

WFP-100

(Model 8420)

Woodstove OWNER'S MANUAL Installation And Operating Instructions

Listed to standards ULC-S610 and UL 127

Manufactured for: HearthStone Quality Home Heating Products, Inc. 317 Stafford Avenue,
Morrisville VT 05661

**PLEASE READ THIS ENTIRE OWNER'S MANUAL BEFORE YOU INSTALL AND USE YOUR
NEW WFP-100 FIREPLACE.
SAVE THIS OWNER'S MANUAL FOR FUTURE REFERENCE**

CAUTION: Do not attempt to modify or alter the construction of the fireplace or its components. Any modification or alteration of construction may void the warranty, listings and approvals of this system. In that case, HearthStone Quality Home Heating Products, Inc. will not be responsible for damages. Install the fireplace only as described in these instructions.

This manual is available for free download on the manufacturer's web site. It is a copyrighted document. Re-sale is strictly prohibited. The manufacturer may update this manual from time to time and cannot be responsible for problems, injuries, or damages arising out of the use of information contained in any manual obtained from unauthorized sources.

California Prop 65

WARNING: This product can expose you to chemicals including glass wool fiber and carbon monoxide which are known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

WFP-100 Model 8420
Manual: 6400-40405
R: 03/15/23

2 GENERAL INFORMATION

2.1 APPLIANCE PERFORMANCE⁽¹⁾

Fuel type	Dry cordwood	
Recommended heating area ^[1]	1,000 to 2,800 ft ² (93 to 260 m ²)	
Firebox volume	4.28 ft ³ (0.113 m ³)	
Maximum burn time ^[1]	10 h	
Overall heat output rate (min. to max.) ⁽²⁾⁽³⁾	16,610 BTU/h to 43,021 BTU/h (4.9 kW to 12.6 kW)	
Average overall efficiency ⁽³⁾ - Dry cordwood	63.9% (HHV ⁽⁴⁾)	68.4% (LHV ⁽⁵⁾)
Optimum efficiency ⁽²⁾⁽⁶⁾	69.7%	
Average particulate emissions rate ⁽⁷⁾	1.6 g/h (EPA)	
Average CO ⁽⁸⁾	157.4 g/h	

^[1] Recommended heating area and maximum burn time may vary subject to location in home, chimney draft, heat loss factors, climate, fuel type and other variables. The recommended heated area for a given appliance is defined by the manufacturer as its capacity to maintain a minimum acceptable temperature in the designated area in case of a power failure.

⁽¹⁾ Values are as measured per test method, except for the recommended heating area, firebox volume, maximum burn time and maximum heat output.

⁽²⁾ The maximum heat output (dry cordwood) is based on a loading density varying between 15 lb/ft³ and 20 lb/ft³. Other performances are based on a fuel load prescribed by the standard. The specified loading density varies between 7 lb/ft³ and 12 lb/ft³. The moisture content is between 19% and 25%.

⁽³⁾ As measured per CSA B415.1-10 stack loss method.

⁽⁴⁾ Higher Heating Value of the fuel.

⁽⁵⁾ Lower Heating Value of the fuel.

⁽⁶⁾ Optimum overall efficiency at a specific burn rate (LHV).

⁽⁷⁾ This appliance is officially tested and certified by an independent agency.

⁽⁸⁾ Carbon monoxide.

2.1 GENERAL FEATURES

Maximum log length ¹	25 in (635 mm) east-west*
Flue outlet diameter	8 in (203 mm)
Chimney diameter	8 in (203 mm)
Type of chimney	CAN/ULC S629, UL 103 HT (2100 °F)
Baffle material	C-Cast
Approved for alcove installation	Not approved
Approved for mobile home installation [‡]	Not approved
Shipping weight (without option)	545 lb (247 kg)
Appliance weight (Including refractory slabs and faceplate)	665 lb (302 kg)
Type of door	Double, glass with cast iron frame
Type of glass	Ceramic glass
Blower	Included (up to 176 CFM)
Particulate emission standard	EPA / ASTM WK47329
USA standard (safety)	UL 127
Canadian standard (safety)	ULC-S610

** East-west: through the door you see the longitudinal sides of the logs; north-south: through the door you see the tips of the logs.

‡ Mobile home (Canada) or manufactured home (USA): The US department of Housing and Urban Development describes “manufactured homes” better known as “mobile homes” as followed; buildings built on fixed wheels and those transported on temporary wheels/axles and set on a permanent foundation. In Canada, a mobile home is a dwelling for which the manufacture and assembly of each component is completed or substantially completed prior to being moved to a site for installation on a foundation and connection to service facilities and which conforms to the CAN/CSA-Z240 MH standard.

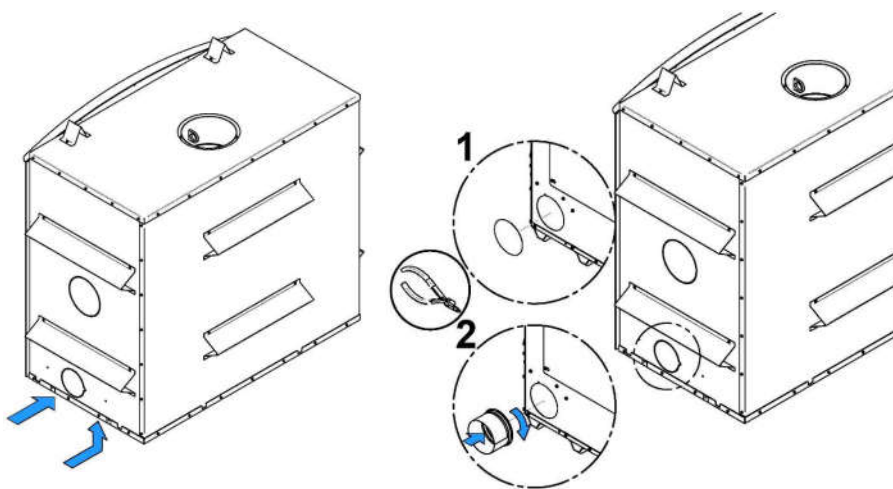
¹ The recommended log length is 16 inches, placed in the north-south orientation. For more details see section 3 - Fuel.

- The fresh air intake kit included with the fireplace contains the following components:
 - One (1) 5" adaptor;
 - One (1) air inlet block-off plate;
 - Four (4) screws.
- The following components are not included:
 - A 5" insulated flexible pipe **(D)** (This HVAC type pipe must comply to ULC S110 and/or UL 181, Class 0 or Class 1 Standards and must withstand temperatures up to 250 °F.
 - The outside wall termination **(E)**.
 - Adjustable clamps (2X) **(C)**.

Note: Only remove the knock-out that will be connected to the fresh air inlet.

The fresh air intake kit may be installed on two different places on the fireplace.

- On the right side of the appliance (most common).
 - On the right side under the appliance.
1. Remove the knock out located on the right-hand side of your fireplace.
 2. Install the 5" adapter included in your fireplace. Align the notch on the adaptor with the one on the fireplace and turn clockwise.



F: 5420-080

3. Flip the fireplace lower decorative louver. Install the blocking plate **(F)** included with the fireplace, on the front opening of the air control housing. Using a screwdriver, secure with four screws located in the user's manual.

Then, install the flexible pipe* **(D)** (not supplied) to the fresh air intake adapter **(B)** using one of the adjustable pipe clamps **(C)**. Secure the other end of the pipe to the outside wall termination **(E)** using the second adjustable pipe clamp **(C)**. The outside wall termination **(E)** must be installed outside of the building.

*For a pipe length less than 20 ft, use a 5" pipe diameter. For a pipe length of more than 20ft, or having more than two deviations, use a 6" pipe diameter. The maximum pipe length is 30 ft (9 m).

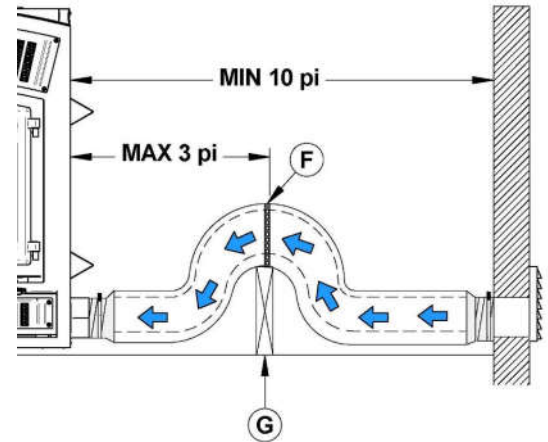
WARNING

TO AVOID CONDENSATION AND RUST IN YOUR FIREPLACE, IT IS RECOMMENDED TO USE AN INSULATED PIPE LONG ENOUGH (MINIMUM 10FT) AND CONTAINING A "P-TRAP".

This configuration can be found inside the chase, but must at all times maintain clearances to combustibles. The following figure is shown as an example.

To complete the installation, make a hole of 1/4" to 1/2" (6 mm à 13 mm) bigger than the insulate pipe diameter in the outside wall of the house at the chosen location. From outside, place the outside wall termination in the hole (open side down) and fasten the register to the wall, with screws.

Place the insulated pipe over the wall termination tube and over the fireplace outside air connector. At each end, carefully pull back the insulation and plastic cover, exposing the flexible pipe. Attach the flexible pipe using pipe clamps. For a better seal, you may also use aluminum tape. Wrap the tape around the joint between the flexible pipe and the air inlets. Carefully push the insulation and plastic cover back over the pipe. Fix the plastic in place using aluminum tape.

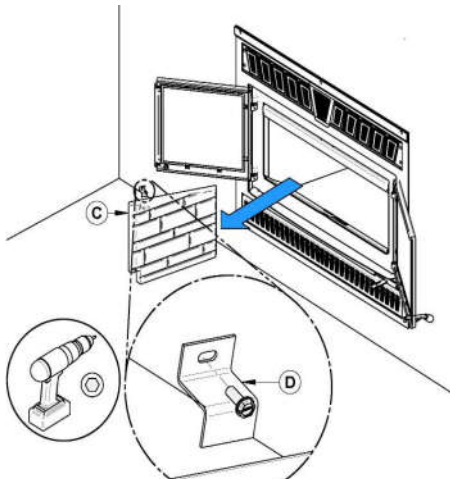
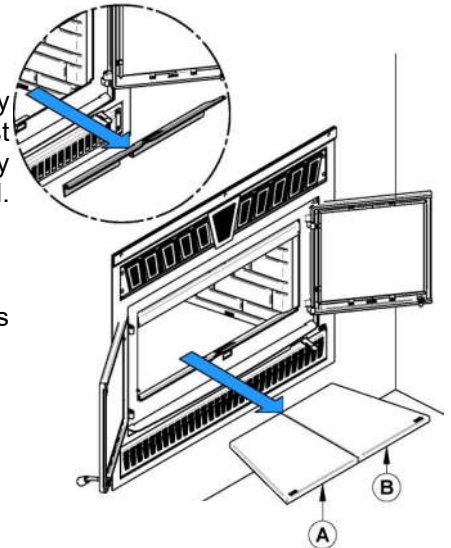


APPENDIX 5 - Refractory Slabs Replacement

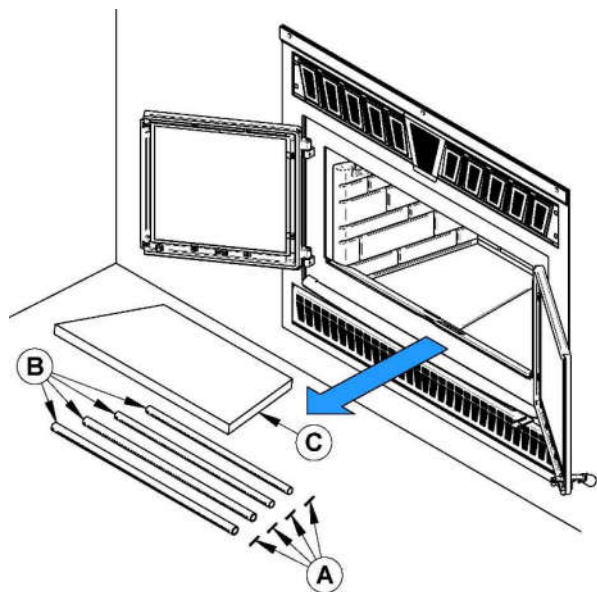
The intense heat of the fire will normally cause hairline cracks in the refractory slabs. These cracks can be minimized by proper curing as described in "First Fires". They will not normally diminish the effectiveness of the refractory slabs. If large cracks develop, then the refractory slabs should be replaced. To replace the refractory slabs, follow these steps:

- 1) Remove the inner ash retainer and the floor refractory slabs (**A & B**).
- 2) Using a power screwdriver and hex tip 5/16", remove the slab holders (**D**) and the left and right refractory slabs (**C**).
- 3) Remove the rear refractory slab (**E**).

To install new refractory slabs, follow the above steps in reverse.



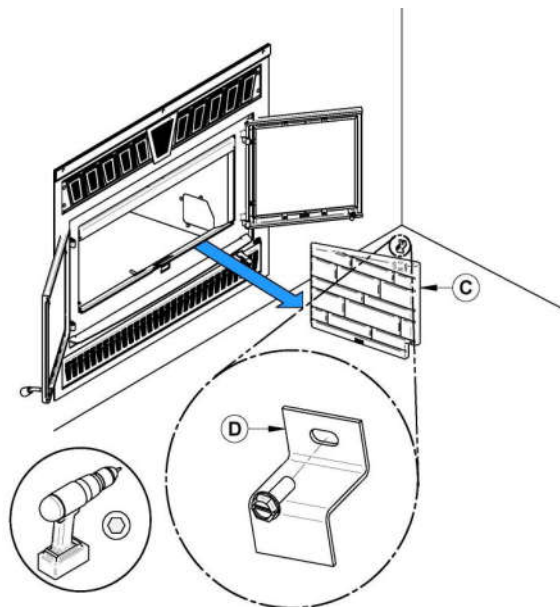
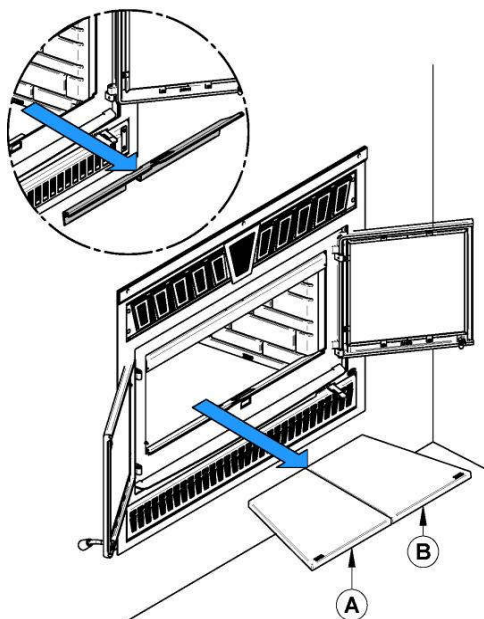
APPENDIX 6 - Installation OF Secondary Air Tubes and Baffle



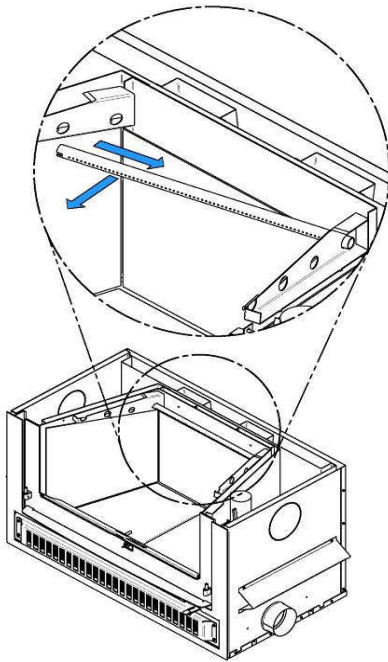
REMOVABLE PARTS	
A	Cotter pins (x4)
B	Air tubes (x4)
C	C-cast baffle (x1)

1) Remove the inner ash retainer and the floor refractory slab (A & B).

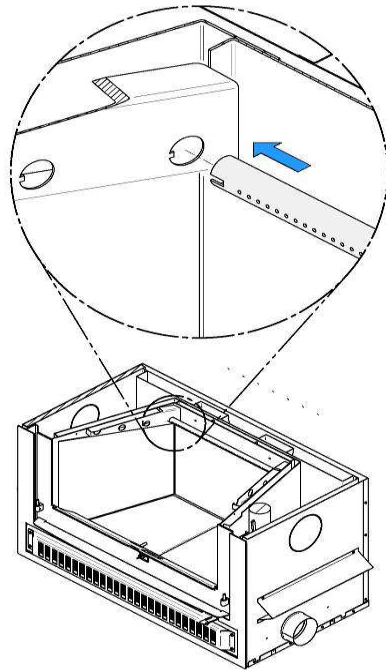
2) Using a power screwdriver and hex tip 5/16", remove the slab holder (D) and the left refractory slab (C).



3) Starting with the rear tube, lean and insert the right end of the secondary air tube into the rear right channel hole. Then, lift and push the tube towards the right inside the hole in the right channel.

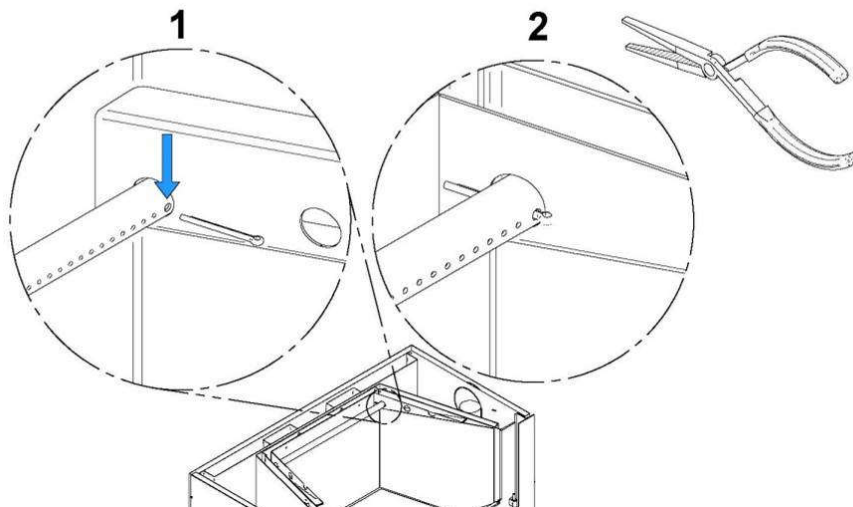


4) Align the notch in the left end of the tube with the tab of the left air channel hole.



5) Insert a cotter pin in the last hole on the right side of the tube. Then bend the tabs on the pin to keep in place.

6) Repeat **steps 4, 5 and 6** for the two tubes in the back then install the baffle. Then, install the two front tubes.

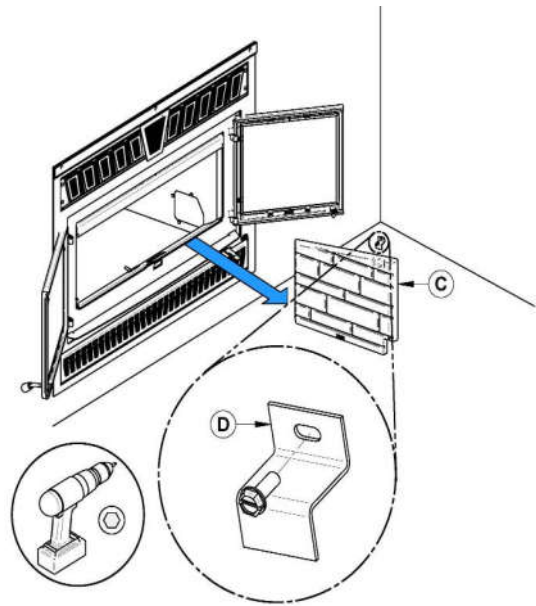
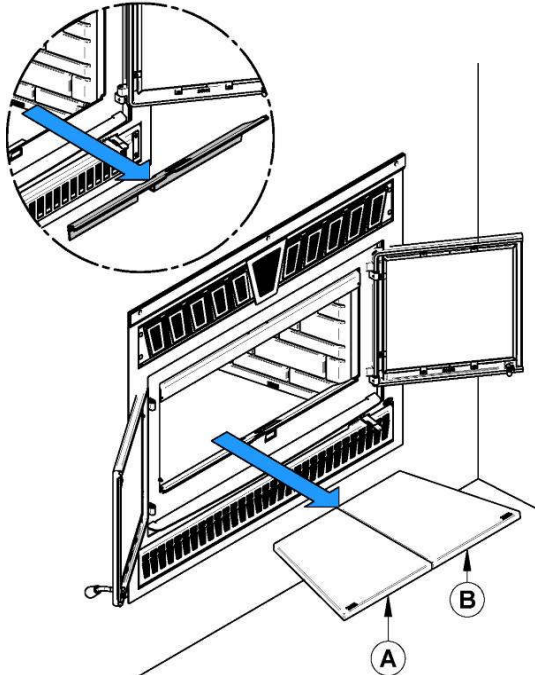


To remove the tubes use the above steps in reverse order.

Note that secondary air tubes can be replaced without removing the baffle board.

APPENDIX 7 - AIR CONTROL SNAP DISC REPLACEMENT

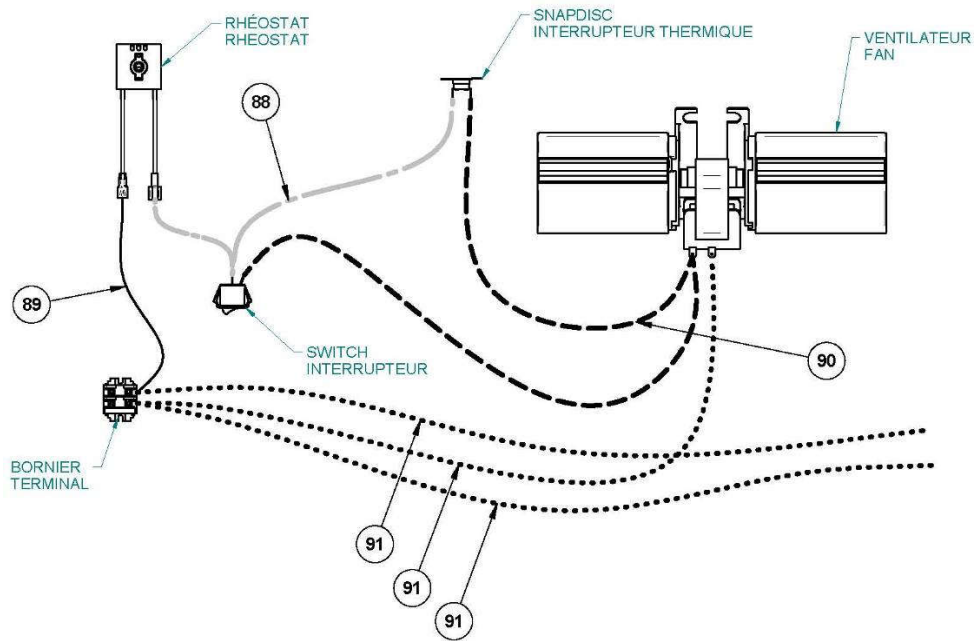
1. Remove the inner ash retainer and the floor refractory slab (A & B).
2. Using a power screwdriver and hex tip 5/16", remove the slab holder (D) and the left refractory slab (C).



3. Remove the 4 bolts (E) holding the access door (F) with a 1/4" ratchet.
4. Remove the thermodisc (G) by unscrewing the 2 screws holding it in place. (H)

APPENDIX 8 – ELECTRICAL WIRING

Have the wiring installed by a qualified electrician. Connect the wires from the power outlet to the terminal block, making sure that the white wire matches the white wire on the terminal. Connect the black wire with the black wire of the terminal block. The ground (green or skinned wire) must be attached to the fireplace metal frame. See appendix 9 for corresponding part numbers.



APPENDIX 9 - PARTS LIST

Description	Part No.		Description	Part No.
Air tube (4) – front	5410-076		Rear bricks	3120-422
Air tube (3) – second from front	5410-077		Left bricks	3120-423
Air tube (2) – third from front	5410-078		Right bricks	3120-424
Air tube (1) – back	5410-075		Bottom left brick	3120-420
C-cast baffle	3120-417		Bottom right brick	3120-421
Top insulation (2 ½" thick)	3120-415		Refractory Brick Set	94-30200
Door Gasket Kit	94-58200		Blowers	7211-941
Air control handle cap	5410-040		Door glass kit	94-58205
			Door latch kit	94-73200

SAFETY RATING LABEL

HEARTHSTONE LIMITED LIFETIME WARRANTY

The warranty of the manufacturer extends only to the original consumer purchaser and is not transferable. This warranty covers brand new products only, which have not been altered, modified nor repaired since shipment from factory. Products covered under this warranty must have been manufactured after the revision date indicated below. Proof of purchase (dated bill of sale), model name and serial number must be supplied when making any warranty claim to your HEARTHSTONE dealer.

This warranty applies to normal residential use only. Damages caused by misuse, abuse, improper installation, lack of maintenance, over firing, negligence or accident during transportation, power failures, downdrafts, or venting problems are not covered by this warranty.

This warranty does not cover any scratch, corrosion, distortion, or discoloration. Any defect or damage caused by the use of unauthorized parts or others than original parts void this warranty. An authorized qualified technician must perform the installation in accordance with the instructions supplied with this product and all local and national building codes. Any service call related to an improper installation is not covered by this warranty.

The manufacturer may require that defective products be returned or that digital pictures be provided to support the claim. Returned products are to be shipped prepaid to the manufacturer for investigation. If a product is found to be defective, the manufacturer will repair or replace such defect. Transportation fees to ship the product back to the purchaser will be paid by the manufacturer. Repair work covered by the warranty, executed at the purchaser's domicile by an authorized qualified technician requires the prior approval of the manufacturer. Labour cost and repair work to the account of the manufacturer are based on predetermined rate schedule and must not exceed the wholesale price of the replacement part. All parts and labour costs covered by this warranty are limited according to the table below.

The manufacturer at its discretion may decide to repair or replace any part or unit after inspection and investigation of the defect. The manufacturer may, at its discretion, fully discharge all obligations with respect to this warranty by refunding the wholesale price of any warranted but defective parts. The manufacturer shall in no event be responsible for any special, indirect, consequential damages of any nature, which are in excess of the original purchase price of the product. A one-time replacement limit applies to all parts benefiting from a lifetime coverage. This warranty applies to products purchased after October 1st, 2011.

DESCRIPTION	WARRANTY APPLICATION	
	PARTS	LABOUR
Combustion chamber (welds only), castings, convector air-mate, and ceramic glass (thermal breakage only*).	Lifetime	4 years
Plating* (defective manufacture) – subject to limitations above.	Lifetime	n/a
Stainless steel firebox components, surrounds and heat shields, ash drawer, steel legs, pedestal, trims (aluminum extrusions), C-Cast baffle*, vermiculite baffle* and secondary air tubes*.	5 years	3 years
Carbon steel firebox components, glass retainers, and handle assembly.	3 years	2 years
Blowers, heat sensors, switches, rheostat, wiring, and other controls.	2 years	1 year
Paint (peeling), gaskets, insulation, firebrick, and ceramic fibre blankets.	1 year	n/a

**Pictures required*

Shall your unit or a components be defective, contact immediately your **HEARTHSTONE** dealer. Prior to your call make sure you have the following information necessary to your warranty claim treatment:

- Your name, address and telephone number;
- Bill of sale and dealer's name;
- Installation configuration;
- Serial number and model name as indicated on the nameplate fixed to the back of your unit;
- Nature of the defect and any relevant information.

Before shipping your unit or defective component to our plant, you must obtain from your HEARTHSTONE dealer an Authorization Number. Any merchandise shipped to our plant without authorization will be refused automatically and returned to sender.

