

How to install Stucco Finishing on a masonry heater



Wrap the masonry heater core with 2 layers of the OCF chopped strand fiberglass or good cardboard from a refrigerator box for the expansion joint around the core of the masonry heater. Overlap all fiberglass joints 4" and tape over the joints with packing tape. Cut the fiberglass 2" larger than all door openings.

Start laying your 4" solid concrete blocks around the core of the masonry heater. When laying out the block, allow for a 3/8-3/4" space between the block and the fiberglass expansion material. This allows you to easily backfill this space between the block and the fiberglass for good heat transfer.



Install your doors into the block work according to the SR Door Installation Manual as you build the finished block around the heater core. With a stucco finish you will want to set the doors $\sim 3/8"$ out in front of the block so that you can install your stucco coats behind the steel door faceplate. If you get any stucco on the $3/16"$ edge of the face plate it will crack your stucco or block work. This photo also shows proper backfilling between the block and the fiberglass expansion material.



This photo shows the notch cut in the block for the wing nut and bolt attachment for the door.



Keep installing the blockwork around the core and backfilling behind the block with mortar. This photo above also shows the fiberglass expansion material installed about 3" above the masonry heater core. This allows you to install the 3.5" of Rock wool mineral wool insulation on top of the cap to allow for expansion.

Keep laying the block up so that the top of the block goes about 2-3" above rock wool. This allows you to pour 2" of mortar on top of the rock wool for a cap and top gasket like in the photo below.





This photo is showing the finished block work on both sides of the heater. The smaller 5" x 5" cut out holes on the bottom of the heater are for the clean out doors that will be installed after the first 2 coats of stucco.

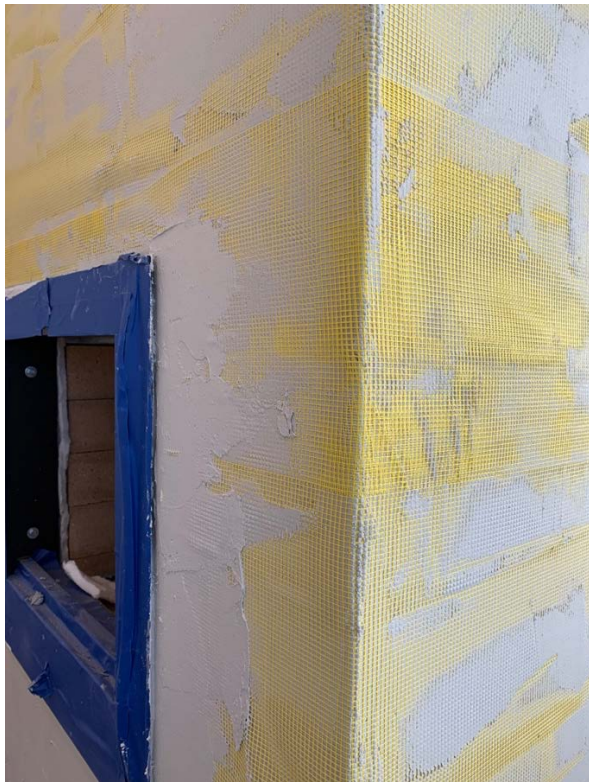
Finishing the blockwork with stucco



After all of the blockwork is finished and has had a day to set you can start applying your coats of stucco. First wash off all of the dust and loose mortar from the block with a sponge and water. You will want the block damp with water but not wet so that the first coat of stucco does not dry out too fast.

For these first 2 coats of stucco you will need enough time to install them one right after another. We recommend using a really good ~\$40 or so bag of white latex modified thin set for your first 2 coats of stucco. Dampen the block with a sponge and water. Then apply the first coat in a thin $\frac{1}{4}$ " layer around the entire heater with a stucco hawk and a 12" concrete finishing trowel. You will have to work fast enough to get the first coat on and while it is still damp. You will then wrap a layer of fiberglass stucco mesh that they use for EIFS based stucco applications around the entire heater with only one seam if possible. Start the mesh at the bottom of the heater about 8" from one corner, this works best with 2 people. Set the mesh on the damp thin set, if the thin set starts to dry then use a misting bottle

of water to keep it moist. Line the mesh up so it is straight and then use the 12" finishing trowel to push the mesh into the first coat of thin set. Now hold the thin set in place with some pressure from your trowel and stretch the mesh to one corner. Keep the mesh flat and straight and then pull the mesh onto the thin set to the corner and then flatten out the mesh into the thin set with your trowel. Go over the doors and clean out openings with the mesh. You will need to cut out the mesh around the doors leaving up to a 1" space with no mesh around the door faceplates. Smooth out the mesh as you go. If you get a hump in the mesh you can go back and slice the humped area with a new sharp utility knife and then smooth out the hump with your trowel.



First coat of thin set with fiberglass mesh embedded. Go over the clean out door openings and the next day after the stucco is hard you will just cut this out with a knife.



Start installing the second coat of thin set over the fiberglass mesh while the first coat of thin set is still damp.





Second coat of thin set is applied to all 4 sides of the heater.



Allow these first 2 coats of stucco to cure for 8 hours or more. The next day you can cut out the stucco mesh from the clean out openings and install your clean out doors in mortar.

The final coat of stucco can be colored and textured according to your own style and design. We really like using either a Type S Hydrated lime mixed with 3-5 parts silica sand for a white smooth finish. A 5 gallon bucket of this lime mortar mix can be colored with masonry dyes or even just straight paint dye from the paint store. Have the paint store mix you enough color for 5 gallons of paint and then mix this into the water of your lime mix BEFORE adding the lime and sand. The color tone will come out to a very close match of the color swatch from the paint store if you mix up about 4 gallons of lime mortar mix.

You can also just use another coat of white thin set for the final finish coat.

We have also used clay plasters from American Clay Products for the final colored coat and finish.

Another alternative would be to use one of the latex modified EFIS materials for the final coat. They can come in any color that you want and a wide variety of textures for finishing. These EFIS based finishes can expand and contract very well with your masonry heater and are pretty bullet proof.

One other easy option would be to just paint the heater with a latex based masonry paint.

