

**HOME OWNER / INSTALLER
FOR YOUR SAFETY
THIS MANUAL MUST BE READ IN ITS
ENTIRETY BEFORE OPERATING HEATER**



RHFE-1004FA

ENERGYSAVER

GAS DIRECT VENT WALL FURNACE



Owner's Operation and Installation Manual

WARNING: If the information in these instructions are 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.

This appliance may be installed in an aftermarket, permanently located, manufactured home (USA) or mobile home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.

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



Rinnai[®]

WARNING

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE, REFER TO THE OWNER'S INFORMATION MANUAL PROVIDED WITH THIS APPLIANCE. INSTALLATION AND SERVICE MUST BE PERFORMED BY A QUALIFIED INSTALLER, SERVICE AGENCY OR THE GAS SUPPLIER.

ENERGYSAVER RHFE-1004FA Operation Manual

Table of Contents

| | Page |
|---|------|
| FEATURES OF THE RHFE-1004FA UNITS | 1 |
| SAFETY DEVICES | 1 |
| IMPORTANT POINTS / USAGE AND INSTALLATION MUSTS | 3 |
| DIMENSIONS | 5 |
| SPECIFICATIONS | 6 |
| SAFETY POINTS | 8 |
| GETTING TO KNOW YOUR NEW RHFE-1004FA | 10 |
| CONTROL PANEL | 11 |
| CUT-AWAY DIAGRAM | 12 |
| NOTICE BEFORE INSTALLATION | 13 |
| INSTALLATION INSTRUCTIONS | 14 |
| GAS CONNECTION | 15 |
| VENT TERMINATION CLEARANCES | 16 |
| LOCATION / CLEARANCES | 17 |
| SLEEVE AND MANIFOLD INSTALLATION | 19 |
| FITTING UNIT | 21 |
| OPERATING INSTRUCTION LABEL | 23 |
| ADDITIONAL CUSTOMER OPERATING INFORMATION | 24 |
| TESTING | 30 |
| CHECK | 30 |
| PRE-SERVICE CHECK | 31 |
| TROUBLE SHOOTING | 32 |
| ERROR MESSAGES..... | 33 |
| MAINTENANCE / SERVICE | 34 |
| WIRING DIAGRAM | 35 |
| WARRANTY INFORMATION | 36 |
| SCHEMATIC DIAGRAM | 38 |
| PARTS LIST | 45 |
| RHFE-1004FA FLOW DIAGRAM | 50 |
| EXTENDED FLUE PIPE KIT | 51 |
| TECHNICAL DATA | 56 |

FEATURES OF THE RHFE-1004FA UNITS

- ◆ Clean Heating Forced Flue Type
- ◆ Easy Operation One-Touch Ignition
- ◆ Sensible Temperature Control Feature
- ◆ Comfortable Room Temperature Control and Display
- ◆ Warm Air Outlet at Floor Level (Keeps Your Feet Warm)
- ◆ Child Safety Lock
- ◆ Room Temperature Setting Memory
- ◆ Dirty Air Filter Indicator Lamp
- ◆ Energy-Saving Economy Setting
- ◆ Humidifier Tray
- ◆ Air Flow Directional Louvers
- ◆ Direct Vent Easily Installed
- ◆ Proportional Heating Variable Capacity
- ◆ Hush! Quiet Operation
- ◆ Modern Design Minimizes Floor Space Requirements
- ◆ Failure Message Display

SAFETY DEVICES

Spark Safety Device: Automatically shuts unit down when there is an abnormal spark at time of ignition.

Flame Failure Device: Activated when burner flame fails. This prevents raw gas from being released.

Overheat Switch: This device automatically cuts the gas off if the heater exceeds a predetermined temperature. This is normally caused by an obstruction in front of the louvers, or a blocked fan filter.

Two Fusible Links: Backs up the overheat switch. If the fusible link cuts the unit off, a service call by an authorized person is required to replace the link.

Overcurrent Prevention Device: This is a 5 amp. glass fuse found on P.C. board. Design to shut unit down in case of overcurrent. If fuse blows all indicator lamps will be "OFF".

Power Outage Safety Device: This safety device cuts off gas passage and stops operation.

Local and state codes must be adhered to prior to installation.

Rinnai is continually updating and improving products therefore specifications are subject to change without prior notice.

| | NAT. | LPG |
|-----------------------------|-------------------------------|-------------------------------|
| Minimum supply gas pressure | 5.0" (127mmH ₂ O) | 11.0" (279mmH ₂ O) |
| Maximum supply gas pressure | 10.5" (267mmH ₂ O) | 13.0" (330mmH ₂ O) |
| Manifold test pressure | Factory set | Factory set |

※See conversion for setting gas pressures.

*There's 1/8" NPT pipe tap provided for gas pressure test. That is located on the gas control assembly A. The minimum inlet gas supply pressure is for the purpose of input adjustment.

GENERAL INFORMATION



THIS SERIES HEATER IS DESIGN CERTIFIED BY CSA INTERNATIONAL AS A DIRECT VENT WALL FURNACE AND MUST BE INSTALLED ACCORDING TO THESE INSTRUCTIONS. ALTERATION OF THE ORIGINAL DESIGN INSTALLED OTHER THAN AS SHOWN IN THESE INSTRUCTIONS OR USED WITH A TYPE OF GAS NOT SHOWN ON THE RATING PLATE, IS THE RESPONSIBILITY OF THE PERSON AND COMPANY MARKING THE CHANGE.

Thank you for purchasing a Rinnai gas forced flue heater.

Before using this product, please read this manual carefully to insure proper use of the product.

Please read the attached warranty thoroughly and keep it in a safe place.

IMPORTANT POINTS / USAGE AND INSTALLATION MUSTS

Unpack heater and check for damage. (DO NOT INSTALL DAMAGED HEATER.) If heater is damaged, contact your supplier for advice. Before installing a heater, check the label for the correct gas type (see label on heater). Refer to local gas authority for confirmation of gas type if you are in doubt.

Included in Carton:

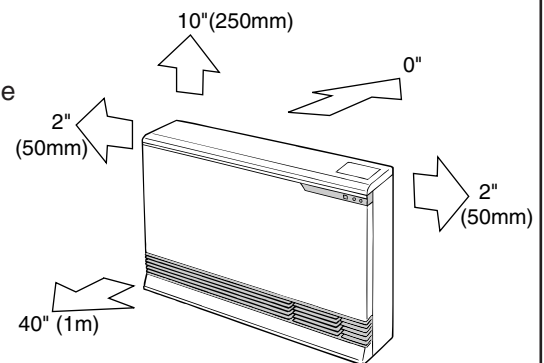
Customers Operating Information

IMPORTANT

Before using this product, please read this manual carefully to insure proper use of product.

1. The installation must conform with local codes or, in absence of local codes, the National Fuel Gas Code, ANSI Z223.1 or the Canadian Installation Code, CAN/CGA-B149.
2. For information on gas type, see data plate on the appliance.
3. This heater must not be installed where curtains or other combustible materials could come into contact with it. In some cases curtains may need restraining.
4. This appliance is not designed to be built in.
5. If you move, check the gas type in the area where you are moving to. The local gas authority will be able to advise on local regulations.
6. This heater discharges a large volume of warm air at low level to provide even heat distribution. If the air in the room contains cooking vapor or cigarette smoke, and the heater is used on a carpet, the surface of the carpet may become discolored. In addition, some nylon carpets contain dyes which may be affected by the warm air flow. Some soft vinyl surfaces are also subject to distortion, or discoloration by warm air. To prevent discoloration of carpets, etc., a mat should be placed under the appliance, extending about 30" (750mm) in front of it.

Diagram shows minimum clearances from combustible materials.



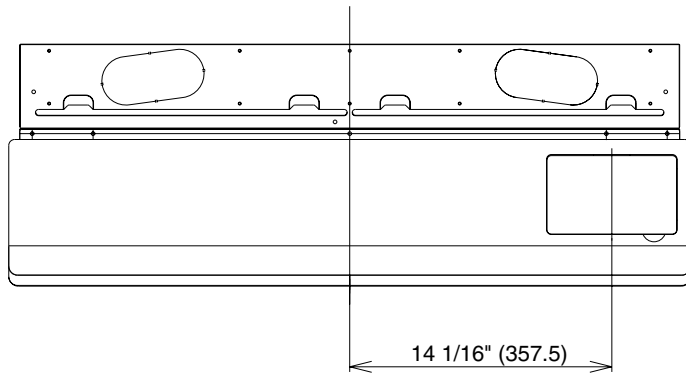
Rinnai recommends 10 inches (250mm) clearance on both sides for future servicing.

7. Read these rules and the instructions carefully. Check all local codes. Failure to follow these could cause a malfunction of the heater resulting in death, serious bodily injury and/or property damage.
8. This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.
If a conversion of the unit is needed, conversions must be performed at Rinnai America or authorized agent at owner's expense.
9. **WARNING:** Any change to this heater or its controls can be dangerous.
10. If a gas leak is suspected, turn heater off, turn gas supply valve off at appliance connector valve. Open windows to ventilate area immediately and contact your dealer or gas company.
11. **DO NOT PLACE CLOTHING OR FLAMMABLE MATERIALS, GASOLINE AND OTHER FLAMMABLE VAPORS AND LIQUIDS, ON OR NEAR THE HEATER.**

12. YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM WITH THE HEATER.
13. LPG containers must not be installed indoors.
14. Do not use this room heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
15. Adequate clearances for accessibility for purposes of servicing and proper operation should be provided.
16. Adequate clearances around air openings should be provided.
17. Do not install in areas where curtains, drapes, clothing, or other moving flammables are within 12 inches of this unit.
18. Periodic examination of the venting system is required.
19. The flow of combustion and ventilation air should not be obstructed.
20. A manufactured Home (Mobile Home) installation must conform with the Manufactured Home Construction and Safety Standard, title 24CFR, Part 3280, or, when such a standard is not applicable, the Standard for Manufactured Home Installations, ANSI A225.1 or Standard for Gas Equipped Recreational Vehicles and Mobile Housing, CSA Z240.4.
21. "This appliance must be installed in accordance with the current standard CSA Z240.4 GAS EQUIPPED RECREATIONAL VEHICLES AND MOBILE HOUSING. Cet appareil doit être installé conformément aux exigences de la norme Z240.4 en vigueur de l'ACNOR, Installations de gaz dans les constructions mobiles et véhicules récréatifs."
22. If a blockage occurs at the vent terminal due to snow, ice, leaves, spider webs or other type of obstructions the unit will stop working. The unit will not function until the blockage has been removed. If the unit then fails to operate contact a qualified service agency.
23. For manufactured (mobile) home or residential installation, this unit has been designed and certified to be converted from natural gas to propane or vice-versa. When provisions are being made to convert this unit, a certified conversion kit must be used. You must also readjust manifold gas pressure to specifications indicated in the conversion manual. If in doubt contact Rinnai America for assistance.
24. Clothing or other flammable material should not be placed on or near the appliance.

DIMENSIONS

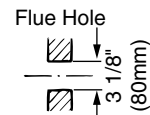
inches (mm)



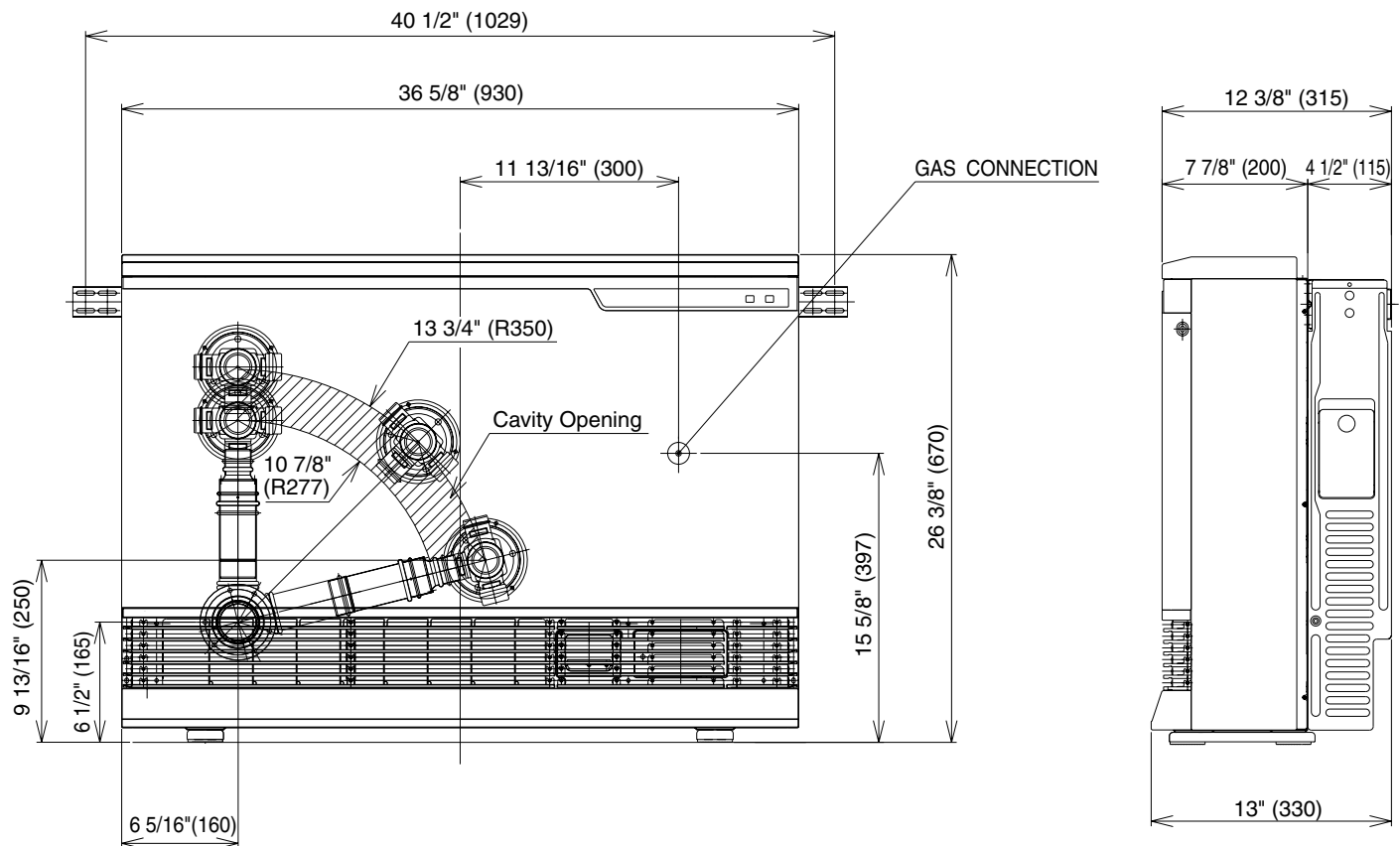
FLUE MANIFOLD POSITION

Center of hole for flue manifold can be drilled anywhere within the shaded area. (To avoid studs, etc.)

FOR WEATHERBOARD WALLS DRILL THROUGH CENTER OF WEATHER BOARD FROM OUTSIDE, THEN DRILL FROM INSIDE THROUGH PLASTERBOARD.



Before drilling the flue hole, check for water and gas pipes as well as electric cables. Use a 3 1/8" (80mm) drill for hole through wall.



SPECIFICATIONS

| MODEL # | BTU/h | | MIN. CLEARANCES | | | FAN CFM OUTPUT |
|------------------------------|----------------|----------------|-----------------|----------------|-------------|----------------|
| | INPUT | OUTPUT | SIDE | TOP | FRONT | |
| RHFE-1004FA-N NATURAL | Low 10,500 | Low 8,400 | 2" (50mm) | 10" (250mm) | 40" (1m) | LO:203.4 |
| | High 38,400 | High 30,700 | | | | HI:360.6 |
| RHFE-1004FA-P PROPANE | Low 10,500 | Low 8,400 | 2" (50mm) | 10" (250mm) | 40" (1m) | LO:203.4 |
| | High 36,500 | High 29,200 | | | | HI:360.5 |

SPECIFICATIONS

| | |
|---------------------|--|
| Type of Appliance | Fan forced flued gas furnace |
| Model | RHFE-1004FA ENERGYSAVER |
| Dimensions | Width—36 5/8" (930mm) Depth—12 3/8" with back spacer (315mm with back spacer) Height—26 3/8" (670mm) |
| Weight | Approx. 90 lbs. |
| Connections | Electrical—AC 120V 60Hz 121 watts Gas—1/2" female NPT |
| Combustion System | Stainless steel bunsen burner |
| Ignition System | Continuous spark |
| Operation | Finger touch control buttons |
| Temperature Control | Electronic thermostat HI-LOW/OFF Up/down switch 2°F increments |
| Temperature Range | Modulates Continuous LOW=55°F 60°F~80°F HI=High Combustion |
| Warm Air Outlet | Bottom front louver |
| Indicator/Lamps | Operation/Combustion, Filter, SetTemp., RoomTemp., Economy, Function Lock. |
| Operating Buttons | ON/OFF, Up/down, Function-lock, Economy |
| Economy Mode | Energy saving feature |
| Humidifier Tray | Capacity—7 pints (3000cc) |

| | | |
|-----------------------------|---|------------------------------|
| 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 | |
| Noise Level Range | HI~LOW=47~37dB(A) | |
| TYPE | Combustion Method | Forced combustion |
| | Air Supply Exhaust | Closed Type |
| | Radiation Method | Forced convection |
| AIR SUPPLY/ EXHAUST PIPE | Wall Penetration Hole | 3 1/8" (80mm) |
| | Max. Extended | 13ft., 2 bends (4m, 2 bends) |

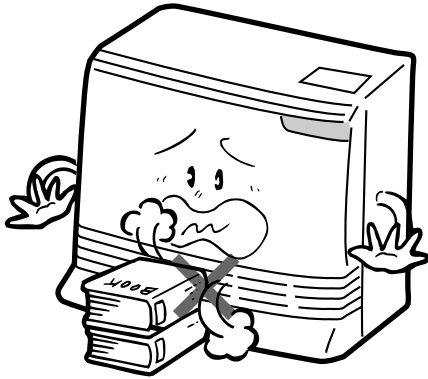
| SPECIFICATIONS FOR VENT SIZES | | |
|-------------------------------|---------------------------------|------------------------|
| S | 3"—4 1/2" (75—115)mm | Thin Walls Mobile Home |
| A | 4 1/2"—9 1/2" (115—240)mm | Wood Walls |
| B | 9 1/2"—15 3/4" (240—400)mm | Wood/Brick |
| C | 15 3/4"—23 5/8" (400—600)mm | Brick/Block |
| D | 23 5/8"—31 1/2" (600—800)mm | Special |

** BTU - Efficiency increase with vent size. Clearances from combustibles see page 3.

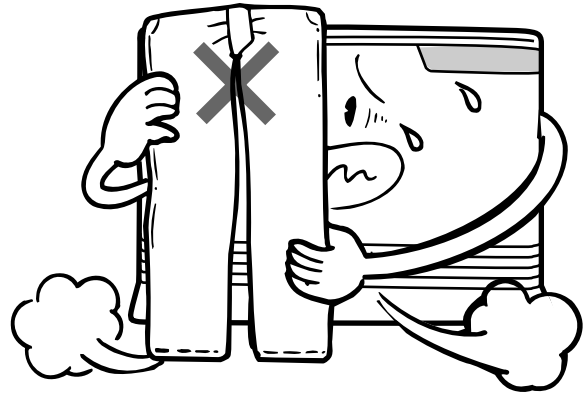
** Thermal efficiency rating determined under continuous operating conditions, and was determined independently of any installed system.

SAFETY POINTS

Do not restrict the warm air discharge by placing articles in front of the heater.



This appliance must not be used for any purpose other than heating.



Do not spray aerosols while the heater is operating. Most aerosols contain butane gas, and can be a fire hazard if used near this heater when it is in use.



Do not install the heater in an unusually dusty area.

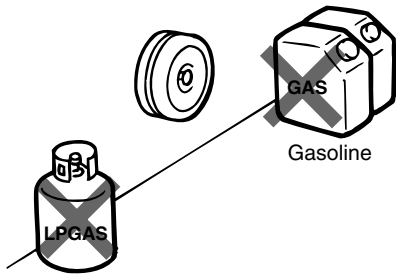
Do not allow curtains or other flammable or combustible materials to come into contact with the heater.

Combustible materials must not be placed where the heater could ignite them.

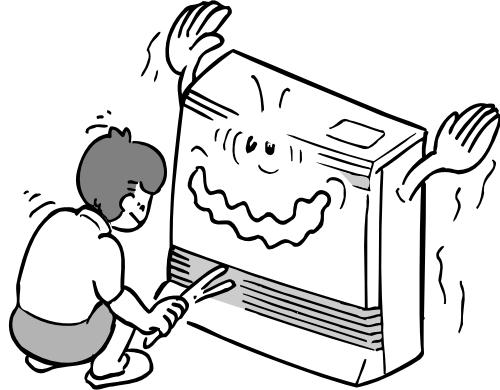
Do not allow anyone to sit on or lean against the appliance.

SAFETY POINTS

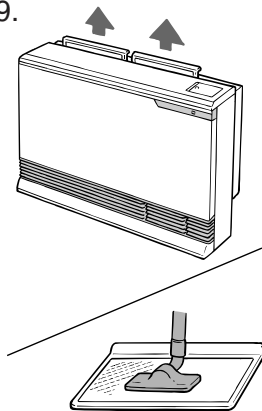
Keep flammable materials, trees, shrubs, etc., away from the flue terminal.



Do not allow anyone to poke articles through the louvers.

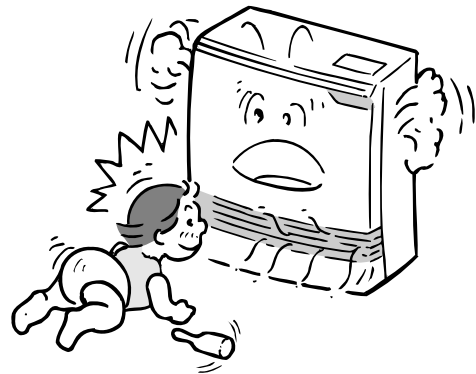


Filter should be cleaned at regular intervals. See page 29.

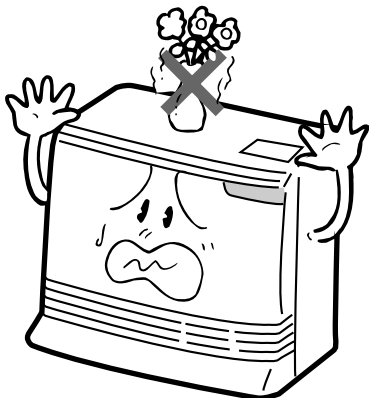


Clean as needed.

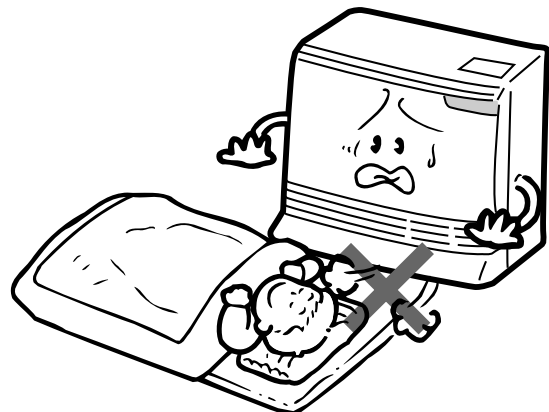
Young children should be supervised at all times. Hand or body contact with the louvers should be avoided.



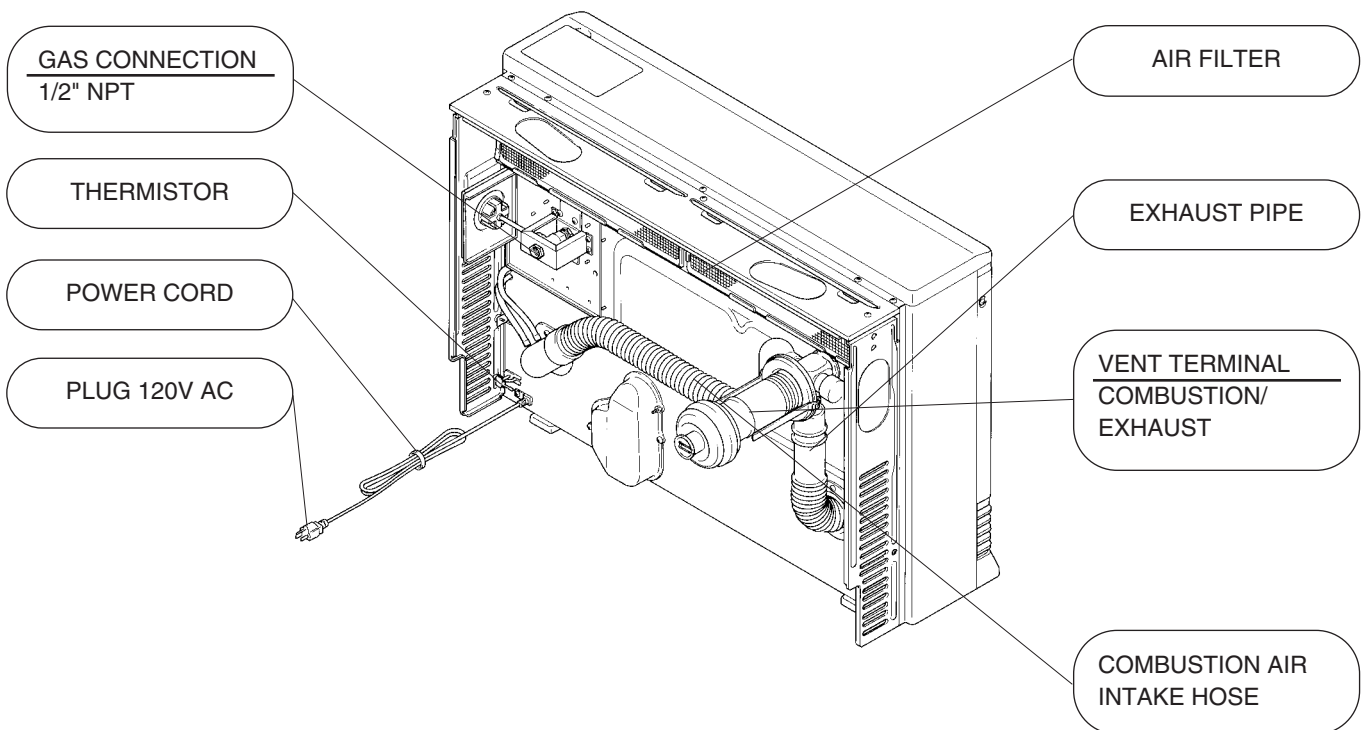
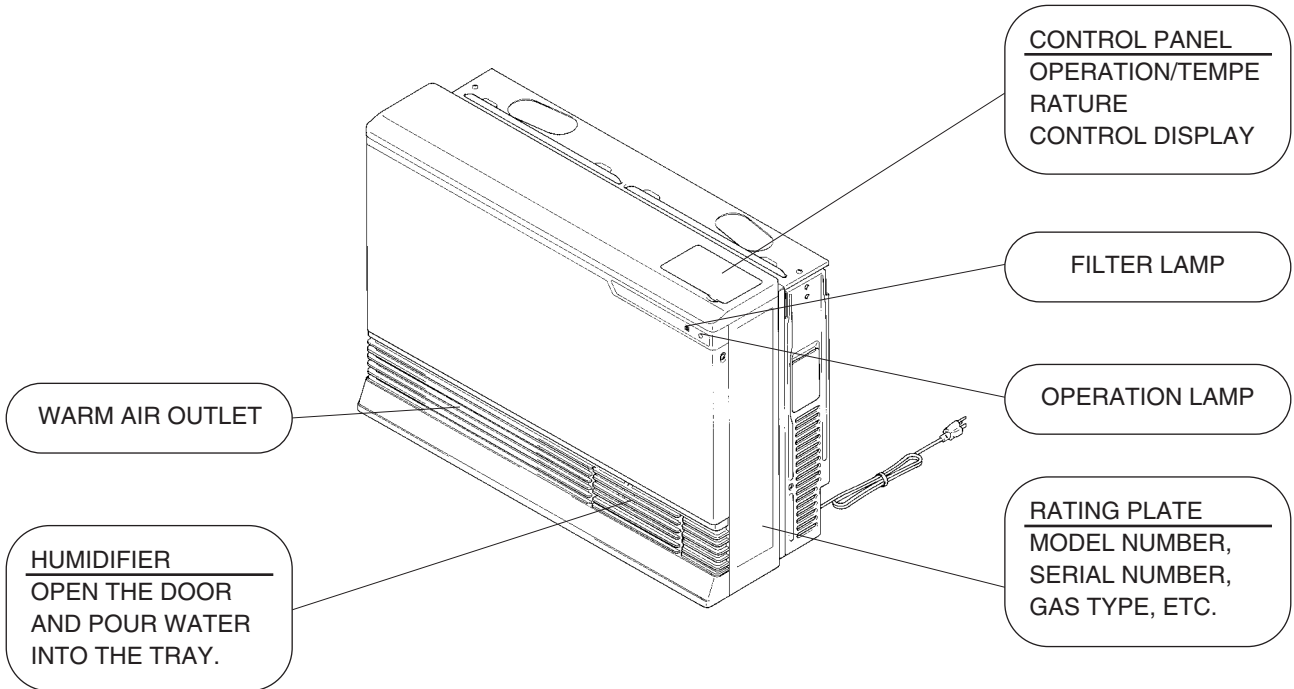
Do not place articles containing liquids on top of the heater. Liquid spilled on the controls may cause extensive damage.



Do not allow young children or an infant to sleep directly in front of the heater.

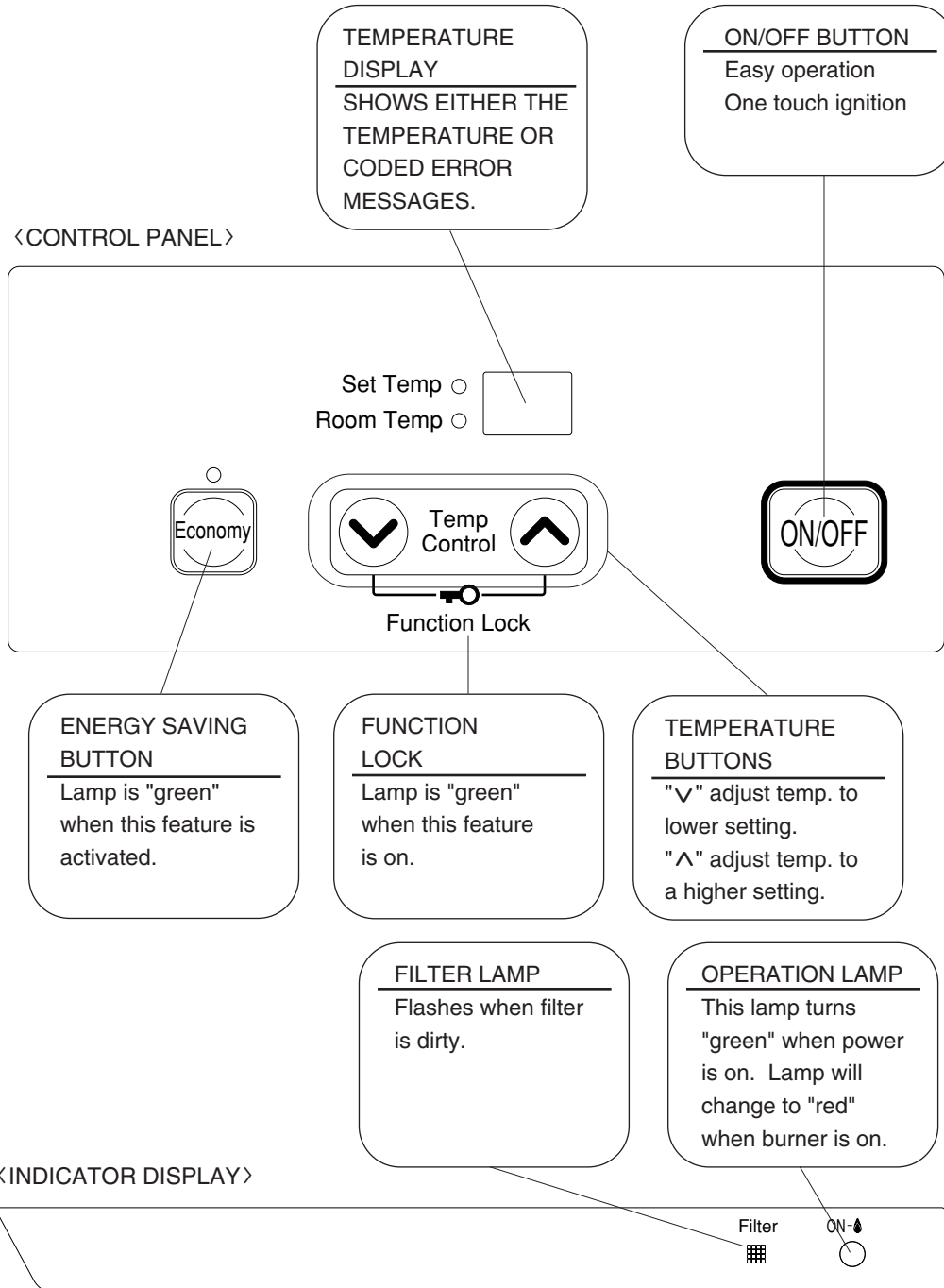


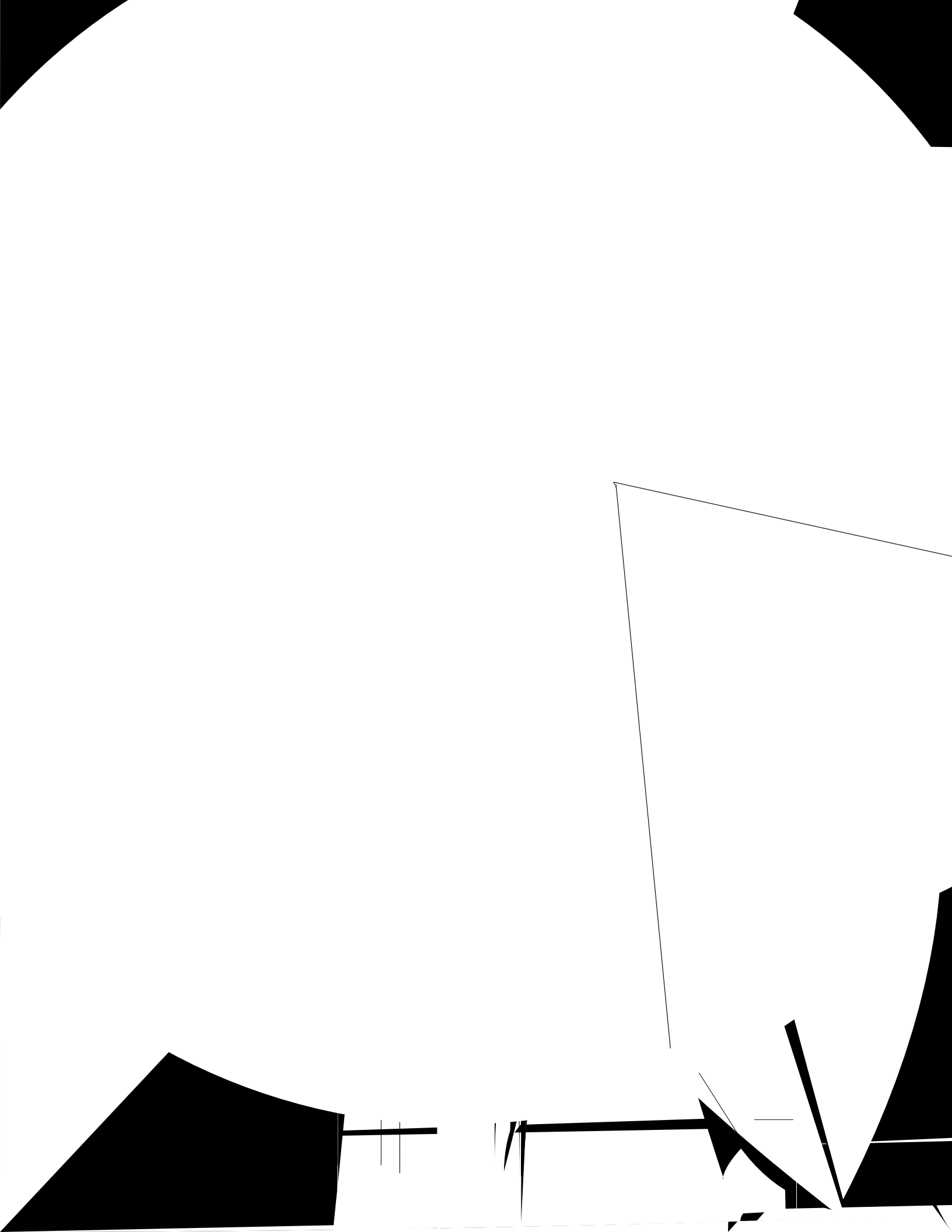
GETTING TO KNOW YOUR NEW RHFE-1004FA



CONTROL PANEL

ALL BUTTONS BEEP WHEN OPERATED.





NOTICE BEFORE INSTALLATION

The heater must be installed by a qualified service person according to these installation instruction.

Check your local building codes for the proper method of installation. In the case of absence of local codes, this heater should be installed in accordance with the National Fuel Gas Code ANSI Z223.1.

Check local codes or, in the absence of local codes, the current CAN/CGA B149 INSTALLATION CODE.

DUE TO HIGH TEMPERATURES, THE APPLIANCE SHOULD BE LOCATED OUT OF TRAFFIC AND AWAY FROM FURNITURE AND DRAPERIES.

CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURES AND SHOULD STAY AWAY TO AVOID BURNS OR CLOTHING IGNITION.

“WARNING” Do not operate appliance with the panel(s) removed, cracked or broken. Replacement of the panel(s) should be done by a licensed or qualified service person.

INSTALLATION AND REPAIR SHOULD BE DONE BY A QUALIFIED SERVICE PERSON. THE APPLIANCE SHOULD BE INSPECTED BEFORE USE AND AT LEAST ANNUALLY BY A QUALIFIED SERVICE PERSON. MORE FREQUENT CLEANING MAY BE REQUIRED DUE TO EXCESSIVE LINT FROM CARPETING, BEDDING MATERIAL, ETC. IT IS IMPERATIVE THAT CONTROL COMPARTMENTS, BURNERS AND CIRCULATING AIR PASSAGEWAYS OF THE UNIT BE KEPT CLEAN.

The appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70 or Canadian Electrical Code, CSA C22.1, if an external electrical source is utilized.

WARNING: THIS APPLIANCE IS EQUIPPED WITH A THREE-PRONG (GROUNDING) PLUG FOR YOUR PROTECTION AGAINST SHOCK HAZARD AND SHOULD BE PLUGGED DIRECTLY INTO A PROPERLY GROUNDED THREE-PRONG RECEPTACLE.

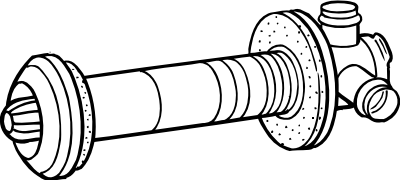

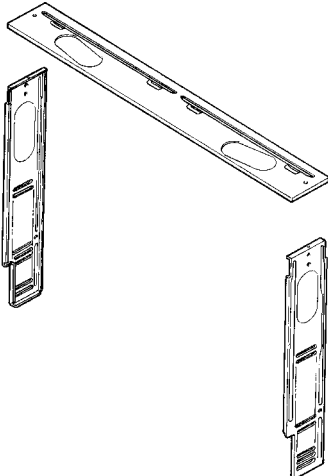







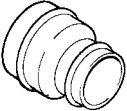
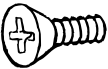

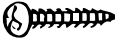

Do not cut or remove the grounding prong from the plug.

Rinnai recommends a dedicated electrical circuit. This gas appliance must not be connected to a chimney flue serving a separate solid-fuel burning appliance.

When the appliance is installed directly on carpeting, tile or other combustible material other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance.

Appliance input ratings are based on sea level operation and need not be changed for operation up to 2,000 feet elevation. For operation at elevations above 2,000 feet, manufactured to specified deration conditions for Canada and the United States.

INSTALLATION INSTRUCTIONS

| | | | | | | |
|---|---|---|---|---|---------------------|---|
| Flue Manifold1 | | Spare rubber seal1 (‘A’ Flue units only) | | | | |
|  | |  | | | | |
| | | (For weatherboard installations) | | | | |
| Back Spacer Set |  | 1 | Wall Brackets |  | 2 | |
| | | | Insulation Clip |  | 1 | |
| | | | Plastic tie for air inlet |  | 1 | |
| | | | (M4) |  | For Back Spacer Set | 7 |
| | | | (M5) |  | For Wall Brackets | 4 |
| Air inlet hose |  | 1 | (M4×20) |  | 1 | |
| Vent adaptor |  | 1 | (M4) |  | 3 | |
| Pipe stopper A&S |  | 2 | (M4.8×32) Wood Screws |  | 7 | |
| Pipe stopper E |  | 1 | Owner’s Manual Conversion Manual Template | | 1 | |

Check to ensure gas type on rating plate matches gas being supplied to the unit. If not, unit may have been converted and should be checked to ensure conversion was done properly. If not, unit could be damaged due to being overfired.

Refer to local gas authority for confirmation of gas type if in doubt.

Refer to data plate located inside of the front panel.

Check for damage, if the unit is damaged contact your supplier or Rinnai.

Do not install a damaged unit before checking with your supplier.

Refer to an approved pipe sizing chart if in doubt about size of gas line.

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.

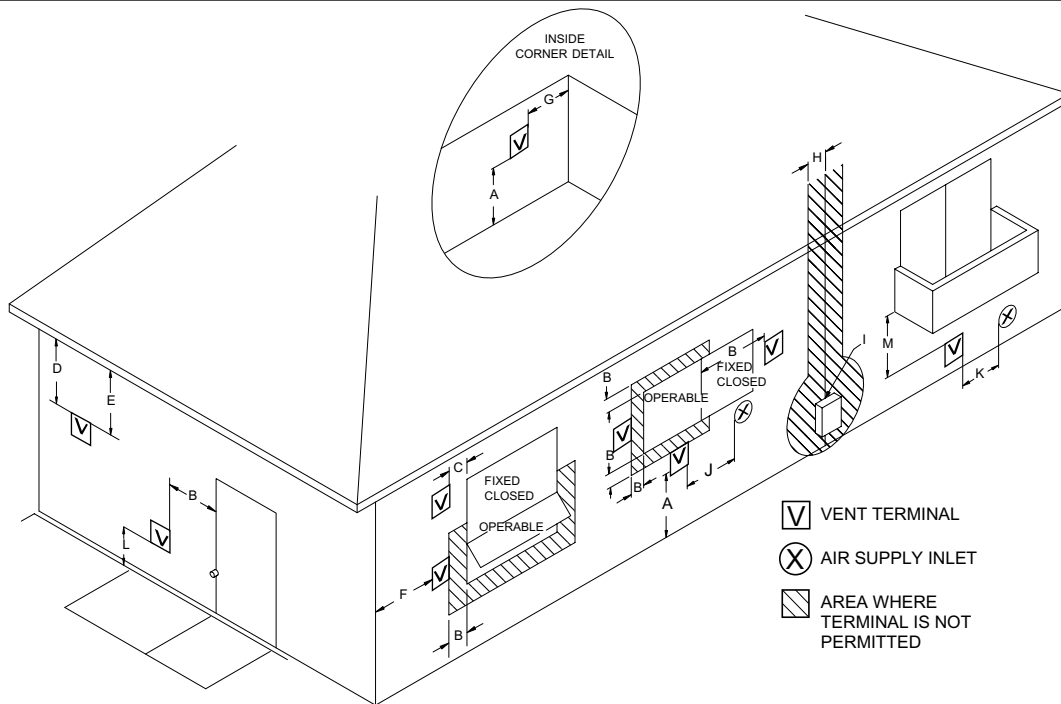
7. The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 P.S.I (3.5kPa).

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.

8. 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.

VENT TERMINATION CLEARANCES



| REF | DESCRIPTION | U.S. Installations | Canadian Installations |
|-----|--|---|---|
| A | Clearance above grade, veranda, porch, deck, or balcony | 1 foot | 1 foot |
| B | Clearance to window or door that may be opened | ** 6 inches for appliances $\leq 10,000$ Btuh, 9 inches for appliances $> 10,000$ Btuh and $\leq 50,000$ Btuh, 12 inches for appliances $> 50,000$ Btuh | 6 inches for appliances $\leq 10,000$ Btuh, 12 inches for appliances $> 10,000$ Btuh and $\leq 100,000$ Btuh, 36 inches for appliances $> 100,000$ Btuh |
| C | Clearance to permanently closed window | * | * |
| D | Vertical clearance to ventilated soffit, eaves, or overhang | * | * |
| E | Clearance to unventilated soffit, eaves, or overhang | * | * |
| 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 within a height 15 feet above the meter/regulator assembly |
| I | Clearance to service regulator vent outlet | * | 3 feet |
| J | Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliance | ** 6 inches for appliances $\leq 10,000$ Btuh, 9 inches for appliances $> 10,000$ Btuh and $\leq 50,000$ Btuh, 12 inches for appliances $> 50,000$ Btuh | 6 inches for appliances $\leq 10,000$ Btuh, 12 inches for appliances $> 10,000$ Btuh and $\leq 100,000$ Btuh, 36 inches for appliances $> 100,000$ Btuh |
| K | Clearance to a forced air inlet into a building | 3 feet above if within 10 feet horizontally | 6 feet |
| L | Clearance above paved sidewalk or paved driveway located on public property | * | † 7 feet |
| M | Clearance under deck, veranda, porch, or balcony (open on 3 sides) | * | ‡ 1 foot |

* For clearances not specified in ANSI Z223.1 / NFPA 54 or CAN/CGA-B149, use clearances in accordance with local installation codes and the requirement of the gas supplier.

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

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

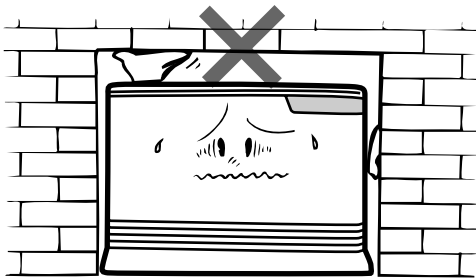
** 4 feet for units other than Direct-Vent Appliance.

LOCATION / CLEARANCES

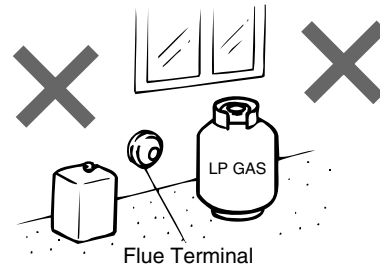
When positioning the heater the main points governing the location are:

1. Flueing
2. Warm air distribution

This heater is not designed to be built in.

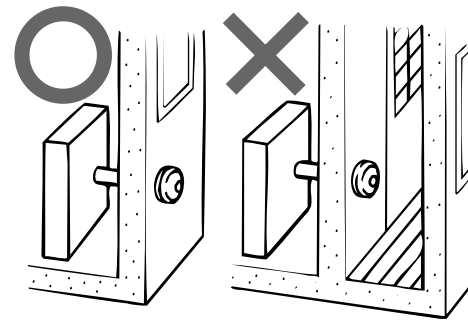
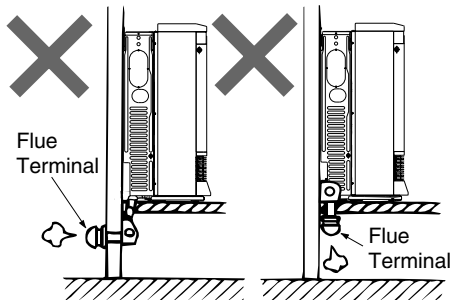


The flue terminal should be positioned away from flammable materials.



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.



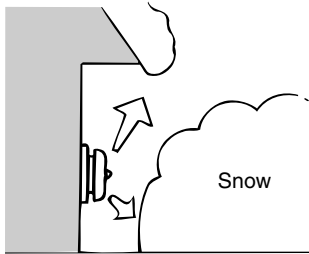
Flue may be positioned directly under opening windows, with a minimum clearance of 9" (230mm).

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)

SNOW AREAS

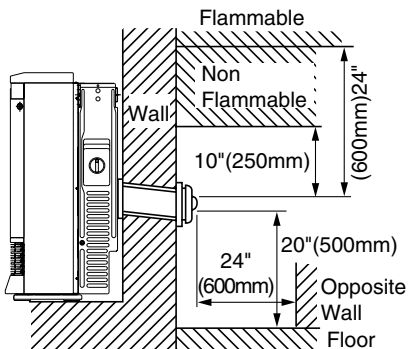


Clearance in accordance with local installation codes and the requirements of the gas supplier.

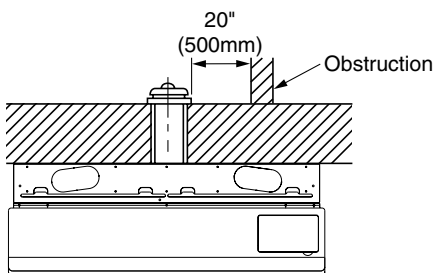
In areas subject to heavy snowfall, keep snow clear of flue terminal at all times.

STANDARD INSTALLATION OF FLUE MANIFOLD.

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



Side Clearances

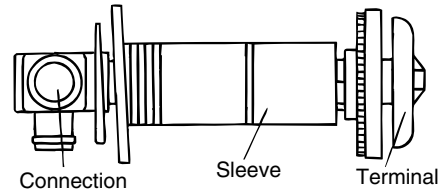


SLEEVE AND MANIFOLD INSTALLATION

METHOD FOR STANDARD WALLS

1. Disassemble Manifold from Sleeve.

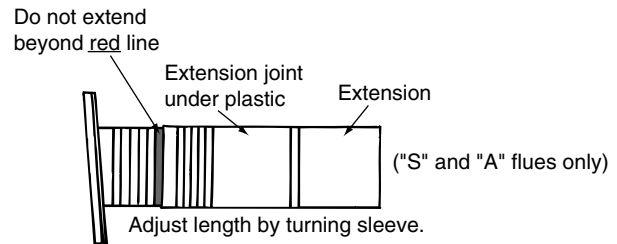
The flue consists of 3 parts, sleeve, inside connectors and tube, outside terminal; (dis-assembly by pulling hard on outside terminal and inner connections, then pull sleeve off outer terminal.)



2. Adjustment of Sleeve Length.

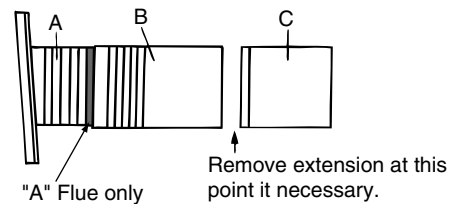
Measure wall thickness through previously drilled 3 1/8" (80mm) hole.

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.

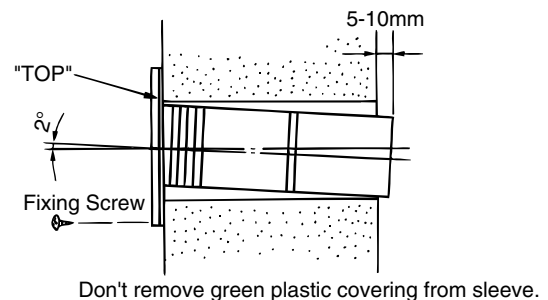
Depending on flue set and wall thickness extension piece "C" may need to be removed. Cut plastic, remove extension, then follow instruction 2. This applies to "S" and "A" flues only. There is no extension on other flues, they can be fully adjusted by turning the threaded section.




4. Fixing Sleeve.

Fix to the wall, using the 3 screws provided.

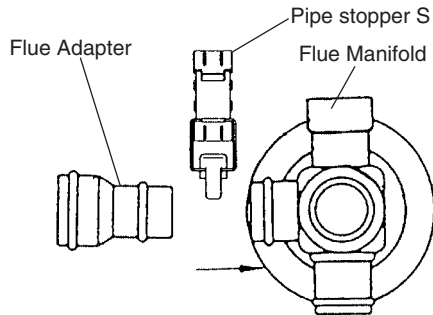
NOTE: The flange is marked "TOP", sleeve must be fitted with this mark **Up**. Check sleeve protrudes 3/16"~3/8" (5~10mm) on the outside.



| | |
|---|---|
| <p>5. Check rubber seal is in place on terminal.</p> <p>*For weather board walls, add spare rubber seal provided to compensate for weather board angle.</p> |  |
| <p>6. Installation of Terminal</p> <p>From outside, insert terminal into sleeve with the “A” mark at the top. Left hand side fixing tie is marked “LEFT” (from inside).</p> | |
| <p>7. Attached Ties</p> <p>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.</p> | |
| <p>8. Insert Inner Connection Assembly.</p> <p>Push assembly into the terminal tube, make sure “TOP” mark is uppermost. Fix with 3 screws provided.</p> | |
| <p>9. Manifold can still be turned after attaching.</p> | |

FITTING UNIT

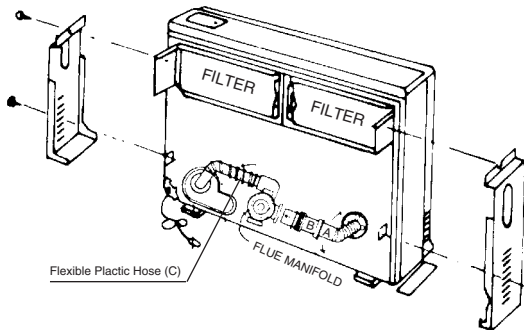
1. Fix Flue Adapter to Flue Manifold with PIPE STOPPER S as shown below.



2. Fit Wall bracket as shown below.



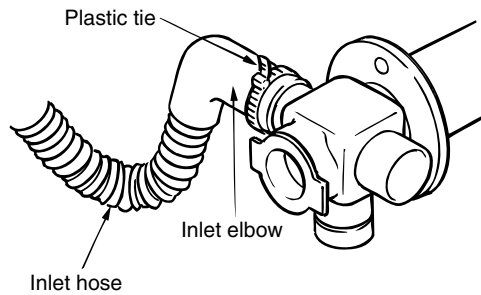
3. Fit Air inlet Hose to heater. Fix Side Back Spacers with screws.



Pipe "A" - Swivels for location adjustment
 Pipe "B" - Telescopic-telescopes into pipe A and flue manifold
 Pipe "C" - Fits on manifold "Air Intake" pipe

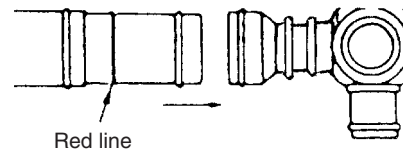
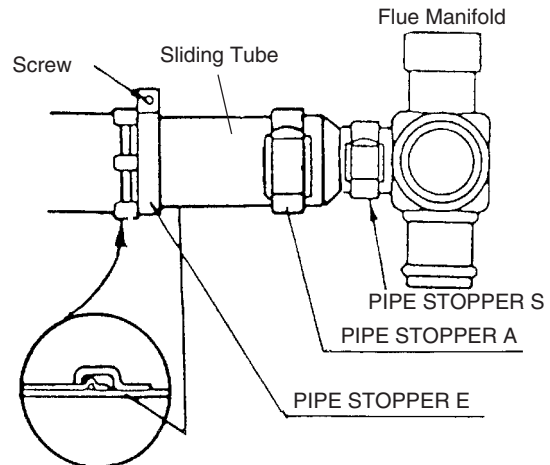
Air Inlet Hose
 Connect Air Inlet Hose to Manifold Inlet.
 Do not kink the hose.

4. Secure with plastic tie as shown below.



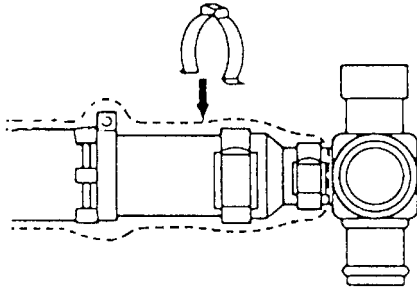
When servicing unit replace plastic tie with new one.
 (Available at local hardware store or contact local distributor.)

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

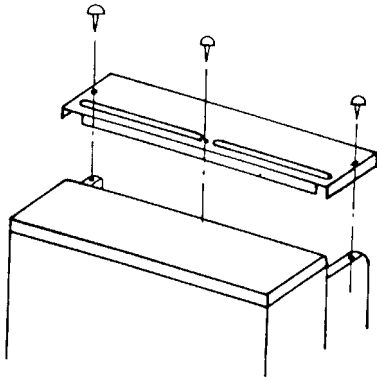


Sliding Tube should not be extended beyond the RED LINE.
 Red line should not be visible after sliding the tube back into the vent outlet.

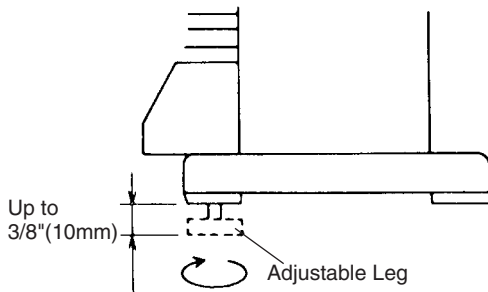
6. Slide the insulation sleeve up to the flue manifold, slip the securing clip over the sleeve as shown.



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



8. 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.


OPERATING INSTRUCTION LABEL ENERGYSAVER RHFE-1004FA

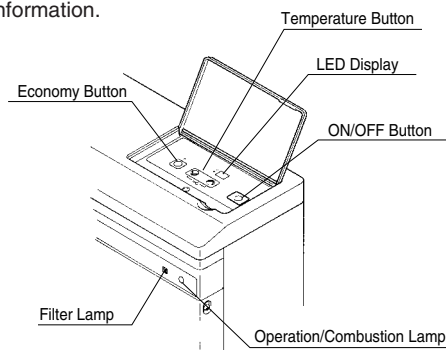
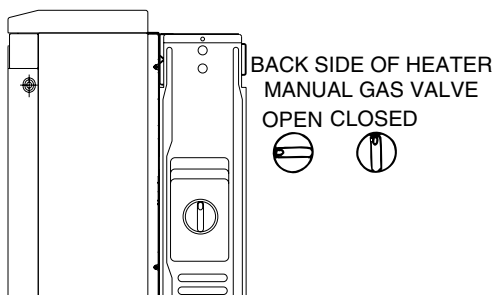
FOR YOUR SAFETY READ BEFORE OPERATING

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS
- Do not try to light any appliance.
 - Do not touch any electric 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.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

OPERATING INSTRUCTIONS

- STOP! Read the safety information above on this label.
1. Set the thermostat to lowest setting.
 2. Turn off all electric power to the appliance via the ON/OFF button on the control panel. Locate manual gas valve to be found on back side of heater.
 3. Turn Manual valve clockwise  to the full OFF position.
 4. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you then smell gas,
- STOP! Follow "B" in the safety information above on this label. If you don't smell gas go to next step.
5. Turn Manual gas valve to the full on position.
 6. Turn on all electric power to the appliance via ON/OFF button.
 7. Set the thermostat to desired setting.
 8. Burner is lit when indicator lamp "ON" turns red.
 9. "ON" indicator flashes when burner fails to ignite.
 10. If the appliance will not operate, follow the instruction "TO turn off gas to appliance" and call your service technician or gas supplier. See manual for additional information.



TO TURN OFF GAS TO APPLIANCE

1. Turn off electric power to the appliance using the ON/OFF button located on the control panel.
2. Locate manual valve on back side of unit.
3. Turn manual valve clockwise to the full OFF position.

NOTE: The fan will continue to operate until the appliance is cool, do not turn the appliance off by unplugging it from the wall.

Keep burner and control compartment clean. Refer to the installation and operating instructions accompanying heater.

ADDITIONAL CUSTOMER OPERATING INFORMATION

IGNITION

Make certain the heater is connected into both the gas and the electric power.

Depress the ignition ON/OFF button slowly and firmly.



When you release the ignition ON/OFF button the 'LED Display will illuminate, the spark will ignite the main burner and the Combustion fan will begin to run. If the heater does not ignite within 15 seconds the spark will stop and the 'LED Display will show Error Code. Turn off unit and repeat ignition operation.

This heater has an automatic ignition system, when the main burner has lit, the combustion Lamp will glow red, and the spark will stop. There may be a smell of burning dust or oil the first time the heater is lit or when the heater has been out of operation for a long time, this is normal. You may need to repeat the ignition operation the first time the heater is plugged in, due to air in the gas line.

TEMPERATURE CONTROL

The thermostat automatically modulates the burner and the fan to maintain the room temperature which you have selected.

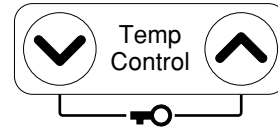
To change the room temperature, simply adjust the temperature control buttons until the desired setting is indicated.

The temperature range from LO to HI is about 55°F (12°C) to 122°F (50°C). Temperature control may be affected by the location of the heater.

TEMPERATURE LEVEL

Set Temp

Room Temp



COMBUSTION INDICATOR

Filter

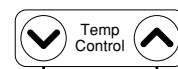


ON-



TEMPERATURE CONTROL

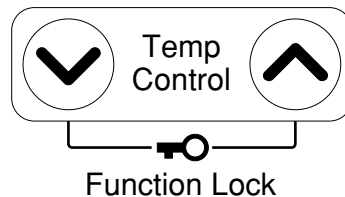
Set Temp
Room Temp



ROOM TEMPERATURE DISPLAY

'Temperature is indicated by the L.E.D. display on the control panel. The first time when the appliance is turned on, the preset temperature '72 F degrees'(from the factory) will be shown on the L.E.D.display. Every time the Set Temp has been changed,that set temperature will be latest data appearing on the L.E.D. display on the next time the appliance is turned on. To get to Set Temp,press either ' up ' or ' down ' button. At the Set Temp, press ' up ' to increase the temperature or ' down ' to decrease. When the desired temperature is set, 10 seconds later the LED display will change to the room temperature mode which will show the current room temperature.

Set Temp ○
Room Temp ○



TO TURN UNIT OFF

Depress ignition ON/OFF button again.
The appliance will stop operate.
Do not turn off by unplugging at the power outlet.
Convection fan continues to run until heater is cool.

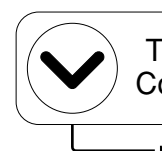
IGNITION BUTTON



ECONOMY BUTTON

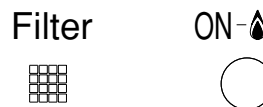
To select 'Economy Mode', push the 'Economy' button, the green lamp will glow. 30 minutes after the room temperature reaches the preset temperature (set by the thermostat), the 'Economy Mode' if set, reduces the temperature by 2°F, after another 30 minutes it reduces the temperature by a further 2°F. This is an energy saving feature. It does not operate if the heater is under capacity for the room size.

ECONOMY



FILTER LAMP

If the filter lamp glows during operation, check air filter for dust. If there is dust present, clean filter. See section on care of heater. Turn heater off before cleaning filters.



OPERATING PRECAUTIONS

Please read this section carefully, before using your Forced flue heater.

Gas Type, Power Source, and Manufactured Date

- Type of gas, power source and manufactured date are displayed on the nameplate placed on the right side of the unit.
 - Do not use gas other than the type of gas (gas group) indicated on the nameplate.
 - This equipment is for 120 V AC (60Hz) only. Do not use power source other than what is listed.

Caution

- Should the type of gas or power source be different, please contact your dealer. Using a different type of gas or power source may affect the performance or may be dangerous.
- If you are moving to another area, please check the types of gas and power source provided in the area. If the types of gas and power source are different, adjustment or modification is necessary. Please consult the gas provider in the new area.

Usage

- Do not use for drying clothes!
 - Do not use for any other purposes other than heating (e.g., drying the laundry).
 - Draping clothes over the unit blocks the warm air outlet or the filter area and is very dangerous, as it causes heat to build up inside the unit.

Usage Location

- Do not use near flammable material !!!

Place the unit sufficiently away from flammable objects such as furniture, wall and curtains. Check carefully when installing the unit.

REQUIRED DISTANCE FROM FLAMMABLES:

Top: At least 10" (250mm) Right: At least 2" (50mm)
Left: At least 2" (50mm)
Front: At least 40" (1m)

- Insert a board under the unit when placing on carpeted floor !!!
This heater may be installed on combustible flooring. When the heater is installed directly on carpeting, tile or other combustible material other than wood flooring, the heater shall be installed on a metal or wood panel extending the full width and depth of the heater.

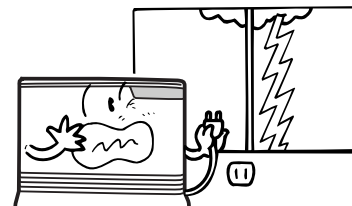
Emergency Procedures:

Stay calm and turn the unit off !!!

In case of an emergency (e.g., abnormal overheating of the unit, loud noise), always stay calm, turn the unit off by pushing the ON/OFF button, close the gas valve and contact your dealer or the Rinnai office or store near you.

During a Thunderstorm

When a thunderstorm is approaching, turn the unit off and unplug the power cord. Heavy thunderstorm may cause damage to the unit.

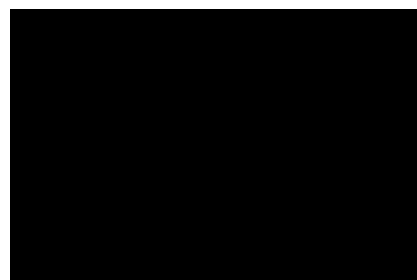


Inspection and Maintenance

- Be sure to perform inspection and maintenance procedures. (See page 29 and 34 for details.) In particular, check the gas connection, power connection and air supply/exhaust pipe connection.
- Do not use the unit if you suspect malfunctioning or damage. Incomplete repairs are dangerous. In case of malfunctioning, read the instructions on page 32 and or contact your dealer or the nearest Rinnai office.

During Snow Accumulation

If the air supply/exhaust vent is covered by snow or damaged by falling icicles, the exhaust may be blocked and cause malfunctioning of the unit. Keep the area around the air supply/exhaust vent free of snow and icicles. Minimum clearance from snow accumulations should be at least (24").



Installation of Unit:

- Please ask your dealer to install the unit properly in a safe location:
- Refer to the installation manual to make sure the unit is installed properly.

Customer's Operating Information

The following pages explain how to use the Forced flue heater. Also read "Operating Precautions" on pages 23—26.

When Using for the First Time

- Check the power cord and power plug.
 - Firmly plug the unit into an electrical outlet, ensure outlet is properly grounded. An outlet that is not grounded properly can cause unit to operate erratically.
 - Make sure the power cord is not exposed to the heat from the exhaust pipe.
- Fully open the gas valve on the unit.

Before the Cold Season Begins

- Check the air supply/exhaust connection.
- Before using this heater, inspect the air supply/exhaust connection to make sure the pipe is not disconnected or bent.
- Check the main unit and the air supply/exhaust.
- Make sure there is no combustible or flammable material near the main unit or the air supply/exhaust.

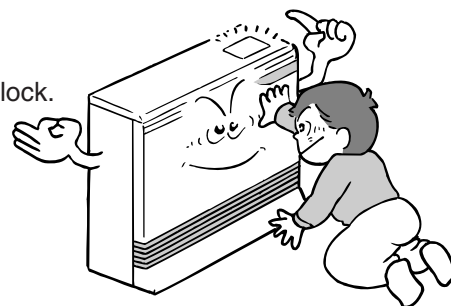
CAUTION:

If you find a problem with the air supply/exhaust do not use the unit. Contact your dealer or the nearest Rinnai office.

Function Lock

The Function lock feature prevents accidents due to tampering by small children.

- Press both“^” and “v” button at the same time.
The “Function Lock” lamp should comes on and engage the function lock.
- Cancelling the Function lock.
Press both“^” and “v” button again and hold for two (2) seconds.
This will disengage the function lock.



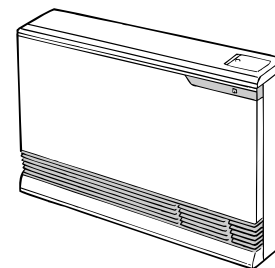
Note:

If the Function lock is engaged while the unit is operating, all operations by switches and buttons will be disabled except turning the unit off.

If the Function lock is engaged while the unit is off, all operation will be disabled. When you turn the unit on and the Function lock is engaged you must cancel the Function lock before proceeding.

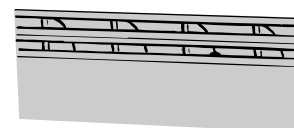
AIR FLOW CONTROL:

- The direction of air flow may be changed to the left or right.
Use a screwdriver or a similar object to change the direction of the vertical louver.



CAUTION:

- Do not adjust repeatedly (more than 5-6 times), as it may cause the louver to break.
- The horizontal louver (which determines the vertical air flow direction) is fixed and cannot be adjusted.
- Do not adjust the air flow direction while warm air is flowing, as it may cause burn injury.



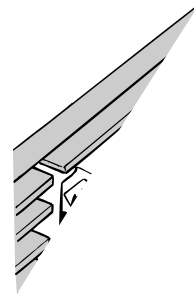
Sensible Temperature Control:

The sensible temperature control feature enables comfortable heating which matches the conditions in the room.

- Based on the information collected by the room temperature thermistor when the heating starts, the heating capacity is automatically adjusted to achieve a comfortable heating effect and to reach the set room temperature quickly.

Adding Water to Humidifier:

So that you can humidify the air your RHFE-UNIT is fitted with an enamelled tray behind the air outlet. To fill the tray, open the door as shown in the diagram and pour water into the tray using the spout built into the door. The air will be humidified as it passes over the water in the tray. **DO NOT FILL THE TRAY WHILE THE UNIT IS IN OPERATION. CLOSE THE DOOR AFTER FILLING.** The RHFE UNIT is a very high efficiency appliance, during operation a small amount of water is produced in the vent tubes, this drains into the enamel tray. It is quite normal for a small quantity of water to remain in the bottom of the tray.



Caution:

- The humidifier tray and the surrounding area are hot when the unit is on. To avoid burns, do not add water to the tray while unit is on.
- Avoid adding water when the room is susceptible to condensation.
- If the water overflows from the water level hole when adding water, do not add any more water.

Care of Unit Exterior:

Dampen soft cloth with warm water, wring water out well and wipe the unit.



Caution:

- After

CAUTION:

- If you continue to use the heater with the filter dirty and turn the unit off. Causing the room temperature display lamp and "operation/combustion" lamp to flash, indicating that the safety device has been used. In this event, clean the air filter immediately as above.

TESTING

Testing Unit

Purge air from gas line.

Refer to pipe sizing chart if in doubt about the size of the gas line.

Connection can easily be reached from the top, rear of the unit. Check for leaks, using soapy water after turning gas on.

Plug unit in and turn power on, (CAUTION - 120V inside unit).

Turn thermostat to "HI", turn control to "ON". Unit should ignite within 10 seconds.

If unit does not ignite, there may be air in the gas line, turn control "OFF" then "ON" again.

Check pressure, regulator is factory set, if pressure is incorrect, check supply before altering regulator.

The appliance must be stopped before testing unit.

Remove the test point screw and connect manometer to pressure point on the modulating valve.

Turn the unit to "ON" position using the ON/OFF button on the operation panel and check pressure.

If pressures are correct remove manometer and replace test point plug.

Leak test all gas connections.

WARNING: DO NOT OPERATE UNIT UNTIL PROPER INSTALLATION HAS BEEN COMPLETED.

CHECK

Fault-Failure Procedure

If unable to get the unit to operate correctly, contact Rinnai Agent, or Gas Utility. Please read the fault finding charts before reporting faults.

Do not use this heater if any part has been under water. Immediately call a qualified service technician to inspect the heater and to replace any part of the control system and any gas control which has been under water.

"WARNING" Do not operate appliance with the panel(s) removed, cracked or broken.

Installation and repair it should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person.

More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc.. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean. Ventilating system should be inspected and cleaned annually of all debris and spider webs.

Rinnai's service assistance telephone number is 1/800/621—9419.

PRE-SERVICE CHECK

Before asking for a service call please check the following points.
These points are part of the normal operation of the unit.

■ At Ignition:

Heater does not operate.



Is the heater plugged in?
Have the fuses or breaker blown at the switch board?
Is there a power failure?
Is the air filter blocked?
Is anything blocking the outlet for the hot air?
Is the flue blocked?

Warm air does not flow when the burner lights.



The fan is started automatically after a short delay.
This is to allow the heat exchanger to warm up, helping to avoid cold draughts.

Smoke or strange smells are produced on the first trial light up after installation.



This is caused by grease or oil and dust on the heat exchanger and will stop after a short time.

Sharp clicking noises at ignition, or when unit cuts down on the thermostat, or goes out.



This is simply expansion noise from the heat exchanger.

■ During Combustion:

Clunking noise when the thermostat operates.



This is the sound of the solenoid gas valves opening and closing.

Unit is not heating room.



Is the air filter blocked?
Is the set temperature high enough?
Is the warm air outlet blocked by anything?
Are the doors and windows of the room closed?

Air filter is blocked or the louvers are blocked or obstructed.



Allow heater to cool, clean air filter, operate again.

Heater will not re-ignite after overheating.



Even after unit has cooled down the heater does not ignite again. Repair is necessary.
Contact your local agent or Rinnai for a Service call.

■ When the unit is turned off.

Convection fan continues to run after turning OFF.



This is to remove the residual heat from the heat exchanger, the fan will stop when the heater cools down.

■ Other Points:

Steam is discharged from the flue terminal.



High efficiency appliances tend to discharge water vapor on cold days, this is normal.

Unit cuts off without apparent reason.



Check whether filters are blocked, dirty filters will cause the heater to overheat.

Power Failure.



Switch OFF, then ON again when power is restored to re-set controls.

TROUBLE SHOOTING

Your RHFE-1004FA requires very little maintenance, simply clean the rear fan filter as needed and wipe the outer case and louver section with a damp cloth.

| Cause \ Problem | No ON indicator | Burner doesn't ignite | Unusual combustion | Combustion stops during operation | Smell of gas | Noisy ignition | Takes too long to warm the room | Remedy |
|---|-----------------|-----------------------|--------------------|-----------------------------------|--------------|----------------|---------------------------------|--|
| Not Plugged In | ● | ● | | | | | | Plug In |
| Power Cut | ● | ● | | ● | | | | Re-ignite manually after power is restored |
| (Initial Installation) Air In Gas Pipe | | ● | | | | | | Purge air (Installer) |
| Gas Filter Blocked | | ● | ● | | | | ● | Service Call |
| Miss Ignition | ● | ● | | | | | | Service Call |
| Flue terminal obstructed | | | ● | ● | | ● | | Clear obstruction |
| Flue manifold not connected | | | | | | ● | | Service Call |
| Louver obstructed | | | | ● | | | ● | Clear obstruction |
| Air filter blocked | | | | ● | | | ● | Clean filter |
| Gas Escape | | | | | ● | | | Service Call |
| Function Lock Set | | ● | | | | | | Cancel Function Lock |
| Gas turned off at meter | ● | ● | | | | | | Turn gas on |

General maintenance items are not covered under unit's warranty. Such as cleaning dust, debris and carbon from flame rod, spider webs, and improper set up of unit.

ERROR MESSAGES

The Energysaver 1004 has the ability to check its own operation continuously. If a fault occurs, an Error Message will flash on the Digital Display of the control panel. This assists with diagnosing the fault, and may enable you to overcome a problem without a service call. Please quote the code displayed when inquiring about service.

| CODE DISPLAYED | FAULT | REMEDY |
|----------------|---------------------------------------|--|
| 11 | Ignition failure | Check gas is turned ON. Service call if repeated. |
| 12 | Flame failure | Check gas is turned ON. Service call if repeated. |
| 14 | Overheat | Clean filter Service call if repeated. |
| 16 | Room overheat | Lower room temperature to less than 40°C(104°F). |
| 31 | Room Temperature Sensor faulty | Service call. |
| 32 | | |
| 33 | Overheat Temperature Sensor faulty | Service call. |
| 34 | | |
| 53 | Sparker failure | Service call. |
| 61 | Combustion fan failure | Service call. |
| 70 | Faulty ON/OFF switch | Service call. |
| 71 | Faulty solenoids | Service call. |
| 72 | Faulty Flame Rod | Service call. |
| 73 | Communication Error | Turn heater OFF, then ON again. |
| 49 | Sensor breakdown | Service Call. |
| 99 | Flue block | Check around flue terminal |

In all cases, you may be able to clear the Error Message simply by turning the heater OFF, then ON again. If the Error Message still remains or returns on the next operation, contact Rinnai or your nearest service agent and arrange for a service call.

MAINTENANCE / SERVICE

MAINTENANCE SUGGESTIONS

This heater has been designed and constructed for a long performance life when installed and operated properly under normal conditions. Regular inspections, as outlined in this section, are strongly recommended as means of keeping your heater operating efficiently throughout the season.

1. Cleaning

Heater must be cleaned annually. Keep heater clear of dust and debris especially in and around burner.

Cleaning procedures of heater are as follows:

- 1) Turn heater off. Allow to cool for one hour.
- 2) Remove the Front Panel by removing screws. See schematic page 38.
- 3) Use pressurized air to remove dust from around main burner, heat exchangers and fan blades.
- 4) Use soft dry cloth to wipe cabinet.

DO NOT DAMAGE OR DISTORT ANY PARTS OF HEATER.

DO NOT USE WET CLOTH OR SPRAY CLEANERS ON BURNER.

2. Visual check of main burner flames.

Flame pattern should be as shown in the following Figures.

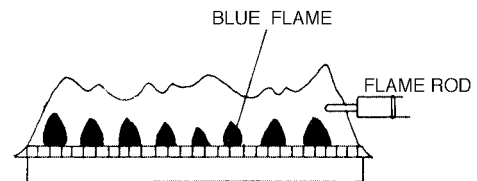
The burner must flame evenly over the entire surface when operating correctly. The flame must burn with a clear blue stable flame. See page 40 item # 417 for location of view ports. Any and all parts removed for inspection or service must be replaced before operating unit.

3. The appliance area must be kept clear and free from combustible materials, gasoline and other flammable vapors and liquids.
4. The flow of combustion and ventilation air should not be obstructed.
5. Verify proper operation after servicing.

VISUAL CHECK

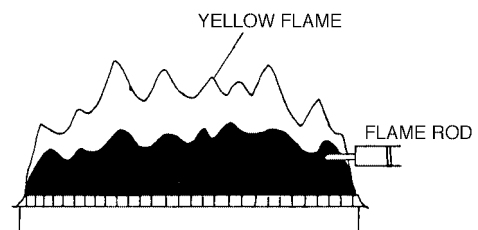
SATISFACTORY

FRONT VIEW



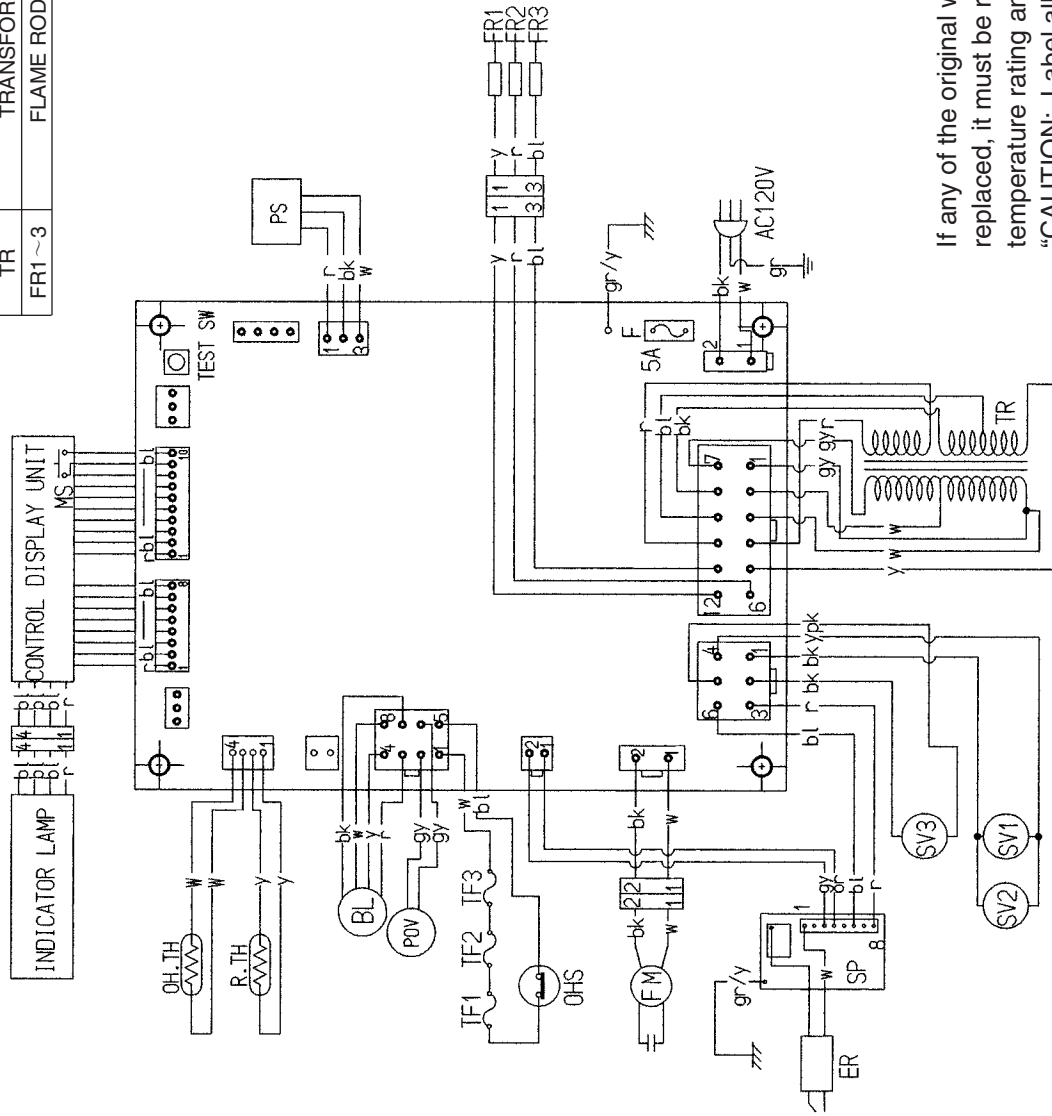
UNSATISFACTORY

FRONT VIEW



- VENT MAINTENANCE
- VENT SYSTEM
Must be checked annually for blockage or deterioration. See vent installation instructions for proper assembly.
- MAINTENANCE-ELECTRIC MOTORS
Motors are permanently lubricated and need no lubrication. Keep fan and motor free of dust and dirt. Clean annually.

| MARK | PARTS NAME | MARK | PARTS NAME |
|-------|---------------------------|-------|-------------------------|
| MS | MAIN SWITCH | OH.TH | OVER HEAT THERMISTOR |
| R.TH | THERMISTOR | OHS | OVER HEAT SWITCH |
| TF1~3 | THERMAL FUSE | FM | CONVECTION FAN MOTOR |
| F | FUSE | SP | SPARKER |
| ER | ELECTRODE | SV1~3 | MAIN SOLENOID VALVE 1~3 |
| POV | MODULATING SOLENOID VALVE | BL | COMBUSTION FAN MOTOR |
| TR | TRANSFORMER | PS | PRESSURE SENSOR |
| FR1~3 | FLAME ROD 1~3 | | |



If any of the original wire as supplied with the appliance must be replaced, it must be replaced with a wire of a least a 194°F temperature rating and number 18AWG or its equivalent.

“CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.”
Verify operation after servicing

CONSUMER SUPPORT

Warranty Information

The installer is responsible for your heater's correct installation.

Please complete the information below to keep for your records:

Purchased from: _____

Address: _____ Phone: _____

Date of Purchase: _____

Model No.: _____

Serial No.: _____

Installed by: _____ Installer's License No.: _____

Address: _____ Phone: _____

Date of Installation: _____

Limited Warranty

Gas Direct Vent Wall Furnace

What is covered?

This Warranty covers any defects in materials or workmanship, subject to the terms stated below. This Warranty extends to the original purchaser and subsequent transferees, but only while the product remains at the site of the original installation. This Warranty only extends through the first installation of the product and terminates if the product is moved or reinstalled at a new location.

How long does coverage last?

| Item | Period of Coverage |
|------------------|----------------------------------|
| Heat Exchanger | 10 years from date of purchase * |
| All Other Parts | 5 years from date of purchase |
| Reasonable Labor | 2 years from date of purchase |

Limited Warranty - continued

What will Rinnai do?

Rinnai will repair any part or component that is defective in materials or workmanship as set forth as follows. All repair parts must be genuine Rinnai parts. All repairs or replacements must be performed by an individual or servicing company that has been authorized by Rinnai. Rinnai will pay reasonable labor charges associated with the repair or replacement of any part or component.

Replacement of the product may be authorized by Rinnai only. Rinnai does not authorize any person or company to assume for it any obligation or liability in connection with the replacement of a product. If Rinnai determines that repair of a product is not possible, Rinnai will replace the product with a comparable product, at Rinnai's discretion.

* If the Heat Exchanger fails due to a defect in material or workmanship within the sixth (6) through the tenth (10) year from the date of purchase, Rinnai will make the following allowances toward the purchase of a replacement Heat Exchanger:

| Heat Exchanger | |
|-----------------|-----------|
| Year of Failure | Allowance |
| 6 | 50% |
| 7 | 40% |
| 8 | 30% |
| 9 | 20% |
| 10 | 10% |

How do I get service?

You must contact a qualified/authorized service provider for the repair of a product under this Warranty. For the name of a qualified/authorized service provider please contact your place of purchase, visit the Rinnai website (www.rinnai.us), call Rinnai at 1-800-621-9419 or write to Rinnai at 103 International Drive, Peachtree City, Georgia 30269.

Proof of purchase is required. You may show proof of purchase with a dated sales receipt, or by completing and mailing the enclosed Registration card within 30 days of purchasing the product. Please complete the enclosed Registration card and mail it to Rinnai at the address shown on the card. Receipt of this card by Rinnai will constitute proof-of-purchase for this product. However, return of the Registration card is not necessary in order to validate this Warranty.

What is not covered?

This Warranty does not cover any failures or operating difficulties due to accident, abuse, misuse, alteration, misapplication, force majeure, improper installation, improper conversion, improper maintenance or service, or for any other causes other than defects in materials or workmanship. This Warranty does not apply to any product whose serial number or manufacture date has been defaced.

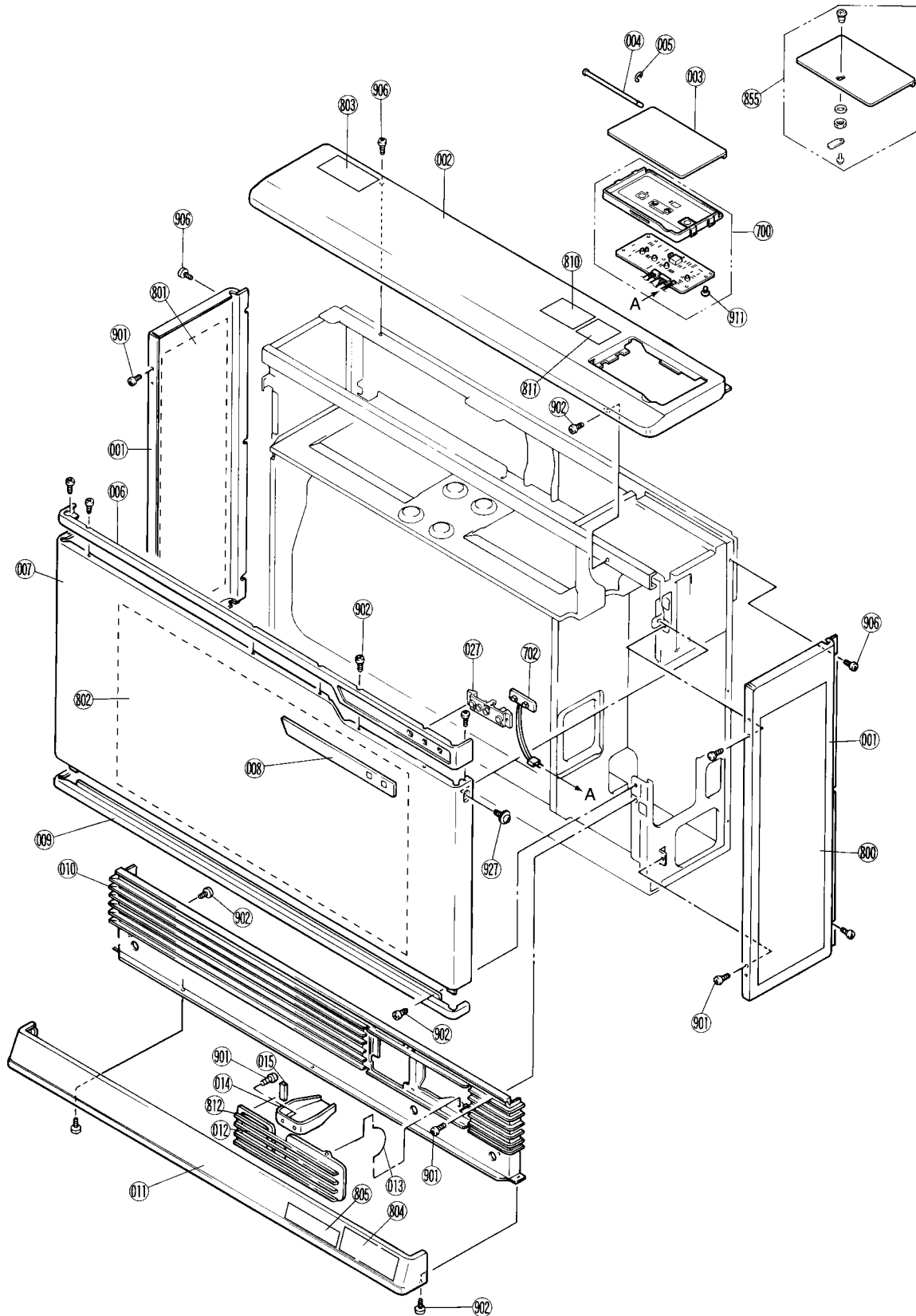
Rinnai is not liable for any special, incidental, indirect or consequential damages that may arise, including damage to person or property, loss of use, or inconvenience. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

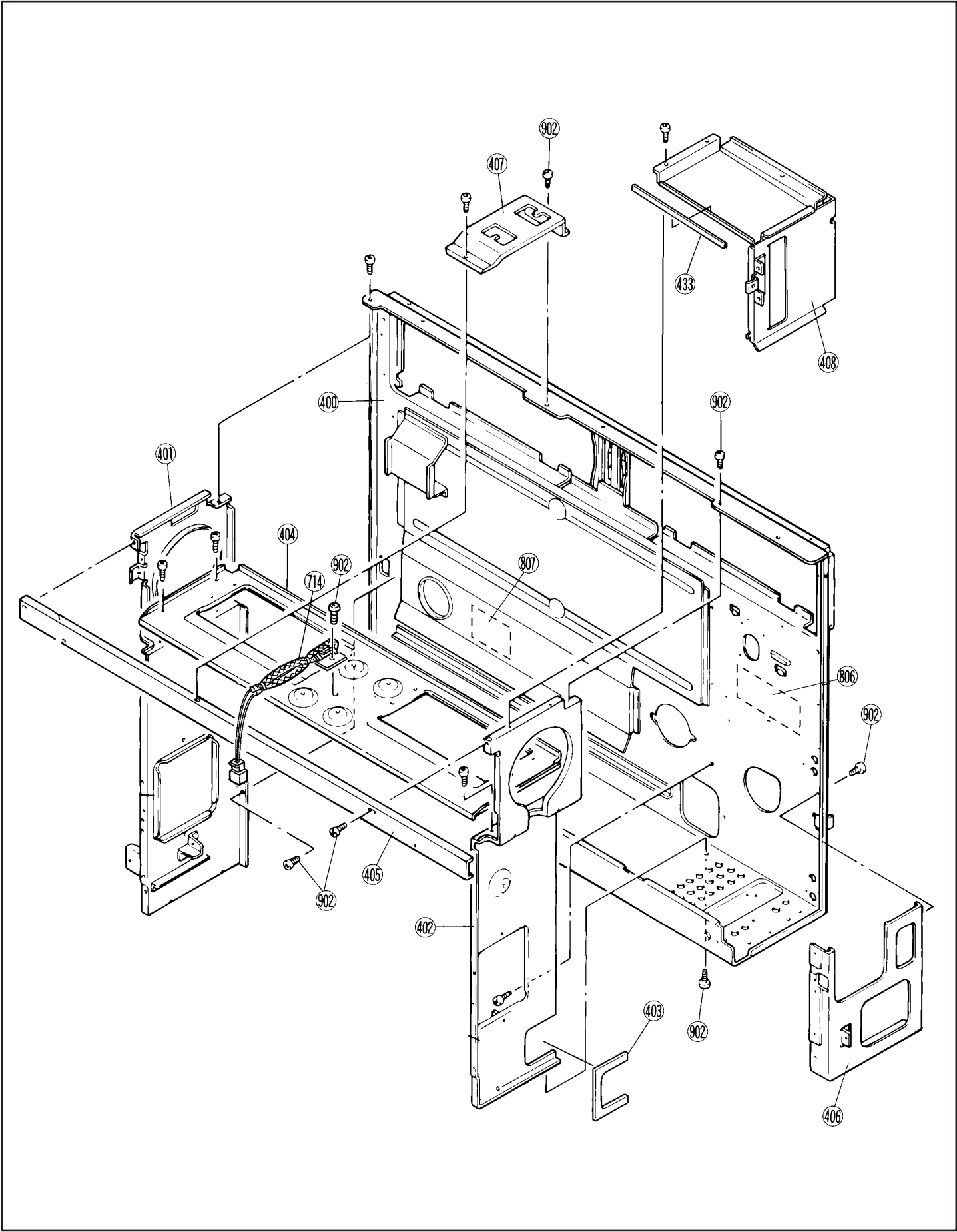
Limitation on implied warranties

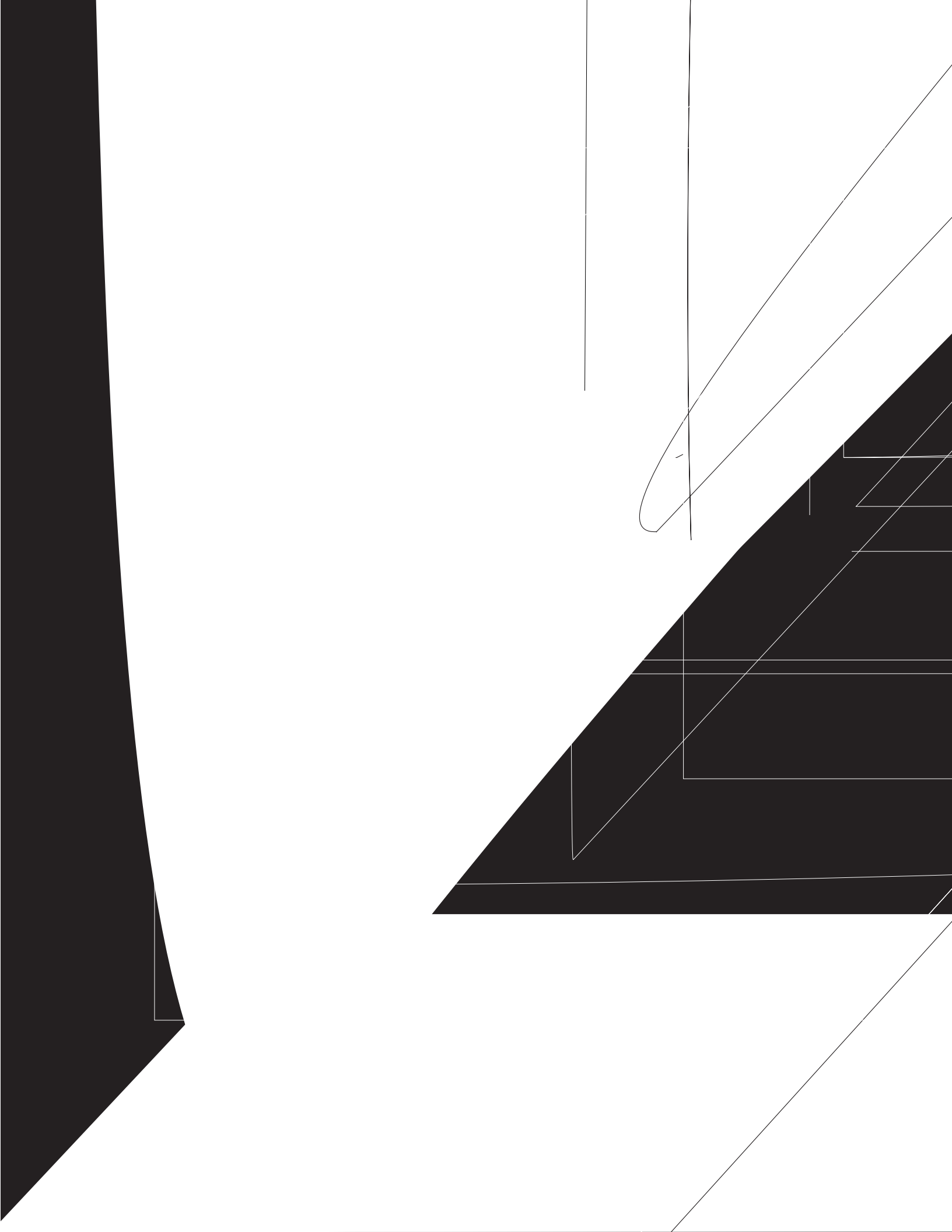
Any implied warranties of merchantability and fitness arising under state law are limited in duration to the period of coverage provided by this limited Warranty, unless the period provided by state law is less. Some states do not allow limitations on how long an implied Warranty lasts, so the above limitation may not apply to you.

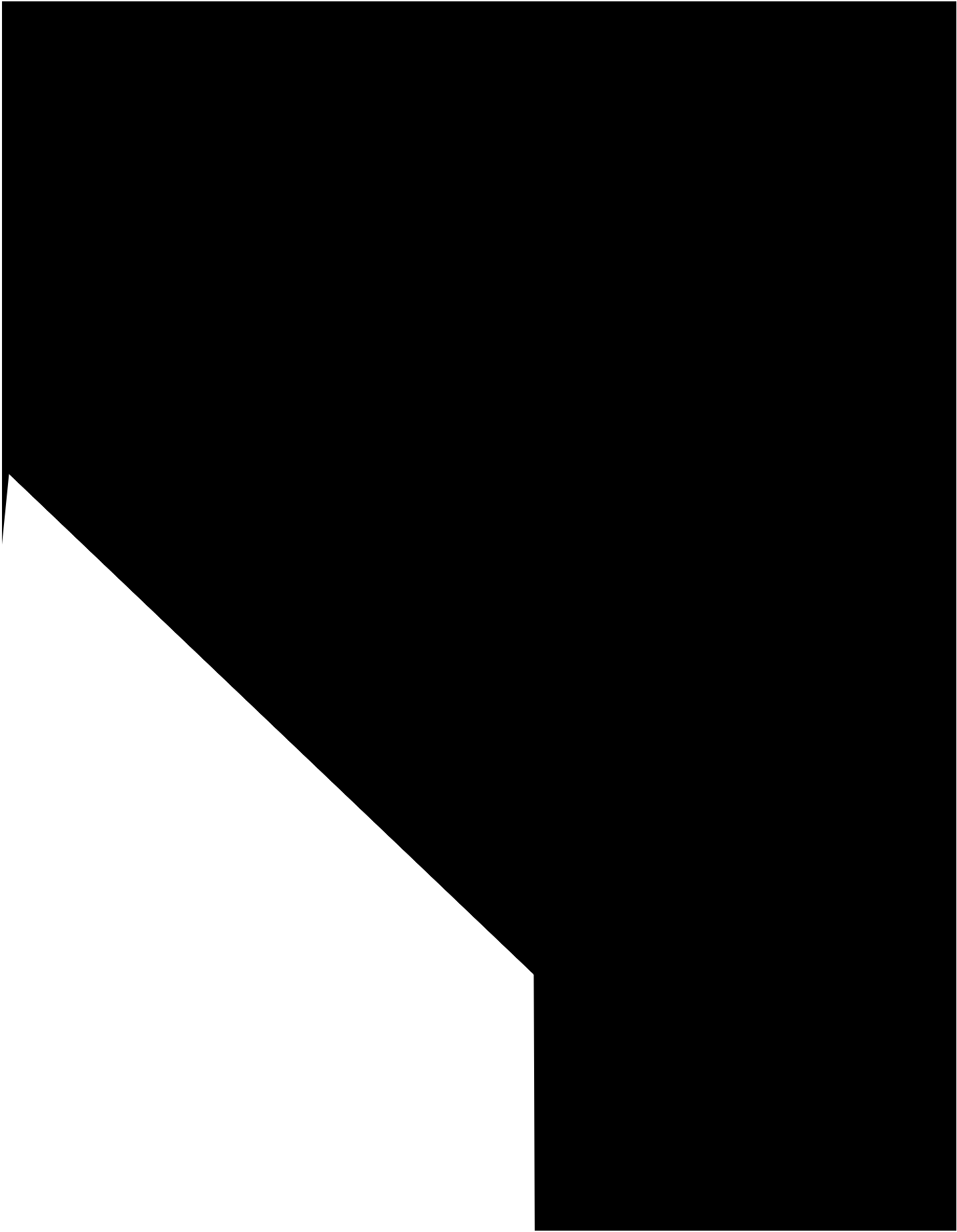
This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

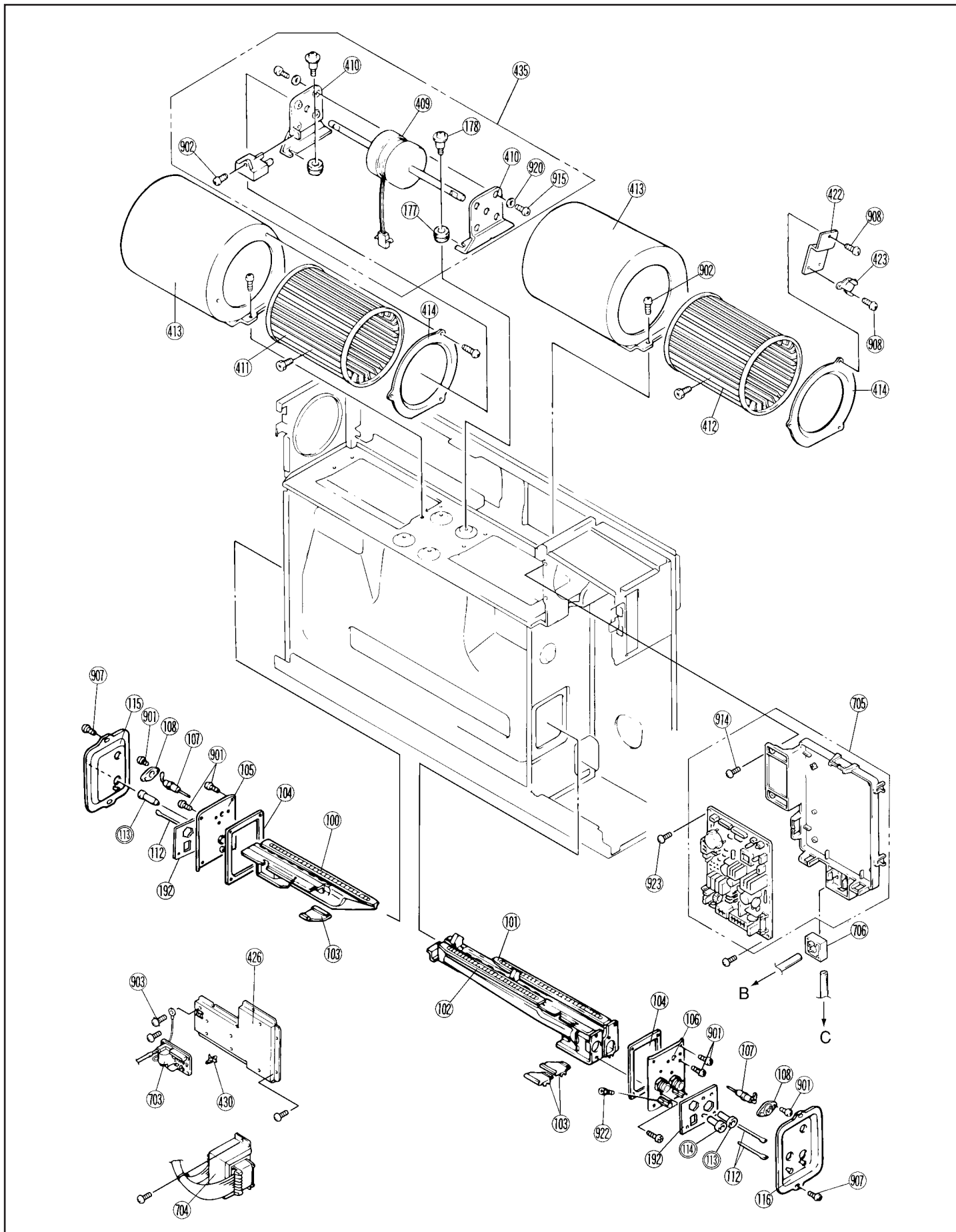
SCHEMATIC DIAGRAM

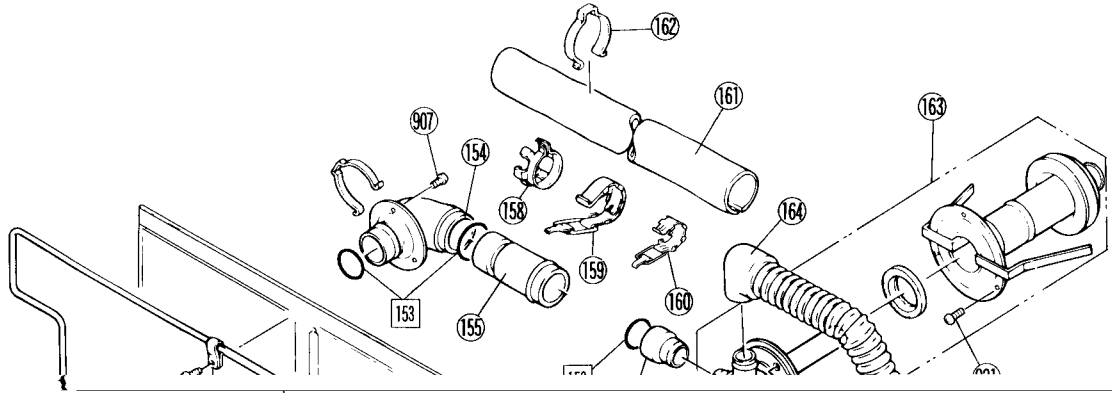


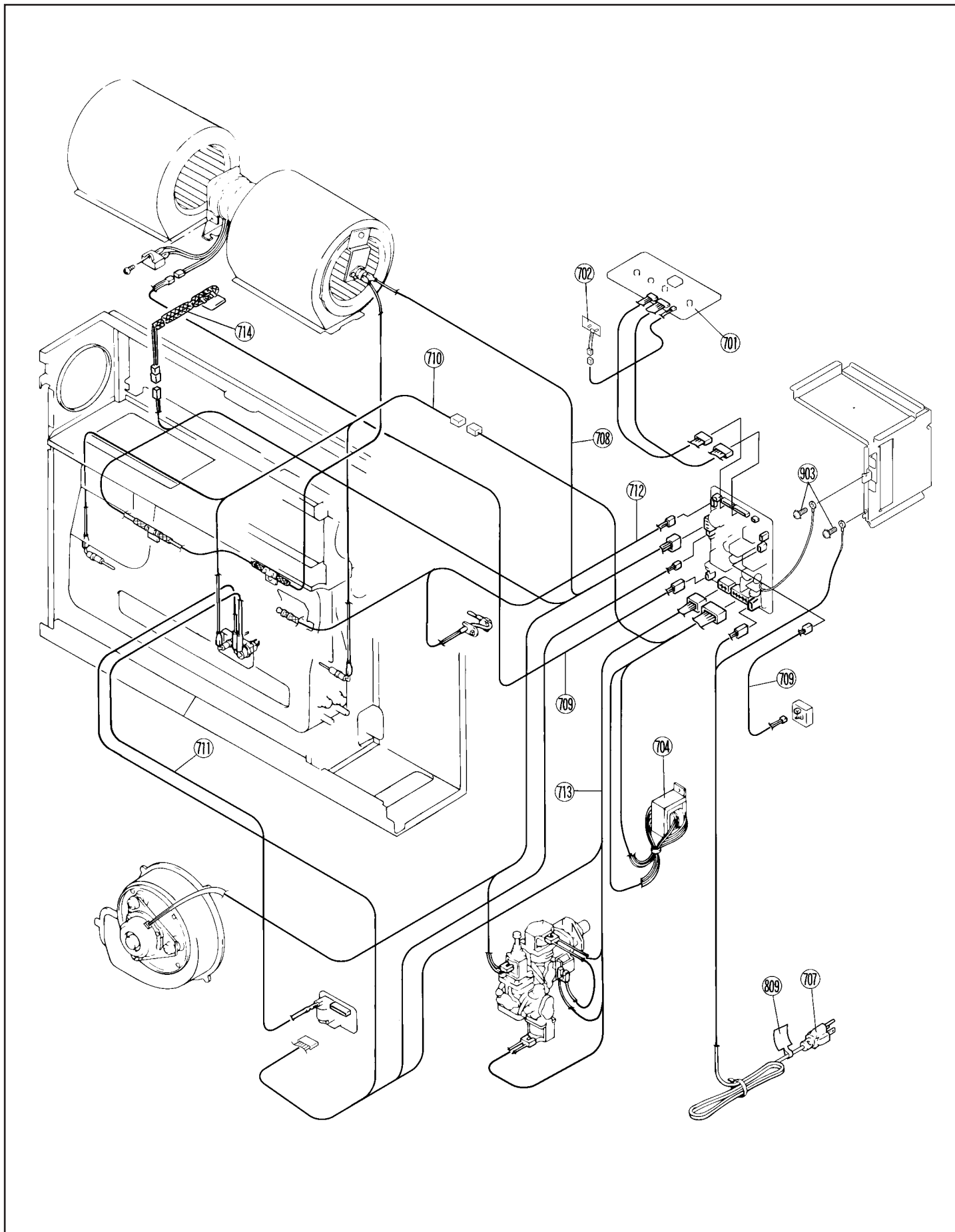












PARTS LIST

| No. | DRAWING No. | PART NAME | QTY | | | REMARKS |
|-----|---------------|---------------------------|--------|----------|----------|---------|
| | | | 1004FA | 1004FA-W | 1004FA-S | |
| 001 | 1001F-073 | SIDE PANEL | 2 | | | |
| | 1001F-073-4 | SIDE PANEL D | | 2 | | |
| | 1001F-073-5 | SIDE PANEL E | | | 2 | |
| 002 | 1004F-2071 | TOP PLATE | 1 | | | |
| | 1004F-2071-3 | TOP PLATE C | | 1 | | |
| | 1004F-2071-4 | TOP PLATE D | | | 1 | |
| 003 | 1004F-2073-2 | OPERATION LID B | 1 | | | |
| | 1004F-2073-6 | OPERATION LID F | | 1 | | |
| | 1004F-2073-8 | OPERATION LID H | | | 1 | |
| 004 | 556F-558-2 | FULCRUM | 1 | 1 | 1 | |
| 005 | ZUAA02SZ | STOPPER | 1 | 1 | 1 | |
| 006 | 1001F-1514-2 | DECORATION PANEL ASS'Y C | 1 | | | |
| | 1001F-1514-3 | DECORATION PANEL ASS'Y D | | 1 | | |
| | 1001F-1514-4 | DECORATION PANEL ASS'Y E | | | 1 | |
| 007 | 1001F-160-2 | FRONT PANEL ASS'Y B | 1 | | | |
| | 1001F-160-5 | FRONT PANEL ASS'Y E | | 1 | | |
| | 1001F-160-6 | FRONT PANEL ASS'Y F | | | 1 | |
| 008 | 1004F-2080 | ESCUTCHEON PANEL | 1 | | | |
| | 1004F-2087 | ESCUTCHEON PANEL B | | 1 | | |
| | 1004F-2086 | ESCUTCHEON PANEL C | | | 1 | |
| 009 | 1001F-084-2 | LOUVER SUPPORT TRIM B | 1 | | | |
| | 1001F-084-3 | LOUVER SUPPORT TRIM C | | 1 | | |
| | 1001F-084-4 | LOUVER SUPPORT TRIM D | | | 1 | |
| 010 | 1001F-163-2 | LOUVER ASS'Y B | 1 | | | |
| | 1001F-1323 | LOUVER ASS'Y | | 1 | | |
| | 1001F-163-3 | LOUVER ASS'Y C | | | 1 | |
| 011 | 1001F-162 | BOTTOM TRIM ASS'Y | 1 | | | |
| | 1001F-162-4 | BOTTOM TRIM ASS'Y D | | 1 | | |
| | 1001F-162-5 | BOTTOM TRIM ASS'Y E | | | 1 | |
| 012 | 1001F-164-4 | FILLER ASS'Y D | 1 | | | |
| | 1001F-1322 | FILLER ASS'Y | | 1 | | |
| | 1001F-164-6 | FILLER ASS'Y F | | | 1 | |
| 013 | 1001F-078 | LOUVER DOOR HINGES | 1 | 1 | 1 | |
| 014 | 551F-015 | FILLER | 1 | 1 | 1 | |
| 015 | RHF300-185-1 | MAGNET | 1 | 1 | 1 | |
| 016 | 1001F-1410-2 | BACK SPACER LEFT A | 1 | | | |
| | 1001F-1410-9 | BACK SPACER LEFT E | | 1 | | |
| | 1001F-1410-10 | BACK SPACER LEFT F | | | 1 | |
| 017 | 1001F-1411-1 | BACK SPACER B RIGHT A | 1 | | | |
| | 1001F-1411-2 | BACK SPACER B RIGHT B | | 1 | | |
| | 1001F-1411-3 | BACK SPACER B RIGHT C | | | 1 | |
| 018 | 1001F-166-4 | OPERATION LID D | 1 | | | |
| | 1001F-166-8 | OPERATION LID H | | 1 | | |
| | 1001F-166-9 | OPERATION LID I | | | 1 | |
| 019 | 1001F-165-10 | BACK SPACER UPPER ASS'Y J | 1 | | | |
| | 1001F-165-13 | BACK SPACER UPPER ASS'Y M | | 1 | | |
| | 1001F-165-14 | BACK SPACER UPPER ASS'Y N | | | 1 | |
| 020 | 1004F-228 | AIR FILTER ASS'Y | 2 | 2 | 2 | |
| 021 | 1001F-092 | BACK SPACER SUPPORT | 2 | 2 | 2 | |
| 022 | RHF1000-117 | WALL BRACKET | 2 | | | |
| | RHF1000-117-3 | | | 2 | | |
| | RHF1000-117-4 | | | | 2 | |
| 024 | 1001F-157 | LEG ASS'Y | 2 | 2 | 2 | |
| 025 | 550F-0220 | RUBBER BRACKET ASS'Y | 2 | 2 | 2 | |
| 026 | 550F-0225 | BASE SUPPORT RUBBER | 4 | 4 | 4 | |
| 100 | 1001F-150-3 | HIGH BURNER LEFT ASS'Y C | 1 | 1 | 1 | |
| 101 | 1001F-144-3 | HIGH BURNER RIGHT ASS'Y C | 1 | 1 | 1 | |

| No. | DRAWING No. | PART NAME | QTY | | | REMARKS |
|-----|---------------|---------------------------------|--------|----------|----------|---------|
| | | | 1004FA | 1004FA-W | 1004FA-S | |
| 102 | 1001F-147-3 | LOW BURNER ASS'Y C | 1 | 1 | 1 | |
| 103 | RHF250-075 | DAMPER PANEL | 2 | 2 | 2 | |
| 104 | 1001F-049 | BURNER BRACKET PACKING | 2 | 2 | 2 | |
| 105 | 1004F-2022 | BURNER BRACKET LEFT ASS'Y | 1 | 1 | 1 | |
| 106 | 1004F-2020 | BURNER BRACKET RIGHT ASS'Y | 1 | 1 | 1 | |
| 107 | 1001F-104-2 | FLAME ROD | 1 | 1 | 1 | |
| 108 | RHF250-038 | ELECTRODE CLIP | 1 | 1 | 1 | |
| 109 | 1001F-216 | ELECTRODE | 1 | 1 | 1 | |
| 110 | 1001F-168 | ELECTRODE BRACKET | 1 | 1 | 1 | |
| 111 | 1001F-175 | ELECTRODE SEAL PACKING | 1 | 1 | 1 | |
| 112 | RHF250-076 | AIR SHUTTER ADJUSTMENT | 2 | 2 | 2 | |
| 113 | 1004F-2031 | MAIN INJECTOR | 2 | 2 | 2 | |
| 114 | 1004F-2036 | MAIN INJECTOR | 1 | 1 | 1 | |
| 115 | 1001F-042 | BURNER SHIELD LEFT | 1 | 1 | 1 | |
| 116 | 1001F-041 | BURNER SHIELD RIGHT | 1 | 1 | 1 | |
| 117 | 1004F-2066 | INTERCONNECTION C ASS'Y | 1 | 1 | 1 | |
| 118 | 1004F-2065 | INTERCONNECTION B ASS'Y | 1 | 1 | 1 | |
| 119 | 1004F-2064 | INTERCONNECTION A ASS'Y | 1 | 1 | 1 | |
| 120 | M10B-4-8 | O-RING | 6 | 6 | 6 | |
| 121 | 1001F-101-2 | INTERCONNECTION CLIP | 1 | 1 | 1 | |
| 122 | CP-30488 | INTERCONNECTION BRACKET | 1 | 1 | 1 | |
| 123 | 1004F-2030 | INTERCONNECTION BRACKET | 1 | 1 | 1 | |
| 124 | 1004F-2060-A | GAS CONTROL ASS'Y A | 1 | 1 | 1 | |
| 124 | 1004F-2060-C | GAS CONTROL ASS'Y C | 1 | 1 | 1 | |
| 125 | CP-40104 | HANDLE SPRING | 1 | 1 | 1 | |
| 126 | 1001F-008-2 | VALVE BRACKET B | 1 | 1 | 1 | |
| 127 | 1001F-106-1 | REVOLVING STOPPER A | 1 | 1 | 1 | |
| 128 | 1001F-106-3 | REVOLVING STOPPER C | 1 | 1 | 1 | |
| 129 | 1001F-1633 | MANUAL VALVE | 1 | 1 | 1 | |
| 130 | 1001F-1632 | COCK REINFORCEMENT BOARD | 1 | 1 | 1 | |
| 131 | 1001F-1626 | SHAFT ADAPTOR | 1 | 1 | 1 | |
| 132 | 1001F-1639 | SHAFT | 1 | 1 | 1 | |
| 133 | 1001F-1630 | HANDLE SUPPORT | 1 | 1 | 1 | |
| 134 | 1001F-1631 | VALVE PANEL | 1 | 1 | | |
| | 1001F-1631-2 | VALVE PANEL B | | | 1 | |
| 135 | REH18-25 | SHAFT GUIDE | 1 | 1 | 1 | |
| 136 | CP-40369-33 | HANDLE ASS'Y | 1 | 1 | | |
| | CP-40369-31 | | | | 1 | |
| 137 | 1001F-138-2 | MAIN HEAT EXCHANGER ASS'Y B | 1 | 1 | 1 | |
| 138 | RHF1000-167 | INLET FLANGE PACKING | 1 | 1 | 1 | |
| 139 | 300FT-14 | GLASS WINDOW PACKING | 2 | 2 | 2 | |
| 140 | 300FT-15 | VIEWING GLASS | 2 | 2 | 2 | |
| 141 | 1004F-2013 | GLASS CLIP | 2 | 2 | 2 | |
| 142 | 1001F-115 | BLANKING PANEL | 1 | 1 | 1 | |
| 143 | 1004F-2048 | OT.TH BRACKET | 1 | 1 | 1 | |
| 144 | 1001F-142-2 | SUB HEAT EXCHANGER No.1 ASS'Y B | 1 | 1 | 1 | |
| 147 | 1001F-143 | SUB HEAT EXCHANGER No.2 ASS'Y | 1 | 1 | 1 | |
| 148 | 1001F-169 | SPACER | 1 | 1 | 1 | |
| 149 | 1001F-021-1 | SUB HEAT EXCHANGER CLIP A | 1 | 1 | 1 | |
| 150 | 1001F-021-2 | SUB HEAT EXCHANGER CLIP B | 1 | 1 | 1 | |
| 151 | 1001F-183 | SUB HEAT EXCHANGER B ASS'Y | 1 | 1 | 1 | |
| 152 | RHF1000-174 | HEAT EXCHANGER BRACKET SLIP | 2 | 2 | 2 | |
| 153 | RHF1000-142-a | O-RING A | 3 | 3 | 3 | |
| 154 | 1001F-131 | EXHAUST ELBOW ASS'Y | 1 | 1 | 1 | |
| 155 | 1001F-132-2 | SLIDE PIPE B | 1 | 1 | 1 | |
| 157 | 1004F-530 | EXHAUST ADAPTOR B ASS'Y | 1 | 1 | 1 | |
| 158 | 1004F-401 | SLIDE PIPE STOPPER | 1 | 1 | 1 | |
| 159 | 1001F-250 | EXHAUST PIPE STOPPER ASS'Y | 1 | 1 | 1 | |
| 160 | 1001F-1730 | EXHAUST PIPE STOPPER S ASS'Y | 1 | 1 | 1 | |
| 161 | 1001F-111 | COVER | 1 | 1 | 1 | |
| 162 | RHF1000-145 | ELBOW COVER STOPPER | 1 | 1 | 1 | |
| 163 | 431F-1900 | FLUE ASS'Y | 1 | 1 | 1 | |

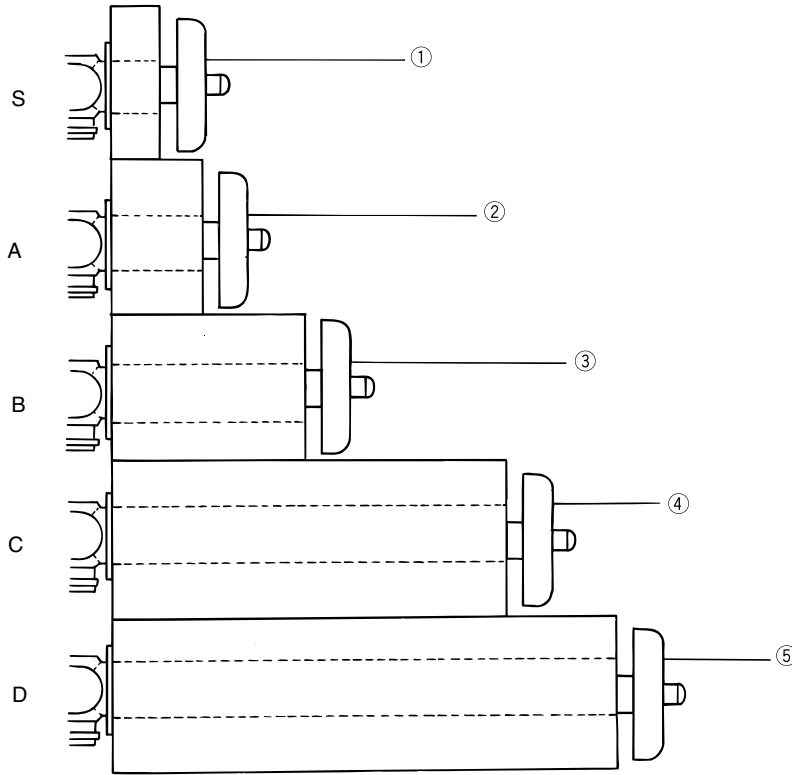
| No. | DRAWING No. | PART NAME | QTY | | | REMARKS |
|-----|---------------|----------------------------|--------|----------|----------|---------|
| | | | 1004FA | 1004FA-W | 1004FA-S | |
| 164 | RHF1000-132 | AIR INTAKE ELBOW | 1 | 1 | 1 | |
| 165 | RHF1000-130-d | AIR INTAKE FLEXIBLE HOSE | 1 | 1 | 1 | |
| 166 | 1004F-2032-1 | AIR INLET | 1 | 1 | 1 | |
| 167 | 1004F-2033 | AIR INLET PACKING | 1 | 1 | 1 | |
| 168 | 1004F-2052-1 | SENSING TUBE A | 1 | 1 | 1 | |
| 169 | 1004F-2052-2 | SENSING TUBE B | 1 | 1 | 1 | |
| 170 | 1001F-158 | AIR INTAKE DUCT | 1 | 1 | 1 | |
| 171 | 1001F-053 | SEAL PACKING | 1 | 1 | 1 | |
| 172 | 1001F-153-2 | COMBUSTION FAN CASING | 1 | 1 | 1 | |
| 178 | CP-30310 | SCREW FOR MOTOR | 3 | 3 | 3 | |
| 180 | 1004F-2082 | COMBUSTION FAN TOTAL ASS'Y | 1 | 1 | 1 | |
| 181 | 304F-9112 | CAP | 1 | 1 | 1 | |
| 192 | 1004F-2088 | BUSH RE-INFORCED BOARD | 2 | 2 | 2 | |
| 400 | 1001F-186-1 | REAR PANEL ASS'Y | 1 | 1 | 1 | |
| 401 | 1001F-154 | FRAME LEFT ASS'Y | 1 | 1 | 1 | |
| 402 | 1001F-156 | FRAME RIGHT ASS'Y | 1 | 1 | 1 | |
| 403 | 1001F-112 | WARM AIR SEAL PACKING | 1 | 1 | 1 | |
| 404 | 1001F-004-2 | CONVECTION FAN SUPPORT B | 1 | 1 | 1 | |
| 405 | 1001F-066 | TOP PANEL SUPPORT | 1 | 1 | 1 | |
| 406 | 1001F-064 | FRAME CORNER | 1 | 1 | 1 | |
| 407 | 1001F-110 | TOP PANEL REINFORCEMENT | 1 | 1 | 1 | |
| 408 | 1004F-2006 | FRAME CORNER ASS'Y | 1 | 1 | 1 | |
| 409 | ES-02051 | CONVECTION MOTOR | 1 | 1 | 1 | |
| 410 | 550F-0903 | CONVECTION MOTOR BRACKET | 2 | 2 | 2 | |
| 411 | 1004F-308-1 | CONVECTION FAN A | 1 | 1 | 1 | |
| 412 | 1004F-308-2 | CONVECTION FAN B | 1 | 1 | 1 | |
| 413 | 1001F-152 | FAN CASING ASS'Y | 2 | 2 | 2 | |
| 414 | RHF1000-89 | BELL MOUTH | 2 | 2 | 2 | |
| 415 | 1001F-159-2 | HEAT SHIELD BOARD B ASS'Y | 1 | 1 | 1 | |
| 416 | RC-223-21-1 | SEAL PACKING | 2 | 2 | 2 | |
| 417 | 1001F-137 | VIEWING WINDOW PANEL | 2 | 2 | 2 | |
| | | | | | | |
| 419 | 302F-0506 | O.H.S. PROTECTOR | 1 | 1 | 1 | |
| 420 | 1001F-062 | ELECTRODE VIEWING PANEL | 1 | 1 | 1 | |
| 421 | 1001F-070 | ELECTRODE COVER | 1 | 1 | 1 | |
| 422 | 1001F-217 | O.H.S. BRACKET | 2 | 2 | 2 | |
| 423 | ES-01131 | OVERHEAT SWITCH | 1 | 1 | 1 | |
| 424 | 1001F-172 | WATER LEVEL INDICATOR | 1 | 1 | 1 | |
| 425 | 550F-1418 | WATER LEVEL LABEL | 1 | 1 | 1 | |
| 426 | 1001F-037 | HUMIDIFIER TRAY | 1 | 1 | 1 | |
| 427 | 1004F-2016 | TRANSFORMER BRACKET | 1 | 1 | 1 | |
| 429 | RHF300-185-1 | MAGNET | 1 | 1 | 1 | |
| 430 | CP-90436-3 | P.C.B. SUPPORT | 4 | 4 | 4 | |
| 431 | RC-312-628 | THERMISTOR HOLDER | 1 | 1 | 1 | |
| 432 | RC-329-1033 | POWER SUPPLY CABLE BRACKET | 1 | 1 | 1 | |
| 433 | 1004F-2009 | EDGE | 1 | 1 | 1 | |
| 434 | 550F-0418 | NYLON RIVET | 2 | 2 | 2 | |
| 435 | 1004F-2085 | CONVECTION MOTOR SUB ASS'Y | 1 | 1 | 1 | |
| 436 | CP-90077-1 | SPEED CLIP | 2 | 2 | 2 | |
| 700 | 1004F-2075 | OPERATION P.C.B ASS'Y F | 1 | 1 | | |
| | 1004F-2075-2 | OPERATION P.C.B ASS'Y G | | | 1 | |
| 702 | 1004F-2078 | INDICATOR ASS'Y | 1 | 1 | 1 | |
| 703 | EI-161 | IGNITOR ASS'Y | 1 | 1 | 1 | |
| 704 | ET-251 | TRANSFORMER | 1 | 1 | 1 | |
| 705 | 1004F-2010 | MAIN P.C.B. TOTAL ASS'Y | 1 | 1 | 1 | |
| 706 | 1004F-2051 | PRESSURE SENSOR | 1 | 1 | 1 | |
| 707 | CP-90466-3 | POWER SUPPLY CABLE ASS'Y | 1 | 1 | 1 | |
| 708 | 1004F-2054 | MOTOR LEAD ASS'Y B | 1 | 1 | 1 | |
| 709 | 1004F-2053 | SENSOR LEAD ASS'Y | 1 | 1 | 1 | |
| 710 | 1004F-2059 | FR LEAD ASS'Y | 1 | 1 | 1 | |
| 711 | 1001F-1667-3 | HIGH TENSION CORD ASS'Y | 1 | 1 | 1 | |
| 712 | 1004F-2057 | THERMISTOR LEAD ASS'Y | 1 | 1 | 1 | |

| No. | DRAWING No. | PART NAME | QTY | | | REMARKS |
|-----|--------------|--------------------------|--------|----------|----------|---------|
| | | | 1004FA | 1004FA-W | 1004FA-S | |
| 713 | 1004F-2058 | SV.IG LEAD ASS'Y | 1 | 1 | 1 | |
| 714 | 1004F-2061 | TF LEAD ASS'Y | 1 | 1 | 1 | |
| 800 | CP-72135-19 | RATING PLATE | 1 | 1 | 1 | |
| 800 | CP-72135-20 | RATING PLATE | 1 | 1 | 1 | |
| 801 | CP-72151-19 | RATING PLATE | 1 | 1 | 1 | |
| 801 | CP-72151-20 | RATING PLATE | 1 | 1 | 1 | |
| 802 | 1004F-2093 | OPERATION LABEL | 1 | 1 | 1 | |
| 803 | 1001F-1651 | FILTER LABEL | 1 | 1 | 1 | |
| 804 | 556F-2065 | CAUTION LABEL | 1 | 1 | 1 | |
| 805 | 1001F-1656 | CAUTION MARK | 1 | 1 | 1 | |
| 806 | 431F-1840 | PROPANE STICKER | 1 | 1 | 1 | |
| 806 | 431F-1841 | NG STICKER | 1 | 1 | 1 | |
| 807 | 1001F-1654 | EXHAUST CAUTION LABEL | 1 | 1 | 1 | |
| 808 | CP-72062-2 | SPEC MARK | 1 | 1 | 1 | |
| 809 | 431F-1860 | POWER SUPPLY CABLE LABEL | 1 | 1 | 1 | |
| 810 | 431F-1862 | GAS CHECK LABEL | 1 | 1 | 1 | |
| 810 | 431F-1863 | GAS CHECK LABEL | 1 | 1 | 1 | |
| 811 | 431F-1830 | EXHAUST CAUTION LABEL | 1 | 1 | 1 | |
| 812 | CP-71747-2 | PULL LABEL | 1 | 1 | 1 | |
| 850 | 1004F-2090 | OWNER'S MANUAL | 1 | 1 | 1 | |
| 851 | 1004F-2092 | CONVERSION MANUAL | 1 | 1 | 1 | |
| 852 | 1004F-2091 | TEMPLATE | 1 | 1 | 1 | |
| 853 | 1004F-2095-1 | CONVERSION SET(TO NG) | 1 | 1 | 1 | |
| 853 | 1004F-2095-2 | CONVERSION SET(TO LPG) | 1 | 1 | 1 | |
| 854 | FOT-106-6 | KEY | 1 | 1 | 1 | |
| 855 | FOT-187 | OPERATION LID SET | 1 | | | |
| | FOT-187-2 | | | 1 | | |
| | FOT-187-3 | | | | 1 | |
| 901 | ZBA0408SC | SCREW | | | | |
| 902 | ZBA0408SZ | SCREW | | | | |
| 903 | CP-30421-1 | SCREW | | | | |
| 904 | ZBA0412SZ | SCREW | | | | |
| 905 | ZBB0410SC | SCREW | | | | |
| 906 | ZBD0408SC | SCREW | | | | |
| 907 | ZBD0408SZ | SCREW | | | | |
| 908 | ZEAB0408SZ | SCREW | | | | |
| 909 | ZEAB0408SB | SCREW | | | | |
| 910 | ZEAB0408SC | SCREW | | | | |
| 911 | ZGAA0308SZ | SCREW | | | | |
| 912 | ZAA0506SZ | SCREW | | | | |
| 913 | ZAA0420SZ | SCREW | | | | |
| 914 | ZEDB0408SZ | SCREW | | | | |
| 915 | ZHAA0408SZ | SCREW | | | | |
| 916 | ZHAD0510SC | SCREW | | | | |
| 917 | ZDAA0410SZ | SCREW | | | | |
| 918 | ZIAD0408SZ | SCREW | | | | |
| 919 | ZRAB04SZ | NUT | | | | |
| 920 | ZSCA04SZ | WASHER | | | | |
| 921 | CP-30408 | SCREW | | | | |
| 922 | ZAA0306SZ | SCREW | | | | |
| 923 | CP-30486-2 | SCREW | | | | |
| 924 | ZSCA04SC | WASHER | | | | |
| 925 | ZRAA04SC | NUT | | | | |
| 926 | ZAA0440UK | SCREW | | | | |
| 927 | ZIAD0410SC | SCREW | | | | |

Vent sizes:

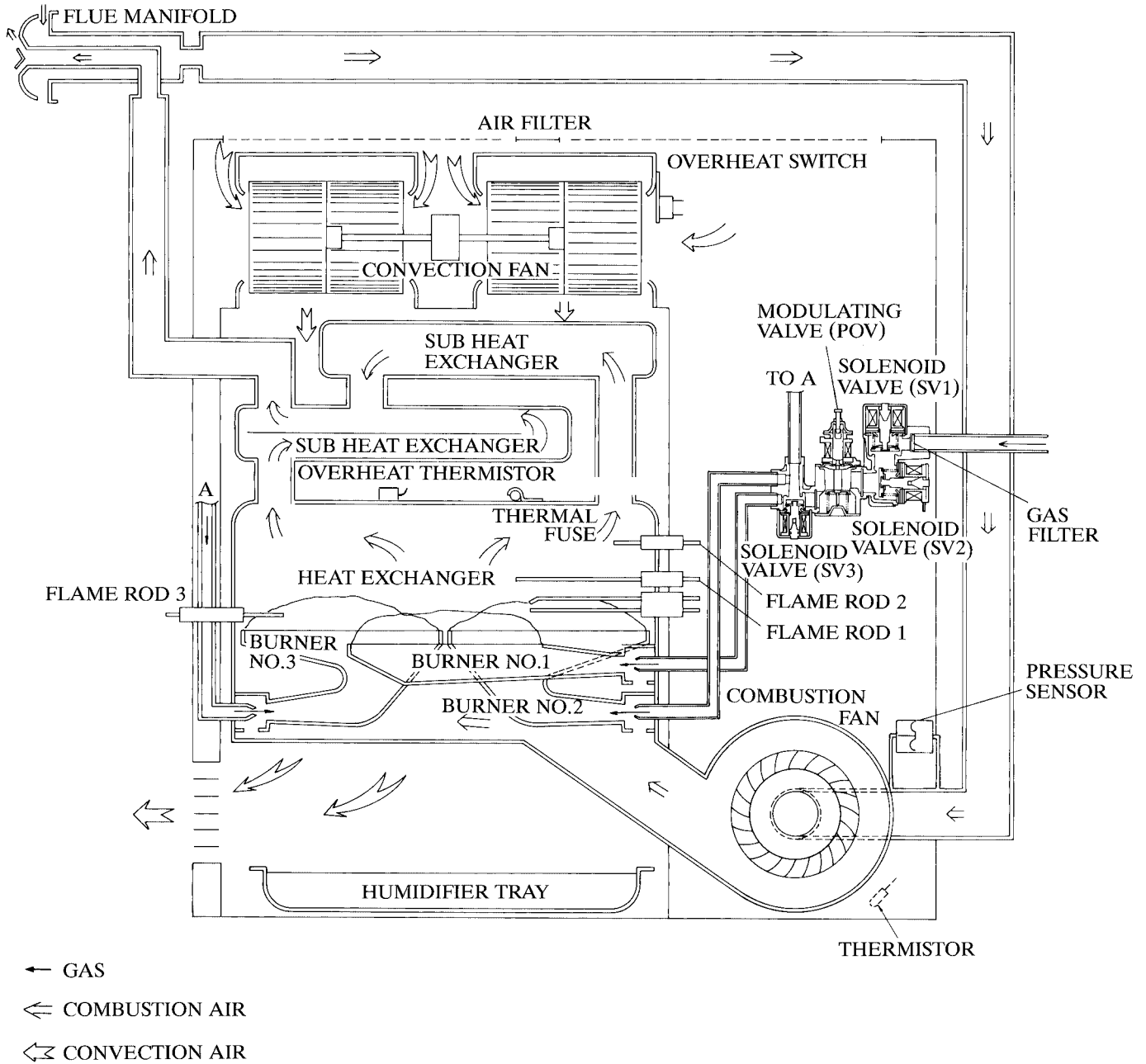
5 Vent lengths are available. inch (mm)

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



| NO. | RANK | PARTS NAME | PARTS NO. | QTY | REMARKS |
|-----|------|--------------|-----------|-----|--------------|
| 1 | M | VENT KIT - S | FOT-150 | 1 | |
| 2 | M | VENT KIT - A | FOT-151 | 1 | |
| 3 | M | VENT KIT - B | FOT-152 | 1 | |
| 4 | M | VENT KIT - C | FOT-153 | 1 | |
| 5 | M | VENT KIT - D | FOT-154 | 1 | |
| 6 | | RUBBER SEAL | | 1 | SEE PAGE 14. |
| | | | | | |
| | | | | | |
| | | | | | |

RHFE-1004FA FLOW DIAGRAM



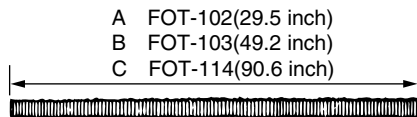
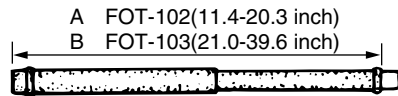
EXTENSION SET PARTS AND INSTALLATION GUIDE

FOT-102
FOT-103
FOT-114
FOT-115

Rinnai

- This extension set is to be used for installations requiring extra distance.
MAXIMUM VENT LENGTH 13' WITH 2 ELBOWS

■ NAMES AND NUMBERS OF PARTS



| | | | PARTS No. | FOT-102 | FOT-103 | FOT-114 | FOT-115 |
|---|---|------------------------|----------------|---------|---------|---------|---------|
| ① | A | EXHAUST PIPE | FOT 111-1 | 1 | | | |
| | B | EXHAUST PIPE | FOT 112-1 | | 1 | 1 | |
| ② | | EXHAUST PIPE(STRAIGHT) | FOT 114-3 | | | 1 | |
| ③ | A | AIR INTAKE HOSE | RHF 1000-130-e | 1 | | | |
| | B | AIR INTAKE HOSE | RHF 1000-130-b | | 1 | | |
| | C | AIR INTAKE HOSE | 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 SET | 3 SET | 4 SET | |
| 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 |

■ TYPES COMPATIBLE WITH EXTENSION SET

RHFE-1004FA

INSTALLING AN EXTENSION KIT

Installing an extension kit requires construction of an air line and the exhaust line. The air line is connected between the Air Supply Elbow at the rear of the heater and the air inlet port on the Flue pipe. Similarly, the exhaust line is connected between the joint pipe at the rear of the heater, and the exhaust port on the Flue pipe.

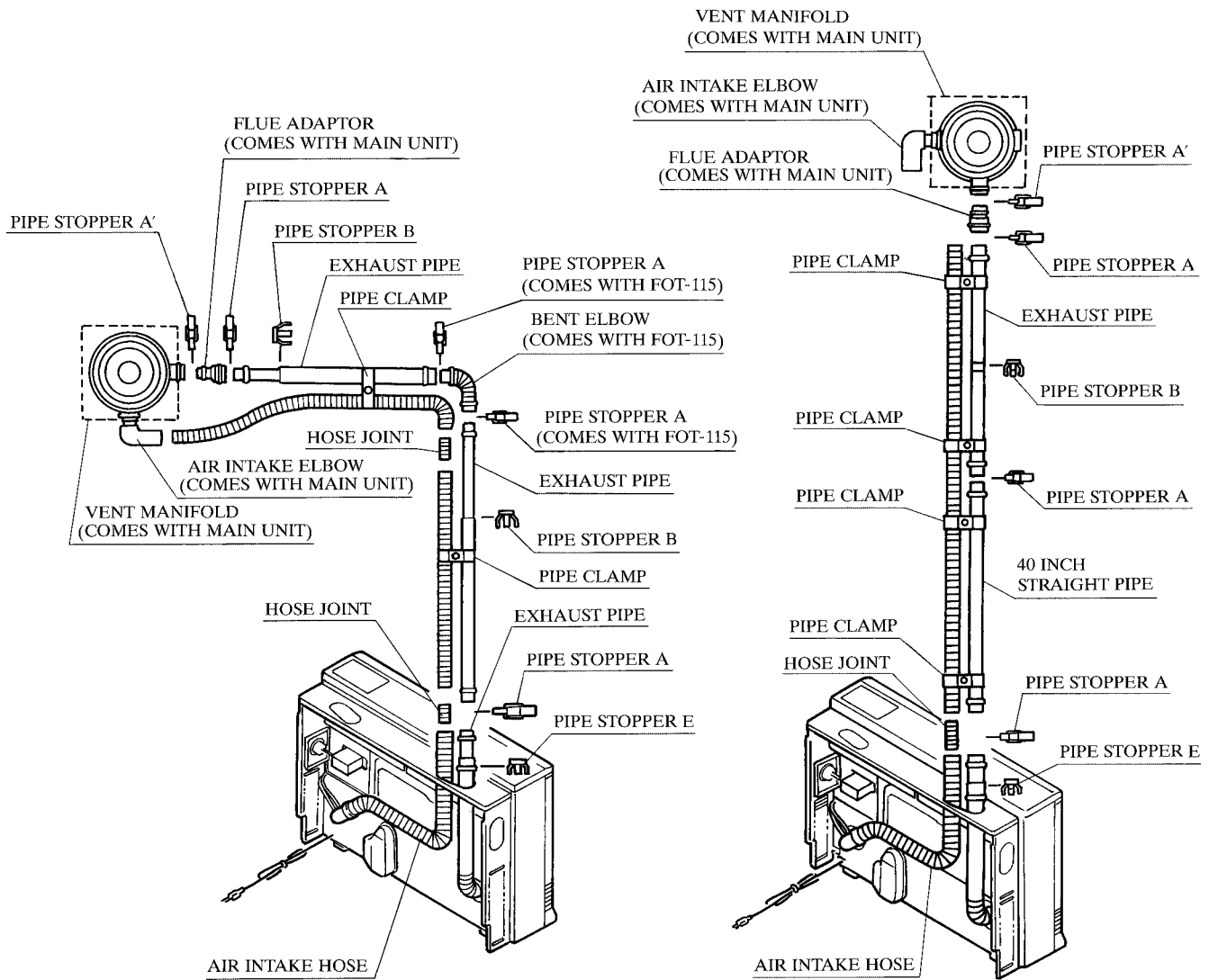
Caution: Check to see there is no debris in pipe or hose.

■ HOW TO INSTALL

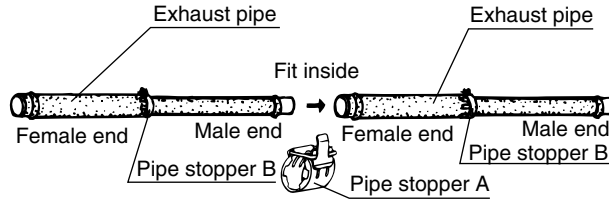
MODEL:RHFE-1004FA

Example:Using 2 sets of extension set and 1 bent set.

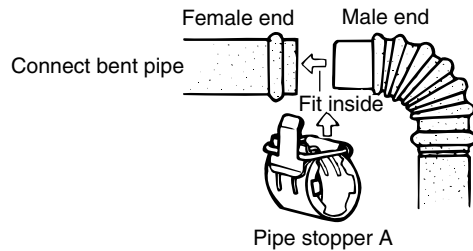
Example:Using 80 inches slide pipe set.



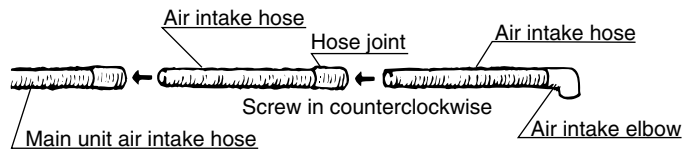
1. How to connect exhaust pipes



To connect the exhaust pipes, fit the male end into the female end and clamp with pipe stopper A to prevent slipping. The exhaust pipe can be telescoped to the required length; do not cut it.



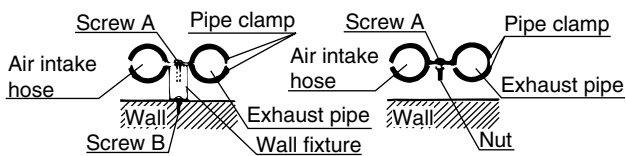
2. How to connect air intake hose



Screw hose joint half of its length onto the air intake hose, then screw another air intake hose into the joint. The hose can be cut to the required length.

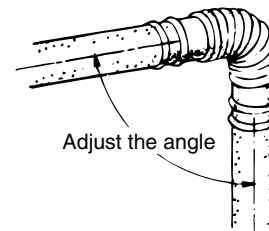
IMPORTANT: The PVC air line is longer than the exhaust line and may need to be cut to size. Be sure, however, to thoroughly deburr all rough edges.

3. Affixing the air intake hose and exhaust pipe



- Set the air intake hose and exhaust pipe into the pipe clamps, screw the clamp onto the wall fixture, and affix to the wall with screw B.
- The air intake hose and exhaust pipe can also be screwed onto the wall using the pipe clamp and the nut.

4. How to use the bent pipe

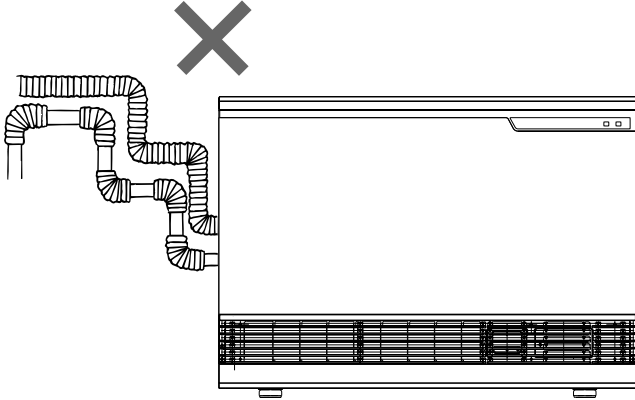


With the exhaust pipes inserted into the ends, bend the bent pipe to the angle required for installation. This part is mainly used for curves and for connection to vent terminal.

■ CAUTIONS

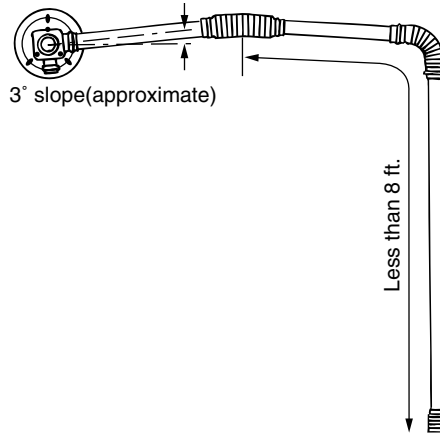
1. Maximum extendable length

FOR BEST ROOM AIR HUMIDITY, KEEP WATER IN THE HUMIDIFIER TRAY.

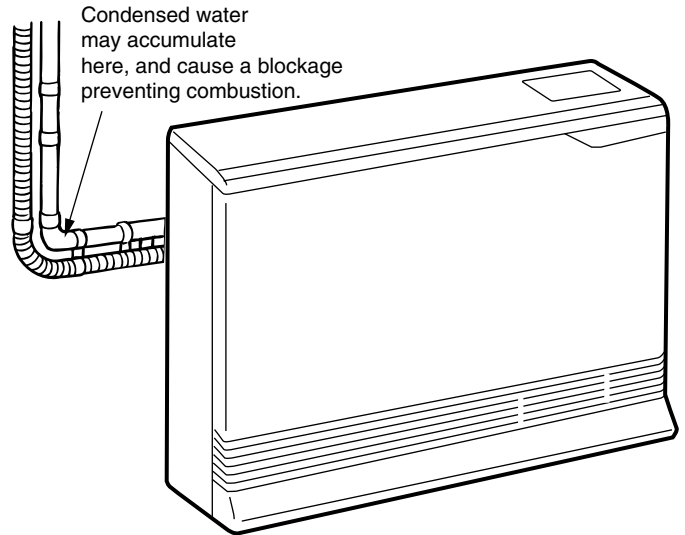


- 13 feet, 2 bends
- The bend where the hose and pipes leave the body is not counted.
- The air intake hose should run along the exhaust pipe.

3. Condensed water formed by combustion, will run back to the unit, and may overflow from the condensation pan if pipes are longer than 8 feet. Therefore, pipes exceeding these lengths should be made to drain to the outside by giving their horizontal portions 3° or more downward and outward slope.

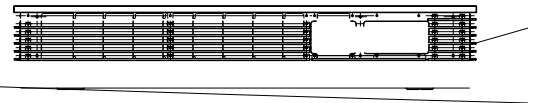


2. To prevent water condensation

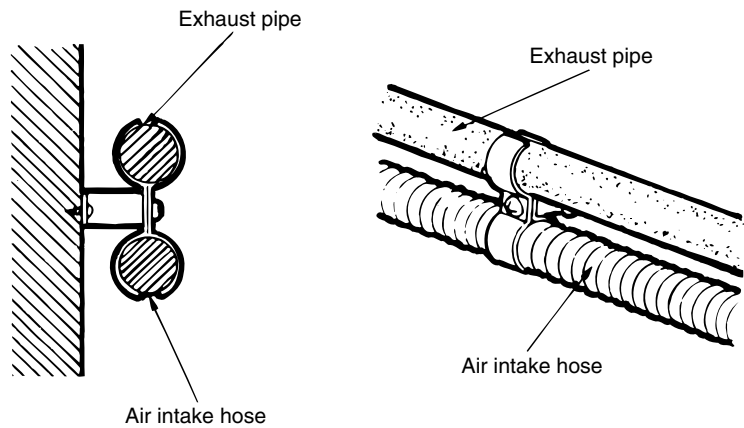


CAUTION

Never allow the exhaust pipe to sag, as condensed water may accumulate and cause incomplete combustion.



4. Wherever the air intake hose and exhaust pipe run sideways, try to have the exhaust pipe on top (to prevent the air intake hose from sagging onto the exhaust pipe).



QUALIFIED INSTALLING AGENCY

The installation must conform to local codes, in the absence of local codes, the installation must conform with American National Standard (National Fuel Gas Code) known as NFPA 54 and ANSI Z223.1.1996.

Available from the American National Standards Institute, Inc., 1430 Broadway, New York, N.Y. 10018 or from the National Fire Protection Association, 470 Atlantic Avenue, Boston, Mass. 02210.

TECHNICAL DATA

| WEIGHT | DIMENSIONS | GAS RATE (BTU/h) | | | | | |
|---------|---|------------------|--------|--------|--------|--------|--------|
| | | INPUT | | | OUTPUT | | |
| 90 Lbs. | Width: 36 5/8" Height: 26 3/8" Depth: 12 3/8" | | NG | LP | | NG | LP |
| | | LOW | 10,500 | 10,500 | LOW | 8,400 | 8,400 |
| | | HIGH | 38,400 | 36,500 | HIGH | 30,720 | 29,200 |

Burner Orifices:

| | NG | | LPG | |
|-----|-------------------|------|-------------------|------|
| | PARTS No. | QTY' | PARTS No. | QTY' |
| HI | 1004F-2031-2-1.80 | 2 | 1004F-2031-1-0.95 | 2 |
| LOW | 1004F-2036-2-1.95 | 1 | 1004F-2036-1-1.20 | 1 |

GAS CONVERSION SPECIFICATIONS

| MODEL | GAS TYPE | DIAMETER OF ORIFICE(mm) | | DAMPER A-DJUSTMENT | | | MANIFOLD DIFFERENTIAL PRESSURE (W.C.) | |
|---------------|----------|-------------------------|------|--------------------|-------|-------|---------------------------------------|----------|
| | | HI | LOW | FRONT | RIGHT | LEFT | HI | LO |
| RHFE-1004FA-N | NG | 1.80 | 1.95 | 7/10 | 10/10 | 10/10 | 3.7"W.C. | 2.0"W.C. |
| RHFE-1004FA-P | LPG | 0.95 | 1.20 | 10/10 | 10/10 | 10/10 | 10.1"W.C. | 4.3"W.C. |

GAS SUPPLY PRESSURE

| | NATURAL | PROPANE |
|---------|-----------|-----------|
| MINIMUM | 5.0"W.C. | 11.0"W.C. |
| MAXIMUM | 10.5"W.C. | 13.0"W.C. |

- The minimum inlet gas supply pressures is for the purpose of input adjustment.
- Heaters may be converted from one gas to another using Rinnai conversion kits.

NAME TITLE

COMPANY

ADDRESS

CITY STATE ZIP

PHONE NUMBER



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



BUSINESS REPLY MAIL
FIRST CLASS NO. 118 PEACHTREE CITY, GA

Rinnai America Corp.
103 International Drive
Peachtree City, Georgia 30269
Attn: Furnace Registrar



EXTENDED WARRANTIES ARE AVAILABLE, CONTACT RINNAI FOR DETAILS.

Rinnai FURNACE
WARRANTY REGISTRATION CARD

Owner's Name _____
Installation Address _____
City, State, Zip _____
Dealer's Name _____
Address _____
City, State, Zip _____
Type of Dealer _____
Model _____ Type of Gas _____
Serial No. _____
Date Purchased _____
Comments: _____

PLEASE RETURN THIS CARD TO RINNAI WITHIN TWO WEEKS OF PURCHASE

Rinnai

AMERICA CORPORATION



103 International Drive,
Peachtree City, Georgia 30269
Phone:1-800-621-9419
Fax:1-888-474-6624

1004F-2090 × 10 (00)
Printed in Japan 2006.01



100694

| DRAWING No. | A | B | C | D | E | F | G |
|-------------|-----------------|-------|-------|----------------|------|----|------|
| CP-72135-9 | RHFE-431FAIII-P | 16700 | 8200 | L.P. (Propane) | 2.8 | 80 | 1340 |
| CP-72135-10 | RHFE-431FAIII-N | 16700 | 8200 | NAT. | 2.4 | 80 | 1340 |
| CP-72135-11 | RHFE-556FAIII-P | 20700 | 8200 | L.P. (Propane) | 4.5 | 80 | 1656 |
| CP-72135-12 | RHFE-556FAIII-N | 21500 | 8200 | NAT. | 3.8 | 80 | 1720 |
| | | | | | | | |
| CP-72135-15 | RHFE-556WTA-P | 20700 | 8200 | L.P. (Propane) | 4.5 | 80 | 1656 |
| CP-72135-16 | RHFE-556WTA-N | 21500 | 8200 | NAT. | 3.8 | 80 | 1720 |
| CP-72135-17 | RHFE-431WTA-P | 16700 | 8200 | L.P. (Propane) | 2.8 | 80 | 1340 |
| CP-72135-18 | RHFE-431WTA-N | 16700 | 8200 | NAT. | 2.4 | 80 | 1340 |
| CP-72135-19 | RHFE-1004FA-P | 36500 | 10500 | L.P. (Propane) | 10.1 | 80 | 2920 |
| CP-72135-20 | RHFE-1004FA-N | 38400 | 10500 | NAT. | 3.7 | 80 | 3070 |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |

Rinnai CORPORATION
Nagoya, Japan

FAN TYPE DIRECT VENT WALL FURNACE

MODEL NO. (A)

MAXIMUM INPUT : (B) BTU/HR

MINIMUM INPUT : (C) BTU/HR

TYPE OF GAS : (D)

MANIFOLD PRESSURE : (E) INCHES W.G.

MINIMUM GAS SUPPLY PRESSURE FOR INPUT ADJUSTMENT ARE (L) INCHES W.G. FOR NAT. GAS AND (M) INCHES W.G. FOR L.P.(PROPANE)GAS.

ONLY FOR DIRECT DISCHARGE WITHOUT DUCT CONNECTIONS.



ELECTRICAL RATING : 120V, 60Hz, LESS THAN (S) AMPERES.

(R) Fan Type Direct Vent Wall Furnace

WARNING
IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE. REFER TO THE OWNER'S INFORMATION MANUAL PROVIDED WITH THIS APPLIANCE. INSTALLATION AND SERVICE MUST BE PERFORMED BY A QUALIFIED INSTALLER

| | | |
|---------------|-------------------|-----------|
| Nov. 06, 2006 | Character changed | I.T |
| DATE | SYN | REVISION |
| | | BY ENGAPP |

| DRAWING No. | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q |
|-------------|------------------|-------|-------|----------------|------|----|-------|-----|---|---|-------------|-----|------|--------------------|---------------------|--------------------|--------------------|
| CP-72151-9 | RHFE-431FA III-P | 16700 | 8200 | L.P. (Propane) | 2.8 | 80 | 13400 | 42 | 0.044inches(1.13mm) | 0.033inches(0.85mm) | CP-72151-9 | 3.5 | 8.0 | 2.4/0.7inches W.C. | 2.8/0.8inches W.C. | 2.1/0.6inches W.C. | 2.6/0.7inches W.C. |
| CP-72151-10 | RHFE-431FA III-N | 16700 | 8200 | NAT. | 2.4 | 80 | 13400 | 42 | 0.044inches(1.13mm) | 0.033inches(0.85mm) | CP-72151-10 | 3.5 | 8.0 | 2.4/0.7inches W.C. | 2.8/0.8inches W.C. | 2.1/0.6inches W.C. | 2.6/0.7inches W.C. |
| CP-72151-11 | RHFE-556FA III-P | 20700 | 8200 | L.P. (Propane) | 4.5 | 80 | 16560 | 52 | 0.044inches(1.13mm) | 0.033inches(0.85mm) | CP-72151-11 | 5.0 | 8.0 | 3.8/0.7inches W.C. | 4.5/0.8inches W.C. | 3.4/0.6inches W.C. | 4.1/0.7inches W.C. |
| CP-72151-12 | RHFE-556FA III-N | 21500 | 8200 | NAT. | 3.8 | 80 | 17200 | 52 | 0.044inches(1.13mm) | 0.033inches(0.85mm) | CP-72151-12 | 5.0 | 8.0 | 3.8/0.7inches W.C. | 4.5/0.8inches W.C. | 3.4/0.6inches W.C. | 4.1/0.7inches W.C. |
| CP-72151-15 | RHFE-556WTA-P | 20700 | 8200 | L.P. (Propane) | 4.5 | 80 | 16560 | 55 | 0.044inches(1.13mm) | 0.033inches(0.85mm) | CP-72151-15 | 5.0 | 8.0 | 3.8/0.7inches W.C. | 4.5/0.8inches W.C. | 3.4/0.6inches W.C. | 4.1/0.7inches W.C. |
| CP-72151-16 | RHFE-556WTA-N | 21500 | 8200 | NAT. | 3.8 | 80 | 17200 | 55 | 0.044inches(1.13mm) | 0.033inches(0.85mm) | CP-72151-16 | 5.0 | 8.0 | 3.8/0.7inches W.C. | 4.5/0.8inches W.C. | 3.4/0.6inches W.C. | 4.1/0.7inches W.C. |
| CP-72151-17 | RHFE-431WTA-P | 16700 | 8200 | L.P. (Propane) | 2.8 | 80 | 13400 | 42 | 0.044inches(1.13mm) | 0.033inches(0.85mm) | CP-72151-17 | 3.5 | 8.0 | 2.4/0.7inches W.C. | 2.8/0.8inches W.C. | 2.1/0.6inches W.C. | 2.6/0.7inches W.C. |
| CP-72151-18 | RHFE-431WTA-N | 16700 | 8200 | NAT. | 2.4 | 80 | 13400 | 42 | 0.044inches(1.13mm) | 0.033inches(0.85mm) | CP-72151-18 | 3.5 | 8.0 | 2.4/0.7inches W.C. | 2.8/0.8inches W.C. | 2.1/0.6inches W.C. | 2.6/0.7inches W.C. |
| CP-72151-19 | RHFE-1004FA-P | 36500 | 10500 | L.P. (Propane) | 10.1 | 80 | 29200 | 121 | 0.071" (1.80mm)x2, 0.077" (1.95mm)x1 | 0.037" (0.95mm)x2, 0.047" (1.20mm)x1 | CP-72151-19 | 5.0 | 11.0 | 3.7/2.0inches W.C. | 10.1/4.3inches W.C. | 2.7/2.0inches W.C. | 7.3/4.3inches W.C. |
| CP-72151-20 | RHFE-1004FA-N | 38400 | 10500 | NAT. | 3.7 | 80 | 30700 | 121 | 0.071" (1.80mm)x2, 0.077" (1.95mm)x1 | 0.037" (0.95mm)x2, 0.047" (1.20mm)x1 | CP-72151-20 | 5.0 | 11.0 | 3.7/2.0inches W.C. | 10.1/4.3inches W.C. | 2.7/2.0inches W.C. | 7.3/4.3inches W.C. |

Rinnai CORPORATION
Nagoya, Japan

FOURNISSEUR À VENTILATEUR AVEC VENTILATION DIRECTE

MODELE# (A)

CONSOMMATION MAXIMUM: (B) BTU/HRE

CONSOMMATION MINIMUM: (C) BTU/HRE

TYPE DE GAZ: (D) GAZ

PRESSION AU COLLECTEUR: (E) POUCES W.C.

PRESSION MINIMUM DE RÉGLAGE: (M) W.C. POUR PROPANE

ET (L) W.C. POUR GAZ NATUREL.

SEULEMENT POUR UTILISATION AVEC SYSTÈME DE RENVOI DIRECT, SANS RACCORDS DE CONDUITS.

DONNÉES ÉLECTRIQUES: 120V, 60HZ, MOINS DE (S) AMPÈRES.

(R) Fournisseuse à Ventilateur Avec Ventilation Directe

90

AVERTISSEMENT: L'installation, l'utilisation ou le service inadéquats peuvent causer des blessures et des dommages matériels. Vous référer au guide de l'utilisateur fourni avec cet appareil.

Pour plus d'information, veuillez communiquer avec un technicien qualifié, une agence de service ou un distributeur de gaz.

"Cet appareil doit être installé en accord avec les règlements locaux s'il y a lieu. Vous référer aux ANSI Z223.1 CAN/CSA-8149."

"Cet appareil doit être installé selon la norme ANSI A19.2 Recreational Vehicles ou la norme CAN/CSA-Z240.4 VC Vehicules de camping ou maisons mobiles."

Capacité de rendement thermique: (G) = (B) × $\frac{(E)}{100}$ BTU/HRE

Consommation d'énergie normale: watts

"Contient au gaz naturel quand l'appareil est muni d'un injecteur de diamètre n° (I)"

"Contient au propane quand l'appareil est muni d'un injecteur de diamètre n° (J)"

DET APPAREIL N'EST PAS CONÇU POUR L'AMÉNAGEMENT EN CHÂNTIER

"Séchez le brûleur et le tableau de contrôle propres. Vous référer au guide d'installation et d'opération fourni avec cet appareil."

"A cause de la température élevée des parties, tenez éloignés les enfants, les vêtements et les meubles."

"Pour utilisation avec le gaz naturel et le propane. Une trousses de conversion fournie par le fabricant doit être utilisée pour passer d'un combustible à l'autre."

Épaisseur murale minimum: 3"

Les pièces suivantes peuvent être utilisées:

- Trousses de ventilation S 3" - 4 1/2"
- Trousses de ventilation A 4 1/2" - 9 1/2"
- Trousses de ventilation B 9 1/2" - 15 3/4"
- Trousses de ventilation C 15 3/4" - 23 5/8"
- Trousses de ventilation D 23 5/8" - 31 1/2"

pression du collecteur en altitude normale

GR(MAX./MIN.): (N) (O)

GP(MAX./MIN.): (P) (Q)

Si marque à gauche l'unité est reçue à 2000-4500pi, avec pression de air collecteur.

Pression du collecteur en altitude élevée

GR(MAX./MIN.): (P) (Q)

GP(MAX./MIN.): (R) (S)

Distance minimum des matières combustibles:

MURS LATÉRAUX: 2" MUR AVANT: 40"

OBJET SUPÉRIEUR: 10" PLANCHER: 0"

Distance minimum du ventilateur avant:

CÔTÉ: 19 3/4"

BAS: 20"

HAUT: 19 3/4"

DEVANT: 20"

Pour installation comme appareil d'origine dans une maison préfabriquée (mobile) seulement.

L'appareil est approprié pour une installation à 0-1370m d'altitude sans se charger les injecteurs.

"Pour utilisation avec le gaz naturel et le propane. Une trousses de conversion fournie par le fabricant doit être utilisée pour passer d'un combustible à l'autre."

Étant donné les températures élevées la surface, tenir éloigné des enfants, des meubles et des vêtements.

Cet appareil doit être utilisé uniquement avec le type de gaz indiqué sur la plaque signalétique. Cet appareil peut être installé dans une maison préfabriquée ou mobile (E-U, seulement) installée à demeure si les règlements locaux le permettent. Voir la notice de l'utilisateur pour plus de renseignements. Cet appareil ne peut pas être utilisé avec

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| Nov 06, 2006 | Character changed | I.T |
| DATE | SYM | REVISION |
| | | BY ENGAPP |

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| RINNAI CORPORATION | | DRAWN S.SUZUI |
| PARTNAME RATING PLATE | | CHECKED |
| MATERIAL POLYESTER FILM | FINISH | DATE Apr 20, 2006 |

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