AGA MARVEL

Installation Operation and Maintenance Instructions

Woodburning Cookstove

Model
2612 Blackwood

Heartland

CONTENTS

CONTACT LOCAL BUILDING OR FIRE OFFICIALS BEFORE INSTALLATION ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA AND THE NEED FOR OBTAINING A PERMIT.

⚠ CAUTION

DO NOT USE CHEMICALS OR FLUIDS TO START THE FIRE. DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS

⚠ CAUTION

Read this entire manual before you install and use your new room heater. If this room heater is not properly installed, a house fire may result. To reduce the risk of fire, follow the installation instructions. Failure to follow instructions may result in property damage, bodily injury, or even death.

WARNOCK HERSEY LISTED

The Blackwood cookstove is listed to CSA Standard B366.2MULC Standard S-627 & UL 1482 by Warnock Hersey Professional Services Ltd.

LLOYD'S REGISTER QUALITY ASSURANCE · ISO 14001 · ISO9001 · OHSAS 18001

AGA MARVEL is committed to building a quality product in an environmentally friendly manner. Our processes are tightly controlled and closely monitored. We have achieved certifications in ISO 9001 for quality assurance, ISO 14001 for environmental management, and OHSAS 18001 for occupational health and safety from Lloyd's Register Quality Assurance.

Important Safety Instructions
Warnings and safety instructions appearing in this guide are not meant to cover all possible conditions and situations that may occur. Common sense, caution, and care must be exercised when installing, maintaining, or operating this appliance.

Recognize Safety Symbols, Words, and Labels.

⚠ WARNING

WARNING-Hazards or unsafe practices with high probability of personal injury or property / product damage.

⚠ CAUTION

CAUTION-Hazards or unsafe practices which could result in personal injury or property or product damage.

NOTE

NOTE-Important information to help assure a problem free installation and operation.

⚠ WARNING

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS STOVE.

Stove Location - If the range must be located near a window, avoid using long curtains which could blow over the stove top, causing a fire hazard.

Any openings in the wall behind the stove or in the floor under the range must be sealed.

Do not set unopened glass or metal containers in the oven, on the warming shelf, or on the cooking surface.

Grease accumulation is the cause of many cooking fires. Clean the oven compartment regularly.

Do not attempt to extinguish a grease fire with water. Cover grease fires with a pot lid or baking soda.

Avoid the use of aerosol containers near the range.

Never place pans, cookie sheets or roasters directly on the oven bottom but use the oven rack in its lowest position.

Warranty Registration

It is important you send in your warranty registration card immediately after taking delivery of your woodburning cookstove.

The following information will be required when registering your unit.
Serial Number
Date of Manufacture
Date of Purchase
Dealer's name and address

The serial number and date of manufacture can be found on the serial plate located on the back of the stove. See Figure 1 and 2.

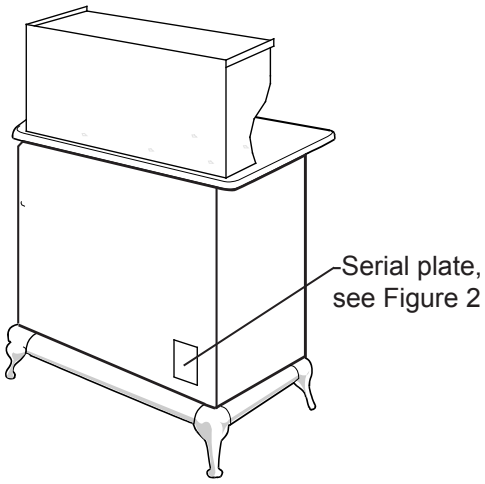
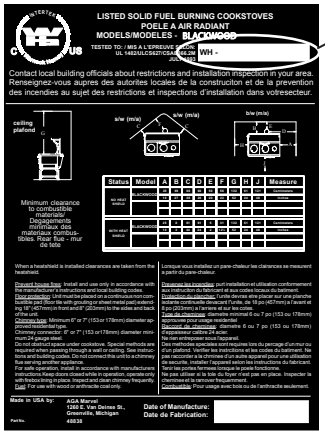


Figure 1



Serial number

Figure 2

NOTE

Please read these instructions thoroughly before attempting to install this stove.

Your woodburning cookstove is a time proven design of North American heritage. Our cookstoves were first made in 1906 and many originals are still in use today. With proper operation and maintenance, your woodburning cookstove will give your family generations of warmth, delightful meals and untold pleasures.

Take the opportunity to read this manual thoroughly to become familiar with all the installation, operation and maintenance procedures for your stove. You will find it offers valuable insight into how a cookstove functions.

Save These Instructions

Keep the manual available for future reference. The manual is an important part of your stove. If your stove is sold, deliver the manual to the new owner along with the stove.

The quality of the installation (especially the chimney connector and chimney), and the quality of the fuel being burned will affect the performance of your stove, but the most important factor is the way you operate the stove. With the help of this manual, you will learn how to effectively heat and cook with your stove. Be sure to read it entirely, including the terms of reference and function.

In addition, your own experience will help you to learn the role that the chimney plays in stove performance. The cookstove has been tested and is listed by Underwriters' Laboratories of Canada and Underwriters' Laboratories in the U.S. The test standards are ULC S-627 and UL 1482.

⚠ CAUTION

The cookstove is listed for burning wood or coal (with the optional coal grate). Do not burn other fuels. The cookstove is not listed for installation in mobile homes. Do not install the stove in mobile homes.

Preparing the installation site before moving the stove into it will save you from having to move the stove more than once. See page 9 for information on "Clearances" and "Floor Protection" page 10.

⚠ WARNING

WARNING- Safety Notice: If your stove is not properly installed and maintained, a house fire may result. For your safety, follow all installation, operation and maintenance directions. Contact local building officials about restrictions and installation inspection requirements in your area. ("Makeshift" compromises in the installation may result in hazardous conditions, including a house fire.)

Spend some time becoming familiar with the various parts by operating them before you burn your stove.

After a few weeks of operating the stove re-read this manual. Many of the procedures will become clearer after you have had some experience with the stove.

⚠ WARNING

OVERFIRING CAUTION

Repeated or extended overfiring will void warranty on this appliance. See page 29 for details.

⚠ WARNING

IMPORTANT:

Check around oven chamber on a weekly basis for soot and creosote accumulation. Clean the chamber thoroughly from the top, side and bottom with the ash scraper provided. Burn the stove hot daily to reduce creosote accumulation. Use only dry wood aged for one year. **Failure to do so could result in a chimney fire and void warranty.**

⚠ WARNING

EXCESSIVE WEIGHT HAZARD

Use three or more people to move product.
Failure to do so can result in back or other injury.

Unpacking

The warming shelf is secured to the skid with 2 screws and a banding strap. The main stove body is strapped to the skid. Smaller component parts are packaged as follows:

In the firebox:
1 ash scraper

The ash pan contains the following parts:
1 poker
1 tool rack
1 lid lifter
1 cooking surface lift handle w/screw and nut
1 interior oven thermometer

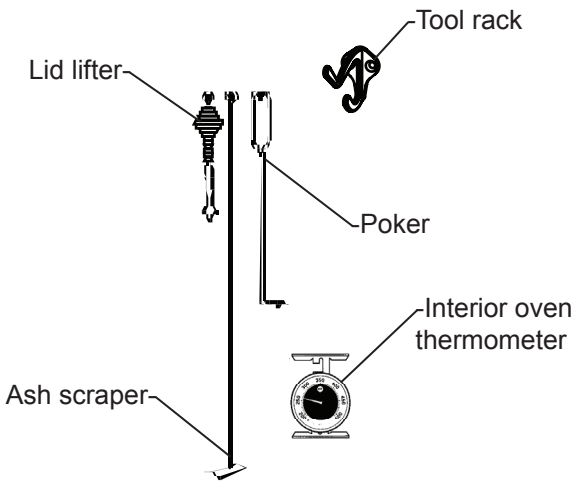


Figure 3

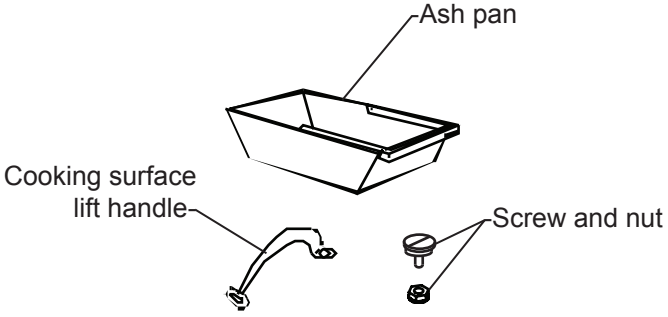


Figure 4

⚠ WARNING

WARNING- The stove is very heavy. Since the legs may dig into a soft floor, do not locate the stove, or even set it to rest, on a surface that could be imprinted. We recommend that 3 or 4 persons be available to assist in the lifting of the stove, and that gloves should be worn to protect hands from cuts.

Unpacking:

1) Cut the banding holding the stove to the skid.
2) Remove the 3 screws at each corner which hold the crate to the skid. (See crate diagram fastened to crate). Lighten the stove by removing the keyplate and lids.
3) With 2 persons minimum on the heavier, firebox side (left), and one person on the other side, lift the stove up, off of the skid and onto its new location.
4) If possible, have a fourth person remove the skid while the others lift.

Shelf assembly to stove top:

Remember when working with the shelf it is top heavy. Use your hand to support it during installation. Remove the shelf assembly from the skid by removing the 2 screws and cutting the banding strap. Lift the shelf assembly by the bracket area that is circled and set on the floor or a table top. Unwrap the shelf assembly.

Remove the washers and screws from the rear edge of the stove top. (2 places). Also remove the 4 machine screws from the top of the stove top.

With a helper lift the shelf assembly (by the circled bracket area and supporting the top of the shelf) and place the shelf into position on the stove top (see diagram above). Line up the bracket holes with the 4 holes in the stove top while a helper supports the shelf.

Secure the shelf to the stove top with the 4 machine screws and the 2 screws and washers. To prevent chipping do not overtighten screws or use power tools.

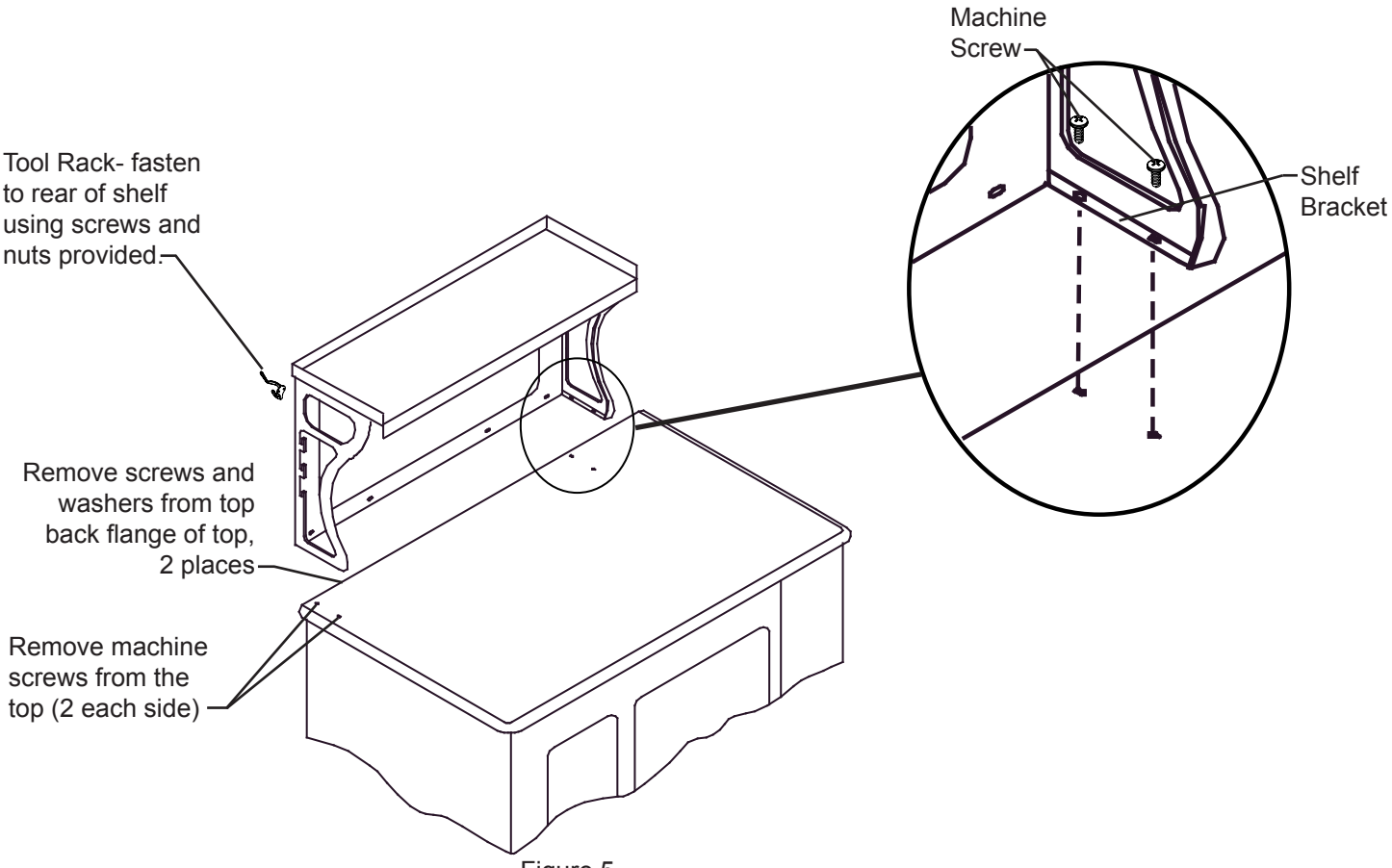


Figure 5

Cooking Surface Lift handle installation:

Insert the lift handle through the left side shelf bracket and secure it to the cooking surface with the screw and locknut provided. (See figure 6).

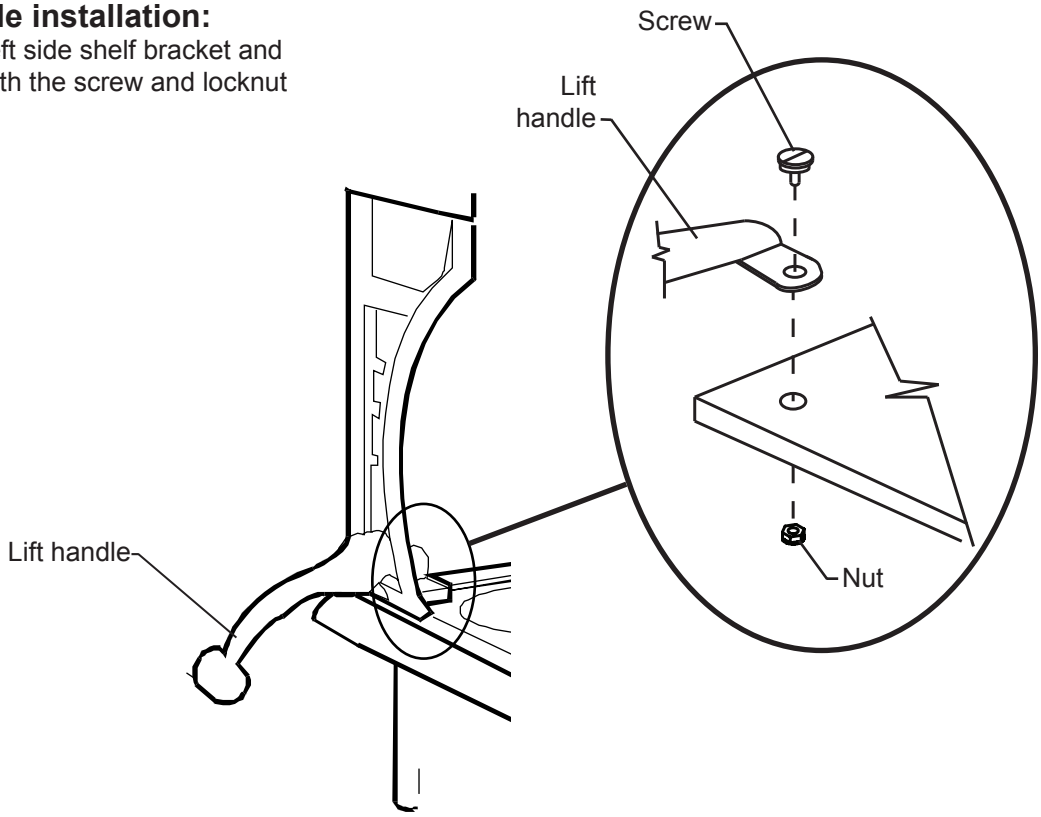


Figure 6

Installation:

Be sure to read the sections on clearances, floor protection, and chimneys before actively starting the installation. Contact local building or fire officials about restrictions and installation in your area.

Clearances:

A woodburning stove radiates heat in all directions. Heat directed toward living areas in front of the stove is usually very welcome. However, heat radiating in other directions will not be as welcome if it results in overheating nearby walls, ceilings and floors.

An important part of planning a safe installation is to be sure that combustible material located near your stove does not overheat. Clearance is the distance between your stove and stovepipe and nearby walls, ceilings, and floors. If there is adequate clearance, then the nearby surfaces will not overheat.

The clearance distance should be empty except for non-combustible heat shields. Air flowing between the stove and stovepipe and nearby surfaces carries away heat. Do not fill the empty space with any insulating material.

Be aware that as wood is exposed to continuous heat it dries out, eventually lowering the temperature at which it will start on fire. Maintain the clearances outlined in this manual, particularly with respect to nearby combustible surfaces.

Your Heartland cookstove has been tested for safe operation providing that these guidelines are followed.

An optional heat shield kit is available for our woodstoves for reduced clearances. See page 13 on "Heat Shield Kit"

⚠ WARNING

CLEARANCES must be maintained to all combustible material. These include doors, trim, furniture, drapes, newspapers, clothes, coal, and wood.

ROUGH IN AND DIMENSION DIAGRAMS

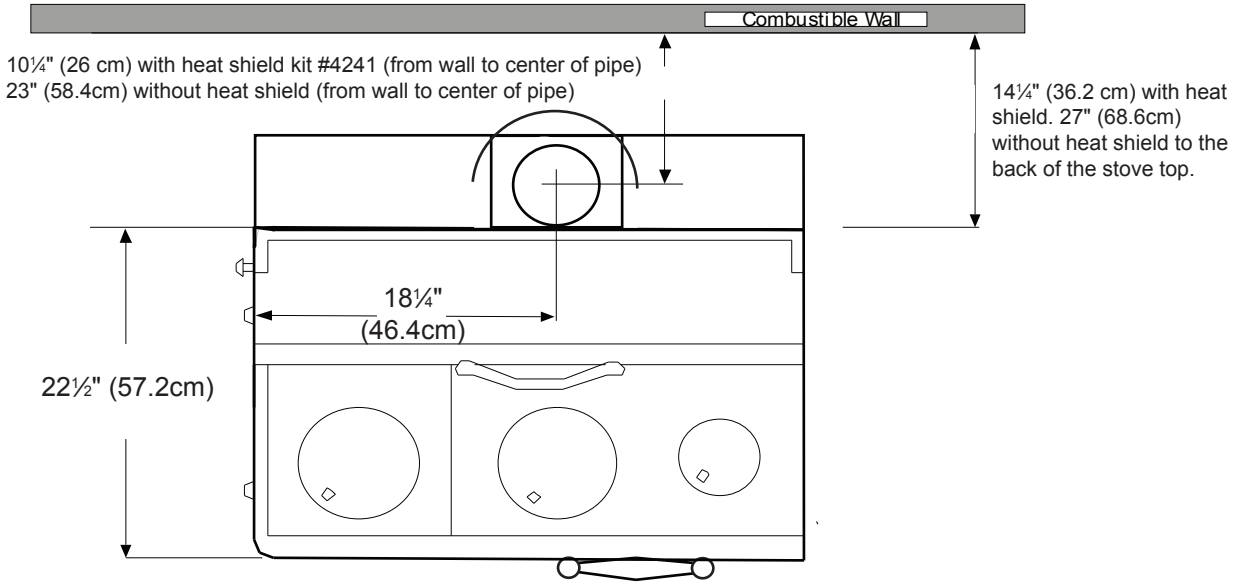


Figure 7

CAUTION

These drawings are for reference only, showing approximate dimensions for rough in purposes. Make sure that no floor or ceiling supports will be cut due to chimney installation.

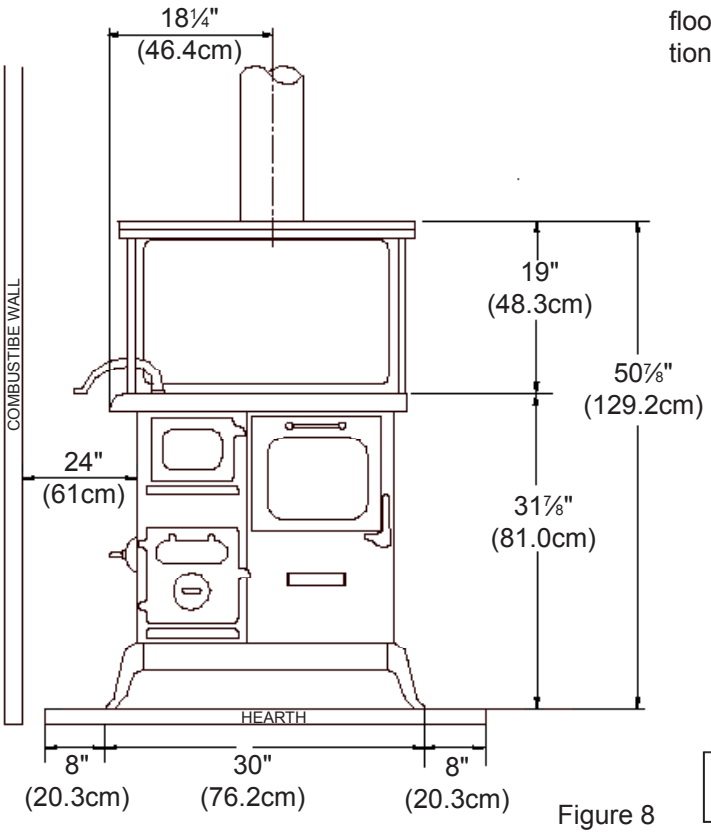


Figure 8

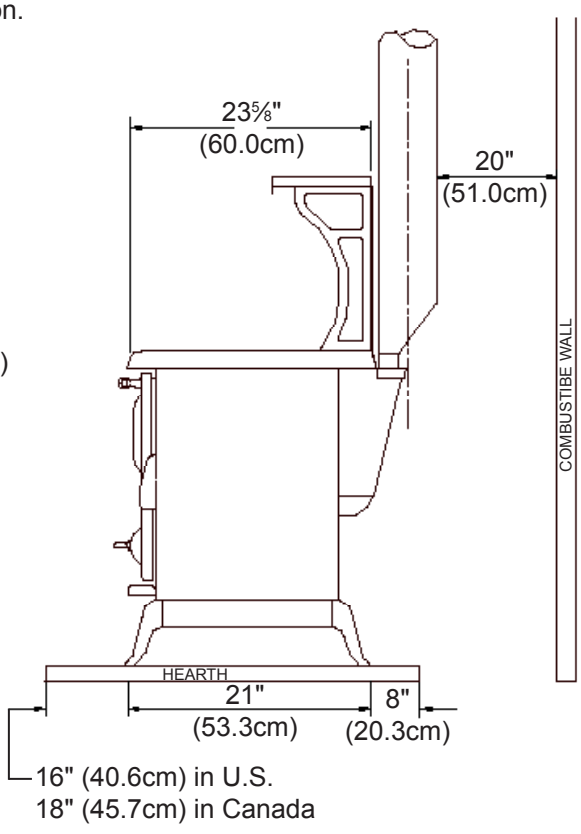


CHART OF CLEARANCES

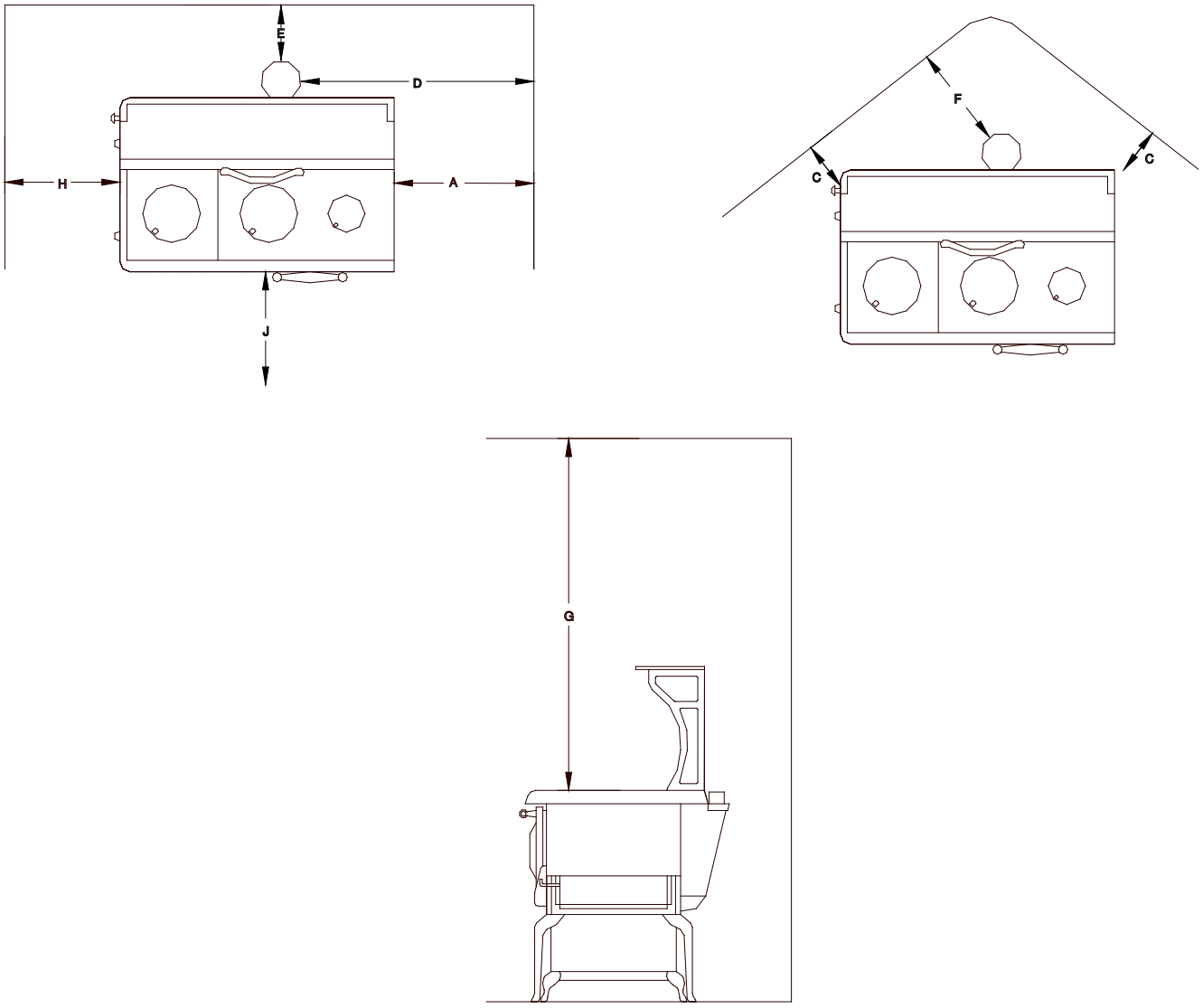


Figure 9

When a heat shield is installed dimensions D, E and F are taken from the heat shield. Dimensions A, C, G and H remain the same with or without a heat shield.

When two or more clearances to combustible walls contradict each other, the clearance with the greater numerical value must be maintained.

Status	Model	A		C	D	E	F	G	H	J	Measure
NO HEAT SHIELD	BLACKWOOD	25		66	66	51	58	132	61	121	Centimeters
		10		26	26	20	23	52	24	48	Inches
WITH HEAT SHIELD	BLACKWOOD	25		66	61	5	31	132	61	121	Centimeters
		10		26	24	2	12½	52	24	48	Inches

Clearance Reductions

There are many alternate decorative methods to reduce clearances to combustible materials. See your dealer, or local fire or building official to assure the appropriate standards are being met with these alternatives. In Canada, refer to the Installation Code for Solid Fuel Appliances and Equipment. CAN3-B365-M84. In the U.S., refer to the National Fire Protection Association Standard 211.

Floor Protection

When installing your woodstove on a combustible floor, a non-combustible floor protector is required under the stove to protect the floor from hot embers that may fall when reloading. The floor pad must be a continuous, non-combustible pad (floor tile with grouting or a sheet metal pad). A floor pad should not be placed on top of a carpet. Pad must extend 18" (458mm) in front of the stove in Canada and 16" (407mm) in front of stove in U.S. Pad must extend 8" (203mm) to the sides and back of the stove.

Pad must extend fully to the wall if using side and back clearances less than these dimensions. Pad extension must be fabricated from non-combustible materials: 1/2" (13mm) thick minimum with thermal conductivity factor "K" of 0.43 or lower (units of K = btu/h/F/in).

To determine thickness of equivalent material required use formula ("K" x 0.5) / 0.43 = thickness required ("K" value can be obtained from manufacturer of floor material).

Chimneys and Draft

The chimney is the most important element of successful stove operation. (See also page 24 "Flue Pipes")

Performance of your woodburning system depends more on the chimney than on any other single component.

The chimney 'drives' the system by producing the draft that draws in combustion air and exhausts smoke and gases to the outdoors.

When installing a new woodburning system or upgrading an existing one, give as much attention to the chimney as you do to the appliance that it serves.

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

This room heater must be connected to:
(1) a listed Type HT (2100°F) chimney per UL 103 or ULC S629, or
(2) a code-approved masonry chimney with a flue liner.

The chimney size should not be less than or more than three times greater than the cross-sectional area of the flue collar.

Follow the chimney manufacturer’s directions for installation. We recommend that prior to installing your stove into a masonry chimney, you have the chimney inspected by a qualified mason. An unlined masonry chimney should not be used without the installation of a liner.

The chimney and installation will have to be inspected by your local building inspector.

Recommended Chimney Clearances

The chimney must:

• extend at least 14 ft. (4.27m) above the collar of the stove;

• extend at least 3 ft. (92 cm) above the point where it passes through the roof;

• be at least 2 ft. above anything within a 10 ft. (3.048m) radius of the top of the pipe.

Good draft in a cold chimney should be between 0.01" and 0.15" "water column" (your dealer may be able to check this for you).

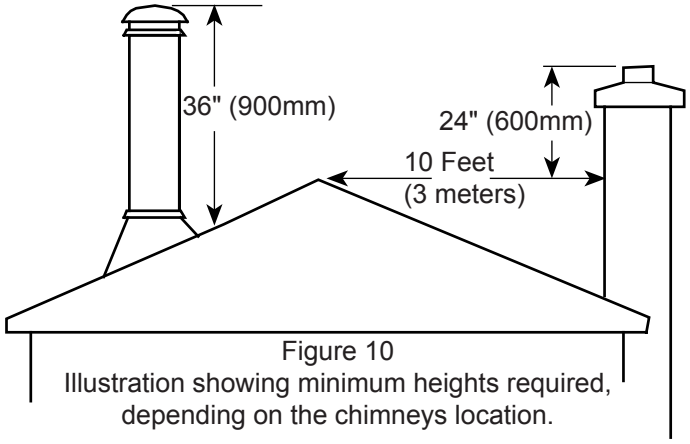


Figure 10
Illustration showing minimum heights required, depending on the chimneys location.

Stovepipe Chimney Connection Requirements

1) The stovepipe chimney connector should be made of 24 gauge or thicker sheet metal and should be 6" in (15.24cm) diameter.
2) The last section of the chimney connector starting from the stove should be screwed to the flue collar of the stove. Individual sections of the chimney connector must be screwed together with at least three sheet metal screws. The last section should be securely attached to the chimney. Be sure there are no "weak links" in the system.
3) The crimped ends of pipe sections should point downward toward the stove so that any soot or creosote that falls from the inside of the pipe will be funnelled into a clean out or fall into the stove.
4) The chimney connector should be at least the height of the warming shelf before a 90 degree turn is installed, with no more than two 90 degree turns.
5) A horizontal run of stovepipe should be no longer than 4 ft (1.22m). A vertical run of stovepipe to a prefabricated metal chimney should be no longer than 8 ft (2.44m).
6) Do not pass the stovepipe chimney connector through a combustible wall if it can be avoided. If this cannot be avoided, follow the recommended in CSA B365 in Canada and NFPA 211 in the U.S., recommendation on Wall Pass-Throughs.
7) Do not use single wall smokepipe as an outside chimney.
8) Never pass stovepipe chimney connector through a combustible ceiling.
9) The whole chimney connector should be exposed and accessible for inspection and cleaning.
10) Galvanized stovepipe should not be used. When exposed to the temperatures reached by smoke and exhaust gases, galvanized pipe may release toxic fumes.
11) Horizontal runs of chimney connector should slope upward ¼" (6.35 mm) per foot going from the stove toward the chimney.
12) During a chimney fire, the chimney connector may vibrate violently. The connector must be securely attached to the pipe and chimney, and individual sections must be securely attached together.
13) This stove is not to be connected to an air distribution duct.

Chimney Connector Systems and Clearances from Combustible Walls for Residential Heating Appliances:

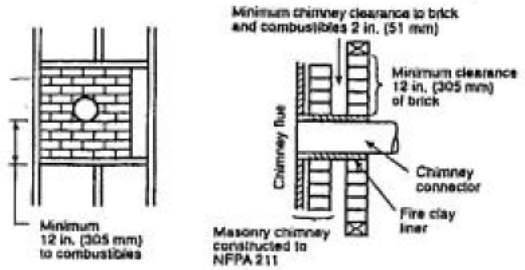


Figure 11

Minimum 3½" thick brick masonry all framed into combustible wall with a minimum of 12" brick separation from clay liner to combustibles. The fireclay liner shall run from outer surface of brick wall to, but not beyond, the inner surface of chimney flue liner and shall be firmly cemented in place.

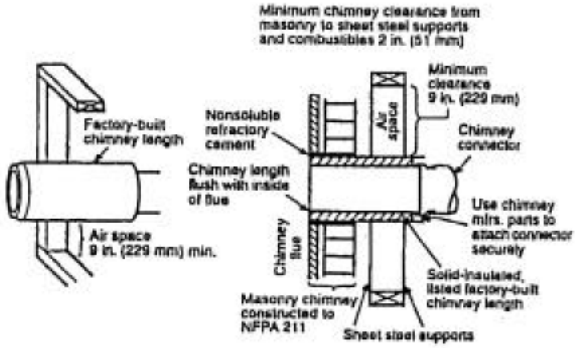


Figure 12

Solid-insulated, listed factory-built chimney length of the same inside diameter as the chimney connector and having 1" or more of insulation with a minimum 9" air space between the outer wall of the chimney length and combustibles.

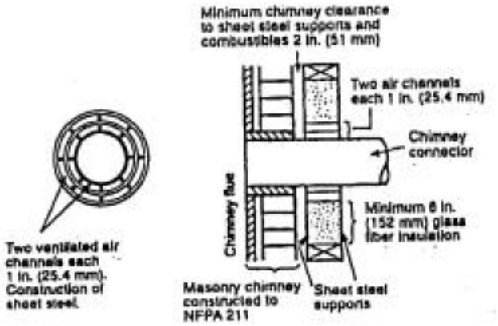


Figure 13

Sheet steel chimney connector, minimum 24 gauge in thickness, with a ventilated thimble, minimum 24 gauge in thickness, having two 1" air channels, separated from combustibles by a minimum of 6" of glass fiber insulation. Opening shall be covered, and thimble supported with a sheet steel support, minimum 24 gauge in thickness.

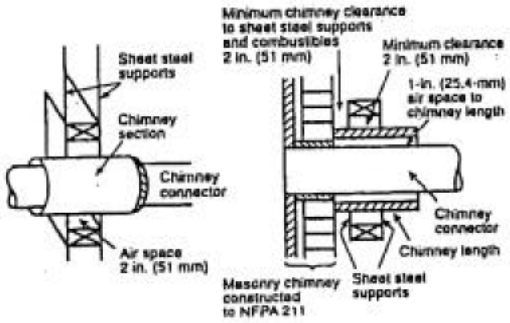


Figure 14

Solid insulated, listed factory-built chimney length with an inside diameter 2" larger than the chimney connector and having 1" or more of insulation, serving as a pass-through for a single wall sheet steel chimney connector of minimum 24 gauge thickness, with a minimum 2" air space between the outer wall of chimney section and combustibles. Minimum length of chimney section shall be 12" chimney section spaced 1" away from connector using sheet steel support plates on both ends of chimney section. Opening shall be covered, and chimney section supported on both sides with sheet steel supports securely fastened to wall surfaces of minimum 24 gauge thickness. Fasteners used to secure chimney section shall not penetrate chimney flue liner.

OPTIONAL ACCESSORIES

Accessories may be obtained from your dealer or call us direct at 800-223-3900. Our office hours are from 8:00 a.m. to 5:00 p.m. est.

Heat Shield Kit #4241

A space saving heat shield kit enables you to install your cookstove as close as 2" (5.1cm) to a combustible wall!

Installation is Easy

The heat shield kit is available for the cookstove and mounts directly on the rear of the stove. The main section of the shield covers the firebox and oven of the cookstove, while the upper section covers the flu pipe to a height above the warming shelf.(See illustration, Figure 15.) An installation and operating manual is packed with every heat shield kit. Extra copies may be obtained from your dealer or by contacting AGA Marvel.

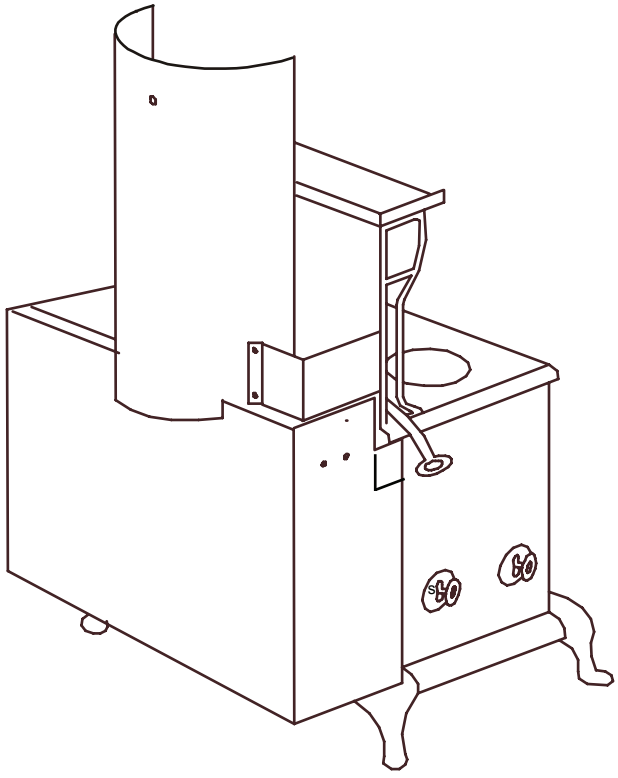


Figure 15
Illustration of heat shield kit

Fresh Air Kit #1017

A fresh air kit enables you to use outside air, instead of room air to fuel the fire. Using an outside source for combustion air has its advantages. If your home is tight and well insulated, then the fire in the stove may be "starved" of combustible air, it will be difficult maintaining a fire, and you may have back drafting problems.

During the heating season, cold air, (which is more dense than warm air), will cause the fire to burn a little hotter, resulting in more BTU's from your wood, and less creosote build-up.

Installation is Easy

Mounting holes and airways are all pre-punched on the cookstove.(See figure 16). Simply remove the cover plates on the bottom of the firebox. Now you are ready for installation. A complete set of diagrams and instructions are included with each fresh air kit. Please note that some States require a fresh air source to be installed with wood burning appliances. Please check your local, and state, building codes.

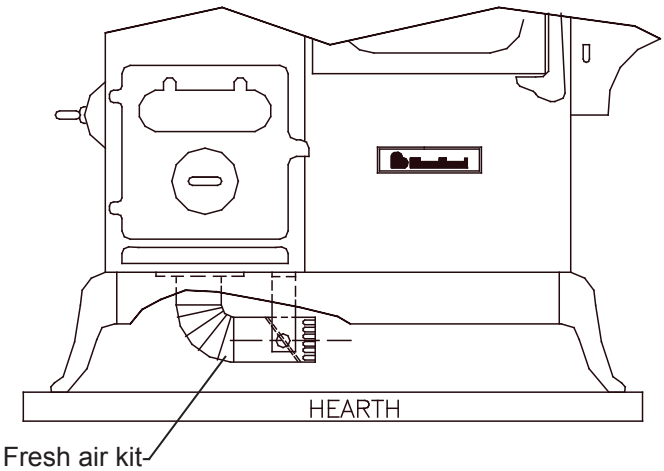


Figure 16
Illustration of Fresh air kit

OPTIONAL ACCESSORIES

Water Jacket Kit #4506

The average family spent about one quarter of their utility bill to heat water last year. By installing the water jacket in your cookstove, you can reduce or virtually eliminate your hot water utility bill.

Installation is Easy

The water jacket can be installed in the stove using only a slot screwdriver. The water jacket is a hollow baffled chamber that fits in the firebox. Two pipes and a pump installed from the water jacket to the electric or gas water heater, circulate heated water from the stove to the storage tank. (See illustration, Figure 17.)

You can expect from 6 to 8 gallons (22.7 to 30.3L) or more hot water per hour (about 8,000 BTUs) from your water jacket.

Because cold water cools the water jacket in the firebox, creosote will be attracted to its cool surface, like humidity being attracted to a cold window.

These deposits will quickly burn off thus reducing creosote formation in the stove and chimney.

An installation and operating manual is packed with every water jacket. Extra copies may be obtained from your dealer or by contacting AGA Marvel. (See page 30).

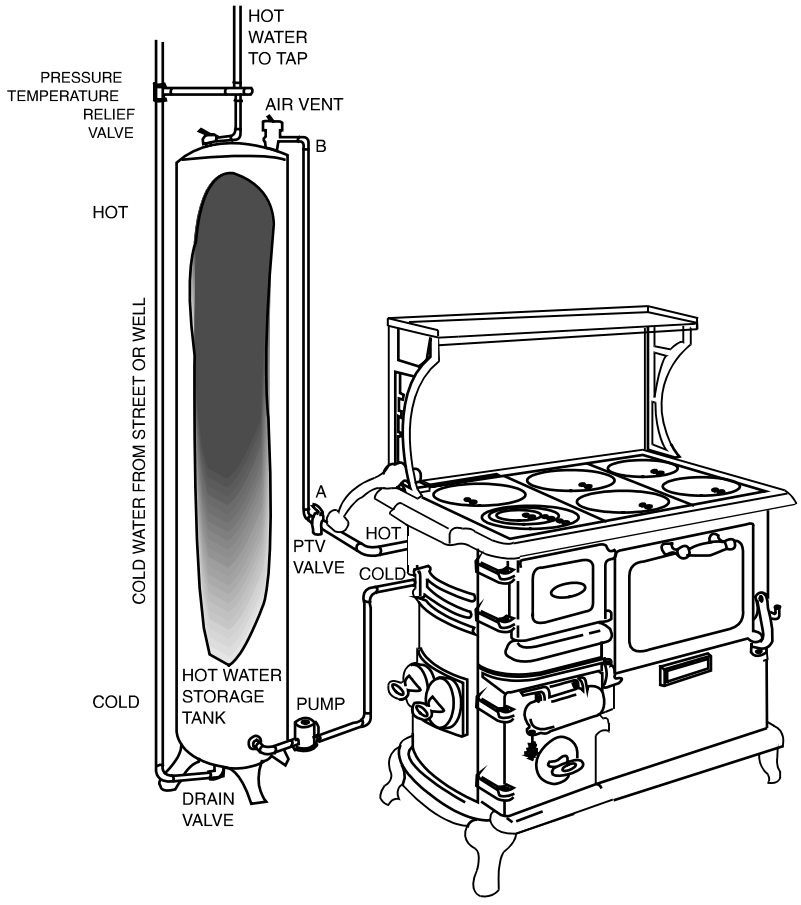


Figure 17
A Sample Water Jacket Installation
This is an illustration of an active or pumped circulating hot water system.

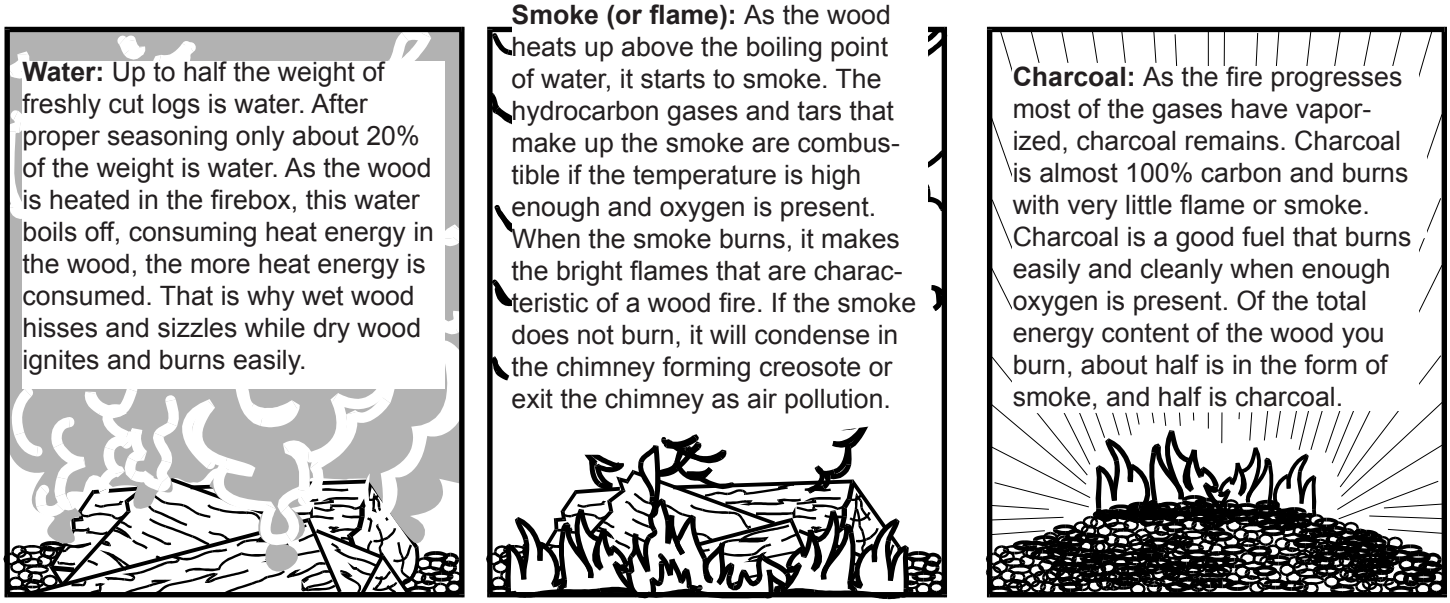


Figure 18

Break In Fires for New Stoves:

If this is your first fire, OR you have installed a replacement set of brick, read the procedure for break-in fires. Proper seasoning ensures longer stove life.

Woodburning:

The firewood you use will make an important contribution to successful operation. You will achieve the best performance and overall efficiency by burning firewood that has been split, stacked and air-dried undercover from rain for at least one year. Burning improperly seasoned or "green" wood can be a frustrating experience leading to poor performance, smoky fires and a build-up of creosote. Do not burn saltwater driftwood refuse, rubber tires, etc. Use of improper fuels can cause a fire hazard and lead to a premature deterioration of the stove components, voiding the warranty. (See Figure 18, Understanding Combustion.)

Burn dry wood because:

- It gives up to 25% higher efficiency;
- It produces less creosote;
- It ignites faster and smokes less;
- Valuable heat is lost in the fire as it dries out wet wood.

Getting Acquainted:

This cookstove is a time proven heating and cooking appliance. Take your time to acquaint yourself with the principles on which your new stove operates as a heater and cooking stove.

Understanding the primary principles of the air intake controls, the oven damper, the flame path for the fire and the relationship to the chimney will give you a very comprehensive understanding of what you are trying to accomplish with the stove.

Before starting the stove, lift the key plate handle and rest the arm in the top hook of the shelf bracket. Open both the top loading and ash pan doors. The doors open by lifting slightly over the hook and pulling towards you.

⚠ CAUTION

Always use the lid lifter to open doors and bell dampers and when adjusting the oven damper.

In the cookstove, looking into the firebox through the top you will see firebrick liners on the left and right side of the firebox.

At the bottom of the firebox is the wood grate, looking in through the ash pan door, you will see the wood grate pull—slide it back and forth and looking down into the firebox you will see the slots open and close.

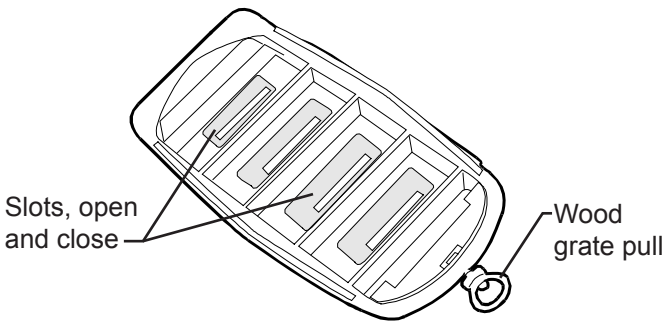


Figure 19

The stove is burned with the slots open which allows the combustion air to enter underneath the fire. As ash and coals build up on the grate these slots fill and will require the occasional "shaking".

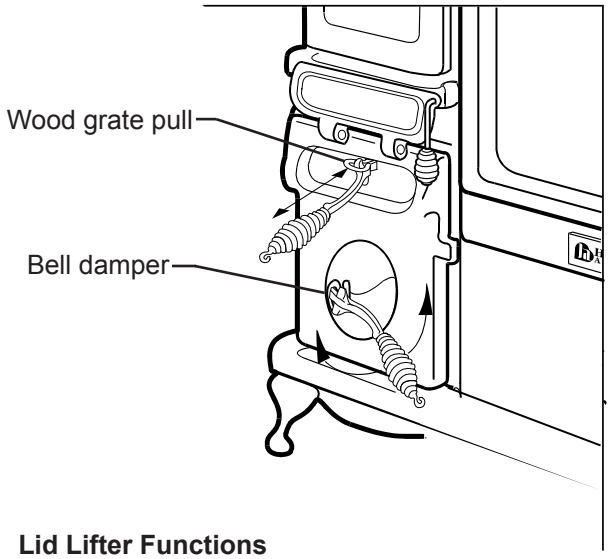
It is a good policy to shake the grate or stir the coals with the poker before loading a new charge of wood.

You will notice that with the ash door closed the ash flap may be lifted to access the wood grate pull without having to open the door.

Burning skid wood or construction materials with nails is not recommended as anything in the firebox that will not burn has the potential to get caught in the grate.

The ash pan is directly below the grate.

Starting the Stove:
Good safety practices:



Lid Lifter Functions

Figure 20

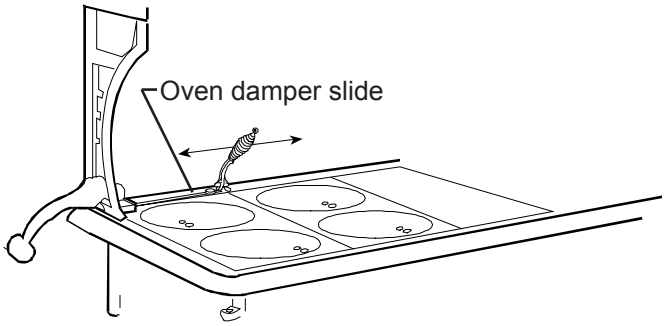


Figure 21

⚠ WARNING

Educate your family members:

• Before burning the stove, have each family member read this manual and be aware of safety practices.

• Keep children, clothing and furniture away from the stove.

• The stove is HOT while in operation – DO NOT TOUCH the stove, contact may cause burns.

• Open the firedoor, ash pan door, woodgrate pull, bell dampers and oven damper with the 1415 lid lifter only—these surfaces get hot; (see figure 20 and 21).

• Keep a class A fire extinguisher nearby and have a clearly understood plan on how to extinguish a fire.

- Make sure you have a high quality smoke detector in your home. Check with your local building code authority for more information.

⚠ CAUTION

Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or 'freshen up' a fire in this heater. Keep all such liquids well away from the heater while it is in use.

Break-In Fire

(Refer to page 15 figure 18)
The firebox of your stove is made of superior materials—cast iron and firebrick lining.

Both materials could be broken by a sharp blow or thermal shock. A little extra care and thoughtfulness during the breakin period will help promote a long life for your stove.

The cast iron and firebrick will have picked up moisture during shipping and storage.

During the break-in period it is important to let the cast iron and firebrick slowly dry out and avoid thermal shock, caused by strong hot fires.

- Build a small kindling fire (following the instructions below for the first fire) and add small pieces of kindling. Let the stove burn for approximately one hour on the first firing.

- Let the stove cool keeping the doors closed.

- **Repeat the process for a few days or until you have had six break-in fires. You may notice some smoke or "burnoff" during your initial firing. This is normal and is caused by the curing of the paint finish.**

Your First Fire

It is advisable to read and understand this section thoroughly before starting the fire (Refer to page 15 figure 18).

1. Open the oven damper (see Figure 22) and air intake controls (bell dampers). On damp cold days, it may help to open the ash door slightly until a good draw develops in the chimney.

2. To kindle a fire. Lift the key plate lift handle and rest it in the top slot of the closet bracket. Crumple six to eight single sheets of newspaper into loose balls and place them on the wood grate. Cut 10-15 pieces of kindling into strips approximately 1/2" by 1/2" by 10" long (1.27 cm by 1.27 cm by 25.4 cm).

   Place the kindling on the newspaper. Place 2 or 3 more pieces of crumpled newspaper on top of the kindling. Ensure that the wood grate slides are open.

   Lighting the ‘charge’ is of your personal preference. One method is to roll a piece of newspaper into a torch, lighting one end and using it to start the paper.

   Light the paper at the bottom of the load and then light the paper at the top, shut the key plate immediately. You may find it helps to hold the key plate open just slightly for a few seconds to give some extra air and establish the fire.

3. To Fuel the Fire. After a couple of minutes open the front loading door slowly. When the kindling is established add larger pieces, perhaps 2"x2"x10" (5cm by 5 cm by 25.4 cm) long.

   Continue this process until the fire is established when split logs can be added.

   Dampering the stove. Tighten the bell dampers to approximately ¼" (6.35 mm) opening. This will slow the fire down. Wait momentarily and close the oven damper.

   The smoke and heat is now being routed around the oven. Remember, by closing the oven damper resistance has been put on the system.

   If the stove/chimney is not yet heated enough or there is too much volume of fire going through, this additional resistance will cause backpuffing.

   Close the oven damper slowly (Fig. 18) to allow the oven flue chamber to absorb the smoke and heat.

4. Reloading the stove—Stove tending time will be greatly reduced if you reload your stove while the system is still hot and there is plenty of hot embers to rekindle the fire quickly. Including some smaller pieces of wood in the new fuel load will help the stove regain temperatures quickly.

   When reloading, open the oven damper and wait momentarily—if loading from the top—slowly lift the key plate or if loading from the front, open the door slowly.

   Load wood—smaller, split pieces first.

   Close the door or key plate.

   Open the bell dampers slightly.

   The stove must rebuild its thermal momentum before closing the oven damper.

   As you become more experienced you will gain knowledge on what settings of bell dampers and oven dampers can be used at the different stages of the woodburning cycle (see Combustion Process, page 15 figure 18).

An "Airtight" House:

If your home is well insulated or especially well sealed, the infiltration air supply to the interior of the house may be inadequate. This phenomenon of air starvation can be exacerbated if exhaust fans (such as clothes dryers, bathroom fans, or cook stove exhaust fans) are used in your home. Outfitting your stove with the optional fresh air kit adapter, connected to an air duct leading to the outside of your home, should correct this problem.

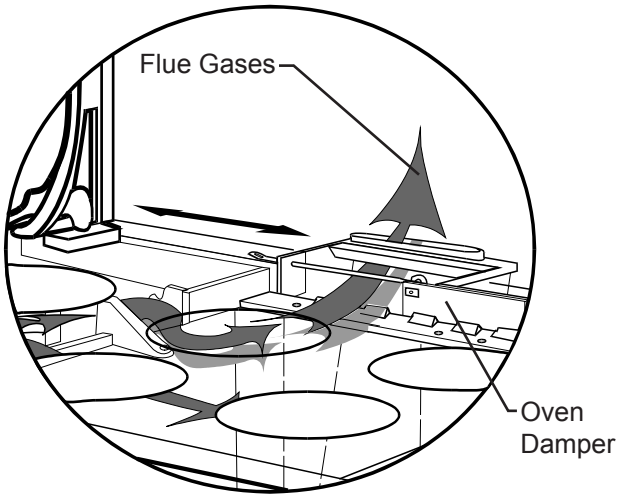


Figure 22
Oven Damper Open

Summer Burning:

The cookstove features a utility which allows you to use your stove during the summer months with less heat radiating from the firebox.

To use the summer position in the Blackwood you will need to purchase the optional #4271 summer grate support. Call your dealer to order, or call direct to AGA Marvel.

1. Remove the wood grate from the lower firebox position by pulling the grate up, back end first, and out of the firebox.

2. Remove the wood grate slide from the wood grate. Place the "summer position wood grate stand" at the back of the firebox on the firebox extension.

3. Place the fire grate so the back of the fire grate rests on the stand, and the front rests on the top of the front brick. You are now ready for summer cooking.

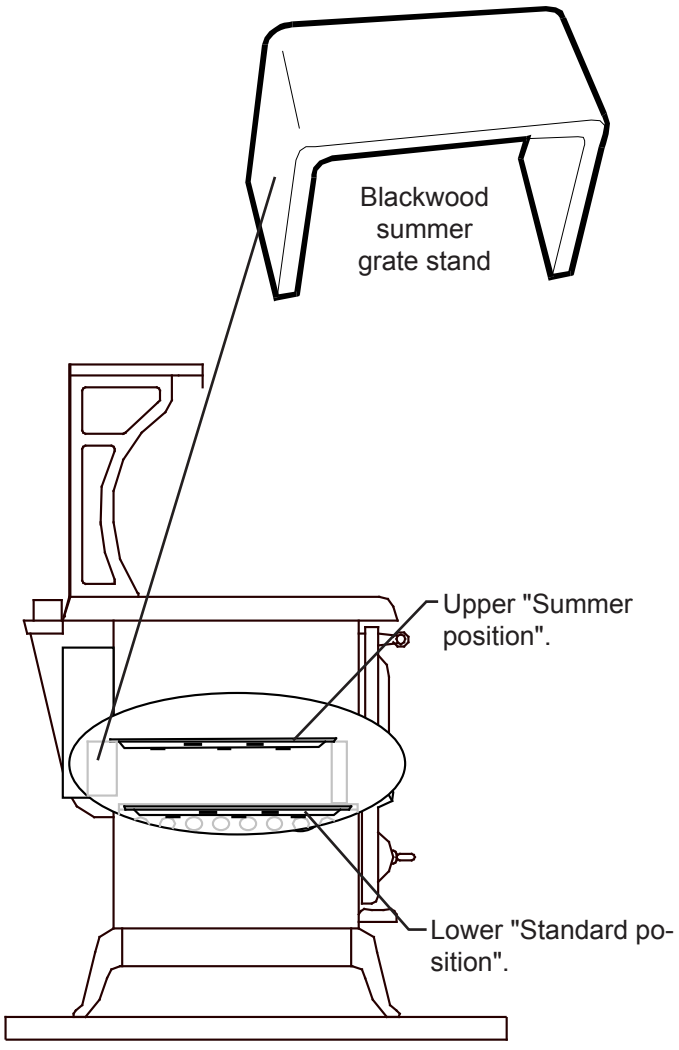


Figure 23
Wood grate positions
for the blackwood stove

NOTE

NOTE-A series of wood "break in" fires should be done before attempting to burn coal (see page 17).

Coal Burning:
Do not burn coal on the wood grate. An optional coal grate kit is available for the cookstove (#4500) to burn coal. An installation and operating manual is packed with every Blackwood Coal Kit. Extra copies may be obtained from your dealer or by contacting AGA Marvel. Below is a brief description of the coal kit installation.

Storage of Coal:
Store coal in a dry, well ventilated area.

Coal Grate Installation:
To install the optional coal grate, remove the lift handle, the key plate and lids. Lift the wood grate out through the top of the firebox and replace it with the coal grate. Remove small front brick in firebox by unscrewing bolt & nut that holds brick in place. Replace with large brick in coal kit. Gently tap the coal grate down until it fits snugly into the steel track. Replace the key plate, lift handle and lids. Then proceed with firedoor damper installation.

Firedoor Damper
(Coal burning only, see Figure 24.)

The firedoor damper comes with each coal kit and must be installed. Remove the black firedoor frame from the firedoor. Loosen the three screws that hold the cover plate over the damper holes. Replace the cover plate with the coal damper, lettered side out. Tighten screws just enough to hold the damper plate on but also allow it to slide freely back and forth. Lock screws in position with a nut on each screw thread.

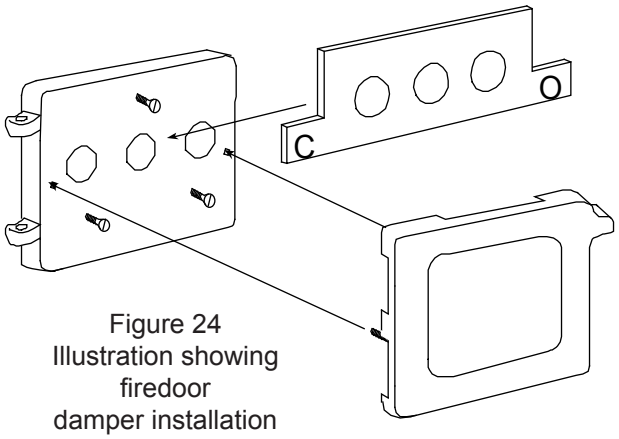


Figure 24
Illustration showing
firedoor
damper installation

Starting Up a Coal Fire
A chimney 6" (15.25 cm) in diameter is imperative for the Coal Burning process. A chimney larger than 6" (15.25 cm) in diameter will cause poor ignition of the coal due to inadequate draft.

It is possible to burn coal with a large diameter chimney, but banking a new bed of coals will require a greater mix of wood to create and maintain an adequate draft.

The minimum draft required to maintain an oven temperature of 350º F (175C) is around .04" (1.016 mm) on a water column. For drafts under .04" (1.016 mm) on a water column, closing the oven draft damper more than half way, will cause back puffing.

During the recharge phase of a new bank, a draft of .08" (2.03mm) should be maintained for at least 10-15 minutes or until a substantial bed of red embers is built up.

We recommend burning anthracite coal, which is relatively clean to handle, burns evenly with a low flame, has a low sulphur content and produces relatively little smoke.

Use a "chess nut" or "nut" size of coal, which is 1 3/16 to 1 5/8 in (3 cm to 4.13 cm) diameter. However, other coal, such as bituminous, can be burned, but is inferior to anthracite.

To Start a Coal Fire:
1. Use paper and dry wood kindling to start the fire.
2. Add small, compact pieces of hardwood when the kindling is burning hot. Keep the primary damper controls fully open to establish a hot fire quickly. The ash door also may be opened during start-up to accelerate the initial burn.
3. When a substantial bed of red embers is built up, start adding coal – small amounts at a time. Keep the draft control open.

4. Continue adding small amounts of coal until there is a solid bed of burning coal. Do not add too much at one time. Allow sufficient time between each small loading (at least five to ten minutes), so that each loading has time to ignite thoroughly before the next load is put in. When a substantial bed of burning coals has been established, fill the stove to the highest possible level, no higher than the bottom of the firedoor – be careful not to overload! A deep bed of coal will always burn more satisfactorily than a shallow bed.
5. When most of the wood is burned and the coal is completely ignited (usually five to ten minutes or less after filling the stove), the draft control should be turned down to the proper operating level. (If the ash door has been opened, it must be closed to prevent overfiring, which can severely damage the stove.)

Recharging the Fire:

If the fire is burning hot and there is a deep bed of coals, add coal a hand full at a time.

Allow enough time between each addition for the combustion process to start. As the bank becomes larger, the amount of coal added at a time can be increased.

If the coal bed is under 5" (12.7cm) before a recharge is started, it may be necessary to add kindling wood to increase the combustion level so that more coal can be added.

1. Coal never should be added unless there is a reasonably hot fire. The coal bed should be bright and vigorous.
2. If the fire is burning hot and there is a deep bed of coals, full loads of coal can be added at any time. However, if there is not a deep bed of coals, it is best to add small amounts of coal at first.

NOTE

When burning coal, the firedoor damper must be kept open. The secondary air is required to aid in burning off coal gases. The coal damper is not required when burning wood and should be kept closed when burning wood.

Coal grates are not to be used in upper (summer) position. Do NOT fill firebox with coal higher than the bottom of the firedoor opening.

Soot - Formation and Need for Removal:

When coal is burned, the products of combustion combine with moisture to form a soot residue, which accumulates on the flue lining. When ignited, this soot makes an extremely hot fire. When burning coal, the chimney connector and chimney should be inspected at least once every two months during the heating season to determine if a soot buildup has occurred.

Disposal of Ashes (wood and coal):

Do not remove the ash pan when the stove is hot. Carry the ash pan with one hand on the handle in the upright position and the other on the front edge of the pan to balance the pan.

Empty the ash pan before ashes build up over the top.

Improper disposal of ashes is the most common cause of wood stove related fires.

Disposal of Ashes - Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

⚠ CAUTION

- Don’t carry hot ashes through the house.
- Even though the stove may be cool, the ashes in the pan may still be hot.
- Never place the ash pan on a combustible floor.
- Never leave the ashes near combustible material or combustible liquids.
- Always dispose of ashes in a closed metal container with a tight fitting lid—if an unexpected gust of wind fan the ashes, a fire could result.

Stove top cooking

A cast iron cooking vessel with a flat bottom is recommended. **Do not cook directly on the cast iron top.**

As you inspect your new cookstove, you may find the edges of your keyplate sitting slightly above the cooking surface. This is caused by the gasket under the keyplate.

When getting used to cooking on the stove top remember that the surface is cast iron and like cast iron cookware, once heated retains the heat for a long time.

Successful stove top and oven cooking will not result from trying to fire the stove up immediately but by having a heated stove and 'banking' the fire to retain the temperature required.

The left hand side of the cookstove top will be the hottest as the fire burns directly beneath it. The surface will get cooler the further you go to the right.

The oven damper can be used to help control the heat on the cooking surface. To have the entire cooking surface warm, the damper will need to be in the closed position. This funnels the heat under the entire cooking surface, therefore heating it (see figure 25).

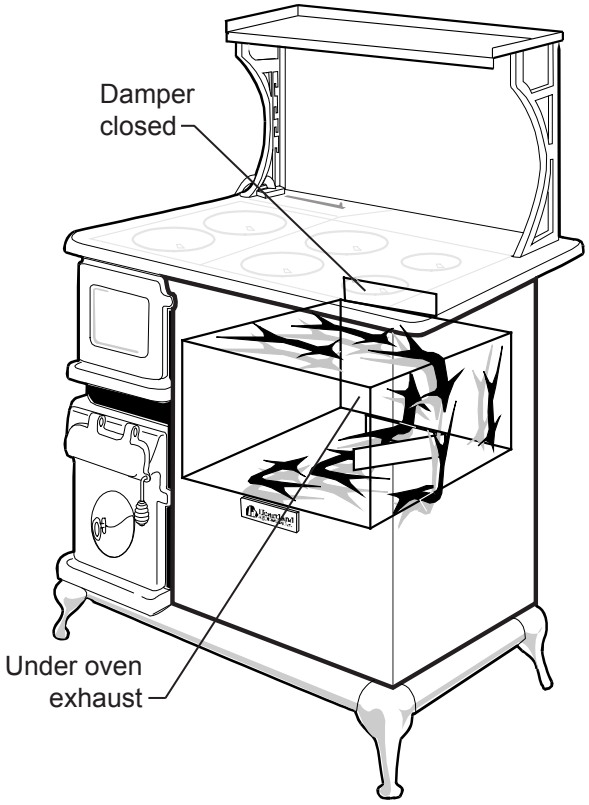


Figure 25

The temperatures established on both the cooking surface and in the oven are determined by three primary things:

1. The amount of draft the chimney has. As the bell dampers are opened more air gets in the firebox and is drawn through the stove and chimney, resulting in a faster, hotter fire.

2. The position of the oven damper. With the oven damper closed, the heat is channelled under the entire cooking surface (heating it up) and around the oven (heating it up). When the oven damper is open, the heat will be routed directly up the chimney.

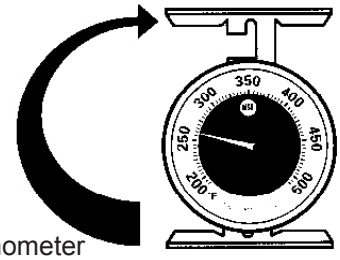
3. How much wood/coal is in the firebox and what stage of the combustion process it is at.

Oven Cooking

Learning how to most effectively control the oven temperature takes some time and experience. As a general rule, the stove should be at the charcoal stage of the combustion process before the oven is ready for cooking.

For accurate oven temperatures, refer to the interior oven thermometer provided with your unit.

Ovens vary in temperature from top to bottom and side to side. The only accurate check on oven temperature is an oven thermometer placed along side food being roasted or baked.



Rotate thermometer base for use as a hanger.

Figure 26

1. You will find that once the stove has about 4" (10.16cm) of red hot coals in the firebox, it will have reached ‘equilibrium’.
2. Equilibrium means that the entire stove and chimney system is heated and running at a fairly constant temperature.
3. At this point, you may load a new charge of wood following the procedure for ‘reloading’. Allow the stove to regain its momentum—igniting the new charge. Keep bell dampers dampered down to allow a steady slow flame.
4. The oven temperature can be controlled by moving the oven damper slide. In the closed position, the oven will get warmer, and cooler when you open it.
5. Remember the effects of the changes in the damper position are not instantaneous on the oven temperature.
6. Ideally your stove will perform best if it is left running constantly, keeping the entire system warm. Depending on your wood and chimney conditions it would typically take three or four charges of cord wood to establish a good base for oven cooking, meaning 1½ to 2 hours before cooking from a cold start.
7. Always load a new charge of wood to a glowing hot coal bed about 4" (10.16 cm) deep. Waiting too long to load a new charge means that the dampers will have to be opened, to get the new charge burning well. This results in extreme temperature swings and will make cooking difficult. Your objective is to maintain the coal bed and a constant heat.
8. Occasional ‘tending’ or stirring may be required. Keeping these principals in mind and with a little experience, you will find cooking to be easy and trouble-free.
9. Woodstove cooking methods are as diverse as their owners—there is no right or wrong way, only, in time, your way.
10. Remember by opening the oven damper there is less resistance on the flue and a hotter faster fire will result. The cooking surface directly over the firebox will typically get hotter in this configuration.
11. Always open the oven damper before opening any firebox doors or lifting the key plate. Wait momentarily before opening the doors to allow the smoke in the oven chamber to be drawn up the chimney to avoid backpuffing.

Maintain your stove properly. The benefits in superior performance and safety are well worth the time.

Chimneys and Drafts

The performance of your woodburning system depends more on the chimney than on any other single component. The chimney 'drives' the system by producing the draft that draws in combustion air and exhausts smoke and gases to the outdoors. Give as much attention to the chimney as you do to the appliance that it serves.

How Chimneys Work

It is well known that hot air rises. This principle is at work inside chimneys and is the key to understanding how chimneys function.

The hot exhaust gases from the appliance are lighter than the outside air. This buoyancy causes the gases to rise in the chimney. As they rise, a slight negative pressure is created inside the appliance. Air rushes into the appliance through any available openings to balance this negative pressure.

The force caused by the rising gases is called draft. Draft is created by the difference in temperature between the gases in the chimney and the outside air. Greater temperature differences produce stronger draft.

Factors That Affect Draft

There are several factors that interfere with draft and most woodburning systems have one or more of these features. It is usually a combination of conditions that make a chimney fail to function properly. Here are the main factors that influence draft:

1) Cold Chimney Liner

An uninsulated chimney that runs up the outside of a house and is exposed on three sides is chilled by outside cold. This means that the flue gases give up their heat rapidly to the liner. As they cool, they lose their buoyancy and draft is reduced. Insulation between the liner and the chimney shell can help to reduce the heat loss, but a chimney that is enclosed within the house is preferable.

2) Large Liner

Chimney liners that are much larger than the flue collar of the appliance allow flue gases to move too slowly. This slow movement gives the gases more time to cool and lose their buoyancy. Oversized liners are the reason that many fireplace inserts vented through fireplace chimneys tend to perform poorly. Ideally, the liner should have the same internal area as the flue collar of the appliance.

3) Chimney Height

Taller chimneys tend to produce stronger draft. We recommend that the top of the chimney should be at least 36" (900 mm) higher than the highest point at which it contacts the roof and 24" (600 mm) higher than any roofline or obstacle within a horizontal distance of ten feet (three meters). These figures produce the minimum allowable chimney height. Chimneys higher than this are often needed for performance reasons. A chimney serving a cookstove located on the main floor of a single-storey house or cottage may not be tall enough to perform well, even though the minimum heights in the building code have been followed. A good rule of thumb to use states that the top of the chimney should be at least 16 feet (4.9 meters) higher than the floor on which the cookstove sits.

4) Negative Pressure in the House

The draft produced by chimneys is a weak force that can be influenced by pressures inside the house. A woodburning cookstove acts as an exhaust ventilator by removing air for combustion from the house. A typical house may have several other exhausts, clothes dryer, gas or oil furnace, fireplace, or central vacuum system. When one or more of these other exhaust ventilators is running, it may compete for the same air that the woodburning appliance needs for combustion. This competition for air supply can make a fire slow to kindle or cause a stove to smoke when its door is opened. Chimneys are often blamed for this type of performance.

5) Stack Effect in houses

In winter, the air in houses is much warmer and, therefore, more buoyant than the outside air. The warm air in the house tends to rise, creating slightly negative pressure in the basement and slightly positive pressure at higher levels. This negative pressure in the basement can compete with chimney draft to a stove or furnace located there.

Checking an existing chimney:

Before an existing chimney is used to vent your new cookstove, a thorough inspection should be done to determine its suitability. The inspection should be performed by an experienced professional because of the many factors that must be considered. A reputable chimney sweep or retailer can give you good advice on the suitability of an existing chimney.

Masonry chimneys should be checked for deterioration including damaged bricks, crumbling and missing mortar, cracks in the drip cap at the top of the chimney, and loose flashings at the roof line. The liner should be checked for cracks and misalignment, and its size should be 6" (15.24 cm).

An existing factory-built metal chimney needs a careful inspection. Your new cookstove should be connected only to factory-built chimneys approved to ULC Standard S629 in Canada and UL 103HT in the U.S. Possible problems with an older metal chimney can include a warped or buckled liner caused by the heat of a chimney fire, corrosion of the outer shell, a loose flashing, and a lack of proper support. Any discoloration of the metal shell near a joint indicates that the insulation has settled. A damaged metal chimney should be replaced with a new approved chimney which will be safer and will perform better.

Safety Practices

What To Do If You Have a Chimney Fire:

1) Close all the combustion air dampers on the appliance.
2) Call the fire department immediately.
3) Get everyone out of the house in case the fire spreads.
4) Go outside and check to see that hot ashes do not ignite shingles.
5) Watch anything near the chimney that could catch fire and burn.
6) After the fire has run its course and the chimney has cooled, have the chimney thoroughly inspected to determine if it sustained any damage.
7) Resolve to inspect and clean the chimney more often to prevent another chimney fire.

Flue Pipes

Flue pipes carry the exhaust gases from the appliance flue collar to the chimney. The flue pipe assembly is an extremely important part of a woodburning systems and should be carefully planned and installed.

Here is a checklist to follow when installing or checking a flue pipe assembly. It is based on the requirements found in the Canadian Standards Association's Installation Code for Solid Fuel Burning Appliances and Equipment (Standard B365).

1) Single-wall flue pipe assemblies must not exceed 3 meters (10') in overall length.
2) The assembly should be as short and direct as possible.
3) A single-wall flue pipe assembly must have no more than two 90 degree elbows; use 45 degree elbow, wherever possible.
4) Do not use galvanized flue pipe because the coating can vaporize at high temperatures, emitting poisonous gases and leaving the pipe thin and weak.
5) Flue pipes for woodburning appliances need to be thicker than those used for other fire-burning appliances; 24 gauge for 150 mm (6") .
6) Joints between pipes should overlap at least 30mm (1¼").
7) Each joint should be secured with three sheet metal screws.
8) The assembly should be constructed to allow for expansion. Elbows in an assembly allow it to expand; straight flue pipe assemblies should have one section left unscrewed and secured with an inspection wrap clamped around the joint.
9) The pipes should slope up towards the chimney at least 20 mm/meter (¼ in/ft).
10) One end of the flue pipe assembly must be securely fastened to the flue collar of the appliance and the other end fastened to the chimney.
11) There must be provision for the cleaning and inspection of the pipes by removal of the pipe. The removal of the pipes should not require moving the appliance.
12) The crimped ends of the pipes should point towards the appliance so that condensation drains to the appliance and does not leak out.
13) A flue pipe must never pass through a combustible floor or ceiling, or through a concealed attic, roof space, or closet.

Flue pipe assemblies should be stable and secure. To check the stability of a flue pipe assembly, grasp it at its mid-point and give it a good shake. If it is properly constructed, it will have little or no movement.

Oven Flue Passage

As heat, smoke and gases travel around the oven, fly ash and often creosote are left behind. The frequency of cleaning of the oven flue will depend on your use, burning habits and the wood you burn. If a 'fly ash' which is very fine and light in color, is what is left behind in the oven flue chamber, it is a good indication you are burning your stove well.

If a sticky black ash is what you observe, you are burning wood which is too wet or the stove is not burning hot enough as a result of a poor chimney. Your dealer can help you correct this.

Follow this procedure when cleaning around the flue passage:

1) Clean the oven flue chamber by removing the top lids and scraping the ash to the sides.
2) Then scrape the sides so the ash falls to the bottom.
3) All the ash may then be scraped into a metal container through the ash cleanout door with the ash scraper.
4) Follow the procedure for ash disposal (see page 20) when cleaning the oven flue chamber, and chimney connector system.

Creosote buildup in the oven flue chamber can lead to rusting, a bad odor, and chimney fires. Check for creosote regularly and clean it out upon discovery.

Creosote is a tell tale condition of burning wet wood, a practice which should immediately be discontinued.

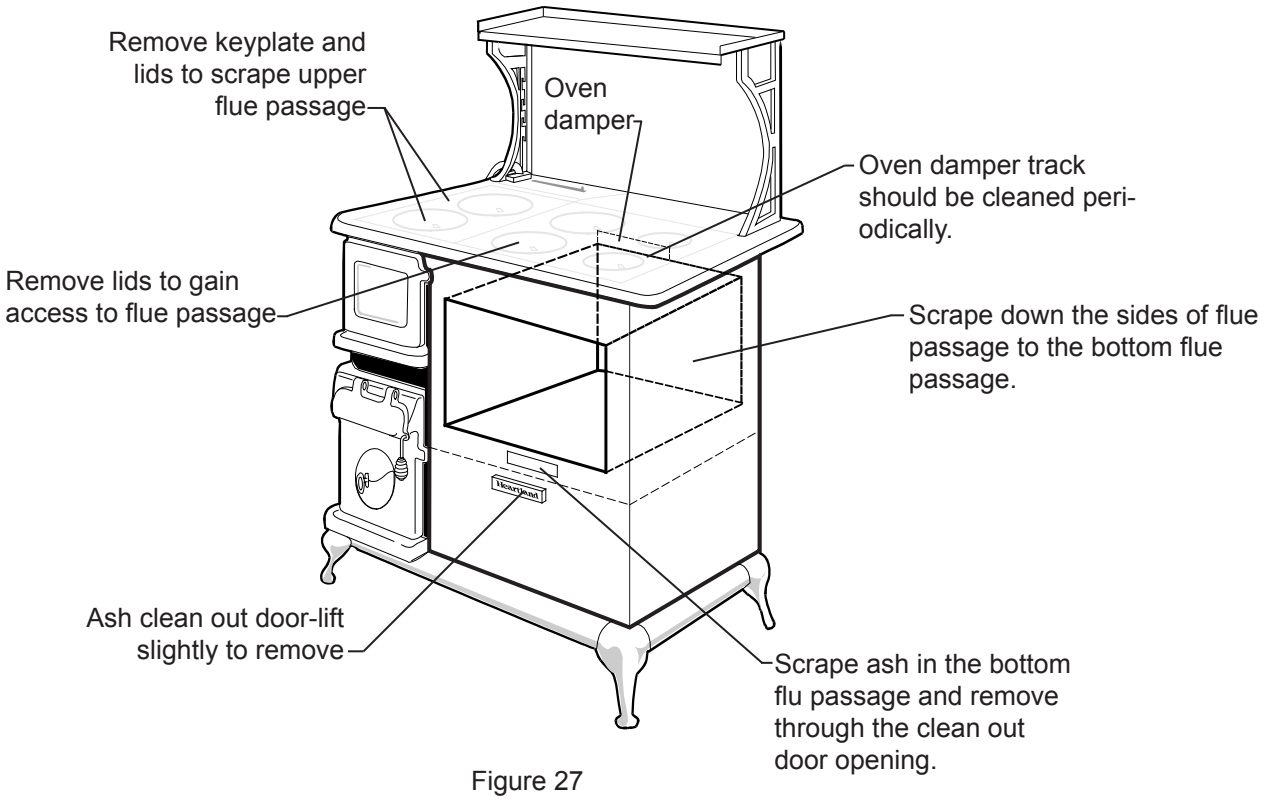


Figure 27

Flue Boot Inspection

Remove the cover plate on the flue boot, located at the back of the range. Inspect for soot or creosote buildup, scrape and clean as much as possible, and remove debris through the clean out door with the ash scraper.

Oven Damper

The oven damper may stick from time to time because of a buildup of ashes or creosote in the damper track. To free up the damper, scrape out the buildup or spray with a creosote remover, let sit for about ½ hour and clean out debris.

⚠ CAUTION

Never use any remover or cleaner on a hot stove.

Chimney Maintenance

Chimney serving woodburning appliances must be checked regularly for creosote build-up. The rate of build-up depends on cookstove and chimney characteristics, the type of fuel used, and on how the system is operated.

Until you are familiar with the rate of creosote build-up in the system, check it often - every couple of weeks. Well-designed woodburning systems tend to have a slower rate of build-up in the spring and fall when heat demand, and therefore firing rate, is lower.

Creosote may be in the form of dry, flaky deposits clinging to the liner, or a shiny, glazed coating that looks like black paint.

Glazed creosote is the most dangerous kind and indicates that one or a combination of conditions exist in the system that can cause the deposits;

1) A cold liner
2) Smouldering fires
3) Wet wood

Glazed creosote should never be allowed to exceed ⅛"(3 mm) in thickness, Dry, flaky creosote should be removed when it reaches 6 mm (¼") in thickness.

Chimney Cleaning Equipment

Brushes and rods are the most common chimney cleaning equipment. Plastic brushes are normally used in metal chimneys and steel brushes are used for masonry chimney. The brush should fit snugly in the chimney so that enough friction is produced to remove deposits. Most chimney cleaning rods are made from fibreglass with threaded couplings at each end. Several passes with the brush are needed for a thorough cleaning.

Many homeowners prefer to contact the services of a chimney sweep rather than climbing on their roofs to clean the chimney. An experienced chimney sweep can complete the job quickly and will leave no mess behind. The sweep will also report on the condition of the chimney. Referrals are the best way to select a chimney sweep. Check with your neighbours to see if they are satisfied with the sweeping services they have received.

Cooking Surface

Stove top and/or keyplate may expand during heating and use - this is normal and slight gaps may appear around key plate.

NOTE

Owners of Blackwood Cookstove: There is an expansion joint at the rear of the cooking surface on the firebox side. The purpose of this joint is to allow the top to expand and contract as required.

Door Gaskets

The rope gasket around the oven door, firedoor, ash pan door and ash door flap, should be periodicaly inspected for a good seal.

If the gasket comes loose but is still usable, it can be reseated using a good high temperature silicon. Replacement gasketing and adhesive can be ordered from AGA Marvel or your dealer.

Gasketing is sold by the foot. Refer to the gasket listing below.

Oven door - 4 ft #6387 rope gasket
Fire door - 3 ft #1710 rope gasket
Ash door - 3 ft #1710 rope gasket
Ash door flap - 2 ft #1710 rope gasket
Key plate gasket - 5 ft #1711 rope gasket

Firebox

Periodic cleaning and inspection of the firebox is recommended.

On the cookstove there is a gasket on the top under the keyplate. This gasket should be inspected and replaced if it fails to seal.

Check for smooth operation of wood grate.

Some cracking of the firebrick is normal and may be sealed with stove cement.

The firebrick, grate and cast liners are replaceable parts. You will prolong the life of these parts by:

1) Following the procedure for break in fires.
2) Avoiding impacting these parts when loading firewood.
3) Burning seasoned firewood.

TERMS OF REFERENCE AND FUNCTION

Backdrafting: The emission of smoke and/or air through the stove when a flow reversal occurs in the chimney, caused by wind conditions or negative pressure within the building.

Backpuffing: The momentary emission of smoke through openings in the stove when oxygen is admitted to an oxygenstarved fire. When a door or the bell dampers are opened, the sudden charge of air may not be immediately absorbed by the chimney system, resulting in a backpuff of smoke.

To help eliminate this problem ensure that the oven damper is open before opening the ash pan or firedoor. Open the doors slowly to allow the smoke to clear from the chimney system.

Bank (the fire): Loading the firebox with fuel (wood or coal) to produce a long burn cycle. Banking can only be accomplished on a good bed of coals.

Creosote: When wood is burned slowly, it produces tar and organic vapors, which combine with expelled moisture to form creosote.

Creosote vapors condense in the relatively cool chimney flue of a slow burning fire resulting in creosote residue accumulating on the flue lining. When ignited, this creosote makes an extremely hot fire.

Establish a routine for the fuel, wood burning and firing technique. Check daily for creosote buildup in the pipe and chimney until experience shows how often you need to clean to be safe.

The hotter the fire and/or the drier the wood, the less creosote is deposited. We recommend burning your stove with all the combustion air dampers open for at least an hour each day.

Weekly cleaning may be necessary in mild weather; monthly cleaning may be enough in the coldest months.

Key Plate: The cast iron section on the stove top which is lifted for fuel loading or to make repairs in the firebox.

Key Plate Lift Handle: The handle used to lift the key plate to allow access to load the firebox.

Lid: The removable round cast iron disks on the stove top. Can be removed to allow access to clean the flue chamber above the oven.

Lid Lifter: The tool used to remove the lids, open and close the firebox doors, and adjust the bell and oven dampers (see figure 20 and 21).

Oven Cleanout Door: The door under the oven that is removable to allow access to scrape ashes out of the flue passage around the oven.

Oven Damper: The shutoff for routing the heat smoke and gases either directly out through the flue or around the oven.

When ‘open’ the smoke, heat and gases will exhaust directly out the flue. This is the position used during the initial firing of the stove.

When ‘closed’ the smoke, heat and gases will be routed around the oven heating the oven, cooking surface and more of the stove mass. When the oven damper is ‘closed’ more resistance is put on the chimney system.

Opening any doors or lifting the key plate with the oven damper closed will result in backpuffing. Always open the oven damper before opening the ash pan door, firedoor or key plate.

Oven Flue Passage: The air space around the oven (between the oven top and the cooking surface, the right side of the oven and the right side of the stove, and the bottom of the stove and bottom of the oven) through which heat, smoke and gases travel.

This resulting travel heats the oven when the oven damper is in the ‘closed’ position.

Oven Rake (Ash Scraper): The tool used to scrape creosote and ash from the flue chamber around the oven.

Warming Shelf: The storage and warming area mounted to the base of the stove. Provides overhead storage and warming for plates and foods.

Water Jacket: A hollow collector which is installed in the firebox through which water flows is heated and is circulated to a storage tank, either by convection flow or by a small pump.

This system may be used for domestic hot water or baseboard heating. Installation should be carried out only by a qualified plumber. Ask your dealer, or call or write us for an installation guide.

OVERFIRING CAUTION

⚠ WARNING

Overfiring of your woodburning appliance represents a serious fire hazard.

Overfiring can also warp your stove, break welds, permanently discolor the plating and cause premature burnout of your stove. Repeated overfirings will void the warranty of this appliance.

To prevent overfiring:

1) If the air intake has little effect on dampering the fire, excessive chimney draft is the probable cause (especially on chimneys in excess of 20’ or 6.1m). Normal chimney draft is approximately 0.05" (1.27 mm). Install a smoke pipe damper in the pipe approximately 5’ (1.52m) from the floor. NOTE: Open damper before opening the door to prevent smoking.
2) Install a magnetic thermometer on the top of your stove near the flue collar or a probe-type thermometer in the smoke pipe.To prevent creosote buildup in the pipes, the stove should be run between 800°F and 900°F (426.7˚C and 482.2˚C) for 30-45 minutes each burning day.
3) Except for the initial period after lighting (5-10 minutes), do not operate your stove with the door open.
4) Ensure the ash pan door is tightly closed during operation. An open ash pan door will allow excess draft through the firebox, causing overfiring. When emptying ashes, clean thoroughly behind the ash pan to allow complete closure.
5) Clean your chimney regularly to remove creosote buildup. A chimney fire is a fire hazard and will overfire your stove. See page 24, "What to do if you have a chimney fire".
6) During operation, if any parts of the stove or pipe begin to glow the stove is overfired. Do not add fuel. Close all doors, dampers and draft controls completely until glowing is eliminated and safe temperatures are restored. If overfiring conditions persist on subsequent burnings, contact your dealer for remedial action.

OBTAINING SERVICE

Before You Call for Service

If the unit appears to be malfunctioning, read through this manual first. If the problem persists, check the trouble-shooting guide. Locate the problem in the guide and refer to the cause and its remedy before calling for service. The problem may be something very simple that can be solved without a service call. However, it may be required to contact your dealer or a qualified service technician.

If Service is Required:

- If the product is within the first year warranty period please contact your dealer or call AGA Marvel Customer Service at 800.223.3900 for directions on how to obtain warranty coverage in your area.
- If the product is outside the first year warranty period, AGA Marvel Customer Service can provide recommendations of service centers in your area. A listing of authorized service centers is also available at www.agamarvel.com under the service and support section.
- In all correspondence regarding service, be sure to give the model number, serial number, and proof of purchase.
- Try to have information or description of nature of the problem, how long the unit has been running, the room temperature, and any additional information that may be helpful in quickly solving the problem.
- Table A is provided for recording pertinent information regarding your product for future reference.

For Your Records	
Date of Purchase	
Dealer's name	
Dealer's Address	
Dealer's City	
Dealer's State	
Dealer's Zip Code	
Appliance Serial Number	
Manufactured Date	
Date Warranty Card Sent (Must be within 10 days of purchase).	

Table A

WARRANTY

ENTIRE PRODUCT – LIMITED ONE YEAR WARRANTY

AGA Marvel warrants the replacement or repair of all parts of this Wood Cookstove which prove to be defective in material or workmanship, with the exception of the painted or porcelain enamel finish or plated surfaces, for one year from the date of original purchase. Such parts will be repaired or replaced at the option of Heartland without charge, subject to the terms and conditions set out below.

The warranty period against defects in the painted or porcelain enamel finish, or plated surfaces, is 90 days from date of original purchase. The warranty does not include normal wear of firebox parts or gaskets.

TERMS AND CONDITIONS

1) This warranty applies only for single family domestic use when the Wood Cookstove has been properly installed according to the instructions supplied by Heartland and is connected to an adequate and proper chimney and chimney connections. Damage due to faulty installation, improper usage and care, abuse, accident, fire, flood, acts of God, commercial, business or rental use, and alteration, or the removal or defacing of the serial plate, cancels all obligations of this warranty. Service during this warranty must be performed by a factory Authorized Service Person.

2) Warranty applies to product only in the country in which it was purchased.

3) Heartland is not liable for any claims or damages resulting from any failure of the Wood Cookstove or from service delays beyond their reasonable control.

4) To obtain warranty service, the original purchaser must present the original Bill of Sale, Model and Serial number. Components repaired or replaced are warranted through the remainder of the original warranty period only.

5) The warranty does not cover expense involved in making this appliance readily accessible for servicing.

6) This warranty gives you specific legal rights. Additional warranty rights may be provided by law in some areas.

7) Adjustments such as calibrations, levelling, tightening of fasteners, or chimney and chimney connections normally associated with original installation are the responsibility of the dealer or installer and not that of the Company.

8) Overfiring of this appliance will void warranty.

9) If the product is installed outside the normal service area, any cost of transportation expenses (tolls, ferry trip charges, or mileage expenses, etc.) involved in the repair of the product, or the replacement of a defective part, shall be borne by the customer (owner).

TO ENSURE PROMPT WARRANTY SERVICE, SEND IN YOUR WARRANTY CARD WITHIN 10 DAYS OF PURCHASE

If further help is needed concerning this warranty, contact:
Customer Service
AGA Marvel
1260 E. VanDeinse
Greenville MI 48838

Phone (800) 223-3900
Fax (616)754-9690

Heartland

www.agamarvel.com

AGA MARVEL
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