



HOME OWNERS SAFETY MANUAL AND BURNING GUIDE FOR MASONRY COOK STOVES AND BAKE OVENS

Before using your cook stove/bake oven, please read these instructions carefully. Failure to do so may bring about potentially hazardous conditions.

Points you should know when using your masonry cook stove/bake oven.

- A. USE ONLY WITH DOOR CLOSED.
- B. DO NOT USE A GRATE OR ANDIRONS.
- C. IN NEW MASONRY COOK STOVES/BAKE OVENS THE ENTIRE CHIMNEY INSTALLATION SHOULD BE INSPECTED REGULARLY (on a monthly basis) UNTIL A CLEANING CYCLE IS DETERMINED.
- D. WHEN CLEANING A CLASS 'A' METAL CHIMNEY USE A POLY OR NYLON TYPE BRUSH. DO NOT USE A METAL BRUSH.
- E. FLAMMABLE LIQUIDS MUST NOT BE USED TO START FIRES.
- F. WHEN CLEANING THE ASHES OUT OF YOUR MASONRY COOK STOVE/BAKE OVEN, BE SURE AND USE A METAL CONTAINER FOR ASHES AS AN ADDED SAFETY MEASURE. DO NOT STORE ASHES ON COMBUSTIBLE SURFACE.
- G. MAINTENANCE AND SAFE OPERATIONS ARE THE HOMEOWNERS RESPONSIBILITY.
- H. INSTALL SMOKE ALARMS AND CO. DETECTORS FOR ADDED PROTECTION.

WARNING:

Before starting the fire, check damper for proper position on cook stoves. Open by-pass damper as well as chimney damper. On units where there is no damper, but an airtight door to stop air flow, do not close this type of door until the wood is totally burned and only glowing embers remain. No flames should be visible. Once the airtight (damper) door is closed it should remain closed until the next firing.

If your masonry cook stove/bake oven has a combustion air control never close before fuel is totally consumed.

On masonry cook stoves after fire is burning well, by-pass damper should be closed to produce more heat to the masonry oven and cook top.

NOTE: For WHITE OVENS use the heater break in sheet. White ovens are heated from a remote firebox as in fireplace-heater-oven combinations.

For BLACK OVENS and masonry cook stoves proceed as follows.
(Black ovens: Where the fire is built directly in the oven on the hearth.)

- 1) After 30 days have passed start using your new masonry cook stove/bake oven. You should have 8 to 10 small fires to cure and slowly dry out any moisture present - unless your installer specifies otherwise.

WARNING: DO NOT EXCEED 10 PERCENT OF FULL LOAD (AS SPECIFIED BY MFG.) ON THE

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FIRST 8 to 10 FIRES. Then, increase load by 5 percent on each of the next 8 fires. On the next fires increase each by 10 percent until you reach the 100 percent maximum that the unit was designed for. If during this break-in period you notice moisture, damp areas on surface or sweat appearing in mortar joints, skip 1 or 2 fires to avoid a steam explosion. You should not feel any heat during the first 12 to 15 fires. If you do - you may be over firing.

- a) During the break-in period take heat measurements as you gradually increase the fuel load. Keeping a record, check cook top and oven for hot spots and cooler spots.

At different times before/during and after the fire this will help you understand when the cook top or oven is at the correct temperature for cooking or baking the desired foods. Also weigh the wood and record it with resulting temperatures.

Good record keeping will shorten the learning curve. Please pass this information to the masonry cook stove/bake oven builder for his information.

Small free standing oven thermometers are available at most grocery stores. A more elaborate and more accurate hand held point and shoot pyrometer is available at outlets like Grainger Stores. They will cost \$150.00 to \$250.00 each on average, but are worth the cost because of the instant readings and accuracy and much faster recording time.

NOTE: You could help the drying out process by using an electric heater or fan directed into the fire box starting 2 or 3 days after masonry cook stove/bake oven is installed. Leave the damper open fully during dry out and curing/break-in period.

2) After **the break-in period, try a top down burn** (a clean burn startup procedure, yes just the opposite of what we are used to).

- a) First step is opening damper. It is a good idea to check draft with a single match held at the lintel. If it is drafting into the room turn off any fans or open a window or door for a brief time.

When chimney is drafting properly, there should be no smoke spillage problems.

On outside chimneys or new units with first startup fires, it may be necessary to heat the flue via the cleanout at the chimney base. Some units may have a by-pass damper that should be open for startup to preheat flue and enhance draft.

- b) For masonry bake ovens place one piece of wood approximately 2" x 2" in diameter on bottom parallel to door near front air supply.
- c) Criss cross 3 to 4 pieces of wood approximately 2" x 3" in diameter on top of the first piece. (Log cabin style)
- d) Lay 3 or 4 pieces approximately 2" x 3" in diameter on top of the second layer, but parallel to the first layer. This will be approximately 8 to 10 pounds of base wood assuming a medium size bake oven.
- e) Crumple 2 to 3 pieces of newspaper and place on top of the third layer. Then using 3 to 4 pounds of small 1/2" to 1" in diameter kindling, criss cross the kindling on top of the paper fairly close together - allowing enough room for air flow. (Log cabin style)

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You will also find that wood laid criss cross will produce more heat than layered wood placed parallel to one another. The entire bottom should be covered to maximize the surface heat.

- f) Using one full sheet of newspaper, make a torch approximately 23' to 29" long. Light the torch and hold it up the flue. This will enhance the draft. When the torch burns down, use it as a match to start the fire.

Start up can be enhanced by using gelled alcohol (canned heat/sterno, etc. available in sporting goods stores) in the base of the chimney or clean outs.

- g) About a 1 1/2 to 2 hour fire should heat your oven for most needs. After the fire is out the oven door should be closed or blocked to trap heat inside. Wait about 20 to 30 minutes soaking period for heat to equalize before starting to bake.

Use flour or corn meal and sprinkle on bottom of masonry bake oven to verify the temperature. If it burns it is too hot. Open door to cool, or swab with wet rag or wait. If it gets golden in color it is about right. If it doesn't change it may not be hot enough. Practice makes perfect. If oven is the proper temperature the brick should all be burned clean - no soot or ash on dome.

- 3)a) For masonry cook stoves use 2" to 3" diameter wood. Place 2 or 3 pieces on grate angled left to right, then place 2 or 3 pieces slightly smaller angled right to left so there is room for air flow. (Do not lay parallel and packed tight together, this will block air flow and will be hard to start.)
- b) Next set kindling and paper on top of 2 layers and light. Be sure combustion air doors are open. Your cook stove may be equipped with a by-pass damper which should be open during startup. After a good fire is established, larger wood can be used (4" to 5" diameter) to hold a constant fire (heat output) longer.

Like masonry bake ovens the amount of wood and oven and cook top temperatures should be recorded for future reference.

Cook top lids (plates) with a spin hole and protruding lugs on bottom should be rotated with holes at 12-3-6-9 o'clock positions. Use a free standing oven thermometer to record temperatures in each position and from lid to lid. After a period of time you will learn where to place pots and pans for the desired cooking results. The hand test and counting 1001-1002-1003 etc. like checking BBQ for proper temperatures also works but takes more time to master.

Tools you need to make your masonry cook stove/bake oven more enjoyable:

Necessary for Black Ovens: a coal rake, a wood shovel and a poker to move fire and ashes as needed and a peel to load and remove pans, etc.

Necessary for Masonry Cook Tops: a lid lifter or a tool to spin lids to control heat output.

Enjoy your new masonry cook stove/bake oven. Please share your successes with your oven builder along with any ideas you may have for improvements.

Do not get discouraged, you will burn some bread, etc. from time to time - GUARANTEED! But in the end it will have been worth it. Check finished bake goods for doneness the same as you would in an electric or gas stove.

REFERENCES: Bread Ovens of Quebec by Lise Boily & Jean-Francois Blanchette
The Bread Builders by Daniel Wing and Alan Scott
The New Woodburner's Handbook by Steve Bushway

All books available on the MHA Website at <http://mha-net.org/html/bookstore.htm>

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