

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK
CITY OF PORTLAND

Please Read
Application And
Notes, If Any,
Attached

**BUILDING INSPECTION
 PERMIT**

Permit Number: 101439

This is to certify that Wescott & Payson/Jeff Donahuehas permission to Install three (3) Rinnai heaters on the first, second and third floors.AT 765 Ocean AveCBL 423 A003001

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and written permission procured before this building or part thereof is lathed or otherwise closed-in. 24 HOUR NOTICE IS REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. _____

Health Dept. _____

Appeal Board _____

Other _____

Department Name


 Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application

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

Permit No: 10-1439	Issue Date:	CBL: 423 A003001
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Location of Construction: 765 Ocean Ave	Owner Name: Wescott & Payson	Owner Address: 31 Old Campus Dr	Phone:
Business Name:	Contractor Name: Jeff Donahue	Contractor Address: 149 Saco Road Standish	Phone: 2073293808
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone: R-3

Past Use: Commercial Duplex	Proposed Use: Commercial Duplex / Install three (3) Rinnai heaters on the first, second and third floors.	Permit Fee: \$120.00	Cost of Work: \$10,000.00	CEO District: 4	Zone: PRUD
		FIRE DEPT: N/A	INSPECTION: Use Group: Type: SB		

Proposed Project Description:
Install three (3) Rinnai heaters on the first, second and third floors.

WITHDRAW

Signature:	Signature:
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: gg	Date Applied For: 11/18/2010	Zoning Approval
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<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</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> <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"/> Date: <i>11/19/10</i>	<p>Zoning Appeal</p> <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:	<p>Historic Preservation</p> <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 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

City of Portland, Maine - Building or Use Permit

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

Permit No: 10-1439	Date Applied For: 11/18/2010	CBL: 423 A003001
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Location of Construction: 765 Ocean Ave	Owner Name: Wescott & Payson	Owner Address: 31 Old Campus Dr	Phone:
Business Name:	Contractor Name: Jeff Donahue	Contractor Address: 149 Saco Road Standish	Phone (207) 329-3808
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	

Proposed Use: Duplex / Install three (3) Rinnai heaters on the first, second and third floors.	Proposed Project Description: Install three (3) Rinnai heaters on the first, second and third floors.
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Dept: Zoning	Status: Approved	Reviewer: Marge Schmuckal	Approval Date: 11/19/2010
Note:	Ok to Issue: <input checked="" type="checkbox"/>		

Dept: Building	Status: Approved with Conditions	Reviewer: Jonathan Rioux	Approval Date: 11/22/2010
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
<ol style="list-style-type: none"> 1) Maintain proper setback(s) from property lines/buildings and proper clearances from verticle openings when direct venting. 2) The installation must comply with the State of Maine Gas Regulations. 3) Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approval prior to work. 			

City of Portland, Maine - Building or Use Permit

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

Permit No: 10-1439	Date Applied For: 11/18/2010	CBL: 423 A003001
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Business Name:	Contractor Name: Jeff Donahue	Contractor Address: 149 Saco Road Standish	Phone (207) 329-3808
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	

Proposed Use: Duplex / Install three (3) Rinnai heaters on the first, second and third floors.	Proposed Project Description: Install three (3) Rinnai heaters on the first, second and third floors.
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Dept: Zoning **Status:** Approved **Reviewer:** Marge Schmuckal **Approval Date:** 11/19/2010
Note: **Ok to Issue:**

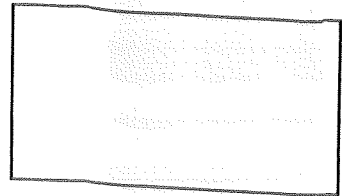
Dept: Building **Status:** Approved with Conditions **Reviewer:** Jonathan Rioux **Approval Date:** 11/22/2010
Note: **Ok to Issue:**

- 1) Maintain proper setback(s) from property lines/buildings and proper clearances from verticle openings when direct venting.
- 2) The installation must comply with the State of Maine Gas Regulations.
- 3) Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approval prior to work.



FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



423 A003^{Com}

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:

Daryn Daniluk Daryn Daniluk

Location / CBL 765 OCEAN Ave 04103 Use of Building Duplex Date 11/15/10
Name and address of owner of appliance Leanna Hart, 765 OCEAN Ave Portland, ME 04102

Installer's name and address Jeff Daniluk 149 Saco Rd Standish
Telephone 329 3808

Location of appliance:

- Basement
- Floors 1, 2 & 3
- Attic
- Roof

Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: 3 Rinnai EX22 ES38
U.L. Approved Yes No VS31

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 # PN7 2334
- Other _____

Type of Chimney:

- Masonry Lined
Factory built _____
- Metal
Factory Built U.L. Listing # _____

Direct Vent
Type Concentric UL# UL18
Ubbink

Type of Fuel Tank

- Oil
- Gas

Size of Tank 120 gallons

Number of Tanks 2

Distance from Tank to Center of Flame 15 feet.
~~Nearest Appliance~~

Cost of Work: \$ 10,000.00

Permit Fee: \$ 100.00

RECEIVED

NOV 18 2010

Dept. of Building Inspections
City of Portland Maine

Approved

Fire: _____
Ele.: _____
Bldg.: _____

Approved with Conditions

- See attached letter or requirement

Signature of Installer

[Handwritten Signature]

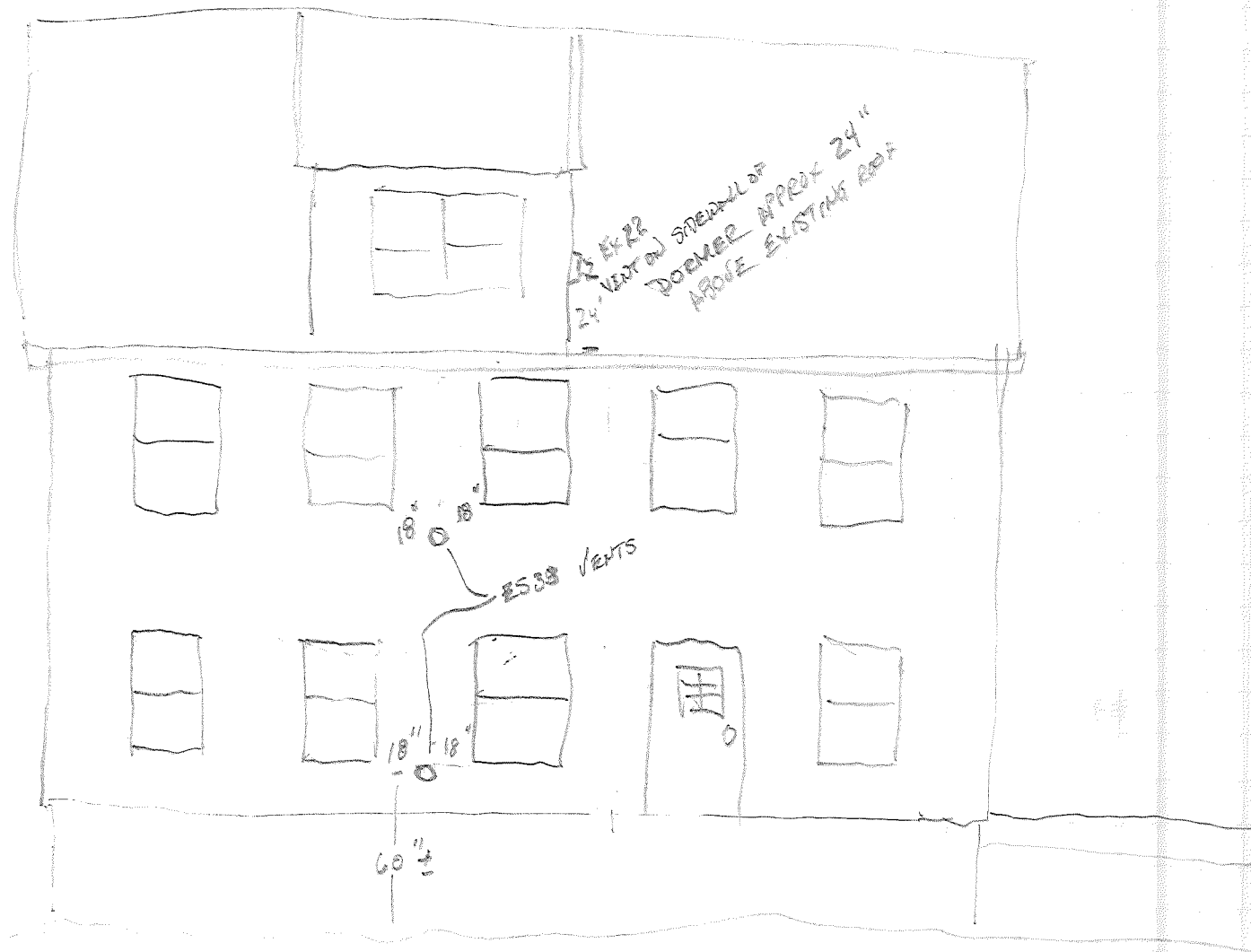
Inspector's Signature

Date Approved

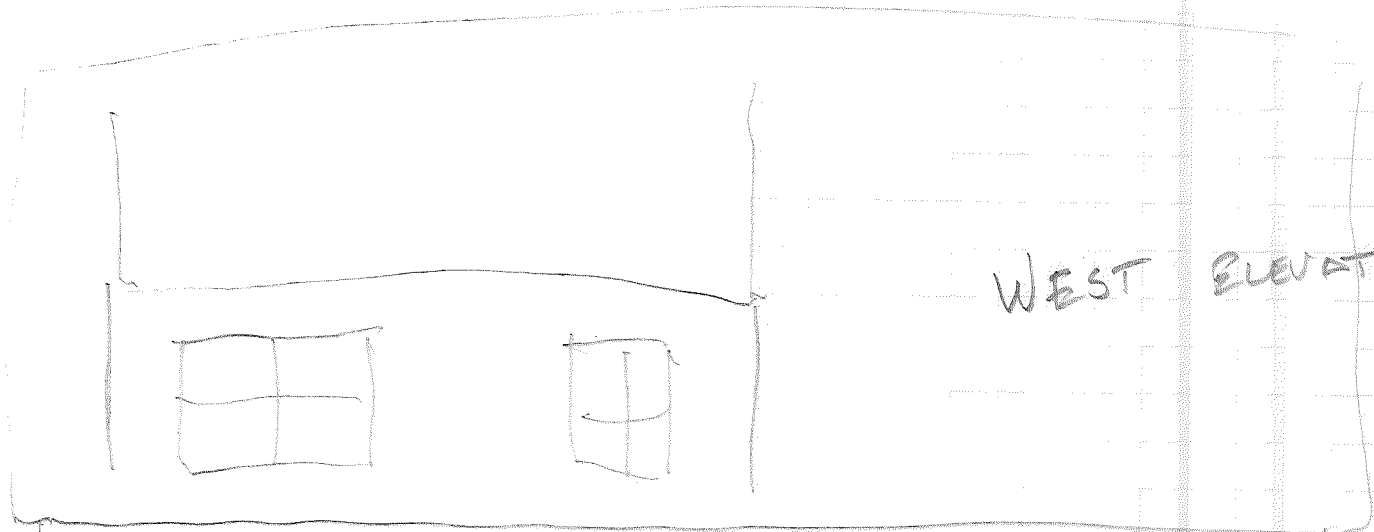
[Handwritten Signature]
Home Owner

12" BETWEEN RIMPS PERMS AT SAME LEVEL PAGE 31
12" BELOW OR BESIDE WINDOW

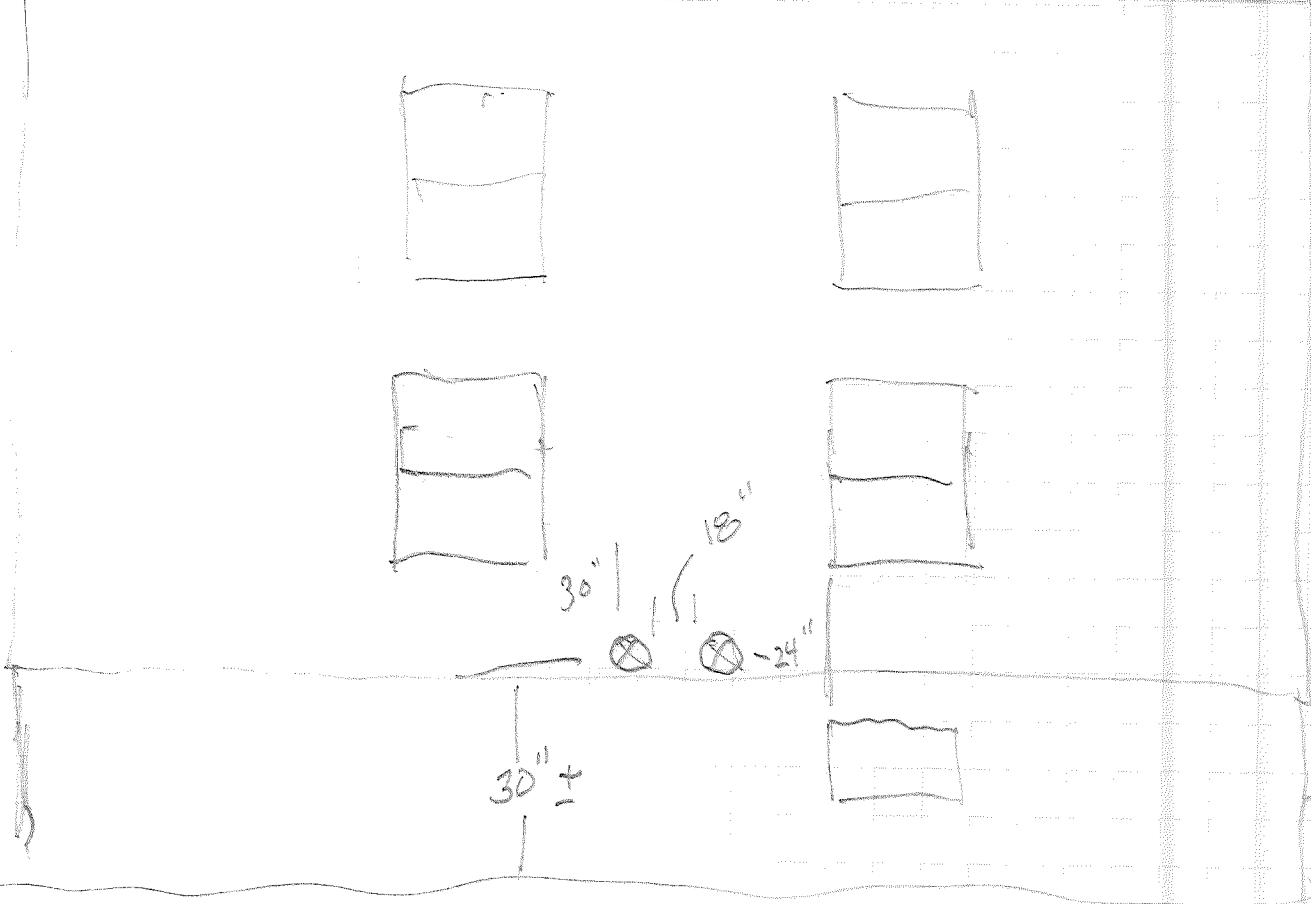
EAST ELEVATION



NOT TO SCALE



WEST ELEVATION



NOT TO SCALE

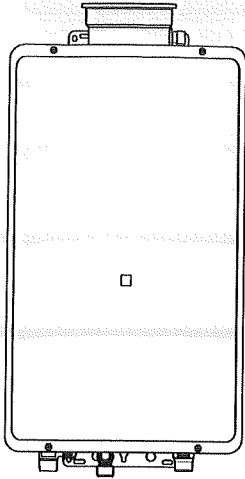
2-V53I

VENT INSTRUCTION FOR
EX 22 + ES 38 SAME

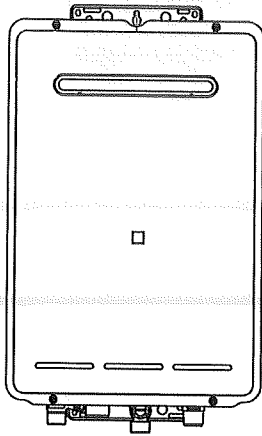
Rinnai®

Tankless Water Heater

Operation and Installation Manual



V53i



V53e

- V53i..... REU-VB2020FFU-US
- V53e..... REU-VAM1620W-US

Certified for installation in manufactured (mobile) homes.

Table of Contents.....	2
Consumer Safety Information ..	4
Operating Instructions	5
Maintenance	12
Error Codes.....	13
Installation Instructions	17
Consumer Support.....	44
French Version.....	47

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

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 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.



V53i only



ANS Z21.10.3
•
CSA 4.3

Venting Instructions (V53i)

Intake / Exhaust Guidelines Refer to the specific instructions on your vent product for additional installation requirements.

- This water heater is a direct vent water heater and therefore is certified and listed with the vent system. You must use vent components that are certified and listed with the water heater model.
- Do not combine vent components from different manufacturers.
- The vent system must vent directly to the outside of the building and use outside air for combustion.
- Venting should be as direct as possible with a minimum number of pipe fittings.
- Avoid dips or sags in horizontal vent runs by installing supports per the vent manufacturer's instructions.
- Support horizontal vent runs every four feet and all vertical vent runs every six feet or in accordance with local codes.
- Vent diameter must not be reduced.
- Do not connect the venting system with an existing vent or chimney.
- Do not common vent with the vent pipe of any other water heater or appliance.
- Vent connections must be firmly pressed together so that the gaskets form an air tight seal.
- The vent piece connected to the water heater must be secured with one self-tapping screw.
- Refer to the instructions of the vent system manufacturer for component assembly instructions.
- If the vent system is to be enclosed, it is suggested that the design of the enclosure shall permit inspection of the vent system. The design of such enclosure shall be deemed acceptable by the installer or the local inspector.

NOTICE

If it becomes necessary to access an enclosed vent system for service or repairs, Rinnai is not responsible for any costs or difficulties in accessing the vent system. Warranty does not cover obtaining access to an enclosed vent system.

Condensate

Condensate formation can occur in high efficiency direct vent appliances. To prevent condensate damage follow these instructions.

- Vertical terminations must incorporate a condensate drain and trap as close as possible to the appliance.
- The V53i water heater has an integrated condensate collector.
- Rinnai offers a condensate trap.
- Regions of cold climate will create more condensate in the vent system. The condensate collector should be used in cold climates.
- Use only vent that is approved and identified as acceptable for your particular model.
- Do not use PVC, CPVC, ABS or galvanized material to vent this appliance.
- Slope the venting toward the appliance according to the vent manufacturers installation instructions.
- All condensate must drain and be disposed of per local codes.
- Use only PVC or CPVC pipe for the condensate drain line.
- The condensate drain pipe should be as short as possible and have a downward pitch.
- Do not connect the condensate drain pipe directly to the rain sewer.
- The condensate drain pipe (along its entire length) must be at least the same diameter as the drain line.
- The end of the condensate drain pipe should be open to the atmosphere. The end should not be under water or other substances.
- Do not connect the condensate drain line with an air conditioning evaporator coil drain.
- To minimize freezing of the condensate, run the condensate drain line through an interior wall or between insulation and an interior wall.
- The condensate collector should be used for all hydronic heating applications.

WARNING

The condensate trap must be primed before operation to prevent exhaust gases from entering the building.

NOTICE

Provisions must be made to prevent the condensate from entering the water heater. Without proper drainage or disposal, condensate will damage the heat exchanger.

Venting Instructions (V53i)

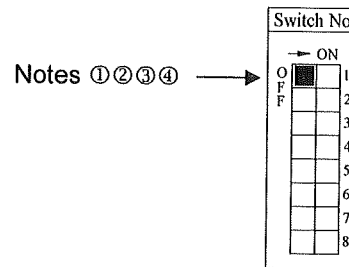
Maximum Vent Length

1. Determine the number of 90 degree elbows in the vent system. (Two 45 degree elbows count as one 90 degree elbow.)
2. Refer to the table to find the maximum vent length based on the number of elbows.
3. Follow the applicable note.

Example: If you have one elbow then your maximum vent length is 35 feet (10.7 m). If your actual length is greater than 15 ft (4.6 m) then move switch no. 1 (SW1) to OFF.

Number of 90° Elbows						
0	1	2	3	4	5	6
41 ft ① (12.5 m)	35 ft ② (10.7 m)	29 ft ③ (8.8 m)	23 ft ④ (7.0 m)	17 ft ④ (5.2 m)	11 ft ④ (3.4 m)	5 ft ④ (1.5 m)

- ① If the length is greater than 21 ft (6.4 m) then move switch no. 1 (SW1) to OFF.
- ② If the length is greater than 15 ft (4.6 m) then move switch no. 1 (SW1) to OFF.
- ③ If the length is greater than 9 ft (2.7 m) then move switch no. 1 (SW1) to OFF.
- ④ Move switch no. 1 (SW1) to OFF.



NOTICE

If you have a longer vent length, switch no. 1 is required to be in the OFF position. This ensures the water heater will run properly. Blocked flue error codes and shutdowns may result if switch no. 1 is not in the correct position.

Vent Products

Listed and Tested Vent Products for V53i.....REU-VB2020FFU-US

Manufacturer	Product	Parts
Rinnai/Ubbink	Rolux Vent System	Refer to the manufacturer's technical literature for specific part numbers and instructions.
Heat-Fab	Saf-T Vent SC system	
Metal-Fab	Corr/Guard Vent/Air	

Vent Manufacturer Contact Information for Installation Instructions and Parts Lists:

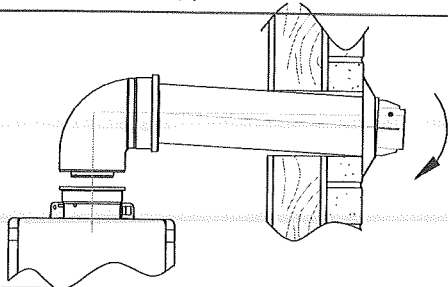
Rinnai/Ubbink	Heat-Fab	Metal-Fab Inc.
Telephone: 800-621-9419	Telephone: 800-772-0739	Telephone: 800-835-2830
Fax: 678-829-1666	Fax: 413-863-4803	316-943-2351
Web Site: www.rinnai.us	E-mail: custsvc@heat-fab.com	Fax: 316-943-2717
	Web Site: www.heatfab.com	E-mail: info@mtlfab.com
		Web Site: www.metal-fabinc.com

Flue Installation - Concentric Venting (V53i)

Horizontal Termination without using the Condensate Collector

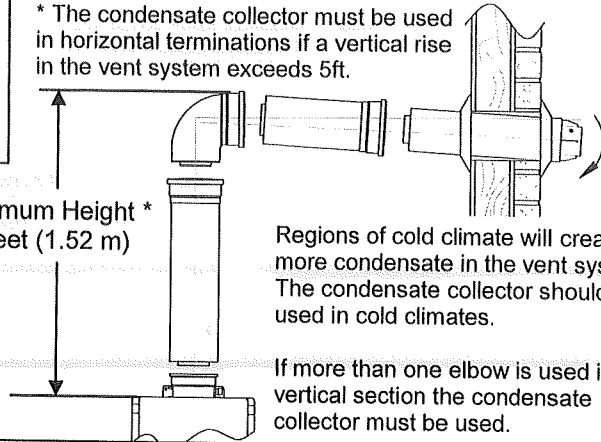
WARNING

If the condensate collector is not used, the drain pipe must be capped to prevent exhaust gases and condensate from entering the building. The cap is supplied on the appliance.



* The condensate collector must be used in horizontal terminations if a vertical rise in the vent system exceeds 5ft.

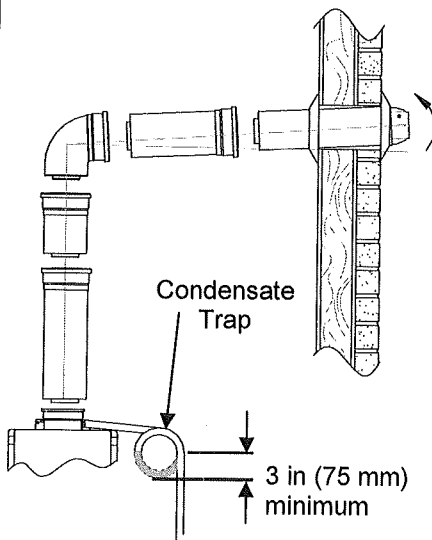
Maximum Height *
5 feet (1.52 m)



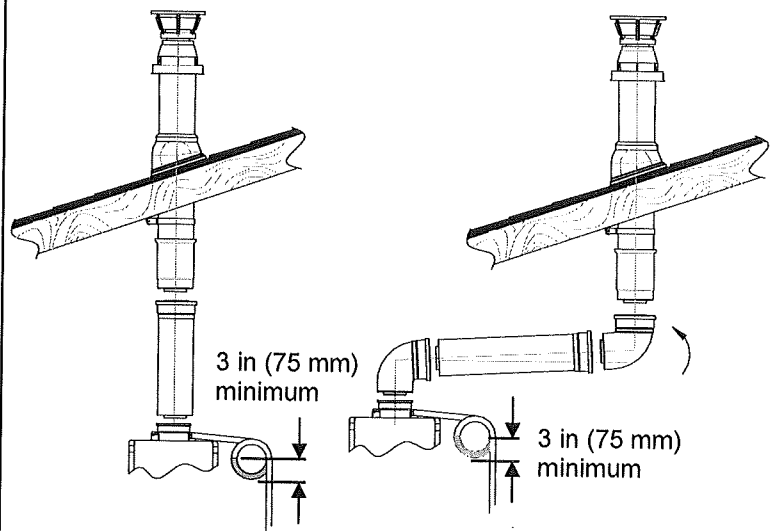
Regions of cold climate will create more condensate in the vent system. The condensate collector should be used in cold climates.

If more than one elbow is used in the vertical section the condensate collector must be used.

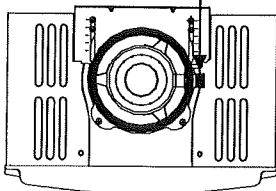
Horizontal Termination using the Condensate Collector



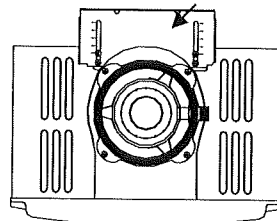
Vertical Termination (condensate collector must be used in all installations)



Condensate Collector



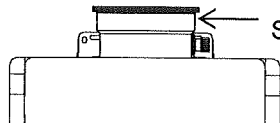
Bracket



To adjust the condensate collector position or to replace the female vent top with a male vent top:

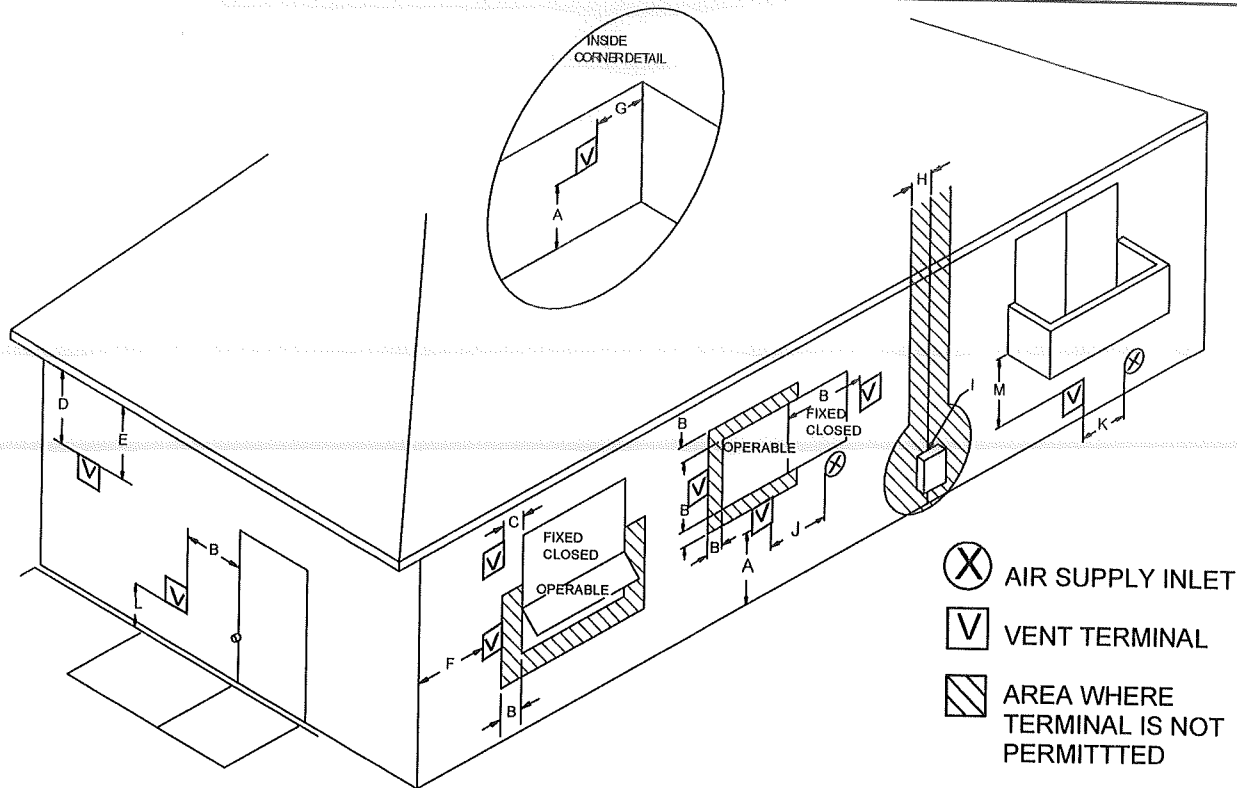
1. Loosen the 4 screws at the rear bracket
2. Slide the bracket away from the female vent top.
3. Remove the 4 screws attaching the female vent top to the water heater.
4. Lift up the female vent top and reposition as desired (or replace with a male vent top).
5. Install the 4 screws at the vent top and tighten the 4 screws at the bracket.

Securing Screw



Secure the first vent component to the water heater with one self-tapping screw at the hole located above the condensate collector.

Flue Terminal Clearances (ANS Z21.10.3, CSA 4.3)



Ref	Description	Canadian Installations	US Installations
A	Clearance above grade, veranda, porch, deck, or balcony	12 inches (30 cm)	12 inches (30 cm)
B	Clearance to window or door that may be opened	36 inches (91 cm)	12 inches (30 cm)
C	Clearance to permanently closed window	*	*
D	Vertical clearance to ventilated soffit, located above the terminal within a horizontal distance of 2 feet (61 cm) from the center line of the terminal	*	*
E	Clearance to unventilated soffit	*	*
F	Clearance to outside corner	*	*
G	Clearance to inside corner	*	*
H	Clearance to each side of center line extended above meter/regulator assembly	3 feet (91 cm) within a height 15 feet (4.5 m) above the meter/regulator assembly	*
I	Clearance to service regulator vent outlet	36 inches (91 cm)	*
J	Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance	36 inches (91 cm)	12 inches (30 cm)
K	Clearance to a mechanical air supply inlet	6 feet (1.83 m)	3 feet (91 cm) above if within 10 feet (3 m) horizontally
L	Clearance above paved sidewalk or paved driveway located on public property	7 feet (2.13 m) ①	*
M	Clearance under veranda, porch, deck, or balcony	12 inches (30 cm) ②	*

① A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

② Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

* For clearances not specified in ANSI Z223.1/NFPA 54 or CSA B149.1, clearances are in accordance with local installation codes and the requirements of the gas supplier.

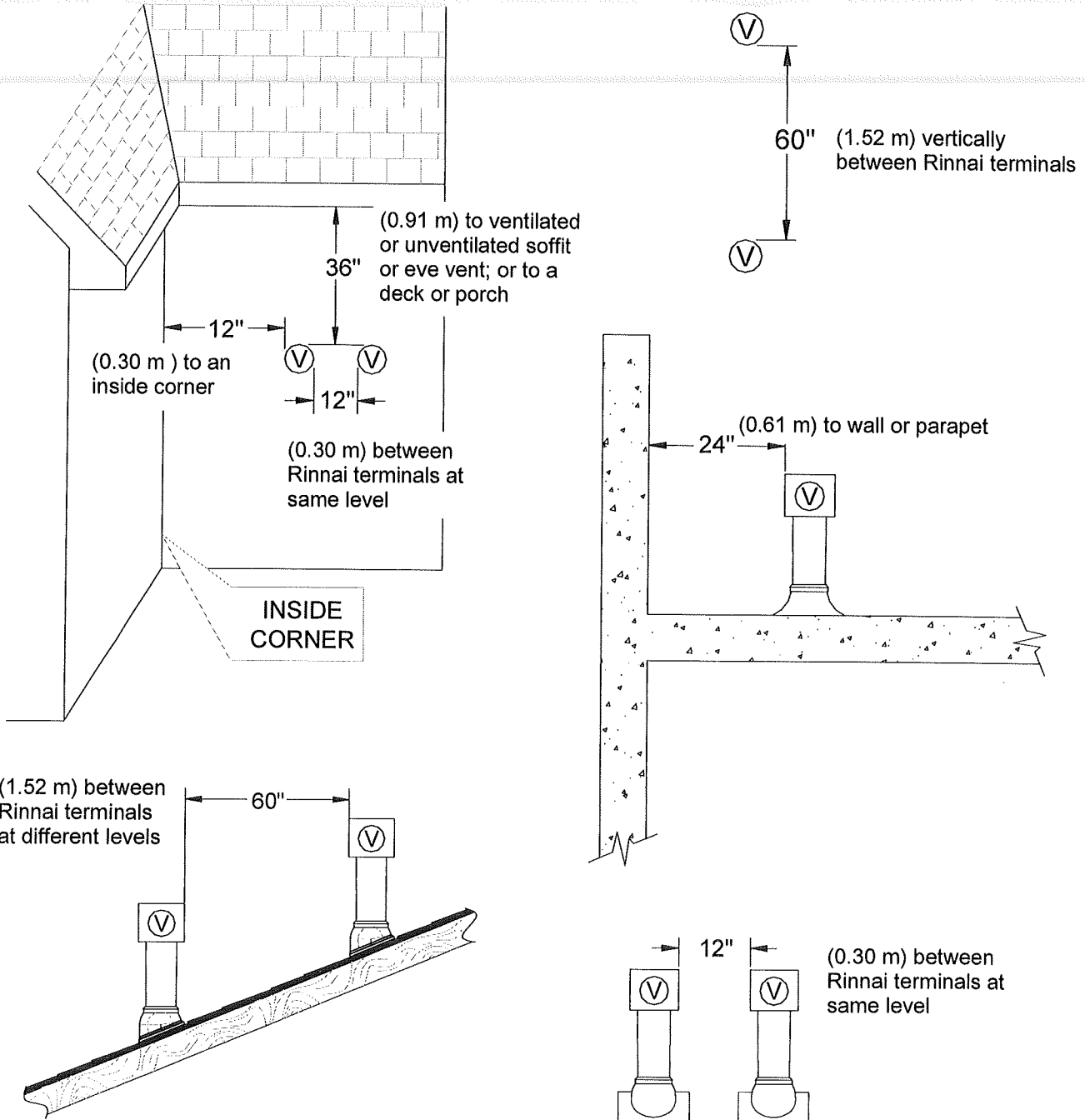
Clearance to opposite wall is 24 inches (60 cm) for Canada and US.

Additional Clearances (V53i)

Local codes supersede these clearances.

- Avoid termination locations near a dryer vent.
- Avoid termination locations near commercial cooking exhaust.

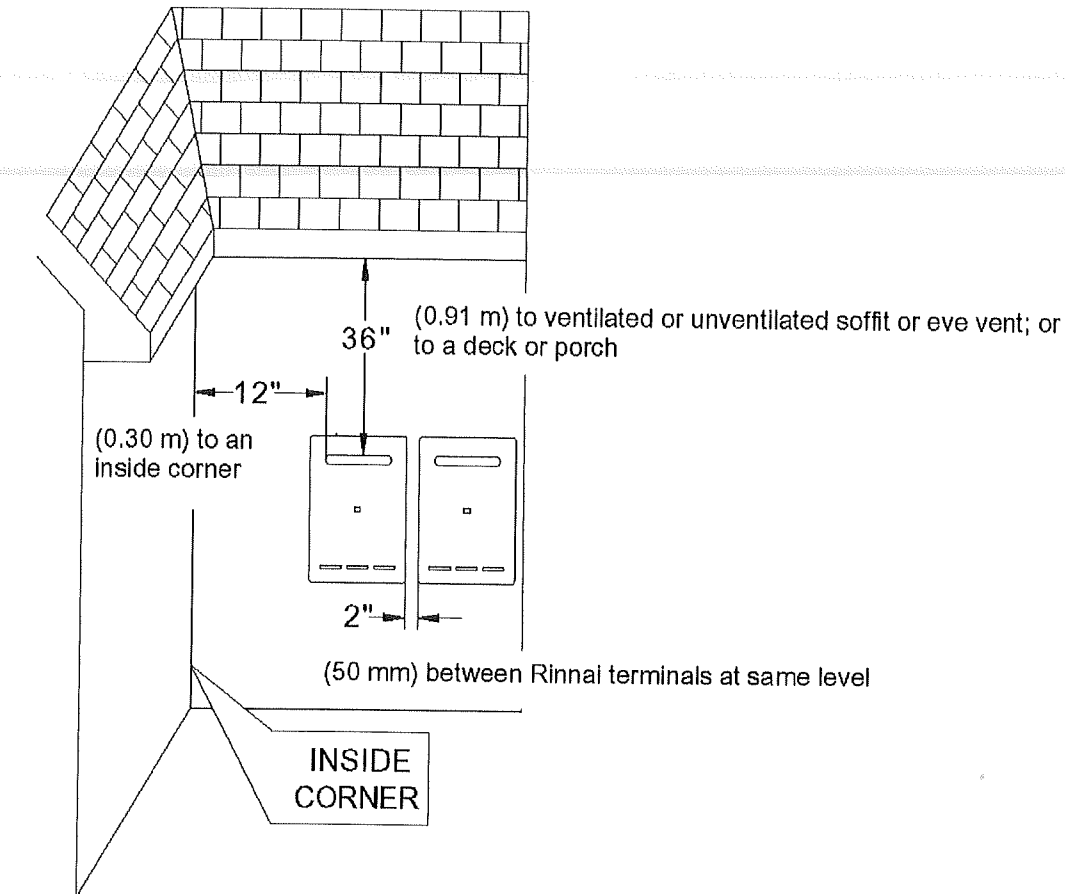
 Vent terminal (represents concentric vent terminal)



Additional Clearances (V53e)

Local codes supersede these clearances.

- Avoid termination locations near a dryer vent.
- Avoid termination locations near commercial cooking exhaust.



1 EX22C
Owner's Operation and Installation Manual for the

EX17C (RHFE-434FTA)

EX22C (RHFE-559FTA)

Energysaver®

Gas Direct Vent Wall Furnace

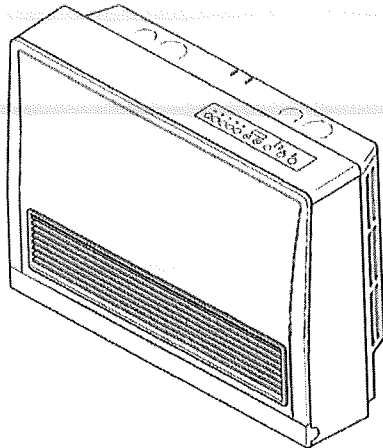


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Operating Instructions.....	6
Installation Instructions	15
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Consumer Support.....	44
French Version.....	46

⚠ WARNING: If the information in these instructions 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.

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

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

Rinnai®

2 ES38's

Owner's Operation and Installation Manual for the

ES38 (RHFE-1004RFA)

Energysaver

Gas Direct Vent Wall Furnace

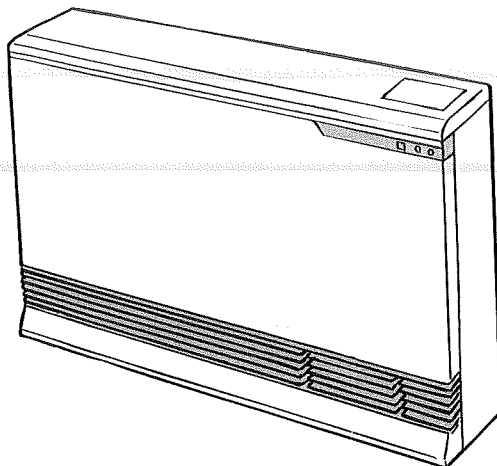


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Operating Instructions	6
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Fault Codes	12
Installation Instructions ...	14
Parts List	32
Consumer Support	42

WARNING: If the information in these instructions 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**

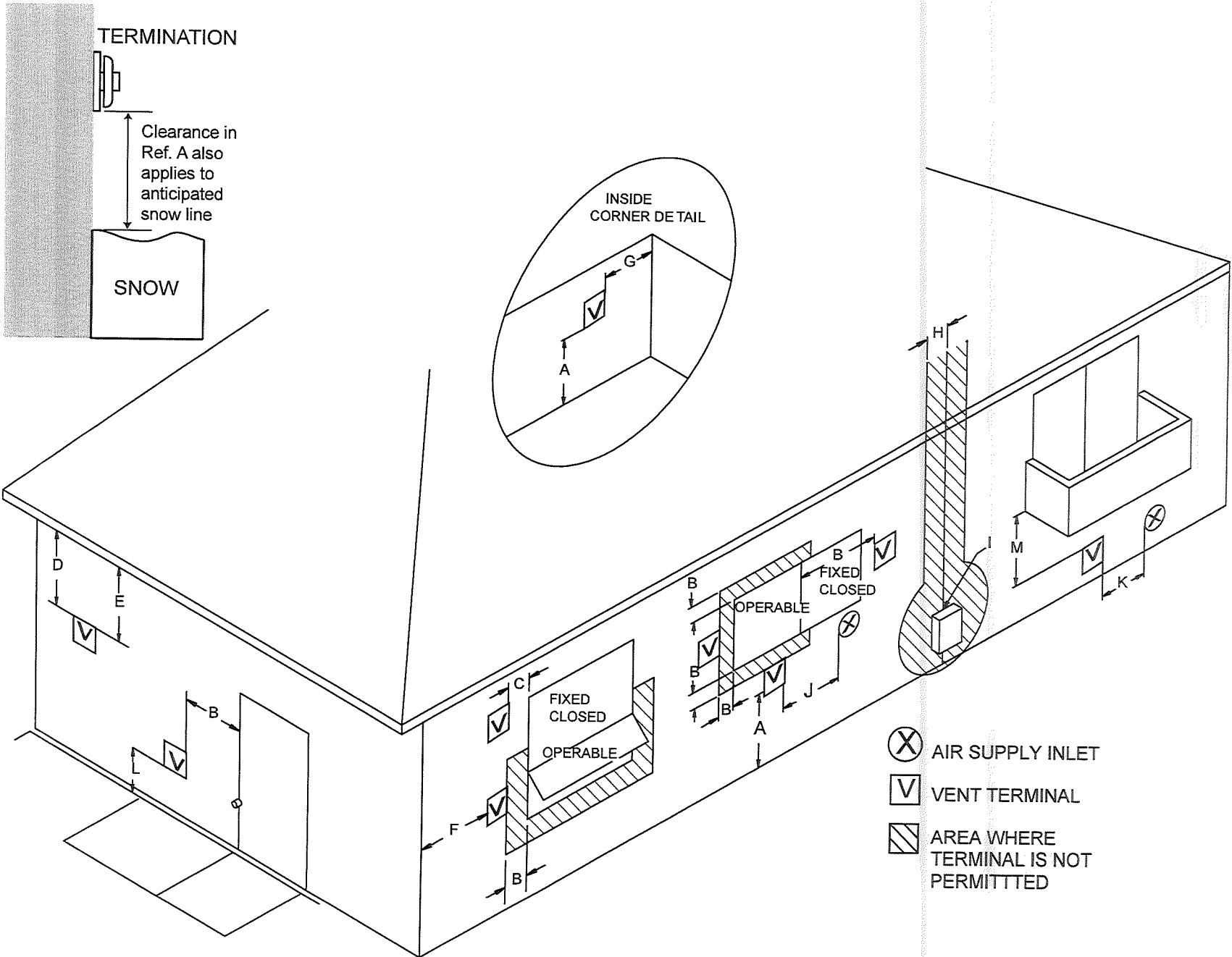
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- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
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INSTALLER: Leave this manual with the appliance.
CONSUMER: Retain this manual for future reference.

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

Rinnai®



Flue Terminal Clearances

Ref	Description	Canadian Installations	US Installations
A	Clearance above grade, veranda, porch, deck, or balcony. (Take into account the anticipated snow line)	12 inches (30 cm)	12 inches (30 cm)
B	Clearance to window or door that may be opened	6 inches (15 cm) for appliances \leq 10,000 BTUh; 12 inches (30 cm) for appliances $>$ 10,000 BTUh and \leq 100,000 BTUh, 36 inches (91 cm) for appliances $>$ 100,000 BTUh	6 inches (15 cm) for appliances \leq 10,000 BTUh; 9 inches (23 cm) for appliances $>$ 10,000 BTUh and \leq 50,000 BTUh, 12 inches (30 cm) for appliances $>$ 50,000 BTUh
C	Clearance to permanently closed	*	*
D	Vertical clearance to ventilated soffit, located above the terminal within a horizontal distance of 2 feet (61 cm) from the center line of the terminal	*	*
E	Clearance to unventilated soffit	*	*
F	Clearance to outside corner	*	*
G	Clearance to inside corner	20 inches (50 cm)	20 inches (50 cm)
H	Clearance to each side of center line extended above meter/regulator assembly	3 feet (91 cm) within a height 15 feet (4.5 m) above the meter/regulator assembly	*
I	Clearance to service regulator vent	3 feet (91 cm)	*
J	Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance	6 inches (15 cm) for appliances \leq 10,000 BTUh; 12 inches (30 cm) for appliances $>$ 10,000 BTUh and \leq 100,000 BTUh, 36 inches (91 cm) for appliances $>$ 100,000 BTUh	6 inches (15 cm) for appliances \leq 10,000 BTUh; 9 inches (23 cm) for appliances $>$ 10,000 BTUh and \leq 50,000 BTUh, 12 inches (30 cm) for appliances $>$ 50,000 BTUh
K	Clearance to a mechanical air supply inlet	6 feet (1.83 m)	3 feet (91 cm) above if within 10 feet (3 m) horizontally
L	Clearance above paved sidewalk or paved driveway located on public	7 feet (2.13 m) ①	*
M	Clearance under veranda, porch, deck, or balcony	12 inches (30 cm) to non-flammables ② 24 inches (60 cm) to flammables ②	12 inches (30 cm) to non-flammables ② 24 inches (60 cm) to flammables ②

① A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

② Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

*For clearances not specified in *ANSI Z223.1/NFPA 54* or *CSA B149.1*, clearances are in accordance with local installation codes and the requirements of the gas supplier.

Flue Manifold Installation

- The flue manifold must exhaust to the outside. Do not exhaust into other rooms.
- The flue manifold is not designed to be positioned under floors or below the heater.
- The termination cannot be vertical.
- This appliance can only be used with one of the five types of Rinnai flue kits. The flue kits and their dimensions are listed on the previous page.
- Refer to the Flue Terminal Clearances section.

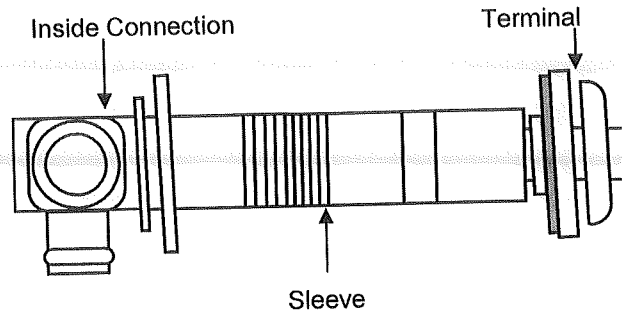
1. Disassemble the flue manifold

The flue consists of 3 parts:

- sleeve
- inside connection
- outside terminal

Disassemble the flue manifold by first pulling out the inside connection. To remove the outer terminal pull and release the two internal ties and then pull out the outer terminal.

Clearance to combustibles for the sleeve and flanges is zero inches.



2. Adjust the sleeve length

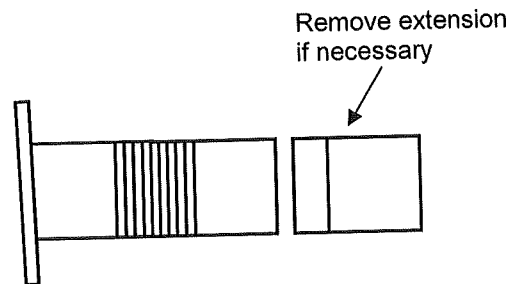
Measure wall thickness through previously drilled 3 1/8 inch (80 mm) hole.

The end of the sleeve should protrude 3/16 - 3/8 inch (5-10 mm) from the outside wall.

The sleeve is threaded for adjustment. Adjust the sleeve length to wall thickness plus 3/16 - 3/8 inch (5-10 mm).

NOTE: Do not extend beyond the red line.

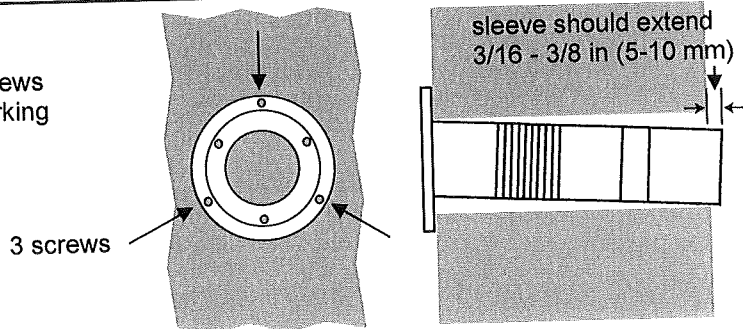
For other than the "S" type flue manifold, if a shorter length is necessary an extension can be removed. Cut the plastic and remove the extension.



3. Attach the sleeve

Attach to the inside wall using 3 screws arranging the flange so that the marking "TOP" is at the top.

The flange is offset 2° to allow the condensate drain to the outside.

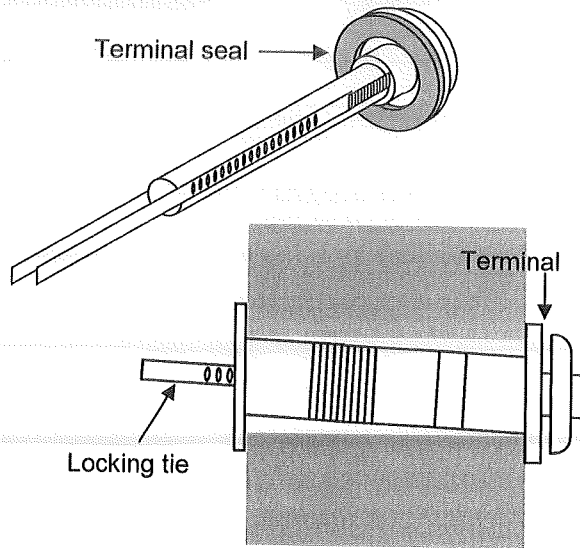


Flue Manifold Installation

4. Install the Terminal

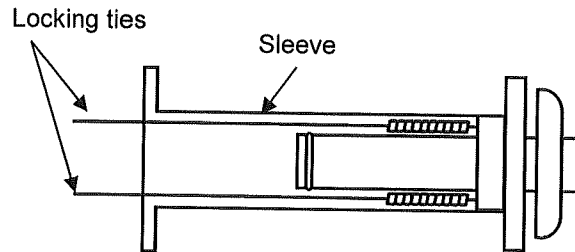
Check that the terminal seal is in place. For weatherboard walls, add the second seal next to the terminal seal to compensate for weather board angle.

From the outside insert the terminal into the sleeve with the marking "TOP" at the top. The left hand side locking tie should be marked "LEFT".



6. Lock the ties

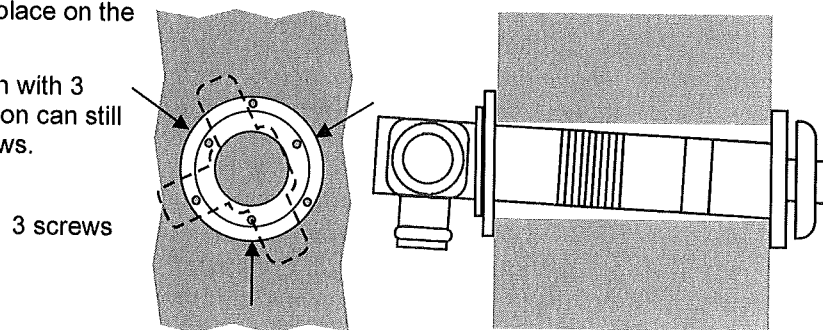
Pulling hard on the left and right hand ties, clip the ties over the notches inside the sleeve. You should be able to pull the ties 2 or 3 notches past the starting point. Cut the ties, leaving about 3/4 inch (20 mm) past the notch. Bend the ties back into the sleeve and parallel to the wall.



7. Insert Inside Connection Assembly

Push the assembly into the terminal tube, ensuring that the seal is in place on the inner tube.

Attach the inside connection with 3 screws. The inner connection can still be turned to install the screws.



Extension Kit Installation

If necessary, extension kits are available to extend the exhaust line and air intake hose between the manifold and the appliance. The maximum vent length is 13 feet (4 m) with 2 bends. The bent pipe attached to the appliance does not count toward the max limit of 2 bends. Any length (horizontal and vertical) in excess of 8 feet (2.4 m) must be sloped 3° downward toward the flue manifold to allow condensate to drain to the outside. Do not allow any low points in the exhaust line where condensate will collect.

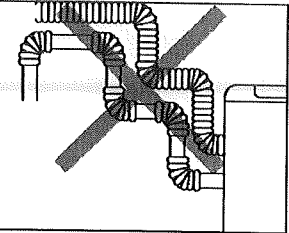
Vent extensions installed in unconditioned air space must be insulated with high temperature insulation and must be accessible.

Vent extensions must not be concealed per NFPA 54 and must be accessible allowing inspection and repair. Decorative covers are available from Rinnai.

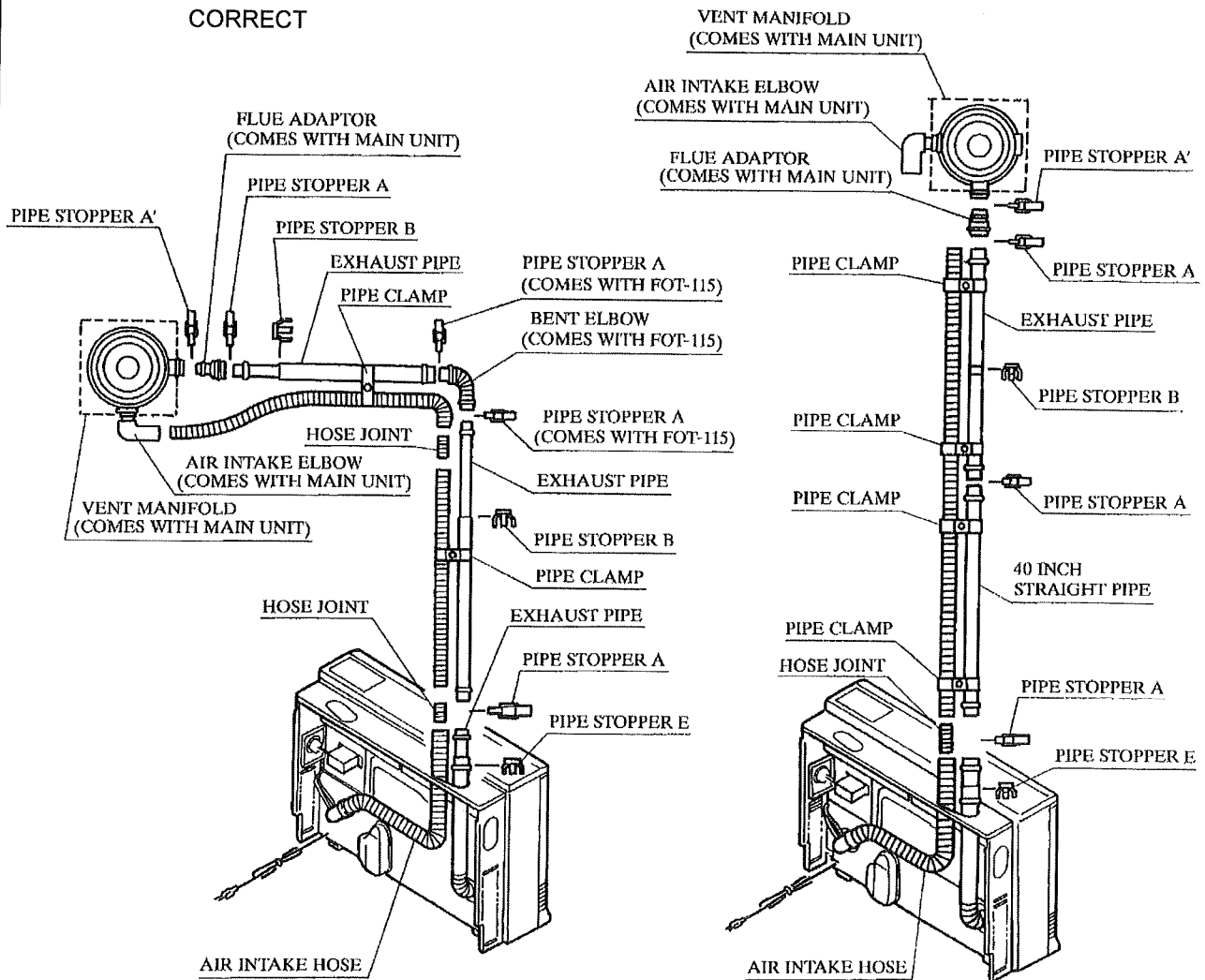
Examples

INCORRECT

- Too many bends (limit is 2)
- Air intake hose is above exhaust pipe



CORRECT



Extension Kit Installation

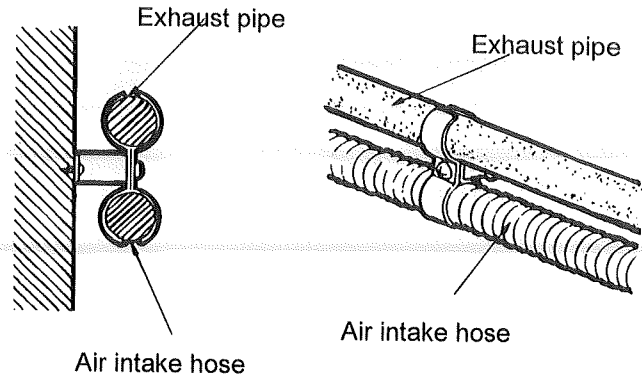
CAUTION Use the pipe stoppers, connectors, clamps, and screws according to these instructions in order to ensure no leakage of exhaust gases.

Clearances	exhaust pipe to combustibles	1 inch (25.4 mm)
	exhaust pipe to non-combustibles	zero

Clamps

Both the exhaust line and air intake hose are supported by clamps which are attached to the wall. A wall fixture can be used to offset the clamp from the wall. Use Screw B to attach the wall fixture to the wall. If the wall fixture is not used then use Screw A and the nut to attach the clamp to the wall.

The air intake hose should always be underneath the exhaust line so that in case the air intake hose sags it will not come into contact with the exhaust line.



Installing the Exhaust Line

The exhaust line is connected between the bent pipe at the rear of the heater and the exhaust port on the flue manifold.

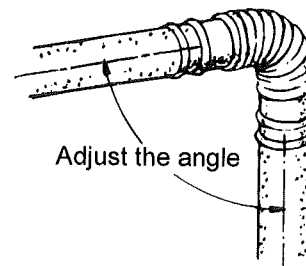
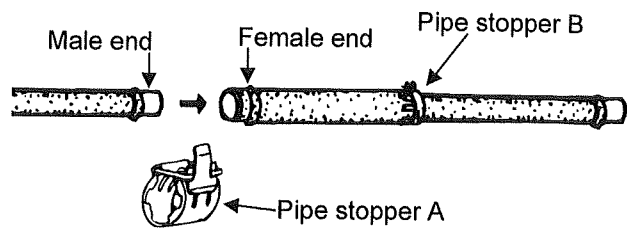
To connect exhaust pipes with other straight pipes or bends, fit the male end into the female end. Use pipe stopper A to clamp the connection.

Use pipe stopper B to fix the length on the adjustable exhaust pipes. Do not extend these pipes beyond the red line.

Do not cut the exhaust pipe. Use the adjustable pipes if necessary.

To bend the elbow, insert exhaust pipes into both ends for additional leverage. Bend to desired angle.

Do not straighten the bent pipe attached to the appliance.



Connecting the Air Intake Hose

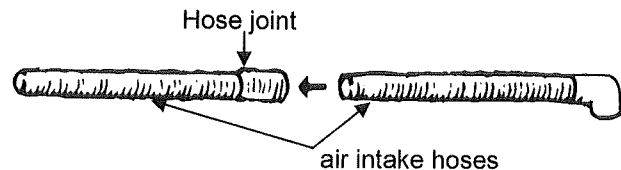
The air intake hose is connected between the air connection at the rear of the heater and the air intake port on the flue manifold.

Push the air intake hose onto the flue manifold and secure with the plastic cable tie.

Join air intake hoses by screwing the hose joint half of its length into the air intake hose and then screwing another air intake hose into the hose joint.

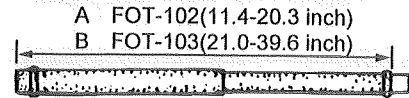
The lengths of the air intake hose and the exhaust pipe must be the same in order for the appliance to operate properly. The hose can be cut to the required length. Deburr all rough edges. Do not cut the hose attached to the appliance.

Support the air intake hose with pipe clamps.



Extension Kit Installation

Extension Kits and Parts



① EXHAUST PIPE



⑥ PIPE STOPPER A



⑨ PIPE CLAMP



⑫ SCREW A



② EXHAUST PIPE (STRAIGHT) 40 inch



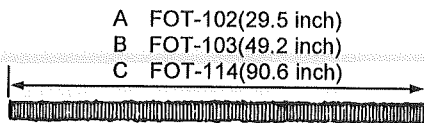
⑦ PIPE STOPPER B



⑩ WALL-FIXTURE



⑬ SCREW B



③ AIR INTAKE HOSE



⑧ TOP STOPPER



⑪ NUT



⑭ O RING



④ BENT ELBOW

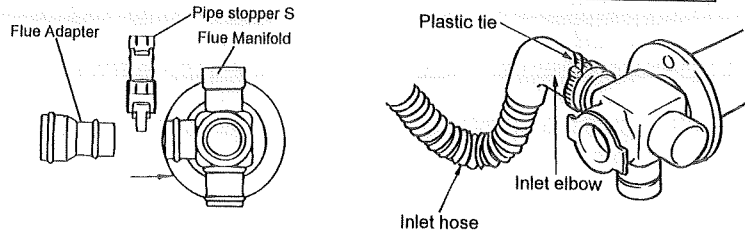


⑤ HOSE JOINT

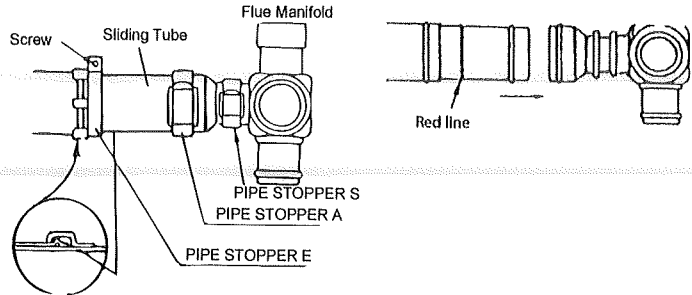
Item	Description	Part No.	FOT-102	FOT-103	FOT-114	FOT-115
1	Exhaust Pipe (adjustable) 11.4-20.3 in (290-515 mm)	FOT 111-1	1			
1	Exhaust Pipe (adjustable) 21.0-39.6 in (533-1005 mm)	FOT 112-1		1	1	
2	Exhaust Pipe - 40 in (1016 mm)	FOT 114-3			1	
3	Air Intake Hose - 29.5 in (750 mm)	RHF 1000-130-e	1			
3	Air Intake Hose - 49.2 in (1.25 m)	RHF 1000-130-b		1		
3	Air Intake Hose - 90.6 in (2.3 m)	RHF 1000-130-F			1	
4	Bent Elbow	FOT 025-4				1
5	Hose Joint	FOT 064-8	1	1	1	
6	Pipe Stopper A	1001F-250	1	1	2	2
7	Pipe Stopper B	FOT 111-6	1	1	1	
8	Top Stopper	FOT 062-7	1	1	1	
9	Pipe Clamp	FOT 064-11	2 sets	3 sets	4 sets	
10	Wall Fixture	FOT 064-12	2	3	4	
11	Nut	FOT 062-10	2	3	4	
12	Screw A	ZAA0420SC	2	3	4	
13	Screw B	CP-30408	4	6	8	
14	O Ring	M10B-4-49				1

Connecting the Appliance

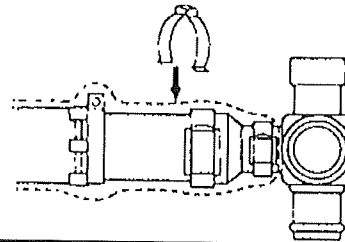
1. Attach flue adapter to the flue manifold with pipe stopper S.
2. Attach the air inlet hose to the flue manifold. Secure with plastic tie. The unused inlet is plugged with the rubber cap supplied on the manifold.



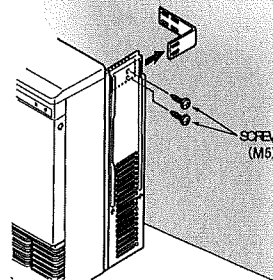
3. Connect the vent sliding tube with pipe stopper S and E. The sliding tube should not be extended beyond the red line. The red line should not be visible after sliding the tube into the vent outlet.



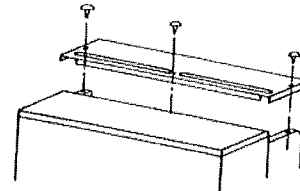
4. Slide the insulation sleeve up to the flue manifold and slip the securing clip over the sleeve as shown.



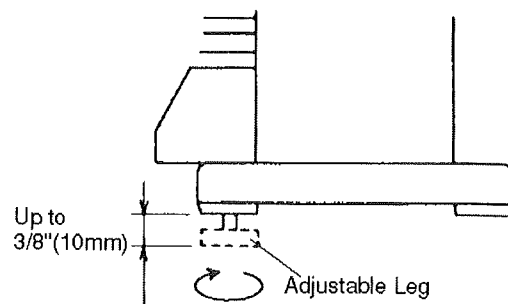
5. Attach the appliance to the wall brackets, using 2 screws at each bracket.



6. Attach the back spacer with 3 screws to the top of the appliance.



7. If necessary, the appliance can be leveled using the adjustable legs under the front right and left legs.





CITY OF PORTLAND, MAINE
Department of Building Inspections

Original Receipt

Nov. 15 2010

Received from Dwayne Partridge

Location of Work 963 Ocean Ave

Cost of Construction \$ _____ Building Fee: _____

Permit Fee \$ _____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: _____

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

Other NVAC

CBL: 423 A003

Check #: Cash Total Collected \$ 170.00

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

Taken by: Hayb

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