City of Portland, Maine - Building or Use Permit Application

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

Permit No:	Issue Date:	CBL:
10-1448		016 J017001

Location of Construction:	Owner Name:	Owner Address:	Phone:
29 WATERVILLE ST	WATERVILLE TRIAD LLC	17 CHESTNUT ST	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Grover Contracting	51 Burnham Drive Naples	2075777282
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		HVAC	R-6

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
3 Unit Residential	3 Unit Residential - install Penscott Boiler and Rinna Hot water	$260.00	$24,000.00	1

FIRE DEPT: ☑ Approved ☐ Denied

*See Conditions

Signature: KG

INSPECTION:

Use Group: R-2 Type: HVAC

IMC-2003

Signature: MJB 12/6/10

Proposed Project Description:

install Penscott Boiler and Rinna Hot water

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
ldobson	11/19/2010

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..

PERMIT ISSUED

DEC - 6

City of Portland

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☑ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☐ Site Plan	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date: 11/19/10	Date:	Date:

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

City of Portland, Maine - Building or Use Permit

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

Permit No:	Date Applied For:	CBL:
10-1448	11/19/2010	016 J017001

Location of Construction:	Owner Name:	Owner Address:	Phone:
29 WATERVILLE ST	WATERVILLE TRIAD LLC	17 CHESTNUT ST	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Grover Contracting	51 Burnham Drive Naples	(207) 577-7282
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		HVAC	

Proposed Use:	Proposed Project Description:
3 Unit Residential - install Penscott Boiler and Rinna Hot water	install Penscott Boiler and Rinna Hot water

Dept: Zoning **Status:** Approved **Reviewer:** Marge Schmuckal **Approval Date:** 11/19/2010

Note: **Ok to Issue:** ☑

1) All previous conditions are still in force

Dept: Building **Status:** Approved with Conditions **Reviewer:** Jeanine Bourke **Approval Date:** 12/06/2010

Note: **Ok to Issue:** ☑

1) The appliance and venting shall be installed in accordance with the UL listing, IMC 2003 and NFPA 211.

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

Dept: Fire **Status:** Approved with Conditions **Reviewer:** Capt Keith Gautreau **Approval Date:** 12/02/2010

Note: **Ok to Issue:** ☑

1) Install shall comply with all manufacture's specifications.

2) Install shall comply with NFPA 58
A compliance letter is required.

PERMIT ISSUED

FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT
HEATING OR POWER EQUIPMENT

PERMIT ISSUED
DEC - 6
City of Portland

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 29 Waterville ST 16J17 Use of Building Residential Date 11/19/10

Name and address of owner of appliance JOHN RYAN same

Installer's name and address Grover Contracting / Jeff Grover
51 Buxton DR Telephone 207-577-7282

Location of appliance:
- ☐ Basement
- ☑ Floor
- ☐ Attic
- ☐ Roof

Type of Fuel:
- ☑ Gas
- ☐ Oil
- ☐ Solid

Appliance Name: Boiler PENSOTT / HOT WATER RINNAI

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 # TN+3883
- ☐ Other

Type of Chimney:
- ☐ Masonry Lined
  Factory built ✓
- ☐ Metal
  Factory Built U.L. Listing #
- ☑ Direct Vent
  Type PVC UL#

Type of Fuel Tank
- ☐ Oil
- ☑ Gas

Size of Tank Street Meters

Number of Tanks

Distance from Tank to Center of Flame _____ feet.

Cost of Work: $ 24,000

Permit Fee: $ 260

Dept. of Building Inspections
City of Portland Maine
NOV 19 2010
RECEIVED

Approved

Fire:

Ele.:

Bldg.:

Approved with Conditions

☐ See attached letter or requirement

Inspector's Signature Date Approved

Signature of Installer

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

CITY OF PORTLAND, MAINE

Department of Building Inspections

Original Receipt

11·19· 20 10

Received from Grover

Location of Work 29 Waterville St

Cost of Construction $_____ Building Fee:_____

Permit Fee $_____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: 260

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

Other HVAC

CBL: 16J17

Check #:_____ **Total Collected $** 260

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

FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT
HEATING OR POWER EQUIPMENT

PERMIT ISSUED
DEC - 6 2010
City of Portland

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 29 Waterville ST 16J 17 Use of Building Residential Date 11/19/10

Name and address of owner of appliance JOHN RYAN same

Installer's name and address Grover Contracting / Jeff Grover
51 Buxton DR Telephone 207-577-7282

Location of appliance:
- ☐ Basement
- ☑ Floor
- ☐ Attic
- ☐ Roof

Type of Fuel:
- ☑ Gas
- ☐ Oil
- ☐ Solid

Appliance Name: Boiler PENSOTT / HOT WATER RINNAI

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 # PNT 3083
- ☐ Other

Type of Chimney:
- ☐ Masonry Lined
  Factory built ✓
- ☐ Metal
  Factory Built U.L. Listing #
- ☑ Direct Vent
  Type PVC UL#

Type of Fuel Tank
- ☐ Oil
- ☑ Gas

Size of Tank Street Meters

Number of Tanks

Distance from Tank to Center of Flame _____ **feet.**

Cost of Work: $ 24,000

Permit Fee: $ 260

Approved

Fire:

Ele.:

Bldg.:

Approved with Conditions

☐ See attached letter or requirement

Inspector's Signature Date Approved

Signature of Installer

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

Technical Data

Table 4

Boiler Model Model No. WB2B		45	60
Natural gas / liquid propane gas			
CSA input	MBH	60-160	60-212
	kW	17-47	17-62
CSA output/DOE *1	MBH	55-146	55-194
heating capacity	kW	16-43	16-57
Net I = B = R rating *2	MBH	127	169
Heat exchanger surface area	ft.^{2}	15.76	15.76
	m^2	1.46	1.46
Min. gas supply pressure			
Natural gas	"w.c.	4	4
Liquid propane gas	"w.c.	10	10
Max. gas supply pressure *3			
Natural gas	"w.c.	14	14
Liquid propane gas	"w.c.	14	14
A.F.U.E.	%	96.1	96.1
Weight	lbs	155	155
	kg	70	70
Boiler water content	USG	1.9	1.9
	ltr	7.2	7.2
Boiler max. flow rate *4	GPM	15.4	15.4
	ltr/h	3500	3500
Max. operating pressure	psig	60	60
at 210°F / 99°C	bar	4	4
Boiler water temperature			
– Adjustable high limit (AHL) range			
space heating	°F/	68 to 165 /	
(steady state)	°C	20 to 74	
DHW production	°F/	165 /	
	°C	74	
– Fixed high limit (FHL)	°F/°C	210/99	
Boiler connections			
Boiler heating supply and return	NPTM "	1 ¼	1 ¼
Pressure relief valve	NPTF "	¾	¾
Drain valve	(male	¾	¾
	thread)		
Boiler supply/return for indirect-fired DHW storage tank NPT" (field supplied)		1 ¼	1 ¼
Gas valve connection, NPTF		1	1

*1 *Output based on 140°F / 60°C, 120°F / 49°C system supply/return temperature.*

*2 *Net I = B = R rating based on piping and pick-up allowance of 1.15.*

*3 *If the gas supply pressure exceeds the maximum gas supply pressure value, a separate gas pressure regulator must be installed upstream of the heating system.*

*4 *See "Typical System Flow Rates" on page 28 in this manual.*

2. TECHNICAL CHARACTERISTICS

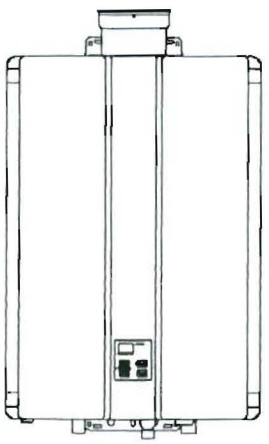
2.1 Technical data

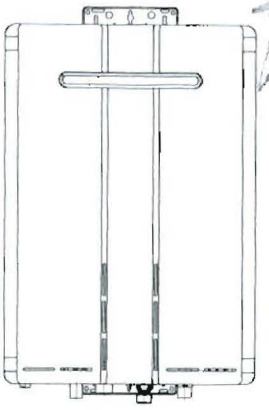
Model		PCH 18
CE Certification	n°	0694BN3485
Appliance Type		B23p-B33-C13-C33-C43-C53-C63-C83-C93
Appliance Category		II2H3B/P
Heat Input max	kW - BTU/hr	18 – 61419
Heat Input max - D.H.W. production working	kW - BTU/hr	23.5 – 80185
Heat Input min	kW - BTU/hr	(G 20) 4 – 13.649 / (G 31) 5.50 – 18.767
Heat Output max - 122/86°F	kW - BTU/hr	19.26 – 65.718
Heat Output max - 176/140°F	kW - BTU/hr	17.69 – 60.374
Heat Output max - D.H.W. production working - 176/140°F	kW - BTU/hr	23.10 – 78822
Heat Output min - 176/140°F	kW - BTU/hr	3.90 – 13.294
Efficiency 100% (full load 122/86°F)	%	96
Efficiency 30% (partial load 122/86°F)	%	97
Efficiency 100% (full load 176/140°F)	%	87.7
Efficiency 30% (partial load176/140°F)	%	88.8
GAS DIRECTIVE 92/42/ECC - Efficiency marking	stars	4
Sedbuk	band	A
NOx	class	5
Central Heating circuit		
Central Heating water temperature setting (min-max)	°C – °F	30-80 / 25-40 – 86-176 / 77-104
Max. heating working temperature	°C – °F	80 – 176
Expansion vessel capacity	litres - gal	6 - 1.60
Max. working pressure (heating)	bar - psi	2.1 - 30
Min. working pressure (heating)	bar - psi	0.3 - 4.29
Dimensions (Boiler casing size)		
Width	in	16.1
Height	in	28.7
Depth	in	11.2
Weight (net)	lb	16.36
Hydraulic connections		
Central Heating Flow connection	NPT	3/4"
Central heating Return connection	NPT	3/4"
Cold water mains connection	NPT	1/2"
Gas connection	NPT	1/2"
Flue systems		
Horizontal-Concentric flue system	Ø mm - in	60/100 - 2.4/4
Max. Flue length	m - ft	5 - 16.4
Twin pipe flue system	Ø mm - in	80/80 - 3.15/3.15
Max. Flue length (from terminal to terminal)	m - ft	50 -164
Twin pipe flue system	Ø mm - in	60/60 - 2.4/2.4
Max. Flue length (from terminal to terminal)	m - ft	30 - 98
Vertical-Concentric flue system	Ø mm - in	60/100 - 2.4/4
Max. Flue length	m - ft	5 - 16.4
Gas Supply		
Natural gas G 20		
Inlet pressure	mbar - psi	20 - 0.29
Gas consumption	m^3/h - ft^3/h	1.91 – 67.44
Propane G31		
Inlet pressure	mbar - psi	37 - 0.53
Gas consumption	kg/h - ft^3/h	1.40 – 25.71
Electrical specifications		
Power supply	V/Hz	120/60
Electrical power consumption	W	175
Electrical protection	IP	X4D

Rinnai®

Direct Vent Tankless Water Heater

Operation and Installation Manual





FOR INDOOR APPLICATIONS ONLY

RC80HPi REU-KA2530FFUD-US
RC98HPi REU-KA3237FFUD-US

FOR OUTDOOR APPLICATIONS ONLY

RC80HPe REU-KA2530WD-US
RC98HPe REU-KA3237WD-US

Register your product at www rinnairegistration.com or call 1-866-RINNAI1 (746-6241)

ANS Z21.10.3
•
CSA 4.3

INSTALLER: Leave this manual with the appliance.
CONSUMER: Retain this manual for future reference.

WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

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

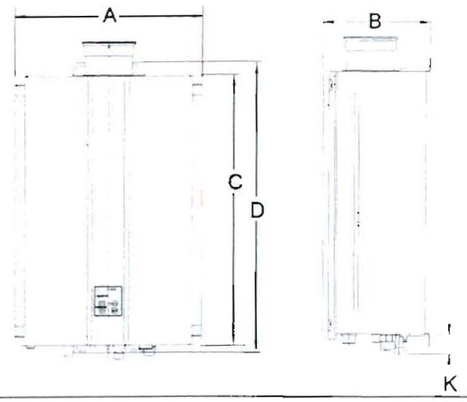
— WHAT TO DO IF YOU SMELL GAS

- Do not try to light ar
- Do not touch any el not use any phone in your building.
- Immediately call your gas supp ighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

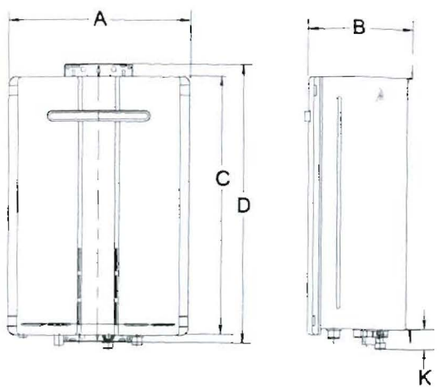
— Installation and service must be performed by a qualified installer, service agency or the gas supplier.

Dimensions

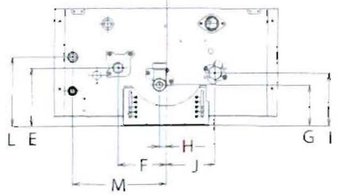
RC80HPi, RC98HPi



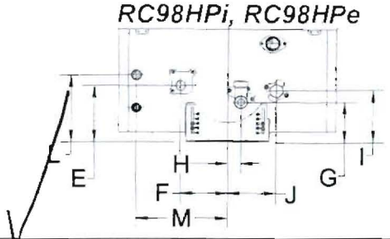
RC80HPe, RC98HPe



RC80HPi, RC80HPe



RC98HPi, RC98HPe



DIM	DESCRIPTION	*RC80HPi* in (mm)	*RC98HPi* in (mm)	*RC80HPe* in (mm)	*RC98HPe* in (mm)
A	Width	18.5 (470)	18.5 (470)	18.5 (470)	18.5 (470)
B	Depth	10.5 (266.9) *	10.5 (266.9) *	10.7 (271.9)	10.7 (271.9)
C	Height - Unit	26.4 (670)	26.4 (670)	26.4 (670)	26.4 (670)
D	Height - with brackets	28.5 (723.2)	28.5 (723.2)	28.4 (721.6)	28.4 (721.6)
E	Hot Water Outlet - from wall	4.3 (110) *	4.3 (110) *	4.5 (115)	4.5 (115)
F	Hot Water Outlet - from center	3.9 (100)	3.9 (100)	3.9 (100)	3.9 (100)
G	Cold Water Inlet - from wall	2.8 (70.0) *	2.9 (74.6) *	3.0 (75.0)	3.1 (79.6)
H	Cold Water Inlet - from center	0.5 (12.8)	1.1 (27.7)	0.5 (12.8)	1.1 (27.7)
I	Gas Connection - from wall	3.9 (99) *	3.9 (99) *	4.1 (104)	4.1 (104)
J	Gas Connection - from center	4.1 (103.2)	4.1 (103.2)	4.1 (103.2)	4.1 (103.2)
K	From base to gas connection	1.6 (40.2)	1.6 (40.2)	1.6 (40.2)	1.6 (40.2)
	From base to cold connection	2.0 (50.2)	2.0 (50.2)	2.0 (50.2)	2.0 (50.2)
	From base to hot connection	1.6 (41.2)	1.6 (41.2)	1.6 (41.2)	1.6 (41.2)
L	Condensate Dain - from wall	5.2 (132.6) *	5.2 (132.6) *	5.4 (137.6)	5.4 (137.6)
M	Condensate Drain - from center	7.7 (195)	7.7 (195)	7.7 (195)	7.7 (195)

* This is the minimum dimension from the wall. The wall bracket is adjustable to allow an additional 1.57 inches (40 mm).

Ladder Diagram