

Installation and Operation Instructions

Stone Age Big Pig™ and Little Pig™ Smoker Ovens



1.0 Introduction

The following provides instructions for the installation and operation care of Stone Age Big Pig™ and Little Pig™ (SA-SM-BP8 and SA-SM-LP6) Smoker Ovens, manufactured by Stone Age Manufacturing, Collinsville, Oklahoma.

Three generations of wood-burning masonry construction experience have gone into the design and construction of these smoker oven kits. A completed Little Pig oven, finished in natural stone, is shown in Figure 1.

Stone Age smokers are unique in that they are the only masonry/metal smoker units which can be covered in the same masonry finish material as the rest of your outdoor kitchen.



Figure 1. Little Pig™ Smoker Oven

The key differences between the Big Pig™ and Little Pig™ ovens are their size and weight. Table 1 shows the weights of the two Smokers.

Table 1. Smoker Weights (lbs)

	Big Pig™	Little Pig™
Refractory Kit Weight	2,850	2,600
Metal Smoker Insert	700	500
Complete Kit	3,550	3,100

Note: Weights do not include footing platform or exterior finish

2.0 Installation

Smokers are offered as kits or assembled with stone or brick veneer finishes. Kit weights are listed in Table 1.

If your smoker is received in kit form, it will arrive on two pallets, one containing the metal frame and the other containing the outer wall components, shown in Figure 2.



Metal Frame



Outer Wall Components

Figure 2. Smoker Kit

Smoker assembly and installation is not specifically designed as a “do-it-yourself” project. This is

primarily because of component weight (see Table 1) and the care required when applying mortar. However, it can be done if one has the necessary weight lifting equipment, and can use a mortaring trowel. We recommend that you contract with a professional rock/brick mason to install and finish your installation.

2.1 Site Selection and Preparation

Consult local building codes before selecting a site, as local code may prescribe specific minimum clearances to a combustible structure. In such case, follow local code if it is more stringent than the factory recommendations.

Select a location at least 8 feet away horizontally from any combustible materials, i.e., outside wall, trellis, etc. If the smoker will be built under a combustible covered area or structure, ensure the area is open enough to allow smoke to dissipate when the unit is in operation, and that the structure is open on at least 3 sides, with a minimum of 6' clearance to combustibles overhead.

Site preparation should include pouring a reinforced concrete footing for placement of the unit. Depth of the footing and specific reinforcement requirements, such as piercing, should be determined based on size and weight of the unit, finish material to be applied, soil stability and building customs. Table 2 provides minimum guidelines.

Table 2. Minimum Footing Requirements (in.)

Finish	Front (in.)	Side (in.)	Depth (in.)
Thin: Fabricated stone, stucco, stain or tile	43	37	8-10
Thicker: Full veneer, natural stone or brick	48	43	18-24

2.2 Smoker Assembly

A. After the footing has cured, set the base plate, checking for level, and square it with the footing, shown in Figure 3. Use high quality refractory cement such as Stone Age Multi-Purpose Ready-Mix for construction of the smoker kit.



Figure 3. Set the Base Plate

B. Align the metal framework, centering it from side to side as shown in Figure 4.



Figure 4. Center Framework Side to Side

C. Position the front of the frame with a 1 ½-inch overhang from the base plate to expose the expansion channel for stone/brick finish, as shown in Figure 5.



Figure 5. Provide Overhang at the Front

D. Install firebrick floor inside of the metal framework. Start at the front edge and cover the entire floor. Use refractory cement to adhere the

bricks to each other and to the base plate. See Figure 6. Use level to make sure floor is even.



Figure 6. Lay Floor

E. After the floor is completed, brick the side and back walls to the bottom of the moisture chamber by laying the bricks on their side, as shown in Figure 7. Four layers of brick are required.



Figure 7. Install Brick Walls

F. When this part (firebox) is completed, it will look like Figure 8, looking from the back.



Figure 8. Firebox Completed

G. Begin outer wall construction. Start with the larger, 2-piece L-shaped sections to create the first layer, and then alternate with the smaller, 3-piece sections, as shown in Figure 9. Install on 3/8"- inch bed of mortar with the components mortared together.

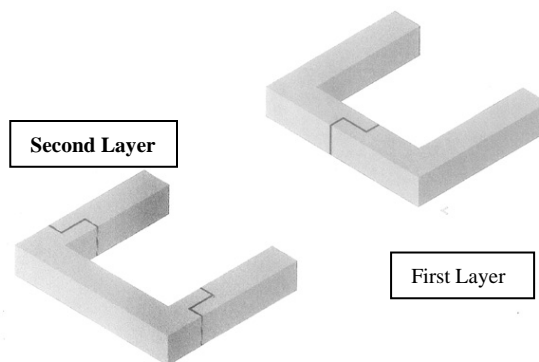


Figure 9. Outer Wall Components

H. Installed, the components will look like Figure 10. Alternate layers until all pieces are used.

Note that mortar is not applied between the lower layers and the firebrick in the firebox area, and there will be a small gap, creating an airspace between the firebrick and the outer walls.



Figure 10. Outer Wall Components Installed

I. Add the roof section as shown in Figure 11. Note that the opening for the chimney flue will be to the rear of the oven.



Figure 11. Add Roof Section

J. Add the chimney kit assembly, as shown in Figure 12.



Figure 12. Add Chimney Section

You are now ready for exterior finishing. Note that the channel around the metal front allows the finish material, stone or thin brick, to run behind the main frame edge, permitting a clean finish. If using stucco, fill in the channel with mortar and finish. Refer to Figure 5 on page 2.

In order to reduce the possibility of moisture saturation, it is recommended that the oven be treated with a water sealer after completion of the exterior. Always finish the smoker with a chimney cap.

3.0 Safety

Working around an oven that can operate at temperatures up to 500°F can be dangerous if proper tools and clothing are not used. Also, combustible materials in the vicinity of the oven may be at risk of fire.

WARNING: When working around a smoker oven, make sure that proper clothing is worn and proper tools are used. Make sure that combustible materials not necessary for operation of the oven are kept away from the oven.

3.1 Clothing

A. It is advisable that long-sleeved shirts be worn when inserting and removing items into/from the oven.

B. Use a non-combustible oven mitt when stoking and adding wood to the fire.

C. Use the non-combustible mitt when inserting and removing items from the oven.

4.0 Building a Fire

Familiarize yourself with the main sections of the Stone Age smoker before operation, as shown in Figure 13. Each section has a separate door, with the firebox at the bottom, the drip shelf in the middle area, and the smoking chamber in the upper area of the unit.

The owner should wait a minimum of 28 days after construction is completed to build the first fire. It is important that all moisture be gone from the smoker oven before the first fire is laid. After that, the first three fires should be small to gently season and break in the smoker.

WARNING: Do not start a fire in a unit that has been exposed to excessive moisture.

To protect from moisture, keep the smoker doors closed when the oven is not in use.

4.1 Selection of Wood

Any cured wood that is suitable for smoking meats can be used in the Little Pig and Big Pig Smokers. Hickory, pecan and mesquite wood are good. Oak is good for heating ovens and generating a bed of coals. Flavored wood such as apple and cherry fruitwoods, soaked in water, can be used for smoking when the cooking starts.

Charcoal and natural lump charcoal are also an option for smoking along with fruitwood chips for flavor.

Avoid use of green uncured wood as it will have a much stronger smoke flavor which can be overbearing, and will produce more soot and oils.

Caution: Do not use paper, trash, synthetic logs, or wood treated with petroleum or other chemicals. Do not use accelerants such as charcoal lighter fluid or other fuels with the smoker.

4.2 Starting and Keeping a Fire

It takes time and experience to learn the nature of a wood-fired smoker oven. There are a lot of variables affecting cooking such as type and quantity of wood, ambient temperature, size of oven and the dish.

5.0 Smoking

Little Pig and Big Pig Smokers have a large capacity for smoking. The Big Pig has five shelves and the Little Pig three. Figure 14 shows the large amount and variety of meats that can be smoked at the same time, even with two of the shelves removed.



Figure 13. Main Section Layout
(Outer Walls omitted for clarity)



Figure 14. Multiple Cooking Shelves Showing
Sunday Afternoon Dinner

The critical factors in smoking meats are temperature control, time and smoke.

- A door-mounted pit thermometer for the smoking chamber is provided with the Stone Age smokers.
- Optimal cooking temperatures vary, depending upon the style of cooking desired. Generally, slow meat smoking should be performed within the temperature range of 200-250°F. Barbecuing and faster or higher-heat smoking should be performed in the range of 250-350°F, and grilling should be performed in the range of 350-450°F, or higher.
- Stone Age smokers are designed to operate within the 200-450°F temperature range.
- An internal meat thermometer should be used to obtain the internal temperatures shown in Table 3.
- Contact with smoke is required to smoke meat. Items should be placed on the cooking grates so that they will be surrounded by smoke.
- Plan your meals, allowing for the proper amount of smoking/cooking time. Don't fire up the smoker with an unrealistic plan of serving smoked chicken an hour later. Smoking takes time, as reflected in Table 3.

Table 3. Smoking Temperature/Time

Type of Meat	Smoking Temp. (F)	Typical Smoking Time	Internal Temp. (F)
Sliced Brisket	230°	1.5 hr./lb.	180°
Pulled Pork	230°	1.5 hr./lb.	190°
Whole Chicken	250°	4 hr.	170°
Whole Turkey	240°	1.5 hr./lb.	170°

- Place drip pans on the shelf below the smoking chamber of the oven to capture excess drippings and fat. Maintaining a ½-inch of water in the pans will also help prevent drying out of the meat, and will make clean up easier. You may also add juice or other non-flammable liquids to the pans, to add other flavors to your food.

6.0 Cleaning, Inspection and Maintenance

As is the case with most other equipment, cleanliness is the best maintenance practice and will contribute to many hours of use.

WARNING: Do not clean the oven when it is hot.

Let the fire and coals completely burn out and cool before cleaning. It is best to wait until the next day before removing ashes. Ashes should be placed in a metal container with a tight-fitting lid, and removed 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.

Use a wire brush to clean the residue from the cooking grates after each use.

Spot check the refractory bricks and mortar for small cracks. It will expand slightly with the heat, then contract as it cools. Replace refractory bricks when the cracks open more than ¼"; or when pits become extensive and deeper than 3/16"; or when any piece of refractory larger than 2 inches in diameter becomes dislodged.

If creosote has accumulated, it should be removed to reduce the risk fire.

Keep the oven doors closed when not in use.

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The products of Stone Age Manufacturing, Inc. ("Stone Age") have been carefully manufactured and the components assembled to give the customer a quality product. Stone Age warrants to the original purchaser the materials that it provides to the customer against defects in manufacture for a period of twenty-five (25) years from the date of purchase on UL-127 listed fireplaces, for a period of five (5) years from the date of purchase on all unlisted fireplaces, fire pits, and other masonry components. Other accessory items or components offered, but not produced by Stone Age Manufacturing, Inc., shall be covered by their manufacturer's warranties. This Limited Warranty covers only actual manufacturing defects in the Stone Age product and does not cover defects or faulty workmanship in the installation of the product or the masonry or other structure in which it is installed. Also this warranty does not cover items that have been damaged due to over-heating, modification, improper storage or maintenance. Stone Age shall repair or replace, at its option, any defective Stone Age product component upon receipt of written notice addressed to Stone Age. This Limited Warranty covers only replacement of any defective components within the product itself occurring during the warranty period and does not cover the cost of installation or removal from a fixed location. **NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE MADE, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES WHICH ARE SPECIFICALLY DISCLAIMED.** Stone Age is not liable for damages or injury to persons or property or other incidental or consequential damages.

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