

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



# CITY OF PORTLAND

# BUILDING PERMIT

This is to certify that Richard & Nola Urban

Located At 35 RIVERVIEW ST

Job ID: 2012-08-4793-HVAC

CBL: 223- C-008-001

has permission to Install gas heating sysytem

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 before this building or part thereof is occupied. If a certificate of occupancy is required, it must be

\_\_\_\_\_  
**Fire Prevention Officer**

\_\_\_\_\_  
**Code Enforcement Officer / Plan Reviewer**

**THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY  
PENALTY FOR REMOVING THIS CARD**

## BUILDING PERMIT INSPECTION PROCEDURES

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

or email: [buildinginspections@portlandmaine.gov](mailto:buildinginspections@portlandmaine.gov)

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.**

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 OCCUPIED.

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

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

Job No: 2012-08-4793-HVAC	Date Applied: 8/23/2012	CBL: 223- C-008-001	
Location of Construction: 35 RIVERVIEW ST	Owner Name: RICHARD & NOLA URBAN	Owner Address: 35 RIVERVIEW ST PORTLAND, ME 04102	Phone:
Business Name:	Contractor Name: Charlie Burnham Heating	Contractor Address: PO Box 382, Freeport, ME 04032	Phone: 865-3010
Lessee/Buyer's Name:	Phone:	Permit Type: HVAC	Zone: R-3
Past Use: Single Family Dwelling	Proposed Use: Same: Single Family Dwelling- to install gas System 2000 heating system	Cost of Work: \$10,000.00	CEO District:
		Fire Dept: <i>N/A</i>	Inspection: Use Group: <i>R-3</i> Type: <i>5B</i> <i>HVAC</i>
Proposed Project Description: install gas sysytem 2000 in basement		Pedestrian Activities District (P.A.D.)	
Permit Taken By: Gayle		<b>Zoning Approval</b>	

Special Zone or Reviews	Zoning Appeal	Historic Preservation
<input type="checkbox"/> Shoreland <input type="checkbox"/> Wetlands <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan  <input type="checkbox"/> Maj <input type="checkbox"/> Min <input type="checkbox"/> MM Date: <i>08/30/12</i>	<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:	<input checked="" type="checkbox"/> Not in Dist 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>S</i>

**CERTIFICATION**

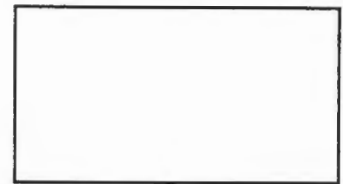
I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, 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

# APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



2012 08 4793 R-3 66

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 35 Riverview str 1223-C-819 Use of Building \_\_\_\_\_ Date 8-23-12

Name and address of owner of appliance Nola Urban  
60 Riverview Portland

Installer's name and address Charlie Burnham Heating, P.O. Box 382 Freeport ME, 04032 Telephone 865-3010

### Location of appliance:

- Basement
- Floor
- Attic
- Roof

### Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: System 2000

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 # \_\_\_\_\_
- Gas # PMT 6050
- Other \_\_\_\_\_

### Type of Chimney:

- Masonry Lined CPU  
Factory built \_\_\_\_\_
- Metal  
Factory Built U.L. Listing # \_\_\_\_\_
- Direct Vent  
Type \_\_\_\_\_ UL# \_\_\_\_\_

RECEIVED

### Type of Fuel Tank

- Oil
  - Gas
- DEPT. OF BUILDING INSPECTIONS  
CITY OF PORTLAND MAINE

AUG 23 2012

Size of Tank \_\_\_\_\_

Number of Tanks \_\_\_\_\_

Distance from Tank to Center of Flame \_\_\_\_\_ feet.

Cost of Work: \$ 9450.00

Permit Fee: \$ \_\_\_\_\_

### Approved

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

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

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

### Approved with Conditions

- See attached letter or requirement

Inspector's Signature \_\_\_\_\_

Date Approved \_\_\_\_\_

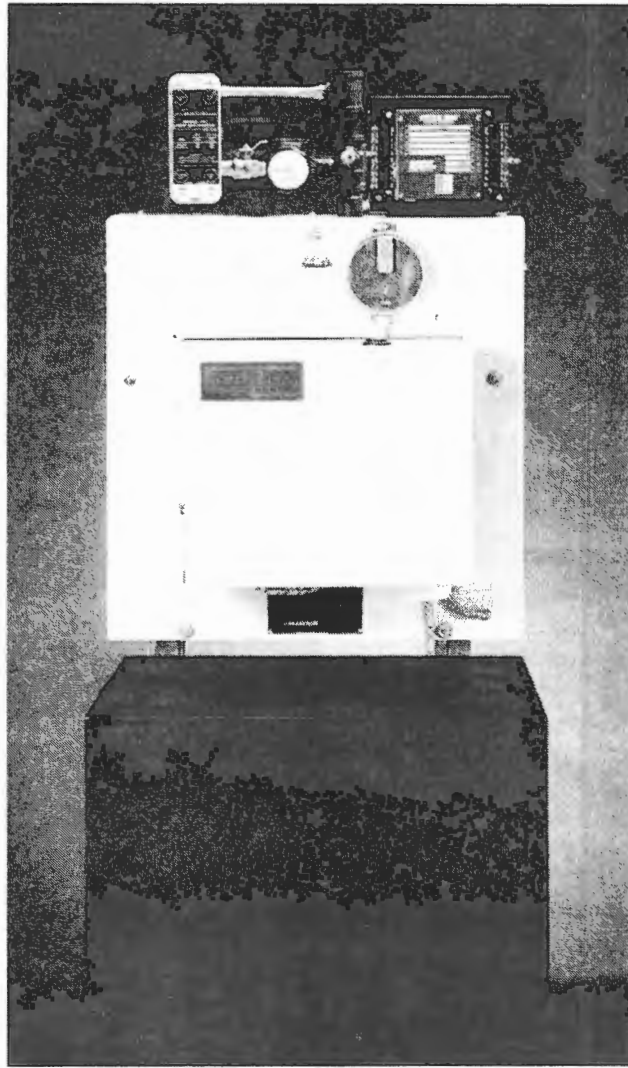
Signature of Installer [Signature]

White - Inspection

Yellow - File

Pink - Applicant's

Gold - Assessor's Copy



## SECTION "B-2" GAS HEAT SERVICE

1. RIELLO GAS
2. CARLIN E-Z GAS
3. GAS PIPING
  - A) SIZING
  - B) LEAK TESTING
  - C) FLOW TESTING
4. GAS PROTECTION PACKAGE

Products

A  
Concept

B-1  
Oil Heat Install

B-2  
Gas Heat Install

C  
Venting

D  
Diagnostics

E  
Digital Manager

F  
Classic Manager

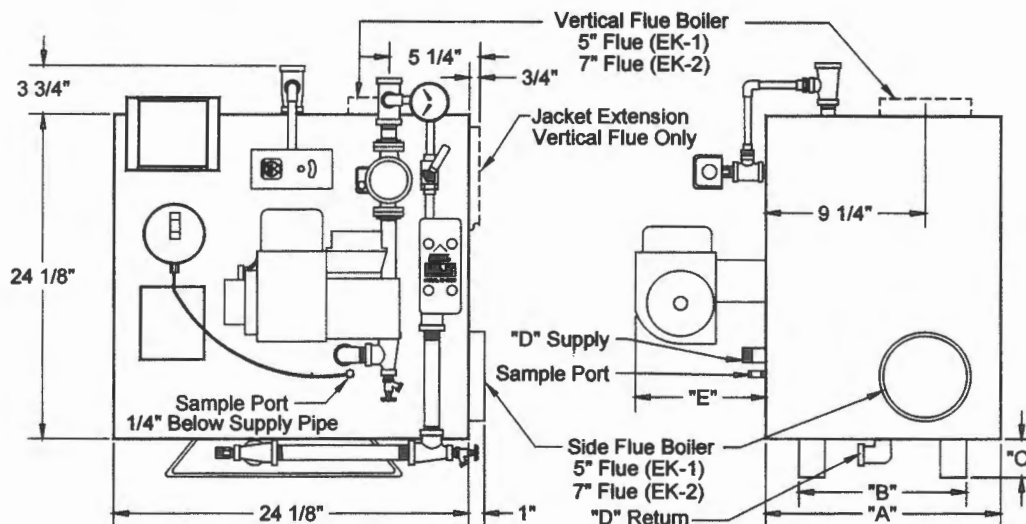
G  
Wiring-General

H  
System Piping

J  
Dom. Piping &  
Pool Appl.

K  
Maintenance

**Figure 1**  
Dimension  
Drawing



**Clearances, Water Content, Weight, and Air Inlet Dimensions**

Model	Water Content	Weight Lbs	Air Inlet Pipe Size	A	B	C	D	Burner	E	E With A/B
EK-1	2-½ gal.	250	2"	17 ½"	13"	2 ½"	1"	Beckett	11"	13"
EK-2	4 gal.	350	3"	24 ¾"	20 ¼"	3 ½"	1 ¼"	Carlin	14"	15 ½"
								Riello	13"	13"

### COMBUSTION AIR

The System 2000 Boiler must be installed in an area where adequate fresh air is available to support combustion. The System 2000 is provided with a sealed Air Box that can be piped to air outside the building. Piping of outside air directly to the boiler is highly recommended because it completely isolates the boiler from the home environment, as well as greatly reducing operating noise from the boiler.

**Boiler with outside air piping:** In modern houses with tight construction the connection of the Air Box to an outside air source to provide combustion air is highly recommended. The outside air source must be located high enough above grade to be at least 12" above expected snow accumulation. **WARNING:** For systems with sidewall venting, combustion air piping from outside the building is required. The Energy Kinetics sidewall vent kit contains specific instructions for installation that must be followed. Combustion air may be supplied through PVC pipe. For EK-1 use 2" pipe up to 20 feet in length with up to (5) 90-degree elbows. For EK-2 use 3" pipe up to 20 feet in length with up to (5) 90-degree elbows. A total equivalent length of 45 feet is allowed. Each 90 degree elbow is the equivalent of 5 feet of straight pipe. For example, if three 90 degree elbows are used, then the length of pipe run may increase to 35 feet. For longer runs up to 40 feet with up to five 90 degree elbows, immediately increase pipe size by 1", to 3" for EK-1 and 4" for EK-2. An unglued or Tek-screw joint allows the door to swing down when the air inlet pipe is disconnected.

**Boiler without outside air piping: WARNING:** The confined space shall be provided with two permanent openings, one near the top of the enclosure and one near the bottom. Each opening shall have a free area of not less than one square inch per 1,000 BTU per hour of the total input rating of all appliances in the enclosure, freely communicating with interior areas having adequate infiltration from the outside.

**WARNING:** Modern buildings of tight construction, as well as the operation of attic and exhaust fans, kitchen ventilation systems, clothes dryers or fireplaces may create conditions of unsatisfactory combustion or venting. Provisions must be made to use combustion air that communicates with a well-ventilated attic or with the outdoors (such as using a louver or grate). The opening should have a free area of not less than one (1) square inch per 4,000 BTU per hour of the total input rating.

### CHIMNEY VENTING

**WARNING:** Masonry chimneys must have a tile or metal liner. The liner must:

- 1) Extend above the masonry.
- 2) Have an insulating air gap, isolating the liner from the chimney, allowing for rapid heat-up and draft establishment.
- 3) Be sealed at each joint to prevent air infiltration and damage from condensation.

NOTICE: Inspect Chimney and Chimney base after initial three months of heating season.

**CAUTION:** If drop leg is in excess of 12 inches deep, backfill with loose gravel or sand to obtain a maximum of 12-inch depth. All clean out doors must be sealed to prevent cold air entry into chimney.

In retrofit installations, have chimney thoroughly cleaned. Carefully inspect chimney, base of chimney, and liner prior to installation of System 2000 Boiler.

# FRONTIER BOILER

## Instructions, Service Version Oilheat Edition

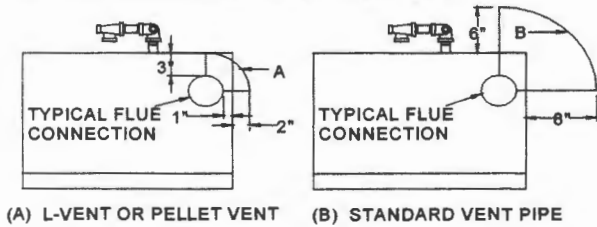
### LOCATION and CLEARANCE

**DANGER:** Provide clearance to combustible surfaces in accordance with all local and national codes. Follow National Fire Protection Association Bulletin NFPA Installation of Oil Burning Equipment and all applicable codes.

Installation Clearances from Boiler Surfaces	Clearance to Combustibles	Clearance for Service
FRONT	15-1/2"	20"
LEFT SIDE	0"	0"
RIGHT SIDE	0"	0"
BACK	4"	4"
TOP	16"	16"
BOTTOM OF LEGS	0"	16"*
FLUE CONNECTION (see Figure 1A)	(A) 3" L-Vent (B) 9" Std.Flue	(A) 3" L-Vent (B) 9" Std.Flue

\*Minimum recommended clearance to allow the door to fully open.

Figure 1A. Top View of Boiler -  
Flue Connection Clearance to Combustibles



Boiler Weight and Water Content		
Model	EK-1 Frontier	EK-2 Frontier
Weight	270 lbs	350 lbs
Water Content	2-1/2 gallons	4 gallons
Air Inlet Pipe Size	2"	3"
Boiler Flue Outlet	4"	6"

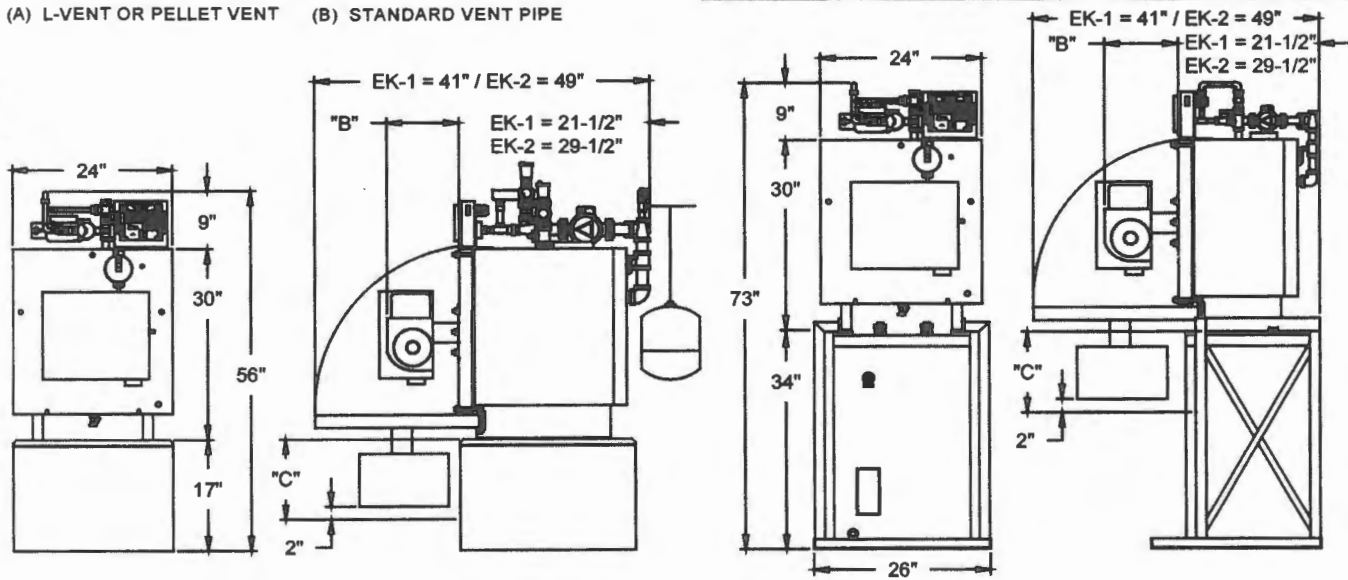
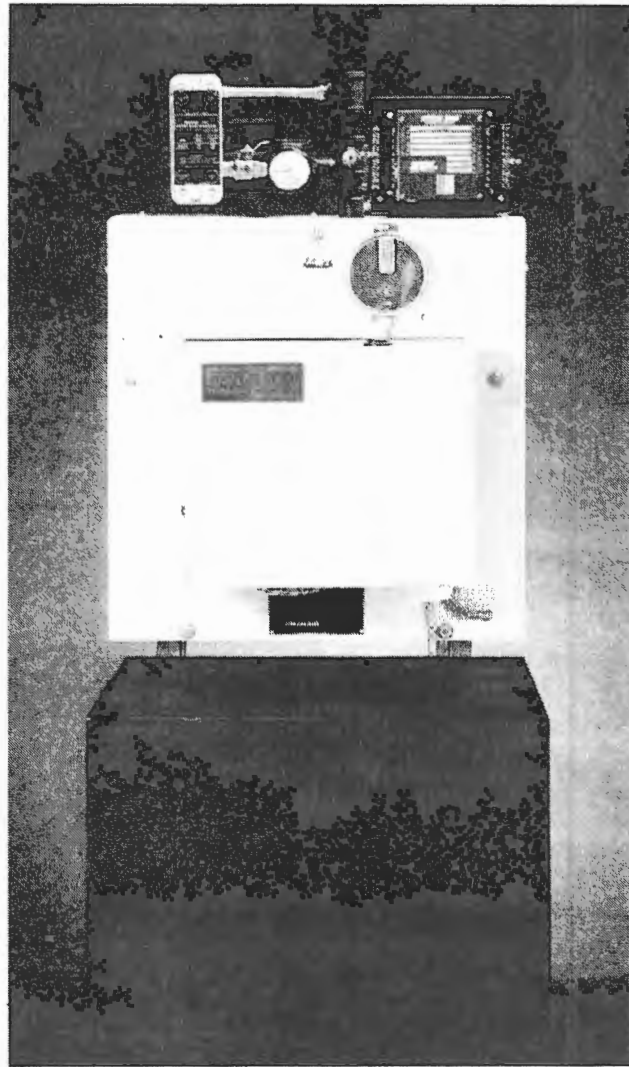


Figure 1B - Boiler Clearance for Cleaning and Service

Burner	"B"		Open Door Leg Bottom to Floor Clearance "C"
	W/o Airbox	W/Airbox	
Beckett AFG	11-1/2"	13-1/4"	34"
Carlin 99FRD	10-1/2"	11-1/2"	36"
Riello 40F5	13"	N/A	35"



## SECTION "B-2" GAS HEAT SERVICE

1. RIELLO GAS
2. CARLIN E-Z GAS
3. GAS PIPING
  - A) SIZING
  - B) LEAK TESTING
  - C) FLOW TESTING
4. GAS PROTECTION PACKAGE

Products

A  
Concept

B-1  
Oil Heat Install

B-2  
Gas Heat Install

C  
Venting

D  
Diagnostics

E  
Digital Manager

F  
Classic Manager

G  
Wiring-General

H  
System Piping

J  
Dom. Piping &  
Pool Appl.

K  
Maintenance



# CARLIN EZ-GAS BURNER SETTINGS

EK-1 Boilers are shipped from the factory preset for 120,000 Btu/Hr firing rate and EK-2 Boilers are shipped from the factory preset for 200,000 Btu/Hr firing rate. The SYSTEM 2000 Boiler can be fired over a range of firing rates to suit the needs of the application. The following table lists approximate settings for Carlin EZ-Gas burners based on extensive testing.

**CAUTION:** Final settings for each burner and firing rate for a particular installation **must** be determined by using combustion test equipment and following the instructions given under "Start Up Procedure".

**CAUTION:** Because the energy converter removes heat from the combustion flue gas so efficiently, low firing rates may not provide high enough flue gas temperature for proper draft in a chimney. The Columns labeled 'Chimney' and 'Sidewall' show the suitability of the firing rate for a particular combination.

Settings are approximate. All combustion tests must be performed at steady state with burner cover installed. Take flue samples through Puff Switch opening: Natural Gas: CO<sub>2</sub>: 8.6-9.2, O<sub>2</sub>: 5.5-4.5

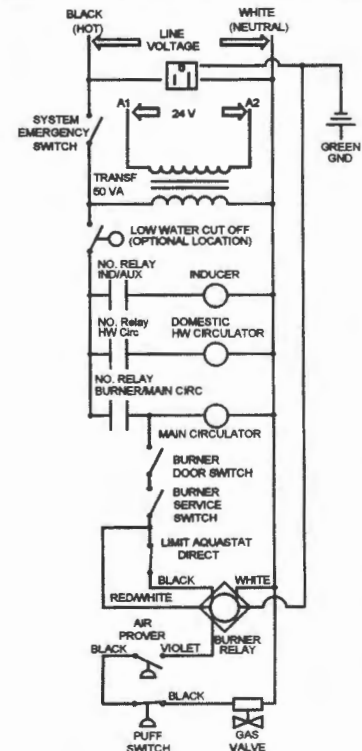
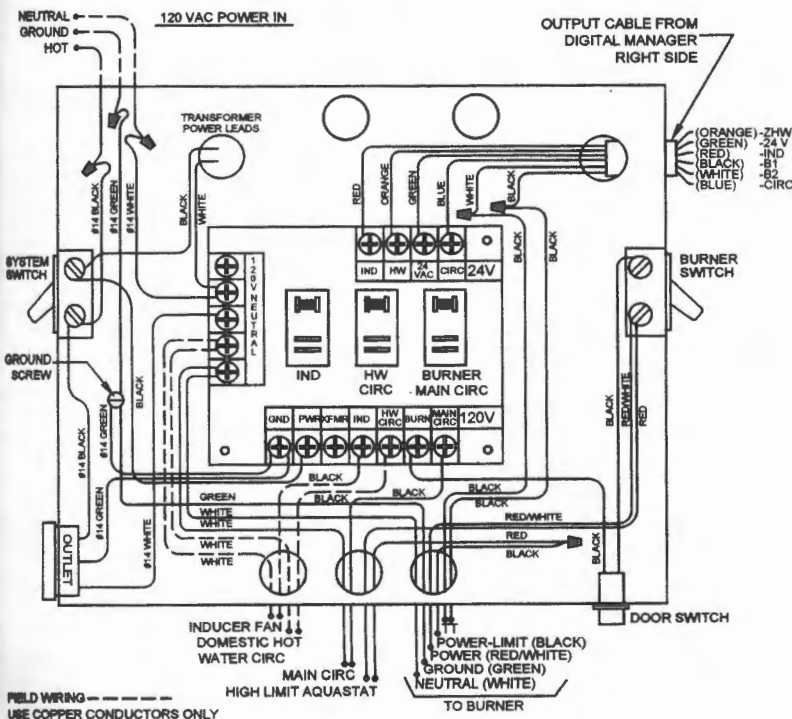
Propane: CO<sub>2</sub>: 9.7-10.7, O<sub>2</sub>: 6.00-4.5

CO: 200 PPM Max

Draft at Breech: Sidewall (power vent): negative 0.10" w.c. to 0.12" w.c. (Set with Damper)  
Chimney: negative 0.02" w.c. to -0.12" w.c.

Model	Input Btu/Hr	Chimney	Sidewall Vent	Burner Orifice Drill size		Approximate air band setting		UTL - air tube insertion length inches	Diffuser
				Natural Gas	Propane Gas	1 Slot	2 Slot		
EK-1	80,000	N	Y	#8 (0.199)	#25 (0.149)	25		2-3/8"	B
	100,000	N	Y	#1 (0.228)	#16 (0.177)	35		2-3/8"	B
	120,000*	Y	Y	C (0.242)	#12 (0.189)	45		2-3/8"	B
	150,000	Y	Y	J (0.277)	7/32 (0.219)	60		2-3/8"	B
EK-2	175,000	N	Y	N (0.302)	C (0.242)		40	2-3/8"	A
	200,000*	Y	Y	21/64 (0.328)	17/64 (0.266)		50	2-3/8"	A
	225,000	Y	Y	T (0.358)	9/32 (0.281)		60	2-3/8"	A
	250,000	Y	N	X (0.397)	5/16 (0.312)		70	2-3/8"	A

\* Factory Setting



Be careful to observe correct wiring in burner control junction box.

Products  
Concept  
Oil Heat Install  
Gas Heat Install  
Venting  
Diagnostics  
Digital Manager  
Classic Manager  
Wiring-General  
System Piping  
Dom. Piping & Pool Appl.  
Maintenance



# PORTLAND MAINE

*Strengthening a Remarkable City, Building a Community for Life • [www.portlandmaine.gov](http://www.portlandmaine.gov)*

## Receipts Details:

**Tender Information:** Check , BusinessName: Charlie Burnham, Check Number: 8211  
**Tender Amount:** 120.00

## Receipt Header:

**Cashier Id:** gguertin  
**Receipt Date:** 8/23/2012  
**Receipt Number:** 47463

## Receipt Details:

Referance ID:	7776	Fee Type:	BP-Constr
Receipt Number:	0	Payment Date:	
Transaction Amount:	120.00	Charge Amount:	120.00
Job ID: Job ID: 2012-08-4793-HVAC - install gas sysytem 2000 in basement			
Additional Comments: 35 riverview St. Charlie Burnham			

Thank You for your Payment!