Cuore Gourmet Wood-Fired Ovens

Suggestions and tips for building oven bases

Your **Cuore Wood-Fired Oven Kit** is a very heavy object, and thus needs to rest safely on a suitable base. If installed outdoors, it must be weatherproofed with a proper enclosure. Here you will find basic instructions, tips and guidelines for building adequate supporting structures, so as to ensure the enjoyment of your **Cuore Wood-Fired Oven Kit** for many years to come.

The base slab.

Your oven kit needs a stand to rest upon, but the stand itself needs a good foundation. So start by building a strong concrete slab. A practical starting point for the slab thickness would be **5½“** / *14 cm,* but your soil conditions will ultimately determine the appropriate dimensions. Minimum recommended side allowances should be **4”** / *10 cm* larger than the future oven base on each side, **4”** / *10 cm* in the back and at least **6”** / *15 cm* in the front. This way, you should have room enough for the finish and reveal, with some additional space in the front.

Start by measuring, staking and digging the ground, then build the frame from **2”x6“** lumber (or **2”x8“** if you need a thicker base) and setting it so as to leave **2”** / *5cm* or **3”**/ *7.5 cm* above ground level. A good practice is to sit the longer lumber parts inside the shorter ones. Before bracing and securing the frame in place, make sure it is perfectly level and square (measure the diagonals to check) (**A**).

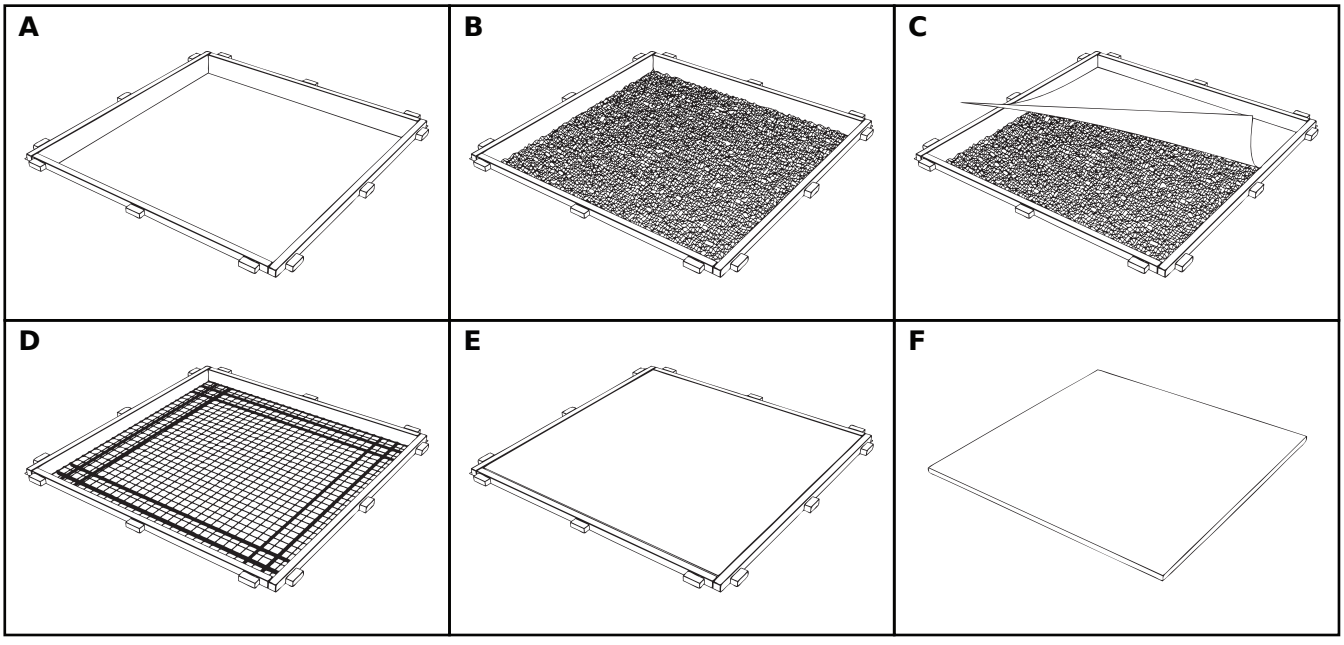
You should then lay a bed of crushed stone inside (pea gravel is fine, too), compact it well, and place a 6 mil plastic sheet on top so as to avoid moisture seeping from below (**B** and **C**).

Next, place a layer of wire mesh inside the frame, and then proceed to assemble the rebar structure on top of it. For this structure, use #4 rebar (**½“**), placing 4 pieces **4”** / *10 cm* from the frame sides and another 4 pieces **8”** / *20 cm* from the frame sides. Now tie the rebar pieces together with rebar wire, and the wire mesh too.

You now have to “float” this structure above the plastic-covered gravel, so as to position it at the middle of the thickness of the future slab. You can rest it on bricks or rebar stands for that (**D**).

And now everything is ready for mixing and pouring the concrete.

After pouring, screed and level the surface using a **2”x4”**, and then proceed to a smooth finish with a steel trowel. Leave it to slowly cure for two days, keeping it damp with curing compound (available at home centers) for a stronger slab. You may also cover it with a plastic sheet, but that may cause surface discoloration (**E** and **F**).



There's an excellent tutorial on building concrete slabs at The Family Handyman website: http://www.familyhandyman.com/masonry/pouring-concrete/form-and-pour-a-concrete-slab .

The oven stand.

The oven stand (together with the hearth slab) provides a smooth and level surface on which to assemble your **Cuore Wood-Fired Oven Kit**. The options for building the stand can be as varied as your imagination allows (brick, stone, metal, concrete, you name it) so we will cover the most common method, concrete block.

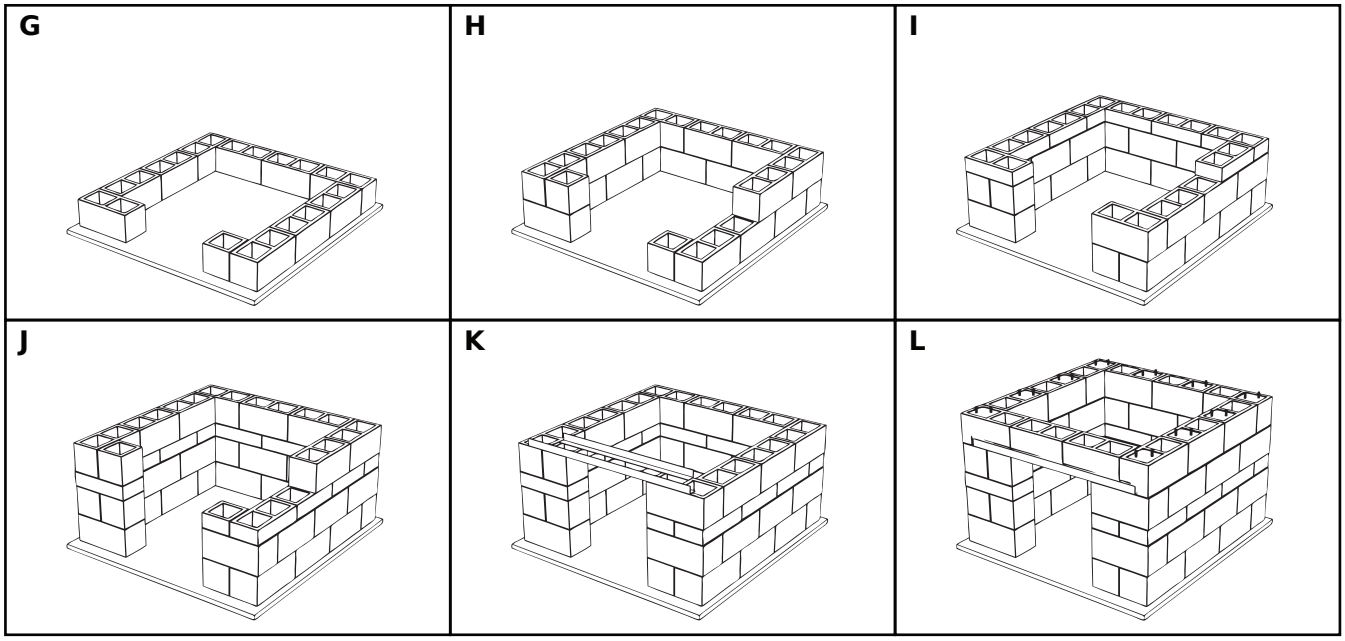
A typical concrete block, or Concrete Masonry Unit (CMU), measures **8"**x**8"**x**16"** (*20 cm* x *20 cm* x *41 cm*). As this example has a front opening for the wood storage space, we will also need **8"**x**8"**x**8"** (*20 cm* x *20 cm* x *20 cm*) blocks, **8"**x**4"**x**16"** (*20 cm* x *10 cm* x *41 cm*) and **8"**x**4"**x**8"** (*20 cm* x *10 cm* x *20 cm*) blocks for a finer control of the final stand height, if needed. Naturally, the quantities and shapes will depend on your particular project.

Start by chalking the lines on the slab as dictated by your project, then proceed to lay the first layer of blocks, using mortar as needed. Take your time to do this as accurately as possible. This first layer should be perfectly straight and level, because errors do accumulate and it will be increasingly difficult to get the subsequent layers right if the base is misaligned from the start (**G**).

Proceed with the following layers (**H**, **I** and **J**), always offsetting the blocks in each layer.

Before the final layer is laid, you should provide a supporting frame for the blocks covering the top part of the front opening. For this, you may use a pair of **2"**x**2"** (*5 cm* x *5 cm*) angle iron pieces. Measure the inner piece so as to allow room for laying the side blocks. Also, remove **3/8"** / 1 cm of material from the blocks where they touch the angle iron pieces so the iron pieces seat flush with the walls (**K**).

After all the blocks are assembled, do a final check for assuring the structure is straight and level. Passing inspection, drop a piece or two of #4 rebar (**½"**) in alternating cores and the corner cores and fill them with concrete. You may leave some rebar sticking out from the top for tying with the hearth slab rebar (**L**).



The hearth slab.

The hearth slab (**3½"**/ *9 cm*) is the final part of the stand. This is the part that will support your oven's floor, so it must be absolutely flat and level.

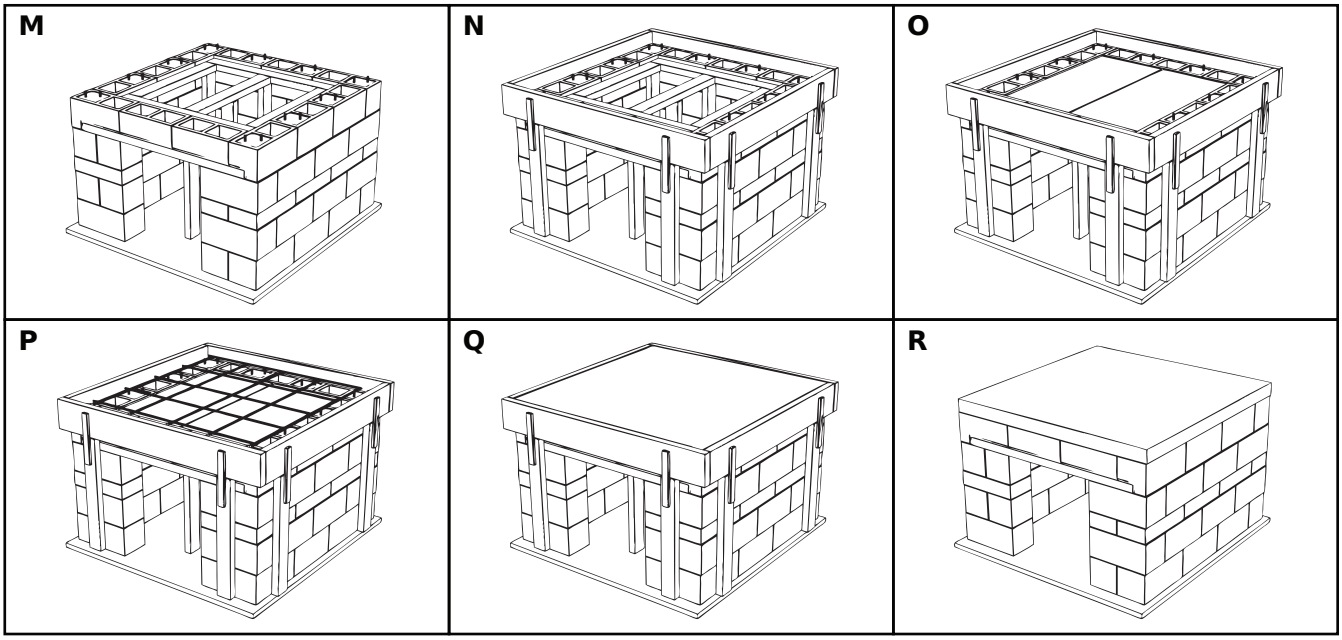
Start by building a frame with **2"x4"** lumber for supporting a **½"** Hardibacker bottom, which will remain as an integral part of the hearth slab. Remember to build the frame a little smaller (**3/8"** / *1 cm*) than the inner dimensions of the stand for easy removal. Also, the Hardibacker joints

must always be supported by a frame member underneath. This frame will be supported by **2”x4”** legs. Use shims for leveling the frame. The top of the frame should be **3/4"** / *2 cm* lower than the stand top, to allow for the Hardibacker thickness and the shims (**M**).

You may the proceed to build the outer form walls with **2”**x**4”** or **2”**x**8”** lumber, flush with the stand outer walls and supported by legs with shims as well (**N**). Now cut and place the Hardibacker boards and double check the leveling (**O**).

Build the reinforcing #4 rebar (**½“**) grid, spaced every **12”** / *30 cm*, keeping it **6”** / *15 cm* from the form borders. Float it to half the hearth slab thickness of **3½“**/ *9 cm* with pieces of block and tie it to the protruding rebar from the stand, if you want (**P**).

You can fill the open cores of the base with the empty cement bags for keeping the poured concrete from falling inside them. After mixing and pouring the concrete, keep it wet (and covered if needed) for a stronger cure and wait at least two days before proceeding with any further construction (**Q** and **R**).



The optional thermal insulation slab.

This is not needed, for your **Cuore Oven Kit** floor pieces are already refractory, but you may add a slab of vermicrete on top of the hearth slab for even better insulation, if you wish.

IMPORTANT! Safety always comes first! Before starting, please take notice:

- ✔ Wet concrete can be very harsh on the skin, and may cause symptoms ranging from a mild redness to third-degree chemical burns. Always wear adequate protection when handling concrete, such as goggles, long pants and long sleeves, rubber gloves and rubber boots, if you have to wade in it. If you get your clothes saturated with wet concrete, remove them, rinse your skin well and don clean clothes before continuing your work.

- ✔ Concrete is very heavy, so go easy with your back. Instead of mixing it by hand, it might be a good idea to rent a mixer from a store, or even rent a mixer truck (and a concrete pump, if needed) that can make as much concrete as you need on the spot. You may save a lot of time and trouble, and end up with a sturdier slab. Ask for a helping hand when pouring.

Annotations

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