD, MA 01085 • (413) 564-5515 • FAX (413) 568-9613
IN CANADA: 7555 TRANMERE DRIVE • MISSISSAUGA, ONT. L5S 1L4 • (905) 672-2991 • FAX (905) 672-2883
www.hydrothermkn.com

AVERTISSEMENT. Assurez-vous de bien suivre les instructions données dans cette notice pour réduire au minimum le risque d'incendie ou d'explosion ou pour éviter tout dommage matériel, toute blessure ou la mort

Ne pas entreposer ni utiliser d'essence ou ni d'autres vapeurs ou liquides inflammables à proximité de cet appareil ou de tout autre appareil.

QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:

- Ne pas tenter d'allumer d'appareil.
- Ne touchez à aucun interrupteur; ne pas vous servir des téléphones se trouvant dans le bâtiment.
- Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les intructions du fournisseur.
- Si vous ne pouvez rejoindre le fournisseur, appelez le service des incendies.

L'installation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.

CONTENTS

Before Your Start	page 2
Ratings & Capacities	page 3
Location	page 3
Combustion Air & Ventilation	page 3
Venting Guidelines	page 5
Common Vent Systems	page 13
General Piping Requirements	page 14
Heating System Piping	page 14
Domestic Water Supply Piping	page 17
Condensate Piping	page 18
Gas Supply Piping	page 19
Electrical Wiring	page 20
Boiler Operation	page 20
Operating Instructions	page 21
Sequence of Operation	page 23
Ignition Troubleshooting	page 24
Checking & Adjustment	page 26
Diagnostics	page 27
Maintenance	page 28
Troubleshooting	page 29
Repair Parts	page 30
Wiring	page 33
Warranty	page 36

BEFORE YOU START

This manual covers the application, installation, operation and maintenance of a KN series boiler.

To obtain the safe, dependable, efficient operation and long life for which this boiler was designed, these instructions must be read, understood and followed.

The KN boiler series has been design certified by CSA for use with natural gas under the latest revision of ANSI-Z21.13/CSA 4.9, Gas-Fired Hot Water Boilers and CAN1-3.1, Industrial and Commercial Gas Fired Packaged Boilers. Each unit has been constructed and hydrostatically tested for a maximum working pressure of 100 psi, 700 kPa, in accordance with Section IV of the A.S.M.E. Boiler and Pressure Vessel Code.

All aspects of the boiler installation must conform to the requirements of the authority having jurisdiction, or, in the absence of such requirements, to the National Fuel Gas Code, ANSI Z223.1/NFPA 54-latest revision. Where required by the authority having jurisdiction, the installation must conform to the Standard for Controls and Safety Devices for Automatically Fired Boilers, ANSI/ASME CSD-1.

If installed in the Commonwealth of Massachusetts, you **MUST FOLLOW** the additional instructions contained in HydroTherm's instruction sheet MACODE-3. Please refer to the back of this manual for required regulations.

In Canada, the installation must be in accordance with the requirements of CSA B149.1 or .2, Installation Code for Gas Burning Appliances and Equipment.

The owner should maintain a record of all service work performed with the date and a description of the work done. Include the name of the service organization for future reference.

Direct all questions to your HydroTherm distributor or contact the HydroTherm Customer Service Department at: 260 North Elm Street, Westfield, MA 01085. Always include the model and serial numbers from the rating plate of the boiler in question.

KN INSTALLATION AND OPERATION INSTRUCTIONS

RATINGS & CAPACITIES

Before installing the KN boiler check the rating plate to ensure that the unit has been sized properly for the job. Also ensure that the unit has been set up for the type of gas available at the installation site. Other important considerations are the availability of an adequate electrical supply, fresh air for combustion and a suitable vent system.

BOILER LOCATION

1. This boiler is suitable for indoor installations only. Locate the boiler in an area that provides good access to the unit. Servicing may require the removal of jacket panels. Allow the minimum clearances between adjacent construction and the boiler as listed in Table 1.

NOTE: Service clearances are not mandatory, but are recommended to ensure ease of service should it be required.

Table 1 - Clearances

	Clearance to Combustibles		Service Clearance	
	in	mm	in	mm
Top	6	153	24	610
Back	6	153	24	610
Left Side	6	153	6	152
Right Side	6	153	6	152
Front	6	153	36	914
Flue	6	153		

2. An optimum site will be level, central to the piping system, close to a chimney or outside wall and have adequate fresh air for combustion. Ensure that the unit is level from front to back and from side to side. Use metal shims if leveling is required. Electrical and electronic components must be protected from exposure to water during operation and maintenance. DO NOT install this boiler in a location that would subject any of the gas ignition and other electronic components to direct contact with water or excessive moisture during operation or servicing.
3. Ensure that the floor is structurally sound and will support the weight of the boiler.

NOTE: The KN may be installed directly on combustible flooring, but never on carpeting.

4. Locate the boiler in an area that will prevent water damage to adjacent construction should a leak occur or during routine maintenance.

5. **DO NOT** place this boiler in a location that would restrict the introduction of combustion air into the unit or subject it to a negative pressure unless the combustion air is piped from the outside, see the COMBUSTION AIR & VENTILATION section.

6. **NEVER** place this boiler in a location that would subject it to temperatures at or near freezing.

WARNING: Never store combustible materials, gasoline or any product containing flammable vapors or liquids in the vicinity of the boiler. Failure to comply with this warning can result in an explosion or fire causing extensive property damage, severe personal injury or death!

COMBUSTION AIR & VENTILATION

WARNING: This boiler must be supplied with combustion air in accordance with Section 5.3, Air for Combustion & Ventilation, of the latest revision of the National Fuel Gas Code, ANSI Z223.1/NFPA 54 and all applicable local building codes. Canadian installations must comply with CSA B149.1 or .2 Installation Code for Gas Burning Appliances and Equipment, or applicable provisions of the local building codes. Failure to provide adequate combustion air for this boiler/water heater can result in excessive levels of carbon monoxide which can result in severe personal injury or death!

To operate properly and safely this boiler requires a continuous supply of air for combustion. **NEVER** store objects on or around the boiler!

CAUTION: Combustion air contaminated with fluorocarbons or other halogenated compounds such as cleaning solvents and refrigerants will result in the formation of acids in the combustion chamber. These acids will cause premature failure of the boiler voiding the warranty!

CAUTION: If the boiler is operated while the building is under construction it must be protected from wood, concrete, sheet rock and other types of dust. Failure to properly protect the unit from construction dust will damage the unit voiding the warranty!

Buildings will require the installation of a fresh air duct or other means of providing make-up air if the intake air option isn't used. Any building utilizing other gas burning appliances, a fireplace, wood stove or any type of exhaust fan must be checked for adequate combustion air when all of these devices are in operation at one time. Sizing of an outside air duct must be done to meet the requirements of all such devices.

WARNING: Never operate the KN in an environment subjected to a negative pressure unless it is Direct Vented. Failure to comply with this warning can result in excessive levels of carbon monoxide causing severe personal injury or death!

All Air From Inside The Building

If the boiler is to be located in a confined space the minimum clearances listed in Table 1 must be maintained between it and any combustible construction. When installed in a confined space without the intake air option two permanent openings communicating with an additional room(s) are required. The combined volume of these spaces must have sufficient volume to meet the criteria for an unconfined space. The total air requirements of all gas utilization equipment, fireplaces, wood stoves or any type of exhaust fan must be considered when making this determination. Each opening must have a minimum free area of $1 \text{ in}^2/1000 \text{ Btu/hr}$, $2200 \text{ mm}^2/\text{kW}$ based on the total input rating of ALL gas utilization equipment in the confined area. Each opening must be no less than 100 in^2 , $64,516 \text{ mm}^2$ in size. The upper opening must be within 12 in , 300 mm of, but not less than 3 in , 80 mm from, the top of the enclosure. The bottom opening must be within 12 in , 300 mm of, but not less than 3 in , 80 mm from, the bottom of the enclosure.

All Air From Outside The Building

When installed in a confined space without the intake air option two permanent openings communicating directly with, or by ducts to, the outdoors or spaces that freely communicate with the outdoors must be present. The upper opening must be within 12 in , 300 mm of, but not less than 3 in , 80 mm from, the top of the enclosure. The bottom opening must be within 12 in , 300 mm of, but not less than 3 in , 80 mm from, the bottom of the enclosure.

Where directly communicating with the outdoors or communicating with the outdoors through vertical ducts, each opening shall have a minimum free area of $1 \text{ in}^2/4000 \text{ Btu/hr}$, $550 \text{ mm}^2/\text{kW}$ of the total input rating of all of the equipment in the enclosure.

Where communicating with the outdoors through horizontal ducts, each opening shall have a minimum free area of $1 \text{ in}^2/2000 \text{ Btu/hr}$, $1100 \text{ mm}^2/\text{kW}$ of the total input rating of all of the equipment in the enclosure.

When ducts are used, they must have the same cross-sectional area as the free area of the opening to which they connect.

Table 2 - Make-up Air Duct Sizing

Input (MBH)	Required Cross Sectional Duct Area					
	1/4 in, 6.4 mm Wire Screen		Metal Louvers		Wooden Louvers	
	in ²	cm ²	in ²	cm ²	in ²	cm ²
600	150	967	200	1292	600	3869
1000	250	1612	334	2154	1000	6448
2000	500	3224	668	4308	2000	12,896

When calculating the free area necessary to meet the make-up air requirements of the enclosure, consideration must be given to the blockage effects of louvers, grills and screens.

Screens must have a minimum mesh size of $1/4 \text{ in}$, 6.4 mm . If the free area through a louver or grill is not known ducts should be sized per Table 2 above.

Direct Intake Air Option - General

This configuration provides combustion air directly to the boiler's air intake using a dedicated pipe when using the direct vent option. Combustion air can be drawn in horizontally through an outside wall or vertically through the roof, see Figures 1, 2, 3 & 4. It must be sized per Table 3.

Single wall galvanized smoke pipe, single wall aluminum pipe, flexible aluminum pipe, PVC or CPVC pipe can be used for the intake air pipe.

Table 3 - Intake Air Pipe Sizing

Model Size	Pipe Diameter	
	in ²	mm ²
600	5	127
1000	6	152
2000	9	229

NOTE: All joints in metal intake air systems must be secured using corrosion resistant fasteners and sealed using a suitable Silicone caulk. If PVC or CPVC is used, the joints must be cleaned with a suitable solvent and connected using a solvent based PVC cement. The intake air system **MUST** be supported by the building structure not the boiler.



CITY OF PORTLAND, MAINE

Department of Building Inspections

Original Receipt

July 23 2009

Received from So. Me Plumbing + Heating

Location of Work 50 Danforth

Cost of Construction \$ 156000 Building Fee: _____

Permit Fee \$ 1580⁰⁰ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: 1580⁰⁰

Building (IL) _____ Plumbing (I5) _____ Electrical (I2) _____ Site Plan (U2) _____

Other _____

CBL: _____

Check #: 17176 Total Collected \$ 1580⁰⁰

**No work is to be started until permit issued.
Please keep original receipt for your records.**

Taken by: 

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy