

City of Portland, Maine - Building or Use Permit Application

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

PERMIT ISSUED

APR 12 2011

Job No: 2011-03-523-HVAC	Date Applied: 2/28/2011	CBL: 046 - - C - 009 - 001 - - - -	
Location of Construction: 201 STATE ST	Owner Name: OTTER LIMITED LIABILITY CO SEA	Owner Address: 39 COVESIDE LN YARMOUTH, ME - MAINE 04096 City of Portland	Phone:
Business Name:	Contractor Name: Clemmons, Scott	Contractor Address:	Phone:
Lessee/Buyer's Name:	Phone:	Permit Type: HVAC - HVAC	Zone: R-6
Past Use: Six residential condominium units	Proposed Use: SAME: Six residential condominium units - to add replacement heating systems	Cost of Work: 40000.00	CEO District:
		Fire Dept: <input checked="" type="checkbox"/> Approved w/conditions <input type="checkbox"/> Denied <input type="checkbox"/> N/A	Inspection: Use Group: Type:
		Signature: <i>CART. R. [Signature]</i>	Signature: <i>[Signature]</i>
Proposed Project Description: 201 State St. /HVAC		Pedestrian Activities District (P.A.D.)	

Permit Taken By: 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 informatin may invalidate a building permit and stop all work.	Zoning Approval		
	Special Zone or Reviews <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:	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 <i>within</i> <input 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>Amy exterior work requires A</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	PHON



FILL IN AND SIGN WITH INK

Waiting for electronic Plans 2/28/11 60

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT

046 009

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 201 State st Use of Building Multi use Date 2/28/11
Name and address of owner of appliance Louise Murphy 39 Coxside Ln Yarmouth ME 04096

Installer's name and address S.C. Clemens - 50 Indian Trail
Crownfield, Me 04010 Telephone 207-462-7995

Location of appliance:
 Basement Floor
 Attic Roof

Type of Fuel:
 Gas Oil Solid

Appliance Name: Baxi 2-1st fl/por
2-2nd fl/por
U.L. Approved Yes No A-31051WZ

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 1127 Scott
 Other PNT 496 PTH

Type of Chimney:
 Masonry Lined
Factory built _____

Metal
Factory Built U.L. Listing # _____

Direct Vent
Type Coaxial UL# _____

Type of Fuel Tank
 Oil
 Gas

Size of Tank NA

Number of Tanks NA

Distance from Tank to Center of Flame NA feet.

Cost of Work: \$ 40,000.-

Permit Fee: \$ 420.00

Received 2/28/11 66

Approved

Approved with Conditions

Fire: _____
Ele.: _____
Bldg.: _____

See attached letter or requirement

Signature of Installer

Scott Clemens (Signature)

Inspector's Signature

Date Approved

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

Job Summary Report
Job ID: 2011-03-523-HVAC

Report generated on Mar 4, 2011 11:29:50 AM

Job Type:	HVAC	Job Description:	201 State St. /HVAC	Job Year:	2011
Building Job Status Code:	Initiate Plan Review	Pin Value:	787	Tenant Name:	
Job Application Date:		Public Building Flag:	N	Tenant Number:	
Estimated Value:	40,000	Square Footage:			
Related Parties:		OTTER LIMITED LIABILITY SEA		<i>Property Owner</i>	
		- Scott Clemmons		<i>MECHANICAL CONTRACTOR</i>	

Job Charges

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
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Location ID: 7314

Location Details

Alternate Id	Parcel Number	Census Tract	GIS X	GIS Y	GIS Z	GIS Reference	Longitude	Latitude
H00003	046 C 009 001		M				-70.266777	43.653582

Location Type	Subdivision Code	Subdivision Sub Code	Related Persons	Address(es)
1				201 STATE STREET WEST

Location Use Code	Variance Code	Use Zone Code	Fire Zone Code	Inside Outside Code	District Code	General Location Code	Inspection Area Code	Jurisdiction Code
		RESIDENTIAL <i>R-6</i>			Historic District		DISTRICT 3	CENTRAL BUSINESS DISTRICT

Structure Details

Structure: 2 Baxi heating units on first, second & third fl

Occupancy Type Code:

Structure Type Code	Structure Status Type	Square Footage	Estimated Value	Address
Muti-Family 5+ Building	0			201 STATE STREET WEST

Longitude	Latitude	GIS X	GIS Y	GIS Z	GIS Reference	User Defined Property	Value
						Number of Bathtubs and Showers	22
						Number of Clothes Washers	2
						Number of Dishwashers	0
						Number of Showers (standalone)	0

Legal 6 Res. unit Condos *Not in Que* *in Historic*

Job Summary Report
Job ID: 2011-03-523-HVAC

Report generated on Mar 4, 2011 11:29:50 AM

User Defined Property	Value
Number of Sinks	22
Number of Wash Basins	23
Number of Water Closets	23
State ID	11511

Structure: 6 Unit Condo Permit#10-0008

Occupancy Type Code:

Structure Type Code	Structure Status Type	Square Footage	Estimated Value	Address
Mutli-Family 5+ Building	0			201 STATE STREET WEST

Longitude	Latitude	GIS X	GIS Y	GIS Z	GIS Reference

User Defined Property	Value
Number of Bathtubs and Showers	22
Number of Clothes Washers	2
Number of Dishwashers	0
Number of Showers (standalone)	0
Number of Sinks	22
Number of Wash Basins	23
Number of Water Closets	23
State ID	11511

Structure: new plumbing

Occupancy Type Code:

Structure Type Code	Structure Status Type	Square Footage	Estimated Value	Address
Mutli-Family 5+ Building	0			201 STATE STREET WEST

Longitude	Latitude	GIS X	GIS Y	GIS Z	GIS Reference

User Defined Property	Value
Number of Bathtubs and Showers	22
Number of Clothes Washers	2
Number of Dishwashers	0
Number of Showers (standalone)	0
Number of Sinks	22
Number of Wash Basins	23
Number of Water Closets	23

Job Summary Report
Job ID: 2011-03-523-HVAC

Report generated on Mar 4, 2011 11:29:50 AM

User Defined Property		Value
State ID		11511

Permit #: 20111653

Permit Data						
Location Id	Structure Description	Permit Status	Permit Description	Issue Date	Reissue Date	Expiration Date
7314	2 Baxi heating units on first, second & third fl	Initialized	6 Baxi heating units			

Inspection Details						
Inspection Id	Inspection Type	Inspection Result Status	Inspection Status Date	Scheduled Start Timestamp	Result Status Date	Final Inspection Flag

Fees Details								
Fee Code Description	Charge Amount	Permit Charge Adjustment	Permit Charge Adj Remark	Payment Date	Receipt Number	Payment Amount	Payment Adjustment Amount	Payment Adj Comment
Job Valuation Fees	\$420.00							

Baxi Luna 3 Comfort Modulating Wallhung Boiler



The new Baxi Luna 3 Comfort controller made by Bertelli & Partners enhances boiler set up and performance. It can also be used as room thermostat, communicating with an optional external sensor to optimize performance.

Advanced Functions

- ◆ Climatic curves selection (with external sensor)
- ◆ Selection of the type of building
- ◆ Self-learning function (automatic selection of the best climatic curve)
- ◆ Modulating thermostat
- ◆ DHW timer (with indirect cylinder)
- ◆ Sets up in F° or C°
- ◆ Optional A/C control

Controller Info Mode

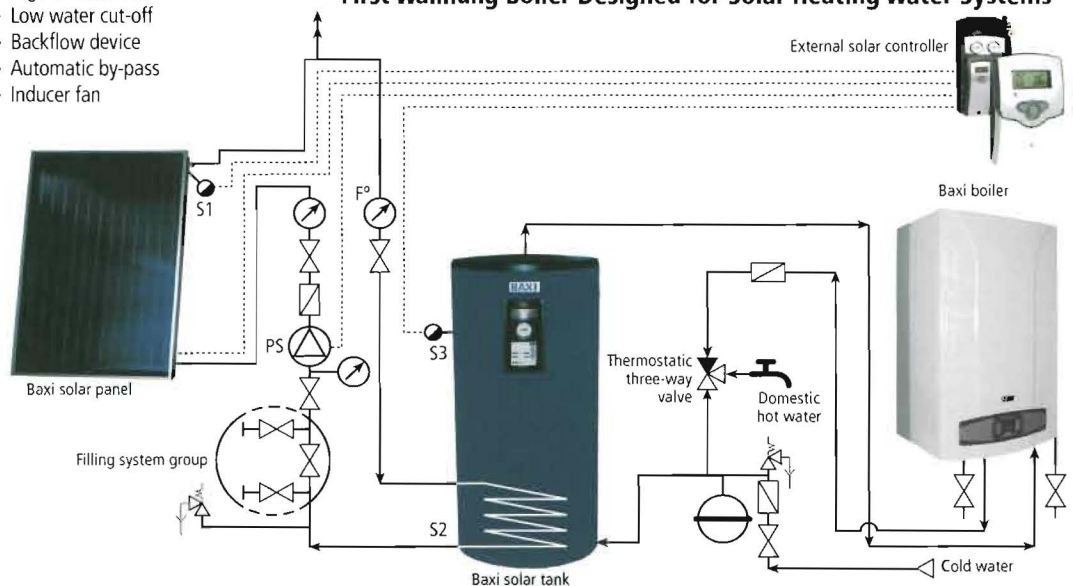
- ◆ Actual DHW temperature
- ◆ Actual external temperature
- ◆ CH set-point temperature
- ◆ Actual CH temperature
- ◆ DHW flow rate
- ◆ Current modulating %
- ◆ Boiler Output %
- ◆ Flame signal %

Mechanical Specifications

Furnish and install a fully, modulating wallhung boiler, as shown in the plans. The boiler shall be a Baxi Luna 3 Comfort 310 Fi combination central heating and domestic hot water boiler, or approved equal. The boiler shall be pre-assembled, and NG/propane fired. The boiler shall include a Baxi controller made by Bertelli & Partners. It shall feature modulating sealed combustion with a nickel-chrome stainless steel AISI 316L premix burner, copper and aluminum silicone-coated heat exchanger, as well as power venting using outdoor air for combustion. The boiler shall be CSA approved and Energy Star certified, with an

AFUE rating of 85.5%. The boiler shall be manufactured by an OHSAS 18001, ISO 14001 and ISO 9001 registered company to conform to Section IV of the ASME Boiler and Pressure Vessel Code. The boiler's heat exchangers shall bear the ASME H-Stamp. The boiler shall be solar water heating system compatible, and able to bring pre-heated water from an indirect solar tank up to demand. The boiler shall feature these built-in components:

- ◆ 3-way electronic valve
- ◆ Circulating pump with auto air vent
- ◆ Pressure relief valve
- ◆ Expansion Tank
- ◆ Heating circuit fill and drain valves
- ◆ Electronic temperature control
- ◆ High limit switch
- ◆ Low water cut-off
- ◆ Backflow device
- ◆ Automatic by-pass
- ◆ Inducer fan



Technical Data		Baxi Luna 3 Comfort 310 Fi Combi CH & DHW	Baxi Luna 3 Comfort 1.31 Fi CH Boiler
AFUE rating	%	85.5	85.5
Thermal efficiency (maximum)	%	89	89
Rated heat input	BTU/hr	126,249	126,249
Reduced heat input		45,040	45,040
Rated heat output		105,776	105,776
Reduced heat output		35,486	35,486
Sealed combustion chamber		yes	yes
Ignition		electronic	electronic
Anti-frost device on heating circuit		yes	yes
Maximum pressure on heating circuit	psi	43	43
Regulation of heating circuit water temperature	- high temp °F	86/180	86/180
	- low temp °F	86/113	86/113
Dimensions:	Height	in 30.04	30.04
	Width	in 17.71	17.71
	Depth	in 13.58	13.58
Coaxial/Dual flue tube	in	2.36-3.93/3.14	2.36-3.93/3.14
Net weight	lbs	90	86
Gas type		NG/LP	NG/LP

Baxi Luna 3 Comfort 310Fi is a combination central heating and DHW boiler. A separate plate-to-plate heat exchanger produces DHW of 3.3 gpm at delta T 77°F. All heat exchangers in Baxi Luna boilers are ASME H-Stamp certified, and come with a 10-year warranty.

Baxi Luna 3 Comfort 310Fi and 1.31Fi Modulation Range (BTU/hr)



First Wallhung Boiler Designed for Solar Heating Water Systems

BAXI

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 Exclusive North American Distributor for BAXI Products
 1815 Sismet Road, Mississauga, Ontario L4W 1P9, Canada
 1-800-461-4657 • info@wallhungboilers.com

www.wallhungboilers.com



3. GENERAL BOILER INFORMATION

3.1 GAS SUPPLY

The boiler requires a gas rate of 128.1 ft³/h - 3.63m³/h.

The meter and supply pipes must be capable of delivering this quantity of gas in addition to the demand from any other appliances in the house. The boiler requires at least a 3/4" gas supply pipe. The complete installation, including the meter, must be tested for gas leak and purged.

3.2 ELECTRICAL SUPPLY

The boiler requires a 120V 60Hz power supply. Ensure the electrical supply is polarised.

The boiler must be grounded.

There must only be one common isolator, providing complete electrical isolation, for the boiler and any external controls.

Using PVC insulated cable 18 AWG x3C 105 °C.

All wiring must be installed in accordance with requirements of National Electrical Code and any additional national, state, or local code requirements having jurisdiction. All wiring must be N.E.C. Class 1. Boiler must be electrically grounded in accordance with the National Electrical Code, ANSI/NFPA No. 70-latest edition.

In Canada, installation must conform to CSA C22.1 Canadian Electrical Code Part 1 and any local codes.

3.2.1 Install Room Thermostat

Install room thermostat on an inside wall. Never install where it will be influenced by drafts, hot or cold water pipes, lighting fixtures, television, sun rays or near a fireplace.

3.3 AIR SUPPLY

The boiler does not require any air vents in the room in which it is installed, or when installed in a cupboard or compartment.

3.4 FLUE SYSTEM

WARNING :

If the heating is directly connected to a floor heating system, a safety overheating thermostat should be provided by the installer.

3.4.1 CONCENTRIC SYSTEM

The flue assembly supplied for the boiler is 2.64 ft / 0.75 m in length + terminal.

For horizontal flues a minor deviation from the horizontal is allowable, provided it results in a downward slope towards the terminal.

Additional flue components are available as follows:

3.28 ft / 1 m flue

90° bend

45° bend

Vertical flue terminal assembly. Refer to the separate installation instructions supplied with the assembly.

Notes: If an extra 90° bend is used, this reduces the maximum flue length by 3.28 ft / 1 m. Each 45° bend used reduces the maximum flue length by 1.64 ft / 0.5 m.

Under no circumstances must the flue length (including allowances for extra bends) exceed 4 m / 13.12 ft.

PNT 1127 + PNT 496

1. Locate the flue elbow on the adaptor at the top of the boiler. Set the elbow to the required orientation (rear, right or left).
2. Measure the distance from the outside wall face to the elbow (Fig. 3). This dimension will be known as 'X'.
3. Taking the air duct, mark dimension 'X' as shown (Fig. 4). Measure the length of waste material, and transfer the dimension to the flue duct (Fig. 4).
4. Remove the waste from both ducts. Ensure that the cut ends are square and free from burrs.
5. Remove the flue elbow from the adaptor.

IMPORTANT: Check all measurements before cutting. Clearance to combustible materials when using concentric system is zero.

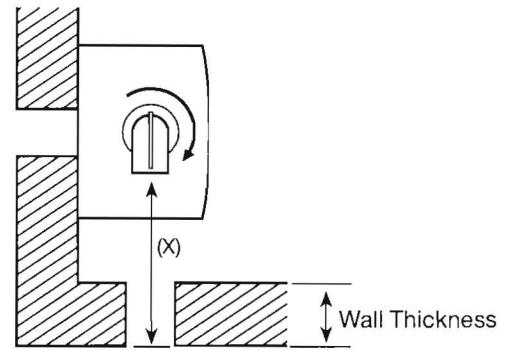
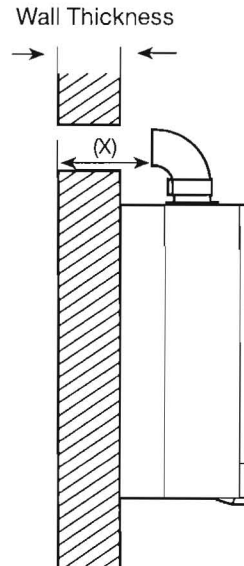


Fig. 3

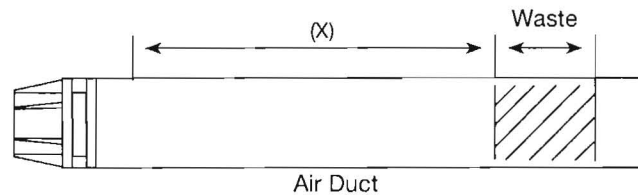


Fig. 4

IMPORTANT: If the equivalent flue length is greater than 1.5 m / 4.92 ft the restrictor **MUST** be removed from the adaptor (Fig. 5).

6. Insert the flue duct into the air duct and pass them through the hole in the wall.
7. Take one of the rubber seals and position it on the boiler flue adaptor. Engage the flue elbow on the adaptor and pull the sleeve up so that it equally covers the joint (Fig. 5).
8. Remove the screws from one of the clips provided. Prise the clip apart and fit it over the seal (Fig. 6). Set the elbow to the required angle.
9. Refit the screws to the clip and tighten them to secure the elbow. Take the second rubber seal and position it on the flue elbow.
10. Locate the flue duct clamp on the flue outlet elbow. Draw the flue duct out of the air duct, engage it in the clamp and tighten the screws (Fig. 7).
11. Draw the air duct out of the wall and align it with the elbow. Position the seal so that it equally covers the joint (Fig. 8).
12. Remove the screws from the second clip provided. Prise the clip apart and fit it over the seal. Refit the screws to the clip and tighten them (Fig. 8).
13. Where possible position the clips so that the screws are not visible.
14. Make good between the wall and air duct outside the building.

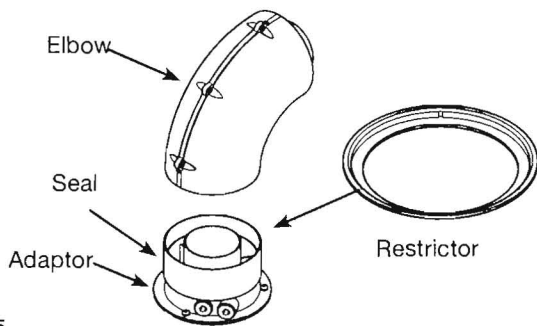


Fig. 5

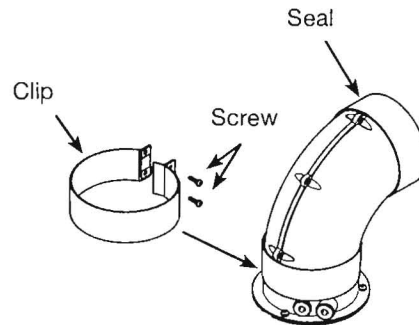


Fig. 6

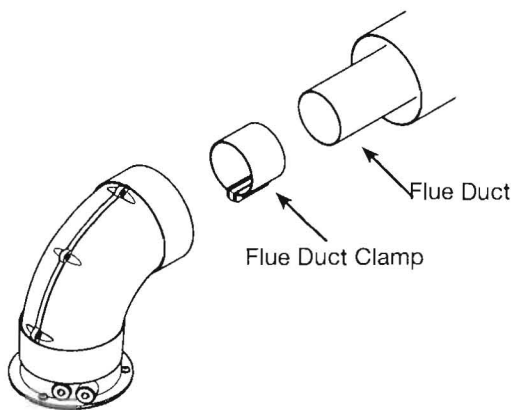


Fig. 7

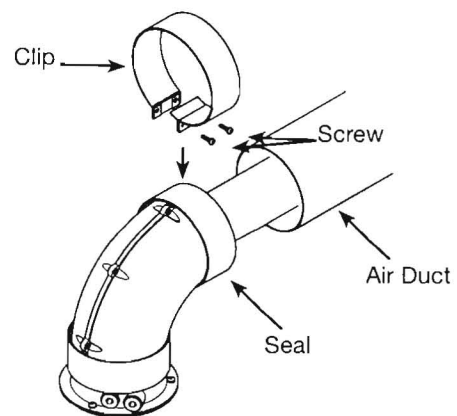


Fig. 8

Vent Termination Minimum Clearances

A = 12"	clearances above grade, veranda, porch, deck or balcony
B = 12"	clearances to window or door that may be opened
D = 18"	vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the centre line of the terminal
E = 18"	clearance to unventilated soffit
F = 9"	clearance to outside corner
G = 6"	clearance to inside corner
H = 4 ft. (U.S.A.)	not to be installed above a gas meter/regulator assembly within H horizontally from the centre line of the regulator
I = 3 ft. (U.S.A.) 6 ft. (Canada)	clearance to service regulator vent outlet
J = 9" (U.S.A.)	clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance
K = 3 ft. (U.S.A.) 6 ft. (Canada)	clearance to a mechanical air supply inlet
* L = 7 ft.	clearance above paved side-walk or a paved driveway located on public property
** M = 18"	clearance under veranda, porch, deck or balcony

- * a vent shall not terminate directly above a side-walk or paved driveway which is located between two single family dwellings and serves both dwellings unless terminated 7ft above sidewalk.
- ** only permitted if veranda, porch, deck or balcony is fully open on a minimum of 2 sides beneath the floor.

Note: local Codes or Regulations may require different clearances.

The flue terminal must be exposed to the external air and the position must allow the free passage of air across it at all times. In certain weather conditions the terminal may emit a plume of steam. Avoid positioning the terminal where this may cause a nuisance.

If the terminal is fitted less than 6.56 ft / 2 m above a surface to which people have access, the terminal must be protected by a terminal guard.

3.6 BOILER LOCATION

The boiler is not suitable for external installation.

The boiler must be installed on a flat vertical wall which is capable of supporting the weight of the boiler.

The boiler may be installed in any room or internal space, although particular attention is drawn to the requirements of the current electrical provisions with respect to the installation of the boiler in a room or internal space containing a bath or shower. Where a room-sealed boiler is installed in a room containing a bath or shower, it must not be possible for a person using the bath or shower to touch any electrical switch or boiler control utilising mains electricity.

The boiler may be installed in a cupboard or compartment, provided it is correctly designed and sufficiently ventilated for that purpose.

3.7 CENTRAL HEATING SYSTEM - FIG. 17

The boiler is designed for use in a sealed central heating system.

Refer to Technical Data, section 2.8, for details of the heating system volume.

The system should be designed to operate with flow temperatures of up to 185 °F / 85°C. When designing the system, the pump head, expansion vessel size, mean radiator temperature, etc. must all be taken into account. Refer to the pump performance table for guidelines.

The boiler is supplied with the following components built in:

Pressure relief valve - set to operate at 43 p.s.i. / 3 bar. The discharge pipe must be routed clear of the boiler to a drain, in such a manner that it can be seen, but cannot cause injury to persons or property.

Manual operation of relief valve at least once a year.

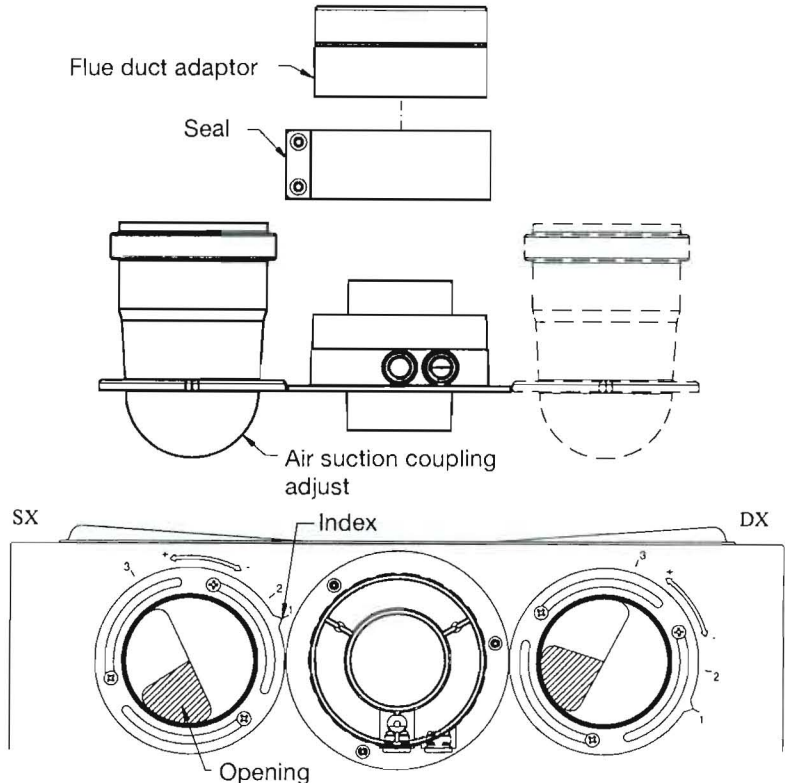
- WARNING:**
1. Avoid contact with hot water coming/out
 2. Prevent water damage

Pressure gauge - to indicate the system pressure to be maintained.

Expansion vessel - with a capacity of 2.2 gal / 10 l and pre-charged to a pressure of 7.25 p.s.i. / 0.5 bar.

By-pass - The boiler incorporates an automatic by-pass. However, where all radiators are fitted with thermostatic radiator valves, an external by-pass must be fitted.

0604/2301/CG.1776



(L1+L2) MAX	CONTROL POSITION	CO ₂ %	
		G20	G31
0 ÷ 2	1	7,4	8,5
2 ÷ 10	2		
10 ÷ 25	3		

Fig. 15

3.5 FLUE TERMINAL LOCATION

Fig. 16 IN COMPLIANCE WITH CGA B149

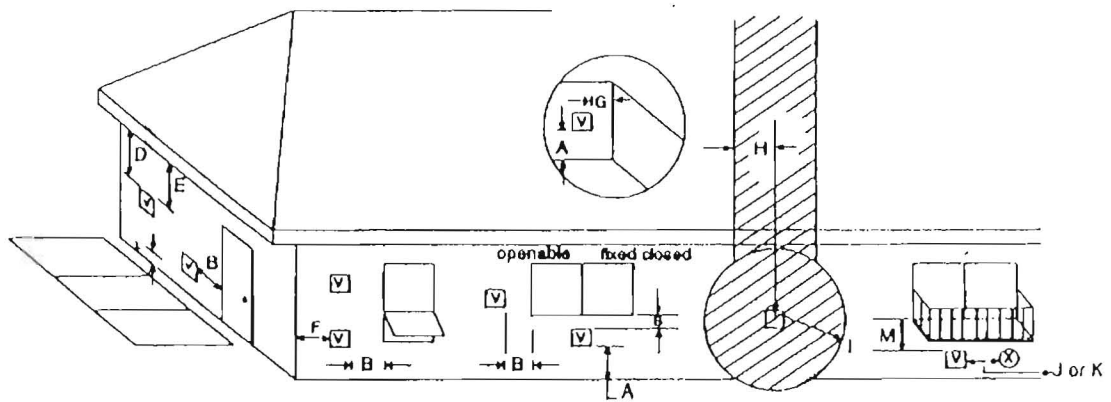


Fig. 16

v = VENT TERMINAL

x = AIR SUPPLY INLET

= AREA WHERE TERMINAL IS NOT PERMITTED

4. INSTALLATION

4.1 - UNPACKING

1. The boiler is supplied in four boxes, as follows:

Box 1 Cased boiler

Water and gas valves plus washers

Water fittings.

Screws and wall plugs

Wall template

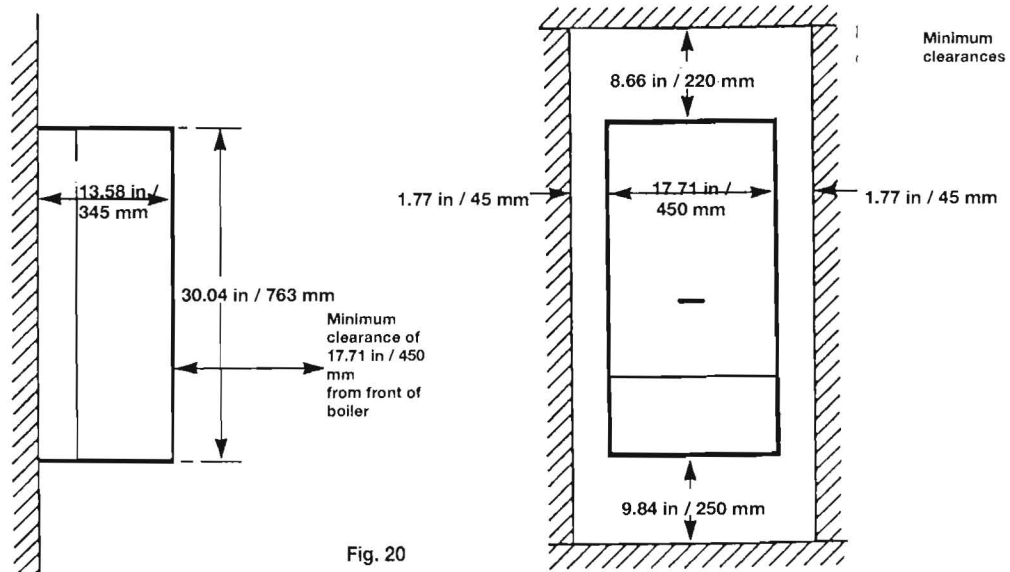
Box 2 90° flue bend with clamp (not required for vertical flue)

Box 3 2.64 ft / 0.75 m flue (for side and rear flue) with terminal

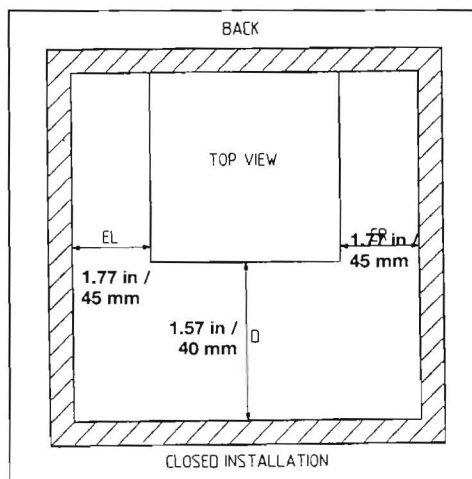
2. Unpack boiler and remove loose items packs.

3. Remove the two screws at the top of the front casing. Slide it up

4.2 - CLEARANCES REQUIRED FOR SERVICING (FIG. 20)



4.2.1. CLEARANCES REQUIRED FOR CLOSET INSTALLATION



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.

BAXI



BAXI LUNA) 3 Comfort Modulating Wallhung Boiler