

**INSTALLER/CONSUMER
SAFETY INFORMATION**

**PLEASE READ THIS MANUAL
BEFORE INSTALLING AND
USING APPLIANCE**

WARNING!
**IF THE INFORMATION IN THIS
MANUAL IS NOT FOLLOWED
EXACTLY, A FIRE OR EXPLO-
SION MAY RESULT CAUSING
PROPERTY DAMAGE, PER-
SONAL INJURY OR LOSS OF
LIFE.**

FOR YOUR SAFETY
**Installation and service must
be performed by a qualified
installer, service agency or
the gas supplier.**

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 your neighbor's phone. Follow the gas suppliers instructions.
- If you cannot reach your gas supplier call the fire department.

**DO NOT STORE OR USE
GASOLINE OR OTHER
FLAMMABLE VAPORS AND
LIQUIDS IN THE VICINITY OF
THIS OR ANY OTHER
APPLIANCE.**



Natural Vent Insert

Models: LHER20

LHEC20

LHER30

LHEC30



Homeowner's Installation and Operating Manual



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

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PLEASE READ THE INSTALLATION & OPERATING INSTRUCTIONS BEFORE USING THIS APPLIANCE.

Thank you and congratulations on your purchase of a CFM Corporation fireplace insert.

IMPORTANT - Read all instructions and warnings carefully before starting installation. Failure to follow these instructions may result in a possible fire hazard and will void the manufacturers' warranty.

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Installation & Operating Instructions

This gas appliance should be installed by a qualified installer in accordance with local building codes and with current CSA-B149.1 Installation codes for Gas Burning Appliances and Equipment. FOR U.S. Installations follow local codes and/or the current National Fuel Gas Code ANSI Z223.1/NFPA 54.

In the Commonwealth of Massachusetts, all gas fittings and installation of this heater shall only be done by a licensed gas fitter or licensed plumber.

FOR SAFE INSTALLATION AND OPERATION OF YOUR GAS FIREPLACE PLEASE NOTE THE FOLLOWING:

1. This appliance gives off high temperatures and should be located out of high traffic areas and away from furniture and draperies.
2. Children and adults should be alerted to the hazards of the high surface temperatures of this appliance and should stay away to avoid burns or ignition of clothing.
3. Children should be carefully supervised when they are in the same room as your appliance.
4. Under no circumstances should this appliance be modified. Parts removed for servicing should be replaced prior to operating this appliance again.
5. Installation and any repairs to this appliance should be carried out by a qualified service person. A professional service person should be contacted to inspect this appliance annually. Make it a practice to have all of your gas appliances checked annually. More frequent cleaning may be required due to excess lint and dust from carpeting, bedding material, etc.
6. Control compartments, burners and air passages in this appliance should be kept clean and free of dust and lint. Make sure that the gas valve and pilot light are turned off before you attempt to clean this unit.
7. The venting system (chimney) of this appliance should be checked at least once a year and if needed your venting system should be cleaned.
8. Keep the area around your appliance clear of combustible materials, gasoline and other flammable vapor and liquids. This appliance should not be used as a drying rack for clothing, nor should Christmas stockings or decorations be hung in the area of it.
9. Under no circumstances should any solid fuels (wood, coal, paper or cardboard etc.) be used in this appliance.
10. Whether the zero clearance kit is installed directly on carpeting, vinyl tile or any combustible material other than wood, this heater must be installed on a metal or wood panel extending the full width and depth of the heater. The insert **can not be installed directly onto or into combustibles.**

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

This appliance is only for use with the type of gas indicated on the rating plate.

Proposition 65 Warning: Fuels used in gas, wood-burning or oil fired appliances, and the products of combustion of such fuels, contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.
California Health & Safety Code Sec. 25249.6

WARNING: Check with your electronics manufacturer before installing a television or other electronic device above this fireplace.

IMPORTANT:

PLEASE READ THE FOLLOWING CAREFULLY

It is normal for fireplaces fabricated of steel to give off some expansion and/or contraction noises during the start up or cool down cycle. Similar noises are found with your furnace heat exchanger or car engine.

It is not unusual for your gas fireplace to give off some odor the first time it is burned. This is due to the curing of the paint and any undetected oil from the manufacturing process.

Please ensure that your room is well ventilated - open all windows.

It is recommended that you burn your fireplace for at least ten (10) hours the first time you use it. If optional fan kit has been installed, place fan in the "OFF" position during this time.

Locating Your Gas Fireplace Insert with Zero Clearance Kit

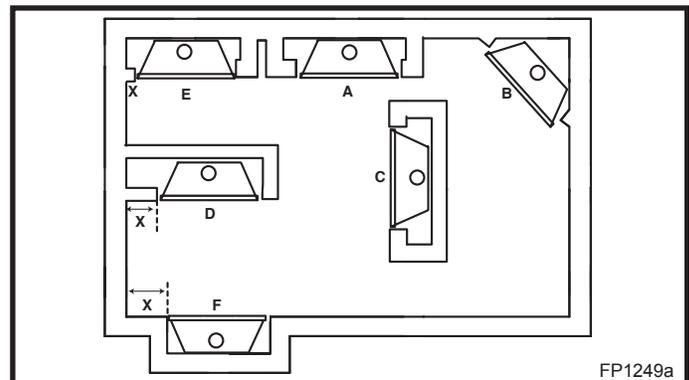


Fig. 1 Locating unit with zero clearance kit.

- | | |
|-------------------------|-----------------------|
| A) Flat on wall | B) Cross corner |
| C) Island | D) *Room divider |
| E) *Flat on wall corner | F) Chase installation |

NOTE: (Fig. 1)

* When you install your fireplace in (D) Room divider or (E) Flat on wall corner positions, a minimum of 6 (X) inches (153mm) clearance must be maintained from the perpendicular wall and the outer edge of the trim.

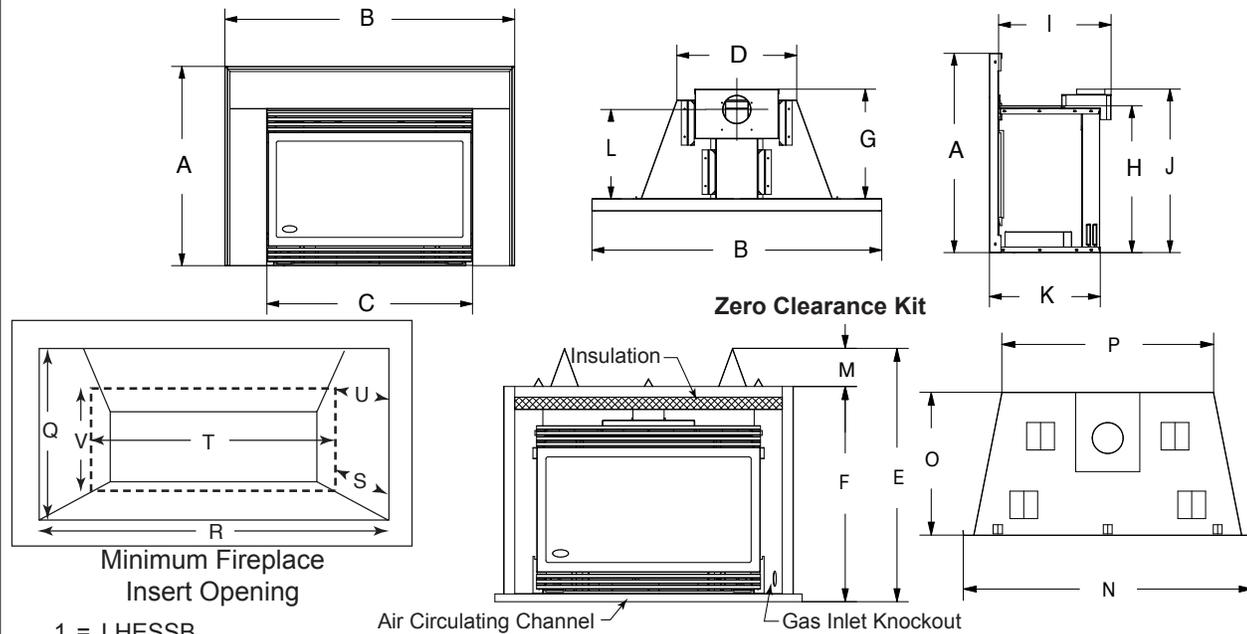
Insert Applications

Before installing the gas fireplace insert, consideration must be given to the functioning needs of the fireplace. The size of the fireplace cavity (min. 25¼"W x 17¼"H x 13½" D (641 x 438 x 343 mm) for the LHEC20 and LHER20, 28¾"W x 21"H x 15½"D (730 x 533 x 394 mm) for LHEC30 and LHER30), the design of the chimney for effective venting should be determined. The availability of the gas supply as well as electricity for the insert fan must be confirmed.



Your Natural Vent Insert unit is designed to be vented vertically with a minimum height of 12' (4 m) and a maximum vertical height of 35' (11 m).

Fireplace & Trim Dimensions



1 = LHESSB

2 = LHESLB/LHEABSL/LHESLGA

3 = LHECSLB/LHECSLMB/LHECSLSA

4 = LHEACNSS

5 = LHETCK

Q - Fireplace opening height

R - Fireplace opening width

S - Depth of insert

T - Firebox width at insert depth(S)

U - Firebox depth at insert back height (V)

V - Insert back height

NOTE: LHESLGA is only available for Model LHEC30 and LHER30

T R I M		LHEC20	LHER20	LHEC30	LHER30
	A-1	20 ⁷ / ₈ " (530 mm)	20 ⁷ / ₈ " (530 mm)	26 ³ / ₄ " (680 mm)	26 ³ / ₄ " (680 mm)
B-1	30 ³ / ₄ " (781 mm)	30 ³ / ₄ " (781 mm)	38 ¹ / ₄ " (972 mm)	38 ¹ / ₄ " (972 mm)	
A-2	24 ¹ / ₄ " (616 mm)	24 ¹ / ₄ " (616 mm)	28 ³ / ₁₆ " (716 mm)	28 ³ / ₁₆ " (716 mm)	
B-2	37 ¹ / ₂ " (952 mm)	37 ¹ / ₂ " (952 mm)	41" (1042 mm)	41" (1042 mm)	
A-3	24 ¹ / ₄ " (616 mm)	24 ¹ / ₄ " (616 mm)	28 ¹ / ₄ " (717 mm)	28 ¹ / ₄ " (717 mm)	
B-3	38 ¹ / ₈ " (968 mm)	38 ¹ / ₈ " (968 mm)	41 ¹¹ / ₁₆ " (1059 mm)	41 ¹¹ / ₁₆ " (1059 mm)	
A-4	20 ³ / ₄ " (527 mm)	20 ³ / ₄ " (527 mm)	24 ³ / ₄ " (629 mm)	24 ³ / ₄ " (629 mm)	
B-4	30 ⁷ / ₈ " (784 mm)	30 ⁷ / ₈ " (784 mm)	34 ⁷ / ₁₆ " (875 mm)	34 ⁷ / ₁₆ " (875 mm)	
A-5	28" (711 mm)	28" (711 mm)	32 ¹ / ₄ " (819 mm)	32 ¹ / ₄ " (819 mm)	
B-5	45" (1143 mm)	45" (1143 mm)	49" (1245 mm)	49" (1245 mm)	
F I R E P L A C E	C	25 ⁵ / ₈ " (651 mm)	25 ⁵ / ₈ " (651 mm)	29 ⁹ / ₁₆ " (741 mm)	29 ⁹ / ₁₆ " (741 mm)
	D	16 ¹ / ₂ " (419 mm)	16" (406 mm)	16 ⁷ / ₈ " (428 mm)	16 ¹ / ₄ " (412 mm)
	E	35" (889 mm)	35" (889 mm)	35" (889 mm)	35" (889 mm)
	F	26 ⁵ / ₈ " (676 mm)	26 ⁵ / ₈ " (676 mm)	26 ⁵ / ₈ " (676 mm)	26 ⁵ / ₈ " (676 mm)
	G	13" (331 mm)	14" (355 mm)	15 ¹ / ₂ " (394 mm)	16 ¹ / ₂ " (419 mm)
	H	17" (432 mm)	17 ¹ / ₄ " (438 mm)	20 ³ / ₄ " (527 mm)	20 ³ / ₄ " (527 mm)
	I	13 ³ / ₈ " (340 mm)	13 ³ / ₈ " (333 mm)	16" (406 mm)	16" (406 mm)
	J	19 ¹ / ₈ " (486 mm)	19 ³ / ₈ " (492 mm)	23 ¹ / ₄ " (590 mm)	23 ¹ / ₄ " (590 mm)
	K	15" (381 mm)	15" (381 mm)	17" (432 mm)	18" (457 mm)
	L	10 ¹ / ₂ " (266 mm)	11 ¹ / ₂ " (292 mm)	12 ³ / ₄ " (324 mm)	13 ³ / ₄ " (349 mm)
	M	8 ¹ / ₂ " (216 mm)	8 ¹ / ₂ " (216 mm)	8 ¹ / ₂ " (216 mm)	8 ¹ / ₂ " (216 mm)
N	37 ¹ / ₄ " (946 mm)	37 ¹ / ₄ " (946 mm)	37 ¹ / ₄ " (946 mm)	37 ¹ / ₄ " (946 mm)	
O	19 ¹ / ₈ " (486 mm)	19 ¹ / ₈ " (486 mm)	19 ¹ / ₈ " (486 mm)	19 ¹ / ₈ " (486 mm)	
P	27 ¹ / ₄ " (692 mm)	27 ¹ / ₄ " (692 mm)	27 ¹ / ₄ " (692 mm)	27 ¹ / ₄ " (692 mm)	
M O U N T I N G	Q	17 ¹ / ₄ " (438 mm)	17 ¹ / ₄ " (438 mm)	21" (533 mm)	21" (533 mm)
	R	25 ¹ / ₄ " (641 mm)	25 ¹ / ₄ " (641 mm)	28 ³ / ₄ " (730 mm)	28 ³ / ₄ " (730 mm)
	S	13 ¹ / ₂ " (343 mm)	14" (355 mm)	16" (406 mm)	16 ¹ / ₂ " (419 mm)
	T	17" (432 mm)	17" (432 mm)	17 ³ / ₄ " (451 mm)	17 ³ / ₄ " (451 mm)
	U	13 ³ / ₄ " (349 mm)	14" (355 mm)	16" (406 mm)	16 ¹ / ₂ " (419 mm)
V	18" (457 mm)	18" (457 mm)	21 ⁵ / ₁₆ " (541 mm)	21 ⁵ / ₁₆ " (541 mm)	

Mantels

When the unit is installed into a woodburning fireplace, the minimum distance the mantel can be placed above the fireplace is governed by local building codes applicable to woodburning fireplaces. Consult local authorities having jurisdiction for these clearances.

For applications requiring the use of a Zero Clearance Kit, the minimum height a mantel can be installed above the fireplace is 24" (610mm) from the top of the upper louvres. The maximum mantel depth is 8" (200mm). (Fig. 2)



The underside of the mantel will become warm. Use only finishes which are heat resistant and do not discolor.

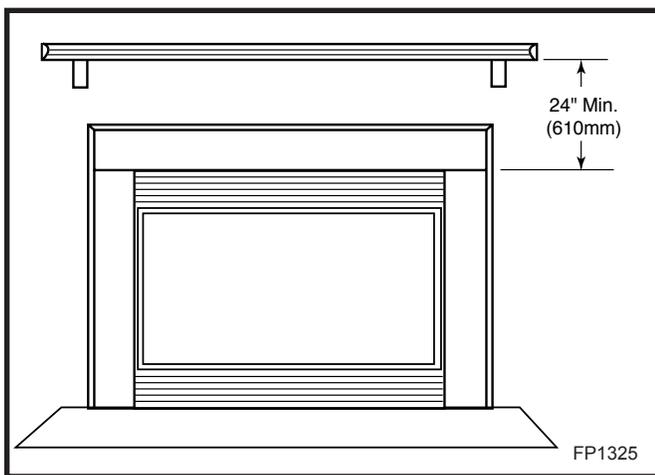


Fig. 2 Minimum mantel height above fireplace.

Framing & Finishing

For Zero Clearance Kit applications, it is important to determine the finished facing material before beginning to frame. This will allow for the thickness of the finishing material between the frame and the fireplace trim.

Similarly, consideration must be given to the 1" inch depth of the air inlet channel sitting on the fireplace base. Finishing material for the hearth should be flush with the top of the air inlet channel.

If the fireplace is installed at floor level a noncombustible hearth must extend a minimum 12" (305mm) in front of the fireplace.

If the fireplace is recessed into the wall and at least 12" (305mm) above floor level, no hearth is required.



The use of wallpaper adjacent to this fireplace is not recommended as high temperatures given off by this fireplace may adversely effect the binders in the adhesive used to apply the wallpaper.

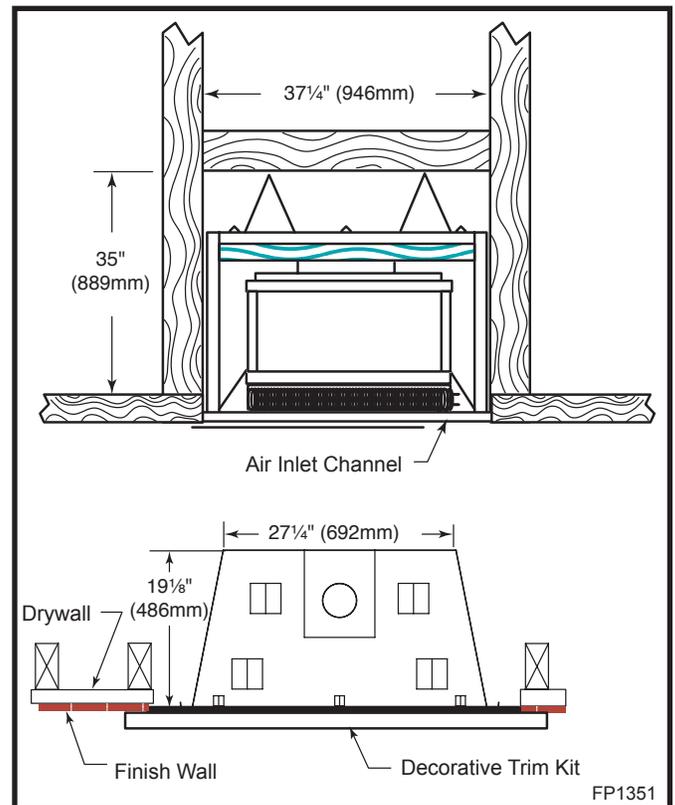


Fig. 3 LHE insert framing dimensions.

NOTE: Insulating around the fireplace will result in overheating and possible malfunctioning of the circulating fan.

Zero Clearance Applications



An alternate air supply is recommended with this component.

For installation other than in existing woodburning fireplaces such as new construction or renovation projects, a Zero Clearance Kit must be used. The kit enables these inserts to be installed in combustible environments. Whenever using a Zero Clearance Kit, consideration must be given to the dimensions of the Zero Clearance Kit and the requirements of the Air Kit.

NOTE: If a Zero Clearance Kit is required for models LHEC20/LHER20/LHEC30/LHER30 Natural Vent Inserts, only the CFM Corporation zero clearance kit HEZC is approved to be used. When using the HEZC with insert models LHEC20 or LHER20, the Trim Closure Kit, LHE20TCK, must also be installed.

Gas Specifications

Model	Fuel	Gas Control	Max. Input Btu/h	Min. Input Btu/h	Air Shutter Setting	
					Front	Rear
LHEC20RN	Nat. Gas	Millivolt Hi/Lo	20,000	14,000	Fully Open	Closed 50%
LHEC20RP	Prop. Gas	Millivolt Hi/Lo	20,000	15,000	Fully Open	Fully Open
LHEC20RFN	Nat. Gas	Comfort Control	20,000	14,000	Fully Open	Closed 50%
LHEC20RFP	Prop. Gas	Comfort Control	20,000	15,000	Fully Open	Fully Open
LHER20RN	Nat. Gas	Millivolt Hi/Lo	20,000	14,000	Fully Open	Closed 50%
LHER20RP	Prop. Gas	Millivolt Hi/Lo	20,000	15,000	Fully Open	Closed 50%
LHEC30RN	Nat. Gas	Millivolt Hi/Lo	30,000	21,000	Fully Open	Closed 15%
LHEC30RP	Prop. Gas	Millivolt Hi/Lo	30,000	22,500	Fully Open	Closed 15%
LHEC30RFN	Nat. Gas	Comfort Control	30,000	21,000	Fully Open	Closed 15%
LHEC30RFP	Prop. Gas	Comfort Control	30,000	22,500	Fully Open	Closed 15%
LHER30RN	Nat. Gas	Millivolt Hi/Lo	30,000	21,000	Fully Open	Closed 15%
LHER30RP	Prop. Gas	Millivolt Hi/Lo	30,000	22,500	Fully Open	Closed 15%

Units:

LHEC20RN	GICN4B0	LHEC30RN	GINN3H0
LHEC20RP	GICL4B0	LHEC30RP	GINL3H0
LHEC20RFN	J34KC0	LHEC30RFN	K32KC0
LHER20RN	GIRN3B0	LHEC30RFP	K32LC0
LHER20RP	GIDN3B0	LHER30RN	K31A30

Gas Inlet & Manifold Pressures

	Natural	LP
Minimum Inlet Pressure	5.5" w.c.	11.0" w.c.
Maximum Inlet Pressure	14.0" w.c.	14.0" w.c.
Manifold Pressure	3.5" w.c.	10.0" w.c.



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

High Elevations

Input ratings are shown in BTU per hour and are certified without deration for elevations up to 4,500 feet (1,370m) above sea level.

For elevations above 4,500 feet (1,370m) in USA, installations must be in accordance with the current ANSI Z223.1/NFPA 54 and/or local codes having jurisdiction.

In Canada, please consult provincial and/or local authorities having jurisdiction for installations at elevations above 4,500 feet (1,370m).

These gas inserts are approved for installation in solid fuel burning masonry or zero clearance fireplaces.

LHEC20 / LHER20 / LHEC30 / LHER30

Certified To

ANSI Z 21.88-2005 / CSA 2.33-2005

Vented Gas Fireplace Heaters

Preparation

Before beginning, remove glass door and logs from unit. Also check to make sure there is no hidden damage to the unit. Take a minute and plan out the gas, venting and electrical route. It is best to start with the gas line first followed by the chimney liner. (Refer to Page 9)

Gas Line Installation



When purging the gas line, the front glass must be removed.

If gas piping from the source to the heater location has not been accomplished, install the required pipe. Consult local plumbing code to assure proper pipe size.

The gas pipeline can be brought in through the rear or the base of the heater.

NOTE: The gas line connection can be made of either properly tinned 3/8" copper tubing, 1/2" rigid pipe or an approved flex connector then reduced to 3/8" to the heater. Some municipalities have additional local codes, it is always best to consult your local authority and the CSA- B149.1 installation code.

U.S. Installations consult the current National Fuel Gas Code, ANSI Z223.1/NFPA 54.



Always check for gas leaks with a mild soap and water solution. Do not use an open flame for leak testing.

The gas control is equipped with a captured screw type pressure test point, therefore it is not necessary to provide a 1/8" test point up stream of the control.

When using copper or flex connector, use only approved fittings. **Always provide a union** when using black iron pipe so the gas line can be easily disconnected for burner or fan servicing. See gas specifications for pressure details and ratings. **NOTE:** If flex connector is used, it must be kept inside of the heater.

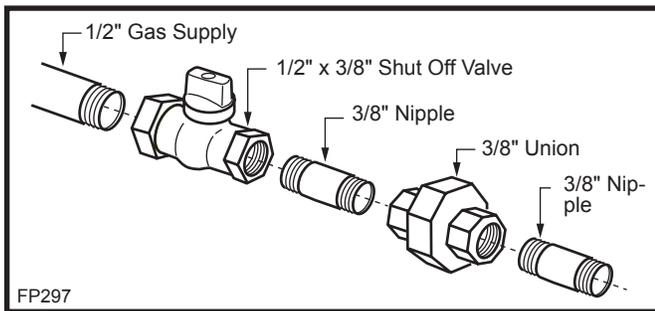


Fig. 4 Typical gas supply installation.

Gas Supply Pressures

This heater must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure equal to or less than 1/2 psig (3.45kPa).

The heater and its individual shut-off 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 psig (3.45kPa).

Fan Kit

115 volt, 60 Hz. 56w (Model FK24)

NOTE: The LHER20 and LHER30 are not designed for a fan kit.

The fan kit includes the following: fan, temperature sensor, speed control and a 6 ft. cord. The following explains how to start and set the fan for automatic operation.

1. Plug in the electrical cord.
2. Start gas fire - see lighting procedures.
3. Turn on fan speed control.
4. Wait until the unit has warmed up sufficiently to activate the temperature sensor, approx. 5-10 minutes.
5. Once fan starts, adjust speed control to desired fan speed. The fan will now automatically come on every time the fireplace is in operation. Should the fan not be needed simply turn off the speed control.



The appliance, when installed must be electrically connected and grounded in accordance with local codes or, in the absence of local codes, with the current CSA C22.1 Canadian Electrical Code.



U.S. Installations, follow local codes and the National Electrical Code, ANSI/NFPA No. 70.



Should this fan require servicing, the power supply must be disconnected. For rewiring of any replacement components refer to Figure 6.

Fan Removal Instructions

1. Turn off gas and electricity.
2. Remove the front glass.
3. Remove the logs.



CAUTION: Logs may be hot!

4. For Model LHEC20: remove burner assembly and bracket rear log. For Model LHEC30: remove bracket rear log and cover fan.
5. Remove the fan mounting nuts (2 nuts). (Fig. 5)
6. Slip off the electrical connector at the motor.
7. Lift out the fan.
8. To reinstall reverse procedure.

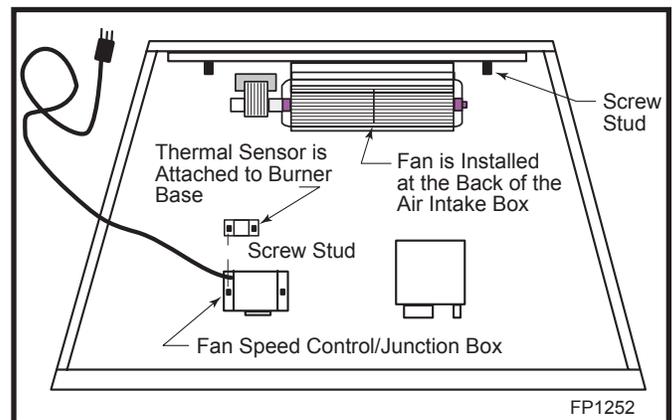


Fig. 5 Fan location.

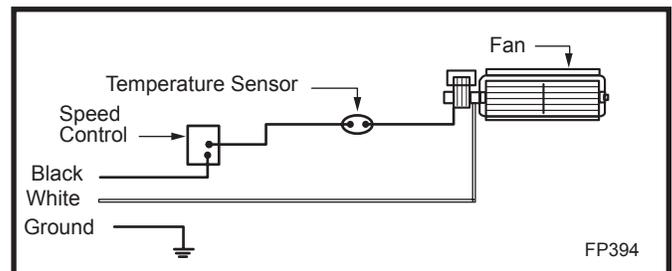


Fig. 6 Wiring diagram RN/RP. **NOTE:** For comfort valve wiring diagram refer to Page 18, Figure 27.

Installation of Trim Switch for RN/RP Gas Valves

1. Thread wire through openings on the right side of fireplace. Do not cut wire or insulation on metal edges.
2. Insert ON/OFF switch with wiring assembly into the bracket switch with the pre-punched opening mounted on the right side of the trim. (Fig. 7)
3. For left side installation, relocate the bracket switch to the left side of the trim kit and repeat Step 2. (Fig. 8)
4. Connect wiring from the switch to the gas valve (Fig. 9a & b).

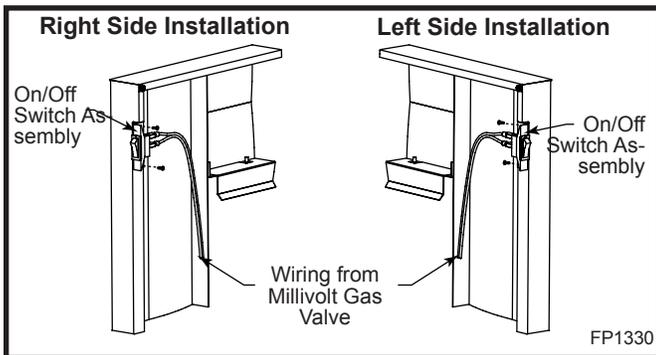


Fig. 7 Insert ON/OFF switch with wiring assembly into bracket switch.

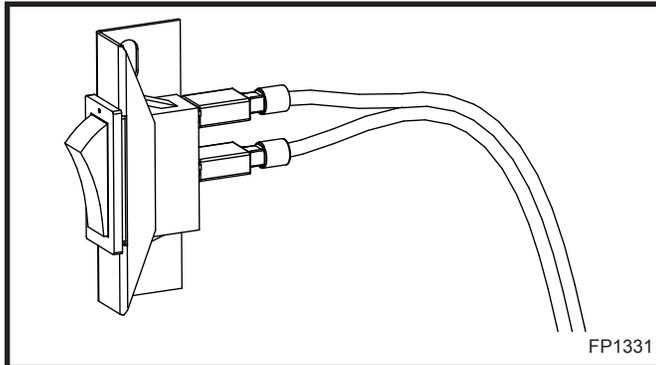


Fig. 8 For left side installation, reverse switch position in bracket.

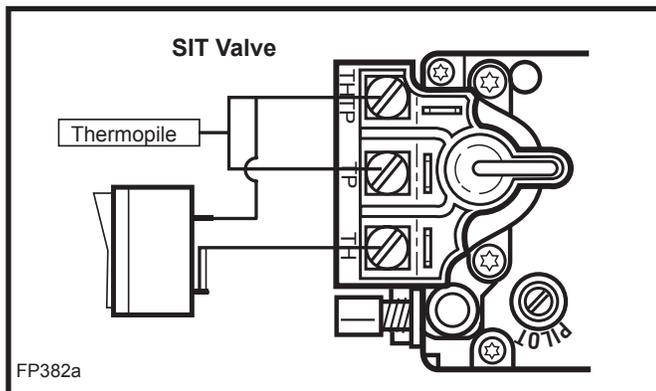


Fig. 9a On/Off switch or millivolt thermostat.

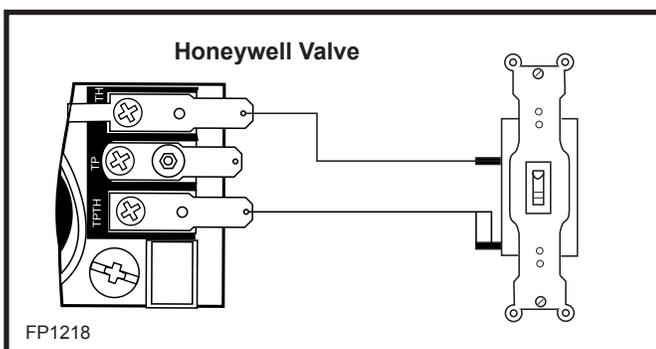


Fig. 9b On/Off switch wiring.



CAUTION: Do not wire millivolt remote wall switch for gas fireplace to a 120v power supply.

Venting Installation

1. The fireplace may be installed in and vented through any solid fuel fireplace that has a minimum fireplace opening 25¼"W x 17½" H x 13½"D (641 x 438 x 343 mm) for LHEC20 and LHER20 or 28¾"W x 21"H x 15½"D (730 x 533 x 394 mm) for LHEC30 and LHER30 and has been installed in accordance with the National, Provincial/State and local building codes and is constructed of noncombustible materials.
2. In order to gain minimum gas insert fireplace opening requirement, if the fire brick refractory is removed from a factory built fireplace, a minimum of ¼" air space is required between the gas insert fireplace's outer casing and the inner wall of the factory built fireplace.
3. In order to obtain the best performance, safety and efficiency for the gas insert fireplace, the LHEC30 and LHER30 gas insert must be installed with an approved 4" diameter flue liner. The LHER20 and LHEC20 should be installed with an approved 3" diameter flue liner as per current CSA-B149.1 or National Fuel Gas Code ANSI Z223.1/NFPA 54.
4. Any flue damper must be removed or blocked open.
5. The chimney must be clean and in good working order and constructed of noncombustible materials.
6. Make sure that all chimney cleanouts fit properly so air cannot leak into the chimney.
7. Install the appliance without trim frame and make all gas fittings and electrical connections.
8. Install the decorative trim frame. Please refer to the Frame Assembly instructions.



Installer must attach red warning plate with screws supplied with the gas fireplace insert to the inside of the firebox of the fireplace into which the gas fireplace insert is installed.



Cutting any sheet metal parts of the fireplace, in which the gas fireplace insert is to be installed, is prohibited.



If the factory-built fireplace has no gas access hole(s) provided, an access hole of 1½ (37.5 mm) or less may be drilled through the lower sides or bottom of the firebox in a proper workmanship-like manner. This access hole must be plugged with a noncombustible insulation after the gas supply line has been installed.

WARNING

Some factory-built fireplaces have air passages on face of fireplace for zero clearance capabilities. Under no circumstances should these passages be blocked.

Zero clearance kit minimum clearance to combustibles materials is 1" (25 mm) for B Vent (use of single wall vent is not allowed.)

As with any natural drafted appliances, the vent cap must always extend a minimum of 2' (610 mm) above any structure within a 10' (3 m) horizontal plane. (Fig. 10)

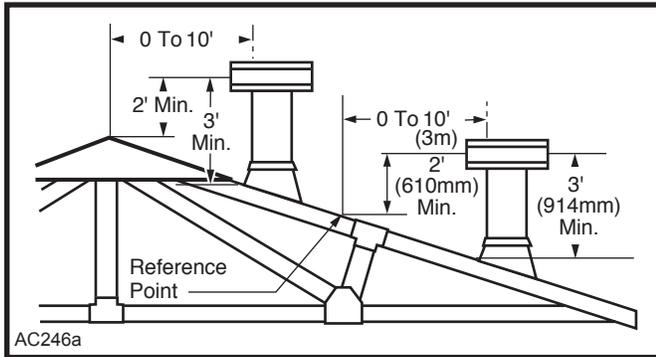


Fig. 10 Example of the 2', 3', 10' rule.



A minimum 12' (3.7 m) vent height is required to effectively vent these fireplaces.

Common Flue Installations

In some areas it is possible to vent more than one gas appliance into the same flue. You must ensure that the flue being shared has the proper capacity to handle both appliances. Check installation codes for venting capacity information.

As always it is best to check with the authority having jurisdiction prior to commencement of the installation.

Liner Installation

Insert liner from top of chimney through the damper opening and attach to 3" flue collar for LHEC20 and LHER20 and 4" flue collar for LHEC30 and LHER30. For best results use three (3) sheet metal screws and a hose clamp.

For natural draft inserts, packing noncombustible fiberglass insulation around the liner in the damper area will isolate the fireplace cavity from the chimney and prevent drafts and noises during operation.

In case the fireplace opening is only minimum height (17¼" (438 mm) for LHEC20 and LHER20; 21" (533mm) for LHEC30 and LHER30) and access from the front is not possible, remove the flue collar plate - unscrew and slide out from the back of the unit. Now attach the liner to the flue collar, lift up and slide flue collar plate back onto the unit top. It is important that the plate is completely inserted and the front screw is fastened again in order to line up the flue outlet and the liner properly. (Fig. 11)



If the fireplace lintel is wider than 8" (203 mm), the height of the fireplace opening must be 25" (635 mm) to allow for a 90° offset elbow to be installed.

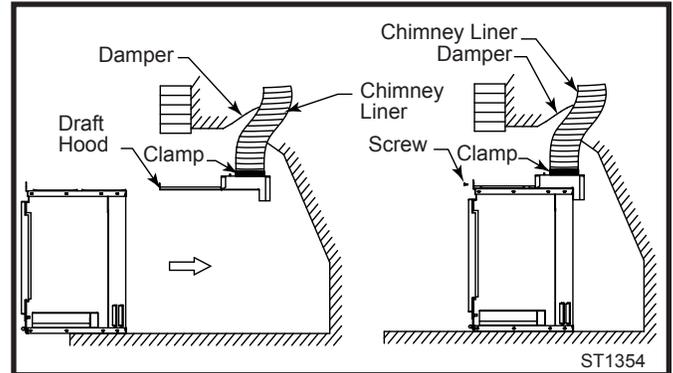


Fig. 11 Remove flue collar plate and attach to flue collar.

Draft Relief Opening

This insert is equipped with a draft-relief opening which receives its dilution air supply through the opening at the back of the insert. These openings must not be obstructed or entered any way. (Fig. 12)

Test Chimney Draw

1. A "Chimney Draw" test must be conducted before the installation is complete.
2. Close all doors and windows in the home and start exhaust fans in the kitchen and bathroom.
3. Light unit and operate for 5 minutes.
4. Hold an ignited match or cigarette in front of the unit. Refer to drawing for the location of the draft hood opening. (Fig. 12)
5. Check to make sure smoke from the match or cigarette is drawn into the fireplace. If it is not, turn the unit off and check for causes creating the lack of adequate draft.

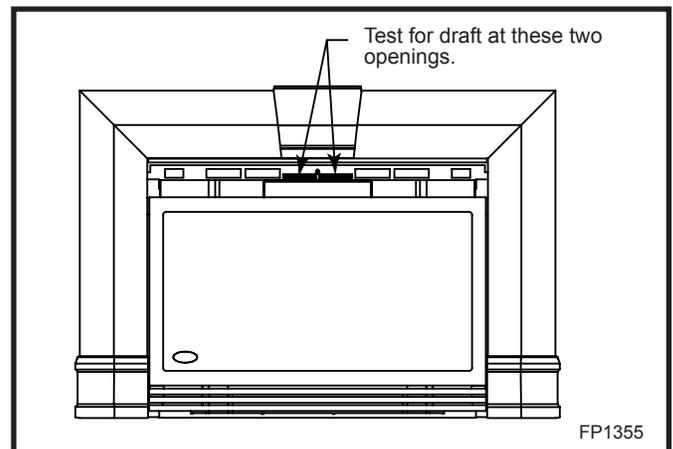


Fig. 12 Hold an ignited match in front of fireplace.

Blocked Flue Shut Off System

These inserts are equipped with a blocked flue shut off switch. This switch is factory installed, wired and tested. Check and make sure the switch and wires are in the proper position. The shut off switch is heat activated and wired in series with the pilot system. (Fig. 13)



Operation of this fireplace when not connected to a properly installed and maintained venting system or tampering with the blocked flue shut-off system can result in carbon monoxide (CO) poisoning and possible death.

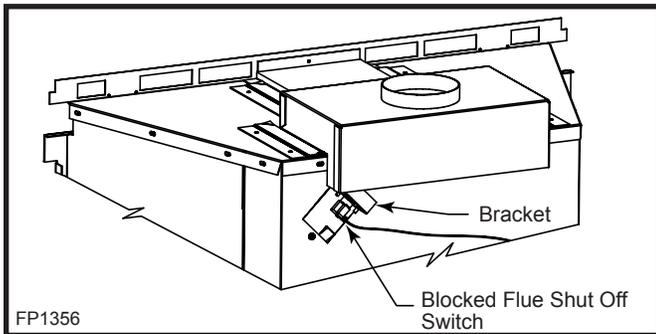


Fig. 13 Blocked flue shut off switch location.

Blocked Flue Shut Off Switch Access

The shut off switch system of these inserts is designed to be accessed from either inside the combustion firebox chamber or outside at the back of the inserts fireplace.

Access to the shut off switch from outside of the insert

1. Turn off the unit and let it cool down if it has been operating.
2. Shut off the gas and the electrical source to the fireplace.
3. Disconnect the gas line and the draft hood of the fireplace.
4. Slide the fireplace out.

Access to the shut off switch directly from inside the combustion firebox chamber.

1. Turn off the unit and let it cool down if it has been operating.
2. Remove the log set and remove the ceramic refractory if installed.
3. Remove the firebox baffle. (Fig. 14)
4. Remove the shut off switch cover fastened with four (4) screws located at the right upper corner of the firebox.
5. This time you can access the shut off switch assembly through the rectangular opening. Remove the screw that secures the switch assembly. Holding

the bracket switch carefully pull out the entire switch assembly.

NOTE: The shut off switch cover was attached with the gasket cover. Before installing the gasket cover back in place, inspect and make sure the gasket is not damaged. If the gasket is damaged, install a new gasket.

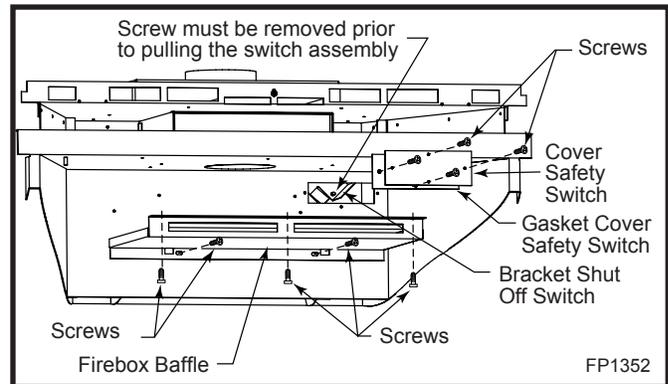


Fig. 14 Access to the blocked flue shut off switch from inside combustion chamber.

Ceramic Refractory Installation

1. Remove front glass.
2. Remove logs from unit.
3. Remove refractory from package.



Refractory are fragile and must be handled with care. Where at all possible, two hands should be used when handling.

4. Take center refractory and tilt so bottom edge seats onto the rear log bracket at the back wall of the fireplace. (Fig. 15)
5. Press center refractory to back side of fireplace and hold in place.
6. Take left or right refractory and align it so leading edge faces outward. (Place refractory in fireplace side and slide it back to support the center refractory.)
7. Repeat step 6 for remaining side refractory.
8. Fasten bracket supports against refractory top to hold side in place.



When side refractory is installed correctly, the center refractory will be supported by the side refractory.

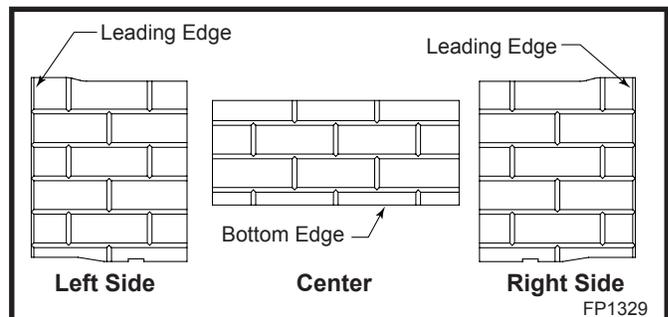


Fig. 15 Ceramic refractory.

Operating Instructions

General Glass Information



Only ceramic glass approved by CFM Corporation may be used for replacement on this unit.

1. The use of substitute glass will void all product warranties.
2. Care must be taken to avoid breakage of the glass.
3. Under no circumstances should this appliance be operated without glass properly installed, or with any cracked or broken glass. Replacement of any glass assembly as supplied by the manufacturer should be done by a licensed qualified service person.

Louvre Removal

To remove louvre, lift louvre up and then pull out. (Fig. 16)

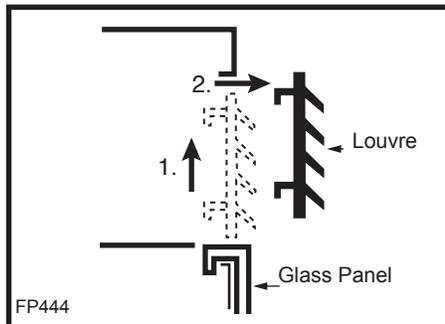


Fig. 16 Louvre removal.

Glass Cleaning

It will be necessary to clean the glass periodically. During start-up condensation, which is normal, forms on the inside of the glass and causes lint, dust and other airborne particles cling to the glass surface. Also initial paint curing may deposit a slight film on the glass. It is therefore recommended that the glass be cleaned two or three times with a non-ammonia household cleaner and warm water (we recommend gas fireplace glass cleaner). After that the glass should be cleaned two or three times during each heating season depending on the circumstances present.



Clean glass after first two weeks of operation.

Glass Frame Removal

1. Remove two (2) screws at the bottom of the frame. (Fig. 17)
2. Lift up and unhook glass frame at the top.

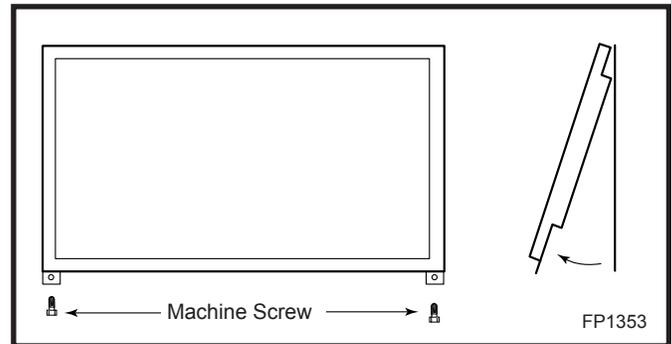


Fig. 17 Remove glass frame.

Log Installation and Burner Lava Rock

1. Remove glass frame. (See "Glass Removal" section)
2. Remove logs from packaging.
3. Place logs according to the model instructions below:

LHEC20, LHER20 (Figs. 18)

- a. Place rear left log (JR7). Use the log's bottom holes to locate it onto one pin stud of the rear log bracket on the left and the other end of the log will sit on top of the lid of the left log support.
- b. Place rear right log (JR8). Use the log's bottom holes to locate it onto the two (2) pin studs of the rear log bracket on the right.
- c. Place the front left log (JR9). Position the log notch against the second grate from the left, and the other edge of the log on top of the rear left log notch. Ensure the log is secure in place.
- d. Place the front right log (JR10). Position the log notch against the third grate from the right, and the other edge of the log on top of the rear right log notch. Ensure the log is secure in place.
- e. Place the burner lava rock on the front area of the burner housing. (Fig. 18)

LHEC30, LHER30 (Fig. 19)

- a. Place the rear center log (KR24). Use the log's bottom holes to locate it onto the two (2) pin studs of the rear log bracket on the center.
- b. Place rear left log (KR22). Use the log's bottom holes to locate it onto the two (2) pin studs of the rear log bracket on the left.
- c. Place rear right log (KR23). Use the log's bottom holes to locate it onto the two (2) pin studs of the rear log bracket on the right.
- d. Place the front left log (KR25). Position the log notch against the second grate from the left, and the other edge of the log on top of the rear left log notch. Ensure the log is secure in place.

- e. Place the front right log (KR26). Position the log notch against the third grate from the right, and the other edge of the log on top of the rear right log notch. Ensure the log is secure in place.
- f. Place the burner lava rock on the front area of the burner housing. (Fig. 19)

Flame Adjustment (RN/RP Models)

For fireplaces equipped with HI/LO valves, flame adjustment is accomplished by rotating the HI/LO adjustment knob located near the center of the gas control. (Figs. 20 or 21)

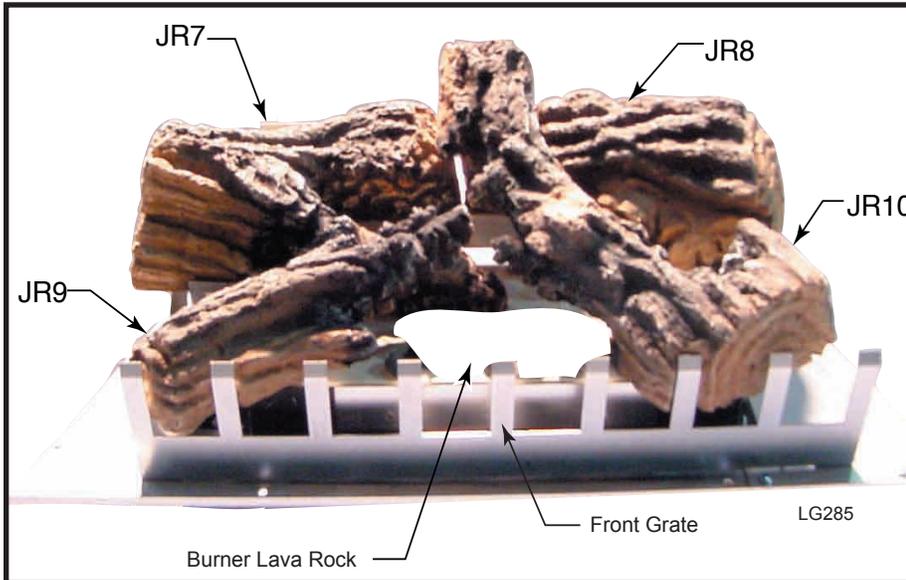


Fig. 18 LHEC20 and LHER20 log and lava rock placement.

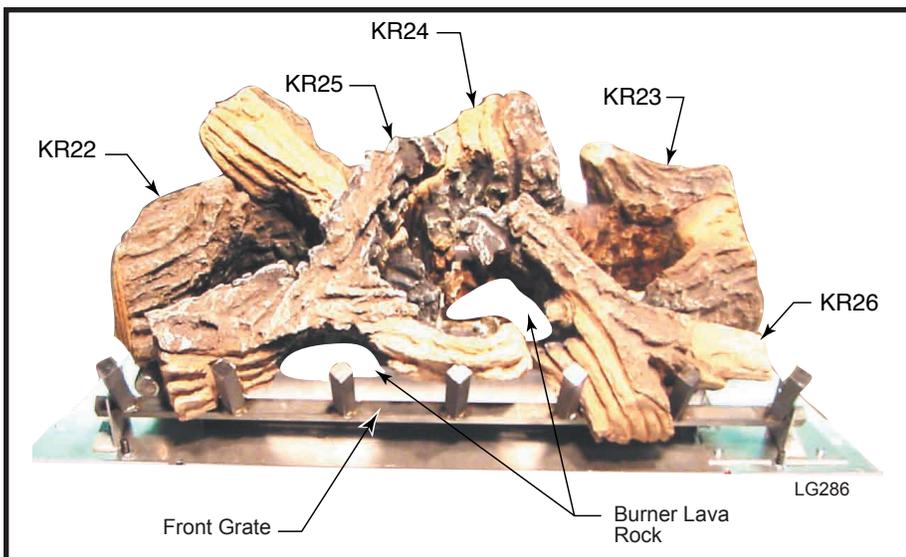


Fig. 19 LHEC30 and LHER30 log and lava rock placement.

Flame Characteristics

It is important to periodically perform a visual check of the pilot and the burner flames. Compare them to the Figure 22 and Figure 23 or 24. If any of the flames appear abnormal call a service person.

First Firing

Upon completing the gas line connection, a small amount of air will be in the lines. When first lighting unit with pilot light, it will take a few minutes to purge themselves of this air. Once the purging is complete, the pilot and burner will light and operate as indicated in the instruction manual. Subsequent lightings of the heater will not require such purging.

When lit for the first time, the appliance will emit a slight odor for awhile. This is due to paint and lubricants used in the manufacturing process. After each lighting, vapor may condense and fog the glass; this moisture disappears within a few minutes of burning.

Large Lava Rock Placement

The large lava rock provided with this fireplace should be placed on the firebox base on either side of the burner assembly.



Under no circumstances should these lava rocks be placed on top of the burner assembly.

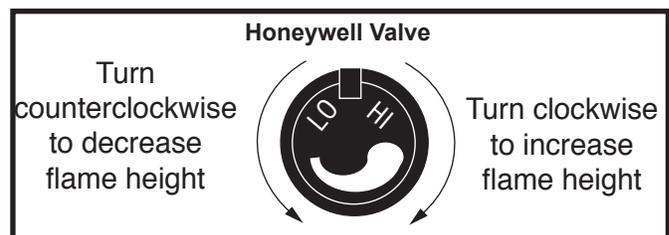


Fig. 20 Flame adjustment knob for Honeywell Valve.

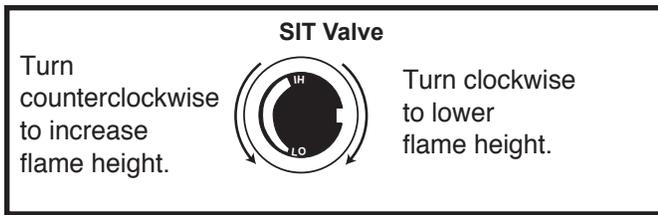


Fig. 21 Flame adjustment knob for SIT Valve.

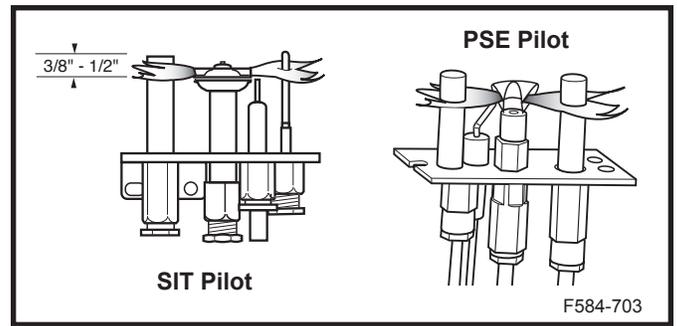


Fig. 22 Correct pilot flame appearance.



Fig. 23 Correct burner flame appearance for LHEC20 and LHER20.



Fig. 24 Correct burner flame appearance for LHEC30 and LHER30.

Lighting and Operating Instructions

FOR YOUR SAFETY READ BEFORE LIGHTING

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

- This heater has a pilot which must be lit manually. When lighting the pilot follow these instructions exactly.
- BEFORE LIGHTING smell all around the heater 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

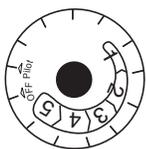
- Do not try to light any fireplace
- Do not touch any electric switch
- Do not use any phone in your building
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's

instructions.

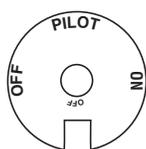
- If you cannot reach your gas supplier, call the Fire Department
- Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, do not try to repair it, call a qualified service technician. Applying force or any attempted repair may result in a fire or explosion.
 - Do not use this fireplace 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.

Lighting Instructions

- STOP!** Read the safety information above.
- Turn off all electrical power to the fireplace.
- For MN/MP/TN/TP appliances ONLY, go on to Step 4. For RN/RP appliances turn the On/Off switch to "OFF" position or set thermostat to lowest level.
- Open control access panel.
- Push in gas control knob slightly and turn clockwise to "OFF".



Euro SIT



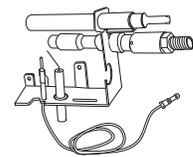
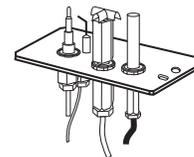
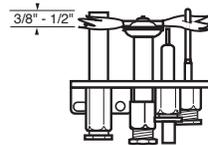
SIT NOVA



Honeywell

- Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, **STOP!** Follow "B" in the safety information above. If you do not smell gas, go to the next step.
- Remove glass door before lighting pilot. (See Glass Frame Removal section).
- Visibly locate pilot by the main burner.
- Turn knob on gas control counterclockwise to "PILOT".

- Push the control knob all the way in and hold. Immediately light the pilot by repeatedly depressing the piezo spark ignitor until a flame appears. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 8.



- If knob does not pop up when released, stop and immediately call your service technician or gas supplier.
 - If after several tries, the pilot will not stay lit, turn the gas control knob to " " and call your service technician or gas supplier.
- Replace glass door.
 - Turn gas control knob to "ON" position.
 - For RN/RP appliances turn the On/Off switch to "ON" position or set thermostat to desired setting.
 - Turn on all electrical power to the fireplace.

To Turn Off Gas To Heater

- Turn the On/Off switch to "OFF" position or set the thermostat to lowest setting.
- Turn off all electric power to the fireplace if service is to be performed.
- Open control access panel.
- Push in gas control knob slightly and turn clockwise to "OFF". Do not force.
- Close control access panel.

Troubleshooting the Gas Control System

SIT NOVA 820 Millivolt Valve

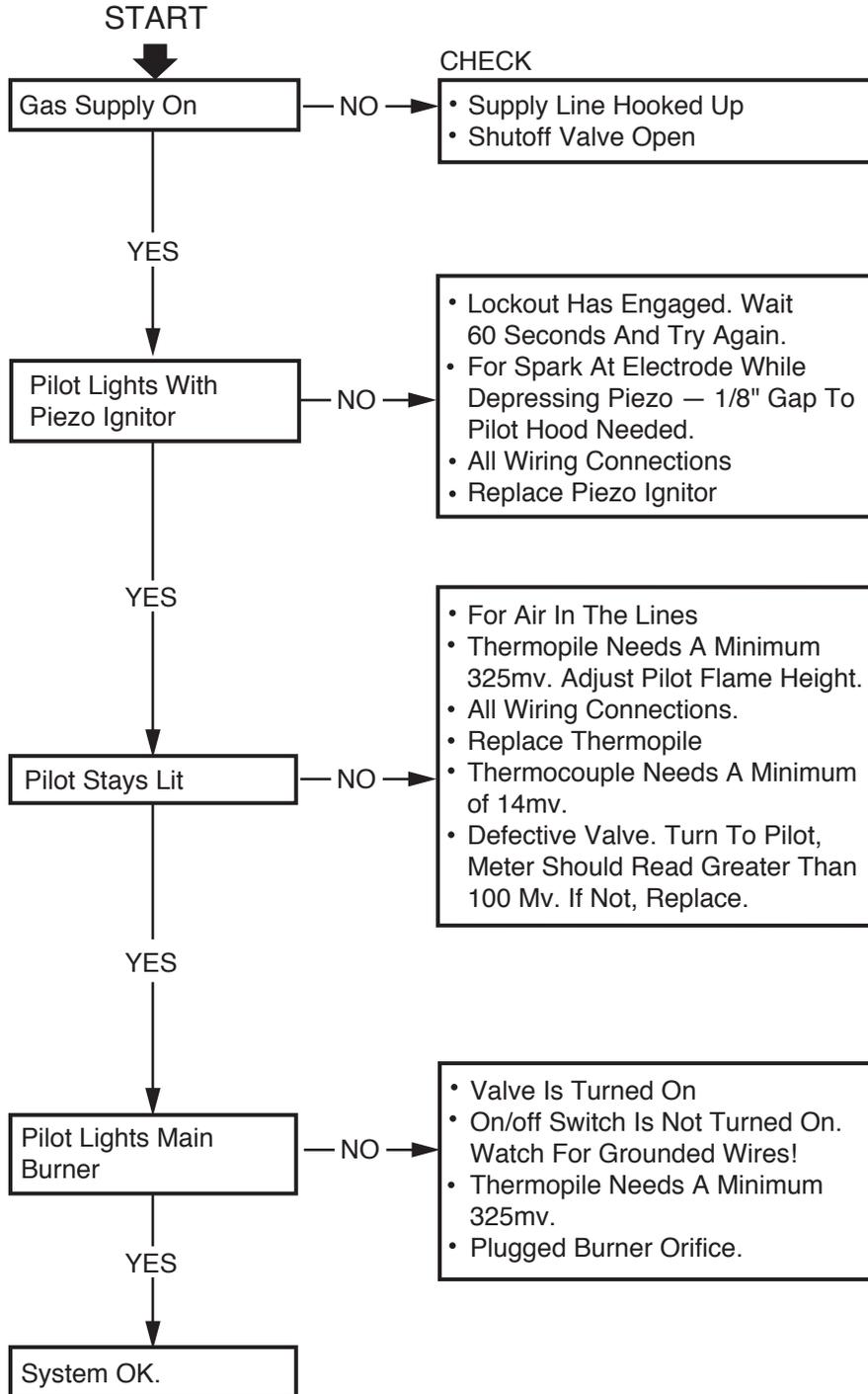
NOTE: Before trouble shooting the gas control system, be sure external gas shut off is in the “On” position.

WARNING: Before doing any gas control service work, remove glass front.

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
1. Spark ignitor will not light	A. Defective or misaligned electrode at pilot.	Using a match, light pilot. If pilot lights, turn off pilot and push the red button again. If pilot will not light - check gap at electrode and pilot-should be 1/8" to have a strong spark.
	B. Defective ignitor (Push Button)	Push Piezo Ignitor Button. Check for spark at electrode and pilot. If no spark to pilot, and electrode wire is properly connected, replace ignitor.
2. Pilot will not stay lit after carefully following lighting instructions.	A. Defective pilot generator (thermocouple), remote wall switch.	Check pilot flame. Must impinge on thermo couple/thermopile. Note: this pilot burner assembly utilizes both-a thermocouple and a thermopile. The thermocouple operates the main valve operation (On and Off). Clean and or adjust pilot for maximum flame impingement on thermopile and thermocouple.
	B. Defective automatic valve	Turn valve knob to “Pilot”. Maintain flow to pilot; millivolt meter should read greater than 10 mV. If the reading is okay and the pilot does not stay on, replace the gas valve. Note: An interrupter block (not supplied) must be used to conduct this test.
3. Pilot burning, no gas to main burner	A. Wall switch or wires defective	Check wall switch and wires for proper connections. Jumper wire across terminals at wall switch, if burner comes on, replace defective wall switch. If okay, jumper wires across wall switch wires at valve, if burner comes on, wires are faulty or connections are bad.
	B. Thermopile may not be generating sufficient millivoltage.	<ol style="list-style-type: none"> 1. Be sure wire connections from thermopile at gas valve terminals are tight and thermopile is fully inserted into pilot bracket. 2. One of the wall switch wires may be grounded. Remove wall switch wires from valve terminals if pilot now stays lit, trace wall switch wiring for ground. May be grounded to fireplace or gas supply. 3. Check thermopile with millivolt meter. Take reading at thermopile terminals of gas valve. Should read 250-300 millivolts (minimum 150) while holding valve knob depressed in pilot position and wall switch “Off”. Replace faulty thermopile if reading is below specified minimum.
	C. Plugged burner orifice.	Check burner orifices for debris and remove.
	D. Defective automatic valve operator.	Turn valve knob to “On”, place wall switch to “On” millivolt meter should read greater than 100 mV. If the reading is okay and the burner does not come on, replace the gas valve.
4. Frequent pilot outage problem.	A. Pilot flame may be too low or blowing (high) causing the pilot safety to drop out.	Clean and/or adjust pilot flame for maximum flame impingement on thermopile and thermocouple.
	B. Possible blockage of the vent terminal.	Check the vent terminal for blockage (recycling the flue gases)

Troubleshooting the Gas Control System

Honeywell Millivolt Valve



Instructions for RF Comfort Control Valve

The Comfort Control Valve allows remote control of temperature, fan and flame appearance.

NOTE: The antenna should hang in free air away from grounded metal.

Operation

1. If the manual switch is in remote position, switch it to LOCAL. (Fig. 25)
2. Turn the pilotstat knob counterclockwise from OFF to the PILOT position, push the knob down, and hold in position. The pilot valve opens and allows gas to flow to the pilot burner.
3. Push plunger on the piezo until the pilot burner is lit. When the pilot burner is lit, the LED on the control will come on after approximately 40 seconds and will be continuously red. When the light turns off which will be approximately 10 seconds after it has been continuously red, the receiver/valve is fully powered.

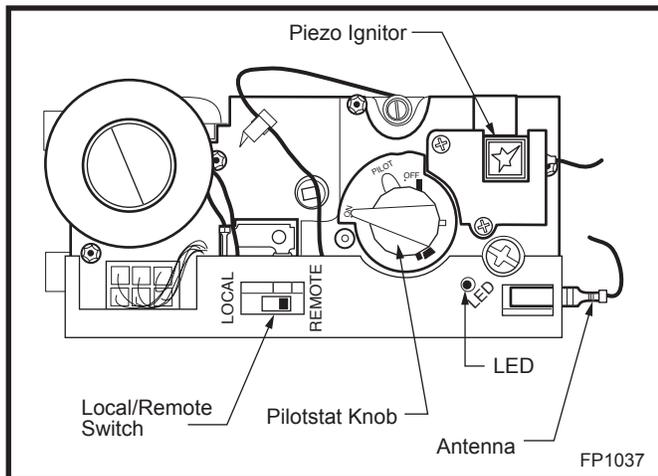


Fig. 25 Comfort control valve.

4. Release the knob. The shaft will move upward. The pilot burner should now stay burning. If the pilot burner goes out, repeat step 2.
5. Turn the knob counterclockwise to the ON position. If the manual switch is in the LOCAL position, the main burner will turn on immediately.
6. ON the initial use of a transmitter, a recognition operation is required between the receiver/valve and transmitter. Change the switch from LOCAL to REMOTE. Press the fan or flame button on the transmitter within 30 seconds. The LED will blink indicating the transmitter will now work with the receiver/valve. If the switch continues in the REMOTE position, the transmitter will now control the main valve, flame modulation level and fan control.

7. If the manual switch is in the LOCAL position, the valve will be at the highest fixed pressure setting. The transmitter will control the fan only.

Shut Off Procedure

If the manual switch is in the REMOTE position, the transmitter can shut off the main burner and fan. However, the control is still on and a command from the transmitter can turn on the main burner or fan.

To shut off the system, turn the pilotstat knob clockwise to the OFF position. This action closes the main gas and safety valves. The transmitter cannot turn on the main burner or fan.

Transmitter Operation

Off Mode

In the OFF mode, the fireplace flame and fan are off, the display will show OFF and displays the room temperature. If the receiver is in REMOTE mode, the fireplace will shut off.

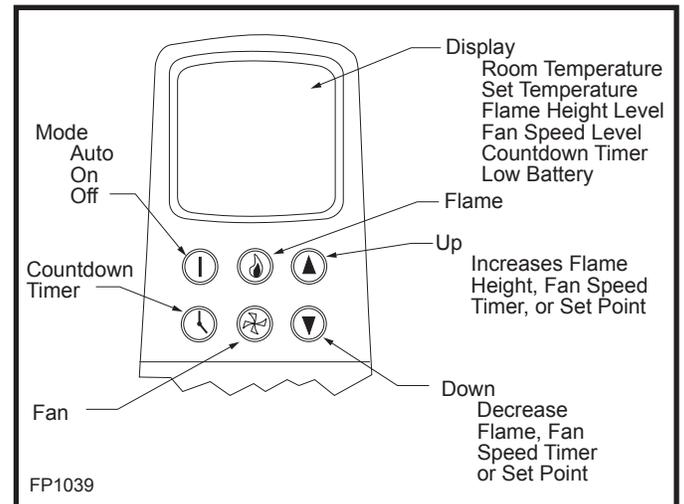


Fig. 26 Transmitter diagram.

On (Manual) Mode

In the ON mode, the room temperature, flame and fan levels will be shown. MANUAL will appear next to both the flame and fan icons.

When the control is in the ON mode, the flame and fan levels, and delay timer are changed with the up and down buttons. To change the flame level, press the flame button followed by an arrow key. To change the fan level, press the fan key followed by an arrow key. Pushing the arrow key once will change the level by one unit.

Delay Timer Mode

The shut off delay timer has a maximum of 2 hours and a minimum of zero minutes. To change the timer level, press the time key followed by an arrow key. Pushing the key once will change the timer by 10 minutes.

Auto Mode

In the AUTO mode, the room temperature, set temperature, flame and fan levels will be shown. AUTO will appear next to both the flame and fan icons.

When the control is in the AUTO mode, the main burner will turn on/off or modulate based on the heat needed to maintain the set temperature. The flame level will change automatically to optimize the heat output needed to maintain the set temperature. To change the set temperature, press the up or down key. Pushing a key once will change the temperature by one degree.

In the AUTO mode, the fan speed will increase with increasing flame height or decrease with decreasing flame height. "AUTO" is displayed next to the flame and fan icons.

Fan Override During Auto Mode

If a lower or higher fan speed is desired when operating in the AUTO mode, the fan speed can be overridden by pushing the fan button followed by the up or down key. Pushing a key once will change the fan level by one unit. In this mode "AUTO" is displayed next to the flame icon and "MANUAL" is displayed next to the fan icon.

Change Between F/C Temperature Units

Push the up and down arrow keys simultaneously for at least 3 seconds to toggle between Fahrenheit and Celsius units.

Disable Thermostat Function

To disable the thermostat function in the AUTO mode, push the time and down keys simultaneously for at least 3 seconds.

To Change Batteries

1. Remove cover on the backside of the transmitter. Install 3 AAA batteries as shown and reattach cover.
2. Once steps 1-3 in OPERATION are completed, receiver/valve and transmitter are now ready. Press any button on transmitter for recognition process to occur between the receiver/valve and transmitter.
3. Use functions as described in TRANSMITTER section.

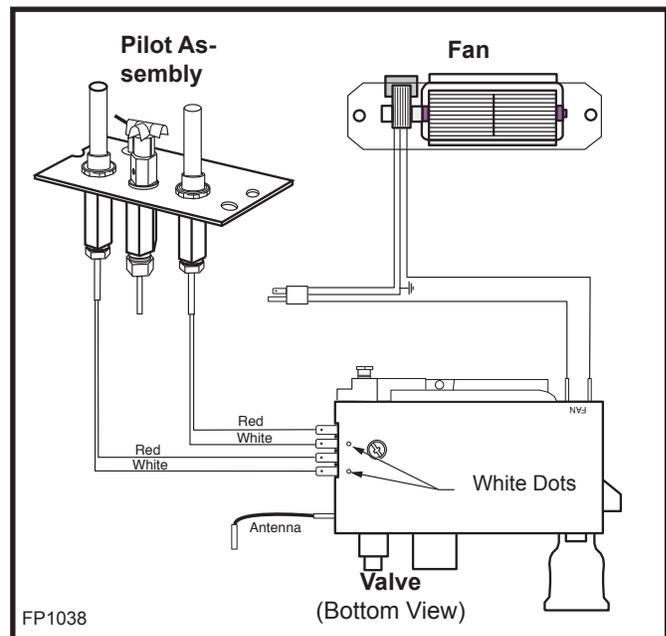


Fig. 27 Comfort Valve wiring diagram.

Troubleshooting

1. Locate LED light on valve.
2. LED will blink after every valid command received by the transmitter; this is not an error.
3. Failure codes may occur anytime after pilot burner is lit.
4. Sequence is failure code followed by light not blinking for 30 seconds.
5. In the event of multiple failure codes, next failure code follows previous failure code by approximately 3 seconds.

If an Error Code 3 is observed while performing the testing, complete the following:

1. Make sure the spade connectors are pushed all the way on. If the Error Code 3 is still showing, then go to the next step.
2. Switch the front two thermopile leads with the back two. Be sure the white lead is connected to the spade with the white dot next to it. If the Error Code 3 is still showing, replace the thermopiles.

If an Error Code 8 is observed while performing the testing, complete the following:

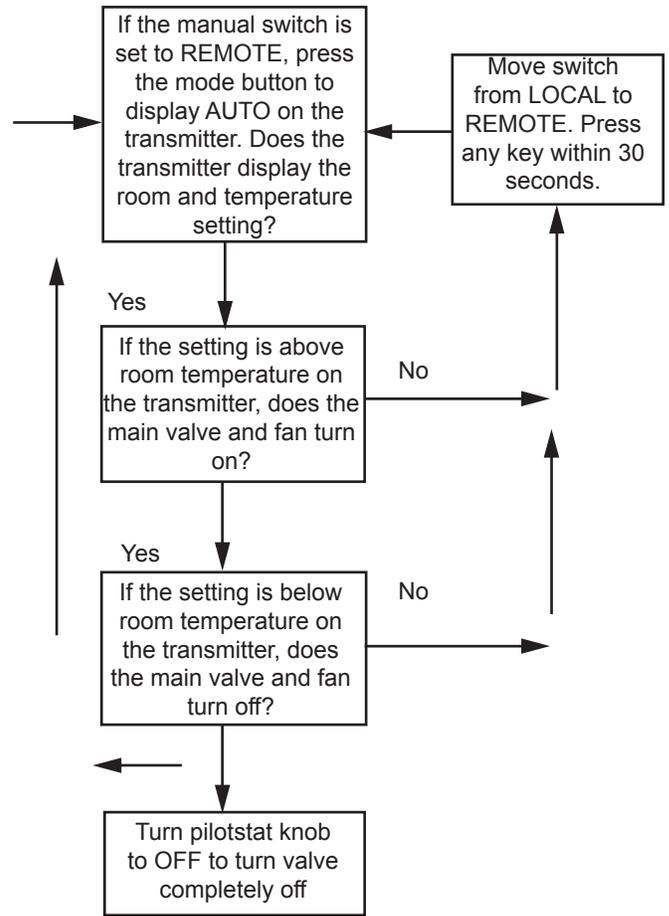
1. Confirm the valve is not in REMOTE mode.
 - If the valve is producing Error Code 8 and in REMOTE mode, the valve is defective and should be replaced.
 - If the valve is in LOCAL mode and producing Error Code 8, then go to the next step.

2. Slide the Remote/Local switch to REMOTE and teach the valve a transmitter (refer to Item 6, page 1). The Error Code will clear itself after approximately 1½ minutes and return to normal operation.

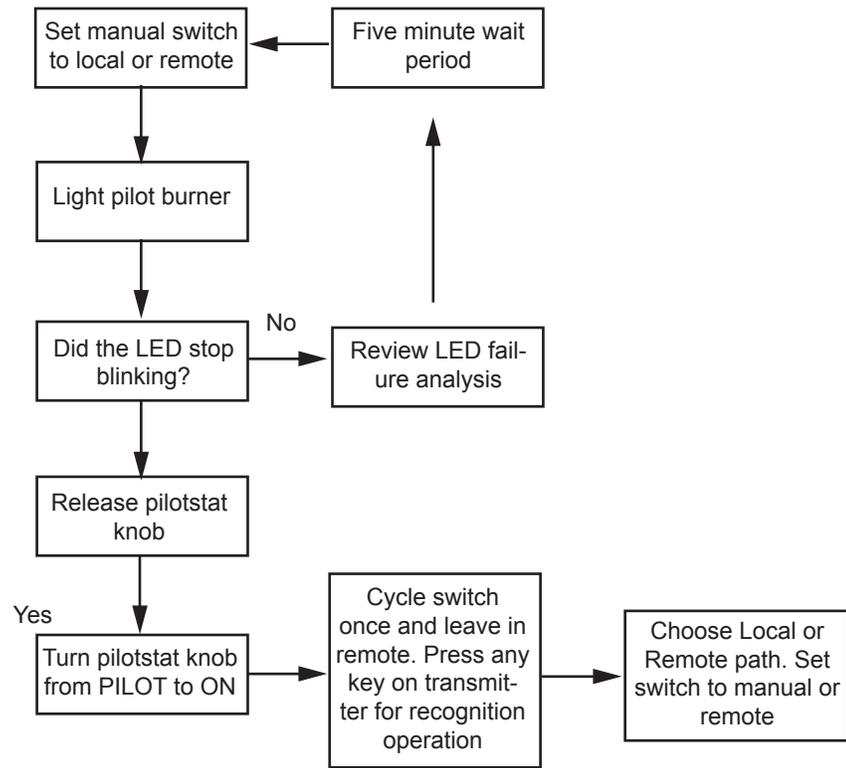
LED Count	Service Action
8	Replace valve
7	Confirm stepper motor connection exists
5	Confirm fan connection exists and works
4	Confirm gas type; jumper in place
3	Replace thermopiles
2	Turn fan ON

NOTE: Some keys are not active.

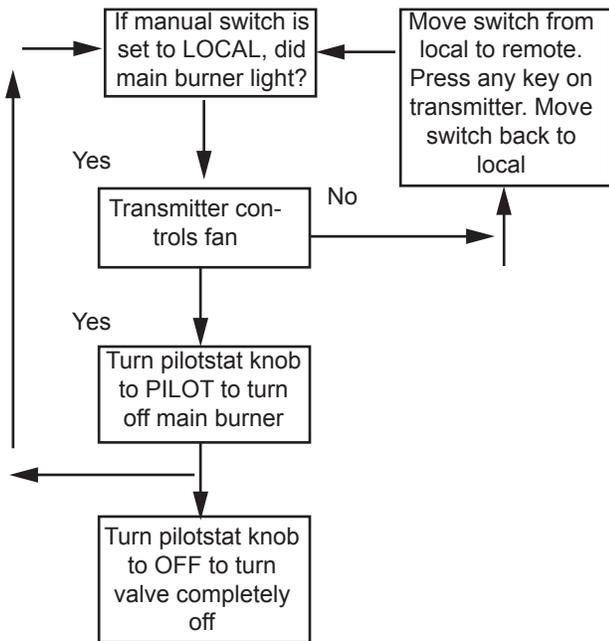
Auto Path



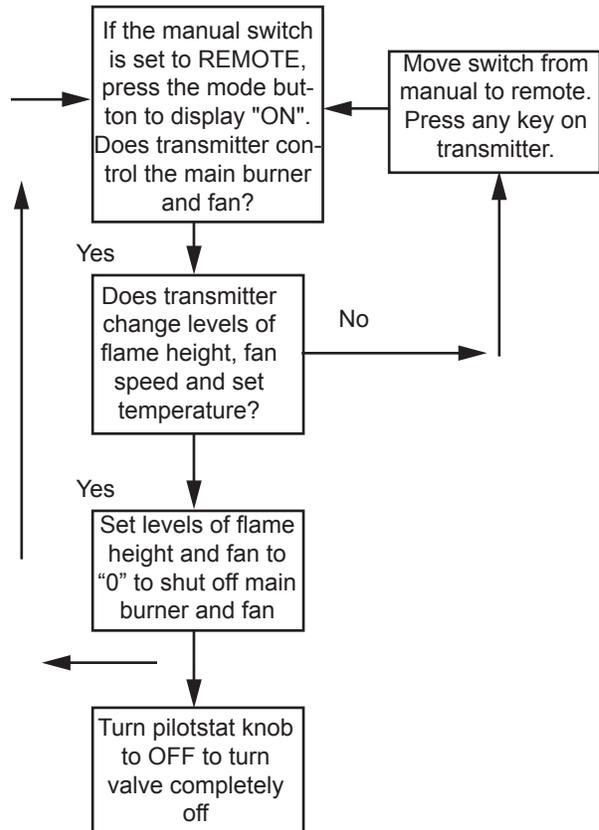
Comfort Valve system control sequence of operation with transmitter



Local Path



On Path



Maintenance

Burner and Burner Compartment

It is important to keep the burner and the burner compartment clean. At least once per year the logs and lava rock/ember material should be removed and the burner compartment vacuumed and wiped out. Remove and replace the logs as per the instructions in this manual.



Always handle the logs with care as they are fragile and may also be hot if the fireplace has been in use.

Fan Assembly

The fan unit requires periodic cleaning. At least once per month in the operating season, open the lower louver panels and wipe or vacuum the area around the fan to remove any build up of dust or lint.

Cleaning the Standing Pilot Control System

The burner and control system consists of:

- main burner
- pilot burner
- gas orifice
- thermopile
- combination millivolt gas valve

Most of these components may require only an occasional checkup and cleaning and some may require adjustment. If repair is necessary, it should be performed by a qualified technician.

In order to properly clean the burner and pilot assembly, turn off the gas to the unit, remove the window frame panel and logs exposing the burner and pilot assembly. Clean all foreign materials from the top of the burner. Check to make sure that burner parts are clean. Visu-

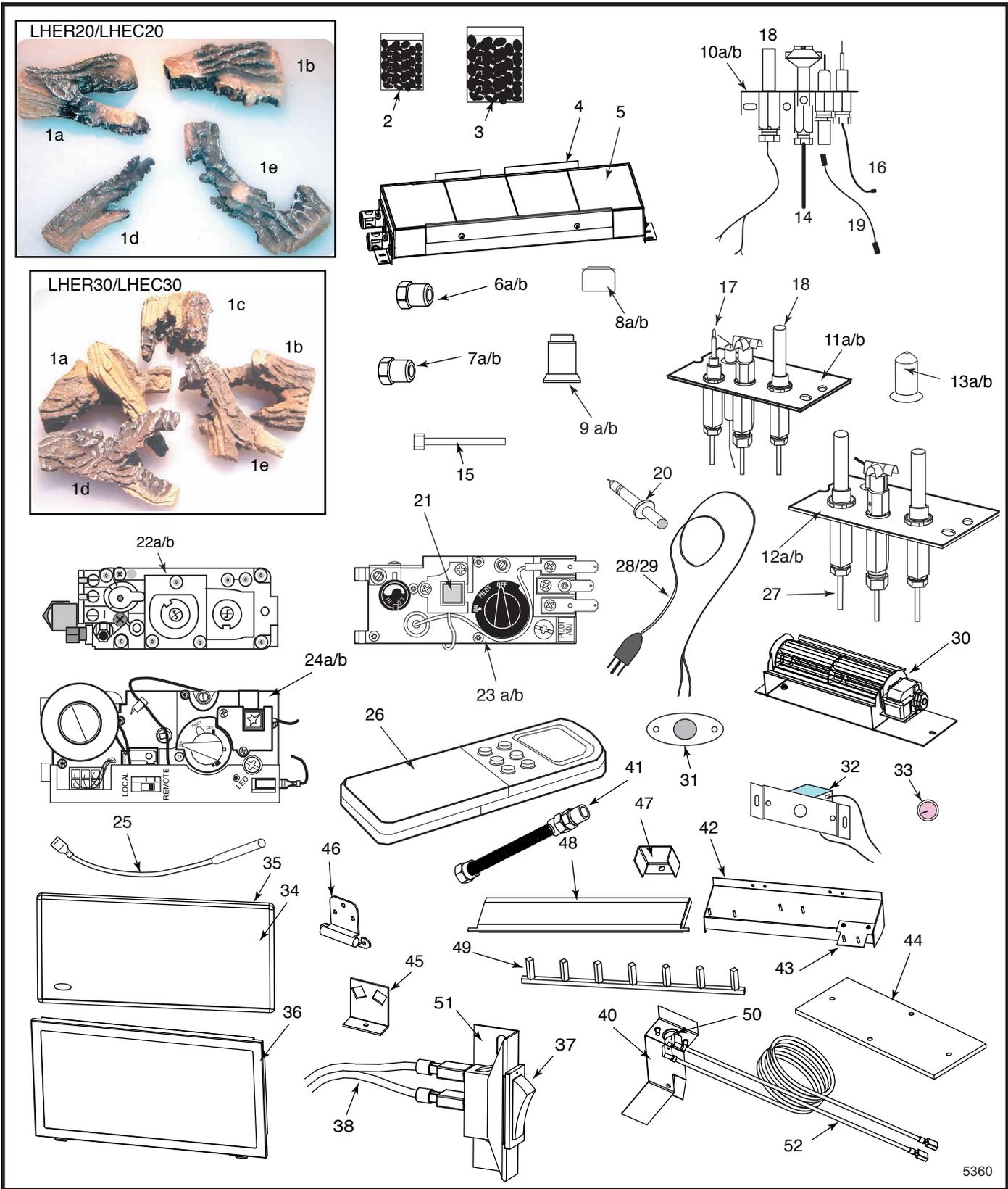
ally inspect pilot. Brush or blow away any dust or lint accumulation. If pilot orifice is plugged, disassembly may be required to remove any foreign material from the orifice or tubing.

To obtain proper operation, it is imperative that the pilot and burner's flame characteristics are steady, not lifting or floating.

Typically, the top 1/8" of the thermopile should be engulfed in the pilot flame. (Page 12, Fig. 22)

Trim Cleaning

Clean the trim with a soft clean cloth, slightly dampened with lemon oil and buff with a soft dry cloth. Do not use brass polish or household cleaners as these products will damage the trim. Lemon oil can be obtained at supermarkets or hardware stores.



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CFM Corporation reserves the right to make changes in design, materials, specifications, prices and discontinue colors and products at any time, without notice.

LHE Series

LHE Series (continued)

Ref.	Description	LHER20	LHEC20	LHER30	LHEC30
1.	Log Set Complete	10005332	10005332	10004866	10004866
1a.	Log Rear Left	10005333 (JR7)	10005333 (JR7)	10004874 (KR22)	10004874 (KR22)
1b.	Log Rear Right	10005334 (JR8)	10005334 (JR8)	10004875 (KR23)	10004875 (KR23)
1c.	Log Rear Center	-	-	10004876 (KR24)	10004876 (KR24)
1d.	Log Front Left	10005335 (JR9)	10005335 (JR9)	10004878 (KR25)	10004878 (KR25)
1e.	Log Front Right	10005336 (JR10)	10005336 (JR10)	10004879 (KR26)	10004879 (KR26)
2.	Lava Rock Burner Package	57897	57897	57897	57897
3.	Lava Rock Package	-	-	10001454	10001454
4.	Burner Housing Assembly with Tiles	10005294	10005294	10004972	10004972
5.	Ceramic Tile (Single)	57803	57803	57803	57803
6a.	Orifice Front Burner (Nat.)	See Rating Plate for Orifice Size			
6b.	Orifice Front Burner (Prop.)	See Rating Plate for Orifice Size			
7a.	Orifice Rear Burner (Nat.)	See Rating Plate for Orifice Size			
7b.	Orifice Rear Burner (Prop.)	See Rating Plate for Orifice Size			
8a.	Orifice Pilot SIT Top Convertible	10002268	10002268	10002268	10002268
8b.	Orifice Pilot SIT Top Convertible	10002269	10002269	10002269	10002269
9a.	Orifice Pilot PSE (Nat.)	10001822	10001822	10001822	10001822
9b.	Orifice Pilot PSE (Prop.)	10001823	10001823	10001823	10001823
10a.	Pilot Assembly SIT Top Convertible (Nat.)	10002389	10002389	10002389	10002389
10b.	Pilot Assembly SIT Top Convertible (Prop.)	10002390	10002390	10002390	10002390
11a.	Pilot Assembly PSE (Nat.)	10001741	10001741	10001741	10001741
11b.	Pilot Assembly PSE (Prop.)	10001742	10001742	10001742	10001742
12a.	Pilot Assembly RFN (Nat.)	-	20002266	-	20002266
12b.	Pilot Assembly RFP (Prop.)	-	20002268	-	20002268
13a.	Pilot Orifice RFN (Nat.)	-	20000908	-	20000908
13b.	Pilot Orifice RFP (Prop.)	-	20000907	-	20000907
14.	Pilot Tubing w/Fittings	10001296	10001296	10001296	10001296
15.	Manifold Tubing w/Fittings	57318	57318	57318	57318
16.	Thermocouple SIT	54912	54912	54912	54912
17.	Thermocouple PSE	10001828	10001828	10001828	10001828
18.	Thermopile	51827	51827	51827	51827
19.	Electrode Ignitor w/Cable SIT	10001297	10001297	10001297	10001297
20.	Ignitor Piezo SIT	52464	52464	52464	52464
21.	Ignitor Piezo Honeywell	20000062	20000062	20000062	20000062
22a.	Valve SIT 820 RN	52677	52677	52677	52677
22b.	Valve SIT 820 RP	52678	52678	52678	52678
23a.	Valve Honeywell RN	10001782	10001782	10001782	10001782
23b.	Valve Honeywell RP	10001759	10001759	10001759	10001759
24a.	Valve Honeywell RFN	-	20003719	-	20003719
24b.	Valve Honeywell RFP	-	20003720	-	20003720
25.	Antennae (for RFN or RFP Units)	-	20003561	-	20003561
26.	Transmitter (for RFN or RFP Units)	-	20002047	-	20002047
27.	Thermopile (for RFN or RFP Units)	-	20002400	-	20002400
28.	Cord Set (for RFN or RFP Units)	-	20002541	-	20002541
29.	Cord Set (for RN or RP Units)	51865	51865	51865	51865
30.	Fan with Bracket	-	54103	-	54103
31.	Fan Temperature Sensor (for RN or RP Units)	-	51704	-	51704
32.	Fan Speed Control Switch (for RN or RP Units)	-	51738	-	51738
33.	Speed Control Knob (for RN or RP Units)	-	51882	-	51882
34.	Glass with Gasket	10005526	10005525	10006770	10004989
35.	Gasket Glass	57317	57317	57317	57317
36.	Frame Window	10005295	10005067	10006768	10004990

LHE Series (continued)

Ref.	Description	LHER20	LHEC20	LHER30	LHEC30
37.	Remote Switch (for RN or RP Units)	53606	53606	53606	53606
38.	Remote Wire Harness w/Terminals (for RN or RP Units)	10002582	10002582	10002582	10002582
39.	Ceramic Fiber Brick FP (Optional)	JT1TR0	JT1TC0	KT1TR0	KT1TC0
40.	Bracket Sensor	10004980	10004980	10004980	10004980
41.	Flexible Connector (6")	10005098	10005098	10005098	10005098
42.	Bracket Rear Log Assembly	10005370	10005369	10006771	10005489
43.	Bracket Log Support Assembly	-	-	10004885	10004885
44.	Gasket Cover Sensor Access	10005007	10005007	10005007	10005007
45.	Bracket Support Grate	-	-	10003479	10003479
46.	Hinge 2 Springs	52356	52356	52356	52356
47.	Shield Heat Pilot	10000248	10000248	10000248	10000248
48.	Sensor Safety Switch Assy	10005074	10005074	10005074	10005074
49.	Grate Assembly Flat Black	10004967	10004967	10003478	10003478
50.	Sensor Spill Switch	51866	51866	51866	51866
51.	Bracket ON/OFF Switch	10005035	10005035	10005035	10005035
52.	Wiring Safety Switch	10005073	10005073	10005073	10005073

Optional Accessories

Remote Controls

Optional remote control units are available to control different functions of the appliance.

Model	Function(s) Controlled
RC1	ON/OFF
RC2	ON/OFF and Temperature
MRC3	ON/OFF and Temperature control with a digital and a programmable 24 hour clock
IMT	Wall mounted thermostat control

NOTE: These remote controls are for RN/RP units only.

Zero Clearance Kit

For installations other than in existing woodburning fireplaces such as new construction or renovation projects, a Zero Clearance Kit must be used. The HEZC enables these inserts to be installed in combustible environments. It is recommended that an Air Kit (AKZC) be installed whenever using a Zero Clearance Kit. Consideration must be given to the dimensions of the Zero Clearance Kit and the requirements of the Air Kit when planning out the installation.

Follow the instructions supplied with the Zero Clearance Kit carefully for proper installation.

Bay Filigree Kits

Model	Description
LHEC20BLKS	Pewter Bay
LHEC30BLKS	Pewter Bay
LHEC30BLKG	Gold Bay

Arch Door Kits

Model	Description
LHER20DKB	Arch Door, Black
LHEC20DKB	Arch Door, Black
LHEC30DKB	Arch Door, Black
LHEC30DKS	Arch Door, Pewter
LHEC30DKG	Arch Door, Gold
LHER30DKB	Arch Door, Black
LHER30DKS	Arch Door, Pewter
LHER30DKG	Arch Door, Gold

Ceramic Firebox Liners

Model	Description
LHER20CR	Ceramic Fiber Brick
LHEC20CR	Ceramic Fiber Brick
LHEC30CR	Ceramic Fiber Brick
LHER30CR	Ceramic Fiber Brick

Trim Options

Face Kits

NOTE: One is required for LHEC20 and LHEC30

Model	Description
LHEC20FB	Louvre T&B, Black
LHEC20LKB	Filigree T&B, Black
LHEC20LKS	Filigree T&B, Pewter
LHEC30FB	Louvre T&B, Black
LHEC30LKB	Filigree T&B, Black
LHEC30LKS	Filigree T&B, Pewter
LHEC30LKG	Filigree T&B, Gold
LHEC20CBTK	Cast Bay Window, Classic Black
LHER20BTK	Bay Window w/Louvres, Black
LHEC20BTK	Bay Window w/Filigree, Black
HECBTKADK	Window Adapter Kit LC30
HEBTKADK	Window Adapter Kit LC30
LHEC30CBTK	Cast Bay Window, Classic Black
LHEC30CBTKMB	Cast Bay Window, Midnight
LHEC30CBTKSA	Cast Bay Window, Sand
LHEC30BTK	Bay Window w/Filigree, Black
LHER30BTK	Steel Bay w/Filigree, Black
LHER30CBTK	Traditional Cast Bay, Classic
LHER30CBTKMB	Traditional Cast Bay, Midnight
LHER30CBTKSA	Traditional Cast Bay, Sand

Trim Kits

NOTE: One is required.

Model	Description
LHE20SSB	Small Surround, Black
LHE20SLB	Large Surround, Black
LHE20TCK	Trim Closure Kit, Black, XL
LHEABSL	Adjust Bevel Steel/Cast
LHE20CSLB	Large Cast Surround, Classic Black
LHE30SSB	Small Surround, Black
LHE30SLB	Large Surround, Black
LHE30SLGA	Large Surround, w/Gold Edge
LHE30TCK	Trim Closure Kit, Black XL
LHE30CSLB	Large Cast Surround, Classic Black
LHE30SLMB	Large Cast Surround, Midnight
LHE30CSLSA	Large Cast Surround, Sand
LHEACNSS	Adjust Cast Cont. Surround

Modification Instructions of EP28-5 Series Fireplace Upgrading to LHEC20 or LHER20 Natural Vent Insert



WARNING: You must turn off gas supply to fireplace.

1. Remove the upper and lower trims.
2. Remove the doors and mesh firescreen, if installed.
3. Remove the bottom door rail. (Fig. 28)
4. Disconnect the gas supply from the control valve under the fireplace. Remove the two (2) screws located at bottom rear of burner pan. Disconnect the primary spill switch from the gas valve. Leave the primary spill switch in its location, as it must be rewired to complete the new burner assembly installation. Lift the complete burner assembly up and out of unit to clear support ledge. (Fig. 29) Remove the existing fan assembly, if installed.
5. Remove the hood and inner baffle. (Fig. 30)
6. Install the LHEC20/LHER20 insert by pushing it all the way back inside the shell. (Fig. 31) For complete gas line and venting installation, refer to Pages 6 and 8.

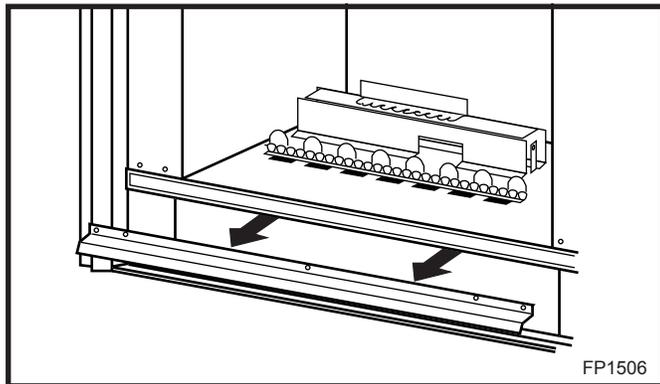


Fig. 28 Remove the bottom door rail.

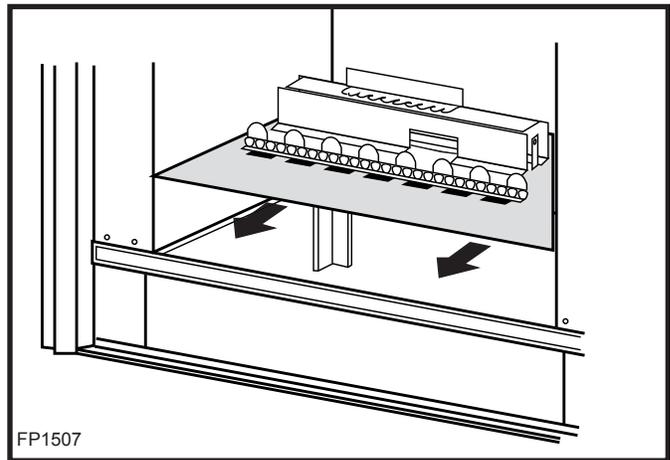


Fig. 29 Remove the old burner assembly.

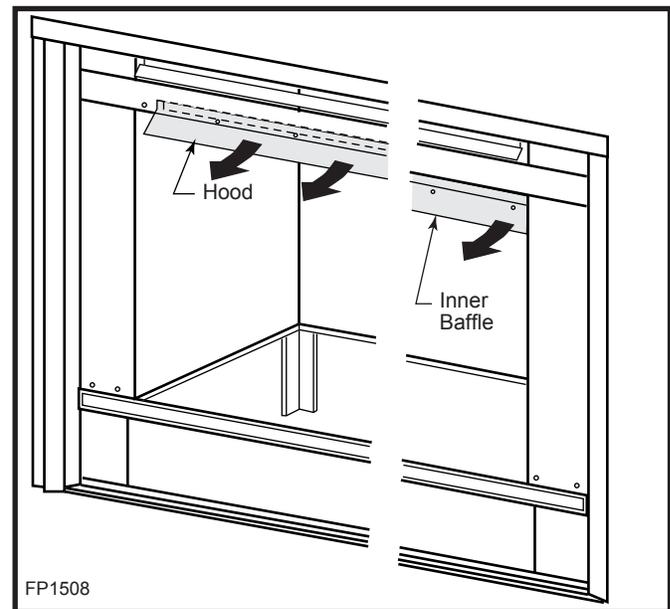


Fig. 30 Remove the decorative burner hood and inner baffle.

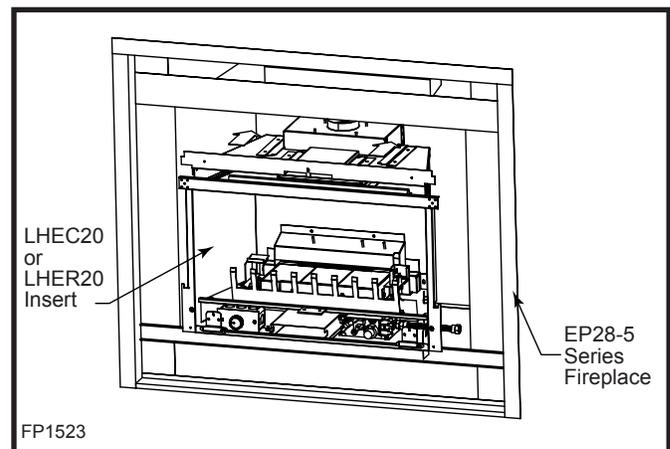


Fig. 31 Install insert by pushing it all the way inside the shell.

LIMITED LIFETIME WARRANTY

PRODUCT COVERED BY THIS WARRANTY

All Vermont Castings gas stoves, gas inserts, and gas fireplaces, and all Majestic gas fireplaces equipped with an Insta-Flame Ceramic Burner, or standard steel tube burner.

BASIC WARRANTY

CFM Corporation (hereinafter referred to collectively as the Company) warrants that your new Vermont Castings or Majestic Gas Fireplace/Stove is free from manufacturing and material defects for a period of one year from the date of purchase, subject to the following conditions and limitations.

EXTENDED LIFETIME WARRANTY

The heat exchanger, where applicable, and combustion chamber of every Vermont Castings or Majestic gas product is warranted for life against through wall perforation. All appliances equipped with an Insta-Flame Ceramic Burner have limited lifetime coverage on the ceramic burner plaque. Warrantees are made to the original owner subject to proof of purchase and the conditions and limitations listed on this Warranty Document

COMPONENT WARRANTY

CAST IRON: All external and internal cast iron parts are warranted for a period of three years.

Note: On porcelain enamel finished external parts and accessories The Company offers no Warranty on chipping of enamel surfaces. Inspect all product prior to accepting it for any damage to the enamel.

The salt air environment of coastal areas or a high humidity environment can be corrosive to the porcelain enamel finish. These conditions can cause rusting of the cast iron beneath the porcelain enamel finish, which will cause the finish to flake off.

Dye lot variations with replacement parts and/or accessories can occur and are not covered by warranty.

GLASS DOORS: Glass doors are covered for a period of one year.

Glass doors are not warranted for breakage due to misuse or accident. Glass doors are not covered for discoloration or burned in stains due to environmental issues, or improper cleaning and maintenance.

BRASS PLATED PARTS AND ACCESSORIES: Brass parts should be cleaned with Lemon oil only. Brass cleaners cannot be used. Mortar mix and masonry cleaners may corrode the brass finish. The Company will not be responsible for, nor will it warrant any brass parts which are damaged by external chemicals or down draft conditions.

GAS VALVES: Gas valves are covered for a period of one year

ELECTRONIC AND MECHANICAL COMPONENTS: Electronic and mechanical components of the burner assembly are covered for one year. All steel tube burners are warranted for one year.

ACCESSORIES: Unless otherwise noted all components and CFM Corporation company supplied accessories are covered for a period of one year.

CONDITIONS AND LIMITATIONS

- This new Vermont Castings or Majestic product must be installed by a competent, authorized, service contractor. A licensed technician, as prescribed by the local jurisdiction must perform any installation/service work. It must be installed and operated at all times in accordance with the Installation and Operating instructions furnished with the product. Any alteration, willful abuse, accident, or misuse of the product shall nullify this warranty.
- This warranty is non-transferable, and is made to the original owner, provided that the purchase was made through an authorized supplier of the Company.
- The customer must pay for any Authorized Dealer in-home travel fees or service charges for in-home repair work. It is the dealers option whether the repair work will be done in the customer's home or in the dealer's shop.
- If upon inspection, the damage is found to be the fault of the manufacturer, repairs will be authorized at no charge to the customer parts and/or labor.

- Any part and/or component replaced under the provisions of this warranty is covered for six months or the remainder of the original warranty, whichever is longest.
- This warranty is limited to the repair of or replacement of part(s) found to be defective in material or workmanship, provided that such part(s) have been subjected to normal conditions of use and service, after said defect is confirmed by the Company's inspection.
- The company may, at its discretion, fully discharge all obligations with respect to this warranty by refunding the wholesale price of the defective part(s)
- Any installation, labor, construction, transportation, or other related costs/expenses arising from defective part(s), repair, replacement, or otherwise of same, will not be covered by this warranty, nor shall the Company assume responsibility for same. Further, the Company will not be responsible for any incidental, indirect, or consequential damages except as provided by law.
- SOME STATES DO NOT ALLOW FOR THE EXCLUSION OR LIMITATIONS OF INCIDENTAL AND CONSEQUENTIAL DAMAGES OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOUR CIRCUMSTANCES. THIS WARRANTY GIVES YOU SPECIFIC RIGHTS AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.
- All other warranties-expressed or implied- with respect to the product, its components and accessories, or any obligations/liabilities on the part of the Company are hereby expressly excluded.
- The Company neither assumes, nor authorizes any third party to assume on its behalf, any other liabilities with respect to the sale of this Vermont Castings or Majestic product
- The warranties as outlined within this document do not apply to chimney components or other non CFM Corporation accessories used in conjunction with the installation of this product..
- Damage to the unit while in transit is not covered by this warranty but is subject to claim against the common carrier. Contact the dealer from whom you purchased your fireplace/stove (do not operate the appliance as this might negate the ability to process the claim with the carrier).
- The Company will not be responsible for:
 - a) Down drafts or spillage caused by environmental conditions such as near-by trees, buildings, roof tops, hills, or mountains.
 - b) Inadequate ventilation or negative air pressure caused by mechanical systems such as furnaces, fans, clothes dryers, etc.
- This warranty is void if:
 - a) The fireplace has been operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals.
 - b) The fireplace has been subjected to prolonged periods of dampness or condensation
 - c) Any damages to the fireplace, combustion chamber, heat exchanger or other components due to water, or weather damage, which is the result of but not limited to, improper chimney/venting installation.
 - d) Any alteration, willful abuse, accident, or misuse of the product has occurred.

IF WARRANTY SERVICE IS NEEDED...

- 1) Contact your supplier. Make sure you have your warranty, your sales receipt, and the model/serial number of your CFM Corporation product.
- 2) DO NOT ATTEMPT TO DO ANY SERVICE WORK YOURSELF.

Canada

ENERGUIDE

Look for the **EnerGuide**
Gas Fireplace Energy
Efficiency Rating in this brochure

Based on CSA P.4.1-02

Efficiency Ratings

Model	EnerGuide Ratings Fireplace Efficiency (%)	Steady State (%)		D.O.E. (AFUE%)
		Fan-OFF	Fan-ON	
LHEC20RN	51.2	71	75	60
LHEC20RP	51.2	72	76	60
LHEC20RFN	51.2	71	75	60
LHEC20RFP	51.2	72	76	60
LHER20RN	51.0	69	N/A	59
LHER20RP	51.0	70	N/A	59
LHEC30RN	48.5	69	72	64
LHEC30RP	48.5	70	73	64
LHEC30RFN	48.5	69	72	64
LHEC30RFP	48.5	70	73	64
LHER30RN	52.1	68	N/A	64
LHER30RP	52.1	69	N/A	64

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www.nficertified.org

We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

CFM Corporation

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