

A Simple Brick Bake Oven

Stuart Wier Boulder, Colorado 2011

Here are some photos showing how we made a simple brick bake oven. This oven is fired with a wood fire, and bakes most anything you can bake in a modern range. No mortar is required.

These bricks are well over 50 years old, left over from use in an old main-street building. You do not need fire bricks. Well-fired hard red bricks will not crack from the heat of the wood fire in this oven. Good bricks are fired in an oven which is hotter than your wood fire. Hard bricks make a clinking sound when tapped together; the higher the pitch the harder. Bricks that go clunk are too soft.

350 bricks were used, and 10 cinder blocks. Also needed is an 8 foot long piece of T-iron sawn into five 19-inch pieces for roof supports, some wood and sheet metal for the door, and optionally a 10 pound bag of mortar. This oven's floor is large enough to hold two 14 inch diameter pizza pans. When the supplies are on hand you can build this oven in an afternoon.



Build a flat, level base of 12 cinder blocks. The first brick layer is 13 across, 5 deep, on edge. No mortar is required, though a little may be used to spread over this surface in a thin layer just enough to fill cracks to stop air flowing up through the cracks below the oven floor.



The second brick layer is 8 across, 5 deep, laid flat. This is the oven floor level.



The inner walls of the fire box are 6 high, 5 deep, laid flat. The opening is 14 ½ inches. Note the slight overlap of the inner walls across the chink in the floor, to reduce air leaks.



Showing the outer walls, T-iron roof supports, and sand or mortar used to fill between the T-irons.
At this point we built a fire in it, just to make sure the bricks did not crack.



The roof is 3 flat layers. Note the second layer crosses the first and third, to reduce air leaks. Later, after these photos were made, we made the two top layers wider, for more mass.

Your best and hardest bricks might well go into the ceiling of the fire box layer; the inner walls and ceiling get the most heat.





The door is made with 4 by 4 wood, with a sheet metal lining nailed to its inside face and bent over the top edge. The door is wedge shaped on top. Make the door to fit as snugly as possible. The floor in front keeps things clean.

Recently we used a small amount of mortar to work into the cracks between the bricks, on the *outside* surface of the *inner wall* layer, on the *top* of the ceiling layer, on the back, and under the floor layer, to reduce air leaks. This required some reassembly of course. The oven works well without the mortar; it may hold heat even better now.

The oven is fired with a wood fire. A brisk fire is maintained for an hour and a half. The fire is big enough to have some flames shooting out the top of the opening, occasionally. No, there is no chimney; cold air comes in the bottom of the door opening and very hot air and smoke go out the top of the opening. After an hour and a half, let the fire burn down to hot embers. After two hours shovel all embers and ashes into a large metal bucket. The door is installed and the oven heat is allowed to become more uniform for 15 to 30 minutes; at first the floor is much cooler than the ceiling. The temperature is about 600 degrees at first; it cools down rapidly at first and slower later. Use an oven thermometer to guide your baking. We stand baking pans on half bricks to get them off the floor.

We have baked bread, fruit pies, biscuits, crackers, hard gingerbread, chicken pot pie, rolls, pizza, and Indian pudding (overnight). You can bake a couple of a pizzas in a very few minutes right after heating the oven.

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