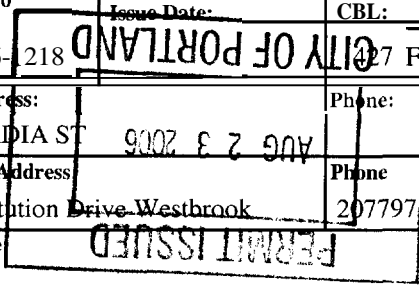


City of Portland, Maine - Building or Use Permit Application

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

Permit No: 06-218	Issue Date: AUG 23 2006	CBL: 427 F009001
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Location of Construction: 40 ARCADIA ST	Owner Name: CORMIER JEFFREY S	Owner Address: 40 ARCADIA ST	Phone:
Business Name:	Contractor Name: Dominic DiBiase	Contractor Address: 52 Constitution Drive Westbrook	Phone: 2077975408
Lessee/Buyer's Name:	Phone:	Permit Type: HVAC	Zone:



Past Use: Duplex	Proposed Use: Duplex- install a direct vent rinnai on the 1st flr & Second Flr	Permit Fee: \$60.00	Cost of Work: \$3,700.00	CEO District: 4
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Proposed Project Description:
install a direct vent rinnai on the 1st flr & Second Flr

FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: HVAC Type: 9/06 8/23/06
Signature: <i>Greg Cass</i>	Signature: <i>[Handwritten 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: Idobson	Date Applied For: 08/18/2006	Zoning Approval	
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<p>1.</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>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..</p>	<p>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p>Date:</p>	<p>Zoning Appeal</p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date:</p>	<p>Historic Preservation</p> <p><input type="checkbox"/> Not in District or Landmark</p> <p><input type="checkbox"/> Does Not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p>Date:</p>
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CERTIFICATION

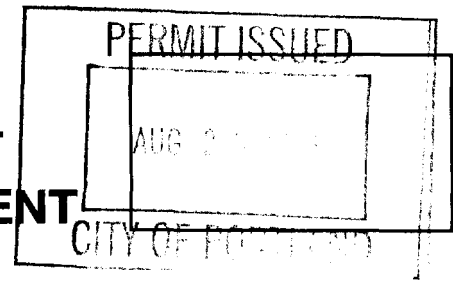
I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition,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

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



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 40 Acadia St. 427-7-9 Use of Building Dwelling Date 8-18-06
Name and address of owner of appliance Adam Hill 40 Acadia St., Portland, Me.

Installer's name and address Dominic DiBiase
52 Constitution Dr. Telephone 797-5408
Westbrook, Me. 04092

Location of appliance:

- Basement
- Floor 1st & 2nd
- Attic
- Roof

Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: Rinnai

U.L. Approved Yes No

Will appliance be installed in accordance with the manufacture's installation instructions? Yes No

IF NO Explain: P

The Type of License of Installer:

- Master Plumber # _____
- Solid Fuel # _____
- Oil # _____
- Gas # PNT1252
- Other _____

Type of Chimney:

Masonry Lined
Factory built _____

Metal
Factory Built U.L. Listing # _____

Direct Vent
Type Internal UL# _____
Double Wall

Type of Fuel Tank

- Oil
- Gas

Size of Tank _____

Number of Tanks _____

Distance from Tank to Center of Flame _____ feet.

Cost of Work: \$ 3700.00

Permit Fee: \$ 60

Approved

Approved with Conditions

Fire: _____
Ele.: _____
Bldg.: _____

See attached letter or requirement

Inspector's Signature

Date Approved

Signature of Installer Dominic DiBiase

City of Portland, Maine - Building or Use Permit

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

Permit No: 06-1218	Date Applied For: 08/18/2006	CBL: 427 F009001
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Location of Construction: 40 ARCADIA ST	Owner Name: CORMIER JEFFREY S	Owner Address: 40 ARCADIA ST	Phone:
Business Name:	Contractor Name: Dominic DiBiase	Contractor Address: 52 Constitution Drive Westbrook	Phone (207) 797-5408
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	

Proposed Use: Duplex- install a direct vent rinnai on the 1st flr & Second Flr	Proposed Project Description: install a direct vent rinnai on the 1st flr & Second Flr
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Dept: Building **Status:** Approved with Conditions **Reviewer:** Mike Nugent **Approval Date:** 08/23/2006
Note: **Ok to Issue:**

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

Dept: Fire **Status:** Approved **Reviewer:** Cptn Greg Cass **Approval Date:** 08/22/2006
Note: **Ok to Issue:**

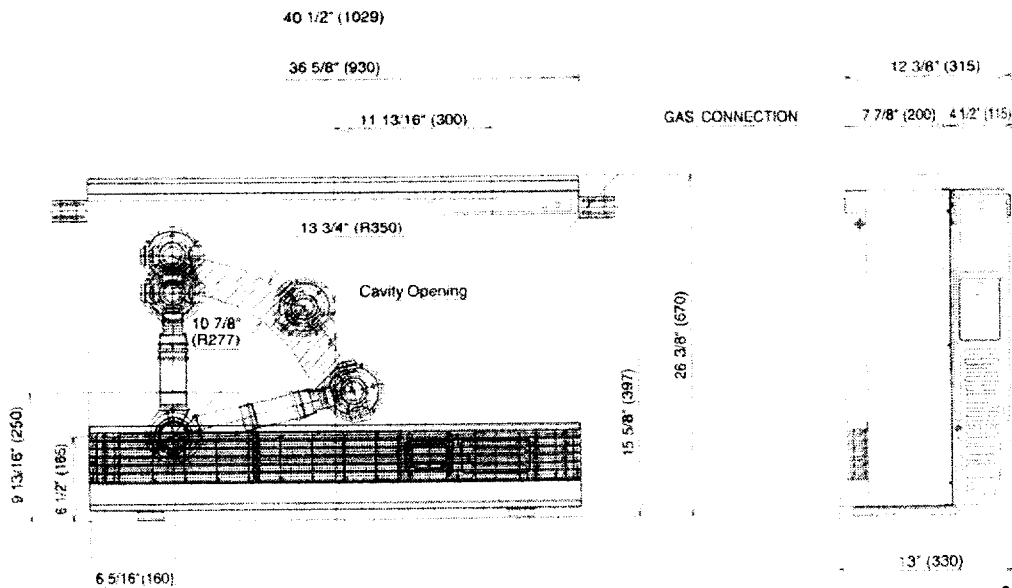


RHFE-1004FA

ENERGYSAVER Direct Vent Wall Furnace

	<u>Natural Gas</u>	<u>Propane</u>
Rinnai model number:	RHFE-1004FA-N	RHFE-1004FA-P
Gas Rate (Input):	Btu/hr	Btu/hr
Low:	10,500	10,500
High:	38,400	36,500
Gas Rate (Output):		
Low:	8,400	8,400
High:	30,700	29,200
Efficiency Rating:	80.8%	81.8%
Gas Supply Pressure:	WC	WC
Min:	5"	11.0"
Max:	10.5"	13.0"
Description:	Fan forced flue gas furnace	
Connections:	Electrical – AC 120V 60Hz 47 watts Gas – 1/2" FNPT	
Combustion System:	Stainless steel Bunsen burner	
Ignition System:	Continuous spark	
Operating Buttons:	ON/OFF, Up/Down, Function-lock, Economy	
Economy Mode:	Energy savings feature	
Humidifier Tray:	Capacity - 7 pints (3000cc)	
Weight:	Approx. 90 lbs	
Clearance from Combustibles:	Side: 2" Top: 10" Front: 40"	

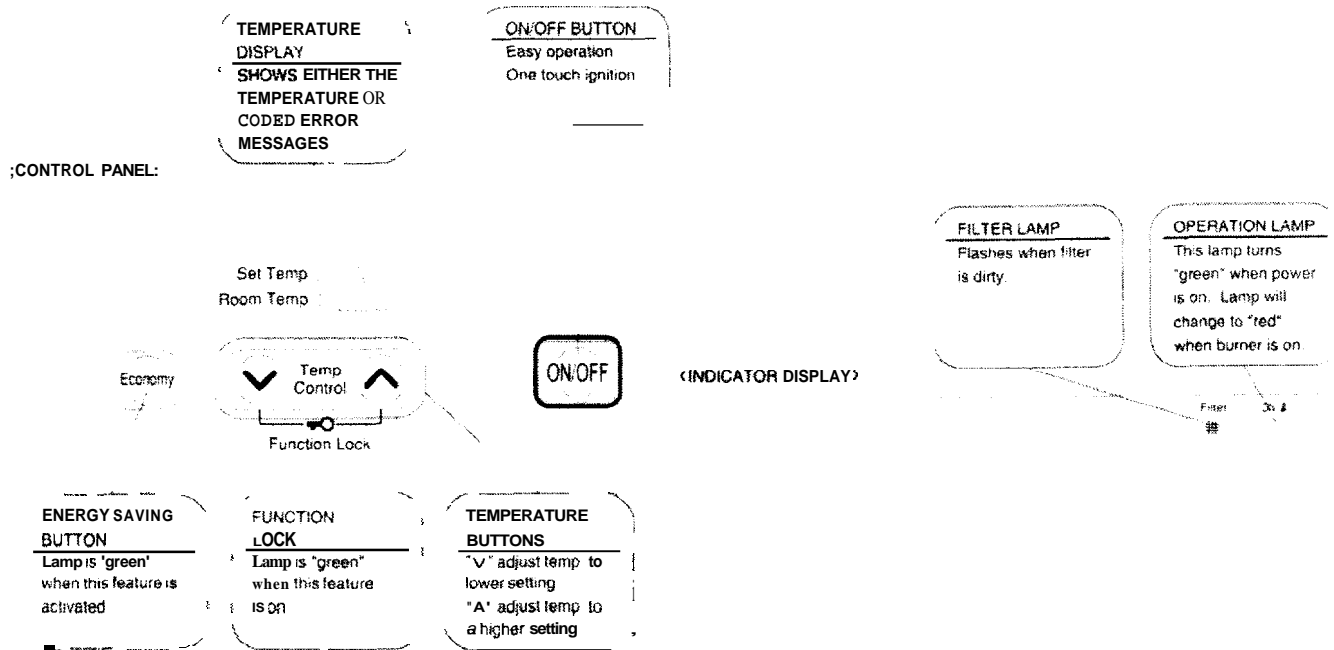
Dimensions:



RHFE-1004FA

Warm Air Outlet:	Bottom front louvers
Fan CFM Output:	Low: 203.4 High: 360.6
Operation:	Finger touch control buttons
Temperature Control:	Electronic thermostat HI-LOW/OFF, Up/Down switch 2°F increments
Temperature Range:	LOW=55°F 60°F~80°F HI=High Combustion
Safety Devices:	Flame failure – flame rod Over heat – Bi-metal switch, thermal fuse, thermistor Power failure - PCB Power surge – 5 Amp fuse Fan delay – Micro computer timer Pre-purge – Combustion fan, pre-purge timer, spark sensor Room over heat – Automatic cut off at 104°F after 10 minutes Child Safety Lock

Control Panel:



GAS CONNECTION

1. The gas supply line shall be gas-tight, sized and so installed as to provide a supply of gas sufficient to meet the maximum demand of the heater without loss of pressure.
2. A shut off valve (and appliance connector valve) should be installed in the upstream of the gas line to permit servicing.
3. Flexible pipe and any appliance connector valve used for gas piping shall be types approved by nationally recognized agencies.
4. Any compound used on the threaded joint of the gas piping shall be a type which resists the action of liquefied petroleum gas.
5. Supplied gas pressure must be within the limits shown in the specifications.
6. After completion of gas pipe connections, all joints including the heater must be checked for gas tightness by means of leak detector solution, soap and water, or an equivalent nonflammable solution, as applicable.

CAUTION: Since some leak test solutions, including soap and water, may cause corrosion or stress cracking, the piping shall **be** rinsed with water after testing, unless it has been determined that the leak test solution is noncorrosive.

7. The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 P.S.I (3.5kPa).

The appliance must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas supply system at test pressures equal to or less than 1/2 psig.

- a. One 1/8" test plug is provided for testing of manifold pressure see schematic for location. (On page 43, item # 125)
At time of installation installer must supply a 1/8" N.P.T. plugged tapping, accessible for test manometer connection, immediately up stream of the gas supply connection to the appliance.

CANADIAN VENT REGULATIONS

CAN/CGA-B149.1-M91

A vent shall not terminate:

- (a) Directly above a paved sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings;
- (b) less than 7 ft. (2.13m) above a paved sidewalk or a paved driveway located on public property;
- (c) within 6 ft. (1.8m) of a mechanical air supply inlet to any building;
- (d) above a meter/regulator assembly within 3 ft. (900mm) horizontally of the vertical centerline of the regulator;
- (e) within 6 ft. (1.8m) of any gas service regulator vent outlet;
- (f) **less** than 1 ft. (300mm) above grade level;
- (g) within the following distances of a window or door which can be opened in any building, any non-mechanical air supply inlet to any building or the combustion air inlet of any other appliance;
 - (i) 1 ft (300mm) for inputs up to and including 100,000 Btuh (30kW),
 - (ii) 3 ft (900mm) for inputs exceeding 100,000 Btuh (30kW); and
- (h) underneath a veranda, porch or deck, unless
 - (i) the veranda, porch or deck is fully open on a minimum of two sides beneath the floor, and
 - (ii) the distance between the top of the vent termination and the underside of the veranda, porch or deck is greater than 1 ft. (300mm).

FOR COMPLIANCE TO NFPA 54 OR 2223.1 U.S.A.

Vent terminal must be located at least 3 feet above any forced air inlet location within 10 feet away.

Vent terminal must not be located over public walk ways or be detrimental to regulators and equipment where condensate could be a problem.

Vent terminal must be kept clear of snow at all times.

The bottom of the vent terminal and the air intake must be located at least **12 inches** above grade.

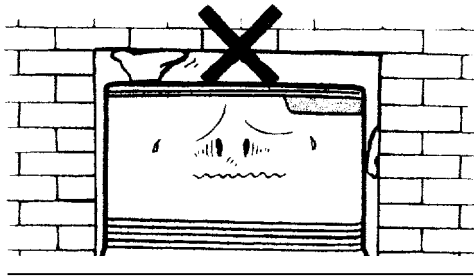
The vent terminal of a direct vent appliance with an input of 50,000 Btu per hour or less shall be located at least 9 inches from any opening through which **flue** gases could enter a building, and such an appliance with an input over 50,000 Btu per hour shall require a **12 inches** vent termination clearance. The bottom of the vent terminal **and** the **air intake** shall be **located at least 12 inches** above grade.

LOCATION / CLEARANCES

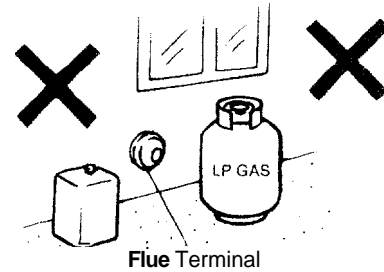
When positioning the heater the main points governing the location are:

1. Flueing
2. Warm air distribution

This heater is not designed to be built in.

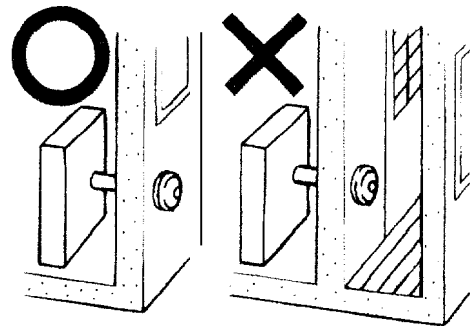
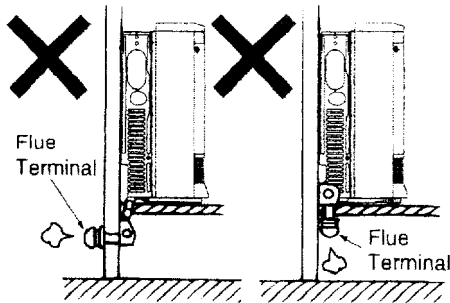


The flue terminal should be positioned away from flammable materials.



Do not flue into natural draught flues or fireplaces, this unit can only be used with one of the five types of Rinnai flue kits. Do not flue unit into other rooms. Flue terminal must be outside,

The flue is not designed to be positioned under floors, or below the level of the heater.



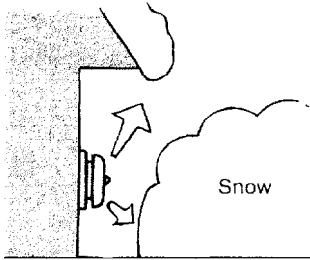
Flue may be positioned directly under opening windows, with a minimum clearance of 9" (230mm).

FLUE SIZES:

5 Flue lengths are available.

- S flue walls 3"~4 1/2" (75~115mm)
- A flue walls 4 1/2"~9 1/2" (115~240mm)
- B flue walls 9 1/2"~15 3/4" (240~400mm)
- C flue walls 15 3/4"~23 5/8" (400~600mm)
- D flue walls 23 5/8"~31 1/2" (600~800mm)

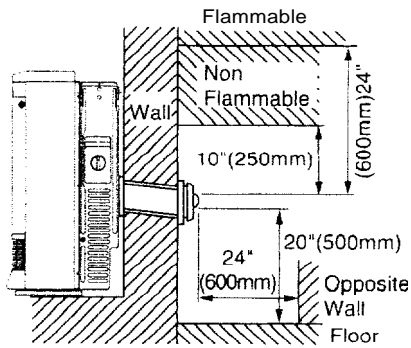
SNOWAREAS



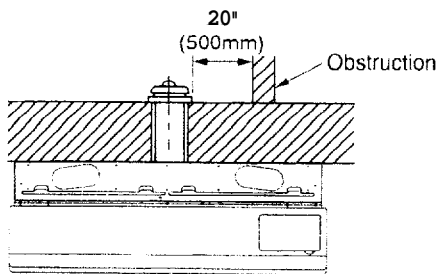
In areas subject to heavy snowfall, keep snow clear of flue terminal at all times.

STANDARD INSTALLATION OF FLUE MANIFOLD.

Diagram below shows minimum clearances and distances from obstructions. Also check local regulations.



Side Clearances



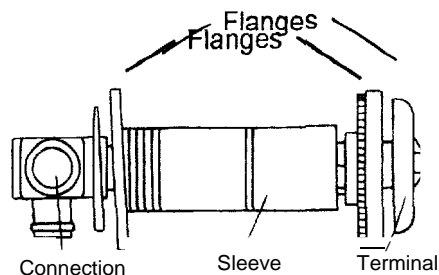
SLEEVE AND MANIFOLD INSTALLATION

METHOD FOR STANDARD WALLS

1. Disassemble Manifold from Sleeve.

The flue consists of 3 parts, sleeve, inside connectors and tube, outside terminal; (dis-assembly by pulling hard on outside terminal and inner connections, then pull sleeve off outer terminal.)

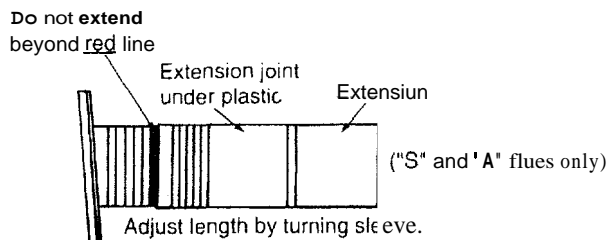
Note: Clearance to combustibles for terminal assembly sleeve and flanges is 0".



2. Adjustment of Sleeve Length.

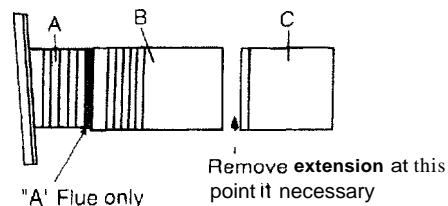
Measure wall thickness through previously drilled 3 1/8" (80mm) hole.

End of sleeve should protrude 3/16"~3/8" (5~10mm) from outside wall. Adjust sleeve length to wall thickness plus 3/16"~3/8" (5~10mm). (Sleeve is threaded for adjustment.) Do not extend beyond red line.



3. For S and A flue only.

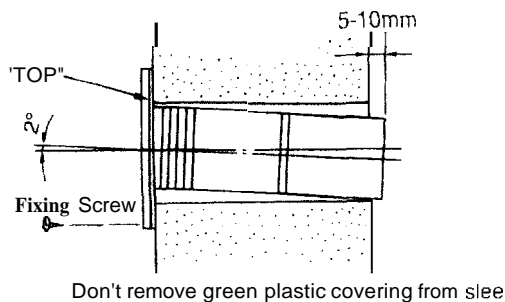
Depending on flue set and wall thickness extension piece "C" may need to be removed. Cut plastic, remove extension, then follow instruction 2. This applies to "S" and "A" flues only. There is no extension on other flues, they can be fully adjusted by turning the threaded section.



4. Fixing Sleeve.

Fix to the wall, using the 3 screws provided.

NOTE: The flange is marked "TOP", sleeve must be fitted with this mark **Up**. Check sleeve protrudes 3/16"~3/8" (5~10mm) on the outside.

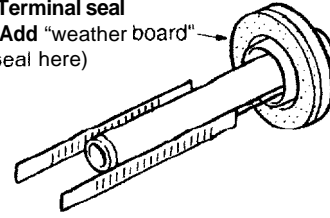


5. Check rubber seal is in place on terminal.

*For weather board walls, add spare rubber seal provided to compensate for weather board angle.

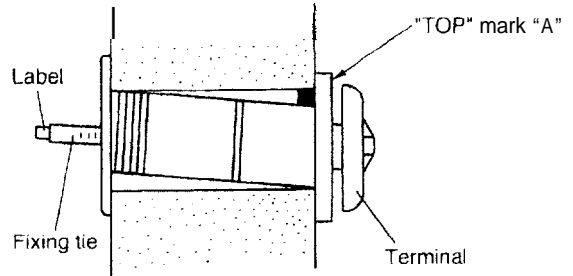
Terminal seal

(Add "weather board" seal here)



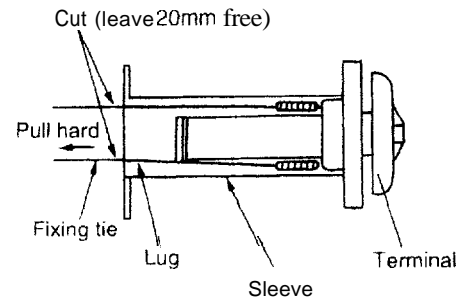
6. Installation of Terminal

From outside, insert terminal into sleeve with the "A" mark at the top. Left hand side fixing tie is marked "LEFT" (from inside).



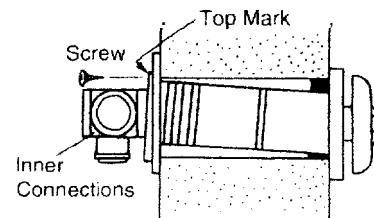
7. Attached Ties

Pull hard on left and right hand side ties, clip ties over lugs inside sleeve. You should be able to pull ties 2 or 3 slots past the starting point. Cut the ties, leaving about 3/4" (20mm) past the lugs. Bend ties so they are parallel with the wall.

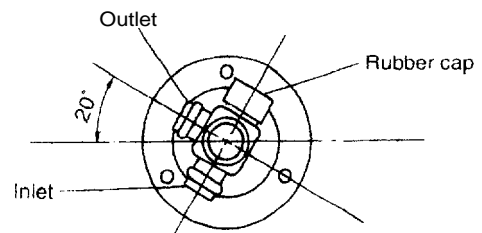


8. Insert Inner Connection Assembly.

Push assembly into the terminal tube, make sure "TOP" mark is uppermost. Fix with 3 screws provided.

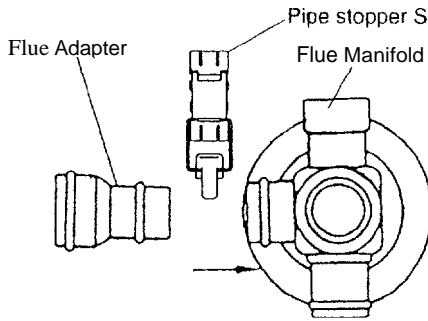


9. Manifold can still be turned after attaching.

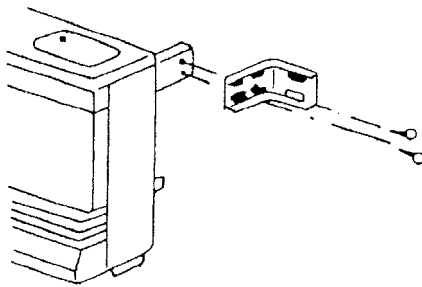


FITTING UNIT

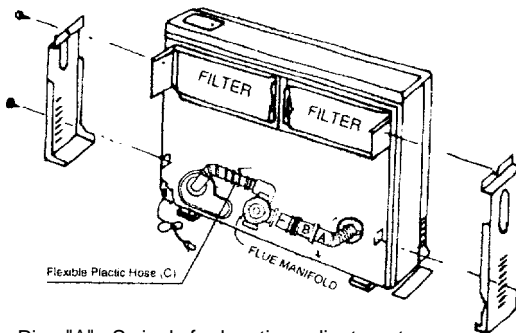
1. Fix Flue Adapter to Flue Manifold with PIPE STOPPER S as shown below.



2. Fit Walt bracket as shown below.



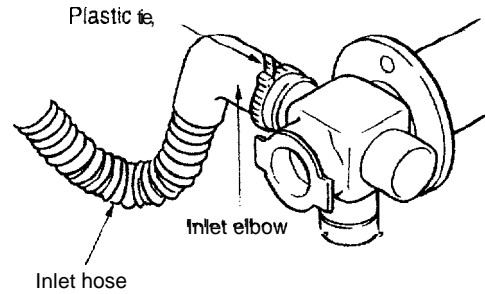
3. Fit Air inlet Hose to heater. Fix Side Back Spacers with screws.



Pipe "A" - Swivels for location adjustment
 Pipe "B" - Telescopes into pipe A and flue manifold
 Pipe "C" - Fits on manifold "Air intake" pipe

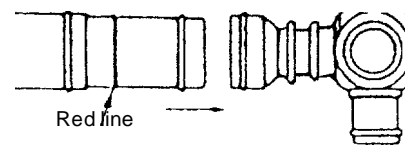
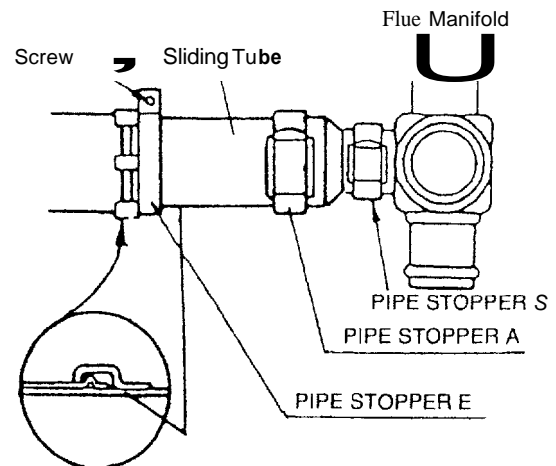
Air Inlet Hose
 Connect Air Inlet Hose to Manifold Inlet.
 Do not kink the hose.

4. Secure with plastic tie as shown below.



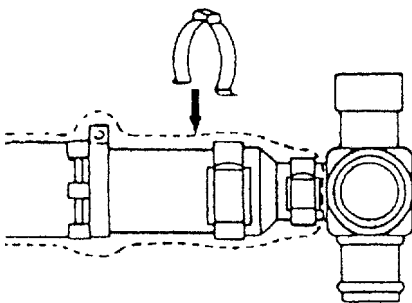
When servicing unit replace plastic tie with new one.
 (Available at local hardware store or contact local distributor.)

5. Connect Vent Sliding Tube with PIPE STOPPER S and E as shown below.

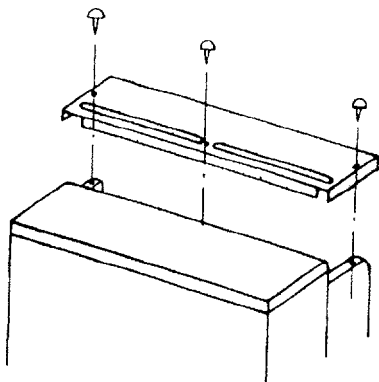


Sliding Tube should not be extended beyond the RED LINE.
 Red line should not be visible after sliding the tube back into the vent outlet.

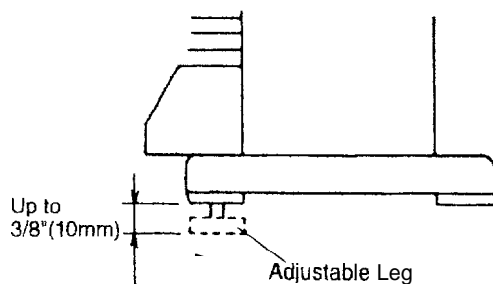
- Slide the insulation sleeve up to the flue manifold, slip the securing clip over the sleeve as shown.



- Fix Back Spacer, Top to heater. (3 screws in top back cover).



- If necessary, the unit can be levelled using the adjustable legs under the front right and left hand side legs.



■ INSTRUCT CUSTOMER ON USE OF HEATER

When you are satisfied that the appliance is operating correctly, explain operation of heater to the customer.

Fault-Failure Procedure

If unable to get the heater to operate correctly, contact Rinnai directly or your Agent or Gas Utility.

Do not use electrical extension cords to connect unit to power supply. Keep the power cord away from the flue.

Some **items** are not covered under the unit's warranty. Example: annual maintenance, carbon on flame rods/igniter, dust, spider webs, improper conversions, etc.