



850 Brick Tunnel oven instructions

V2022

# Oven checklist

240 x 240 x 50mm tiles	1	230 x 115 x 25	4	BT3	4
252 x 230 x 50mm tiles	2	230 x 115 x 75 - 75BT	2	BT4	2
282 x 230 x 50mm tiles	2	230 x 115 x 75/63	6		
		230 x 115 x 75/63T	2	<b>Components</b>	
188 x 57 x 25mm underloor tiles	3			1000 x 600 x 25mm Calsil board	2
		<b>Flue Arch</b>		Mortar 20kg Airstet ( white tub )	1
IFB 230 x 115 x 75	11	230 x 115 x 75	6	Castable bag 20kg	1
IFB 150 x 115 75	1	230 x 115 x 25	4	Ceramic fibre blanket 7.2 x .610	1
IFB 165 x 115 x 75	2	230 x 115 x 75 - 75A	2	Square small door arch templates	2
		230 x 115 x 25 - 25A	2	Square Large flue arch templates	2
		230 x 115 x 75/63	2	Joiners	16
		50 x 115 x 75/63 FACE	7	450 x 200mm stainless steel flue	1
Brick Quater moon 425	2	50 x 115 x 75/63 GRAIN	7	200mm stainless steel hat	1
Brick Tunnel 850 chamber 1/4 round	4			Large stainless steel brick trim Cap 200mm	1
Brick Tunnel 850 chamber 1/4 round	4			Large double handle square black door	1
				Door temperature gauge	1

# Safety & Tools

Please take care as Sydney Fire bricks take no responsibility for and harm to the builder of the oven.

## Extras needed to complete the oven.

- 8 x Bags of Boral sand cement premixed
- 1 x bag of fireclay or builders clay
- 1x Chicken wire – 5 metre roll
- Galvanised tie wire
- 5 x rolls of supermarket aluminium foil
- Trowel
- Gloves, respirator and safety glasses
- Wire cutters
- Pencil
- shovel
- Wheel barrow for Render mix
- Tape measure
- Stanley knife
- Bucket and sponge
- 4 x common house bricks for holding chamber bricks
- 4 x 2mm spacers (eg 3/8 Gal washers, wooden shims)

## Helpful items

Paint Scraper

Rubber mallet

Drill with ceramic bits

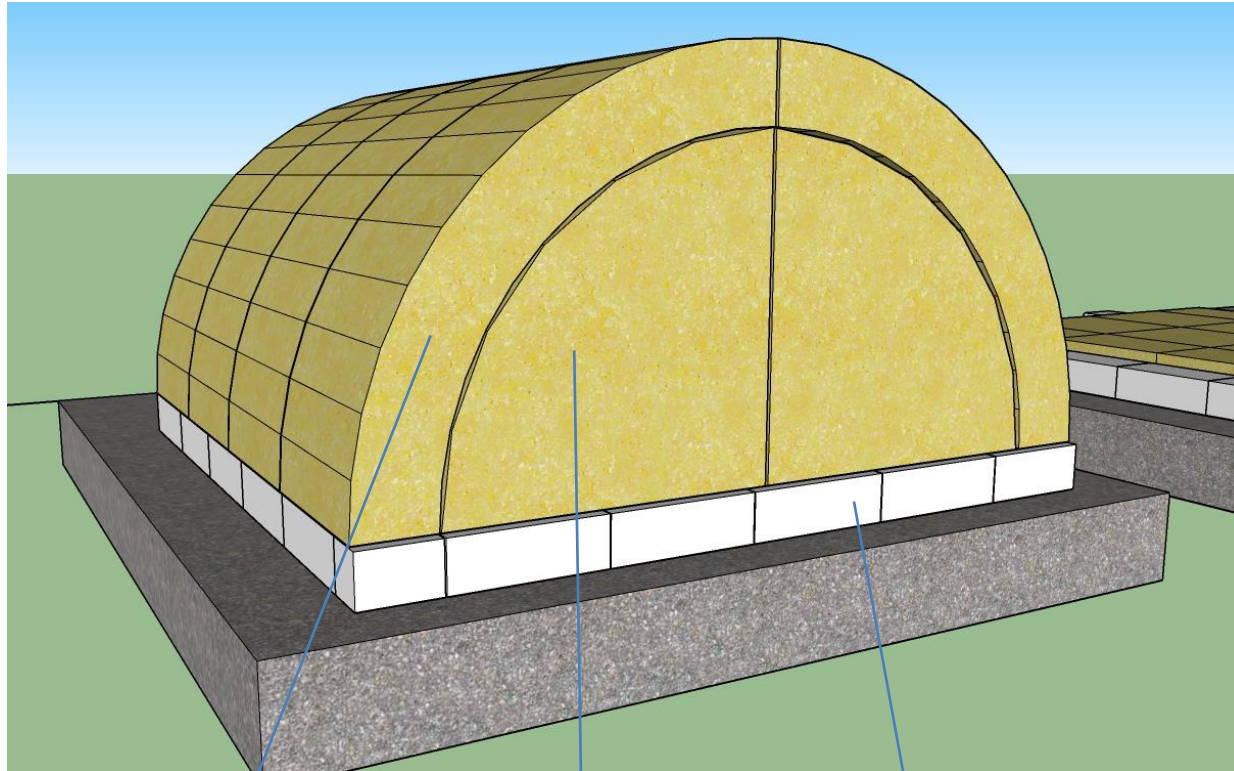
Tarp or builders plastic to cover during bad weather

Builders plastic to catch debris

# Tips and tricks

- When using ceramic fibre wear long sleeves and a mask in case of allergies or irritation.
- The render on top of the ceramic fibre blanket should be 20 -30mm or thicker to have sufficient strength. Use wire mesh for reinforcing.
- Floor tiles should be placed inside **loose (no mortar)** so over time with wear and tear, any cracked or broken tiles may be replaced. Ash after a few uses will fill any gaps and act as an expansion joint. If you mortar them in it will break any under tile product upon removal.
- When laying your floor tiles in position grind any high lips down leaving a smooth joint, this will stop the peel catching on any tiles. The tiles can be grinded on one side then flipped over so the grinded side can face down.
- The Airset mortar (white bucket provided) should be stirred before use and will go off very quickly if the lid is left off. ( this is the White plastic pails )

# Type of bricks in your chamber

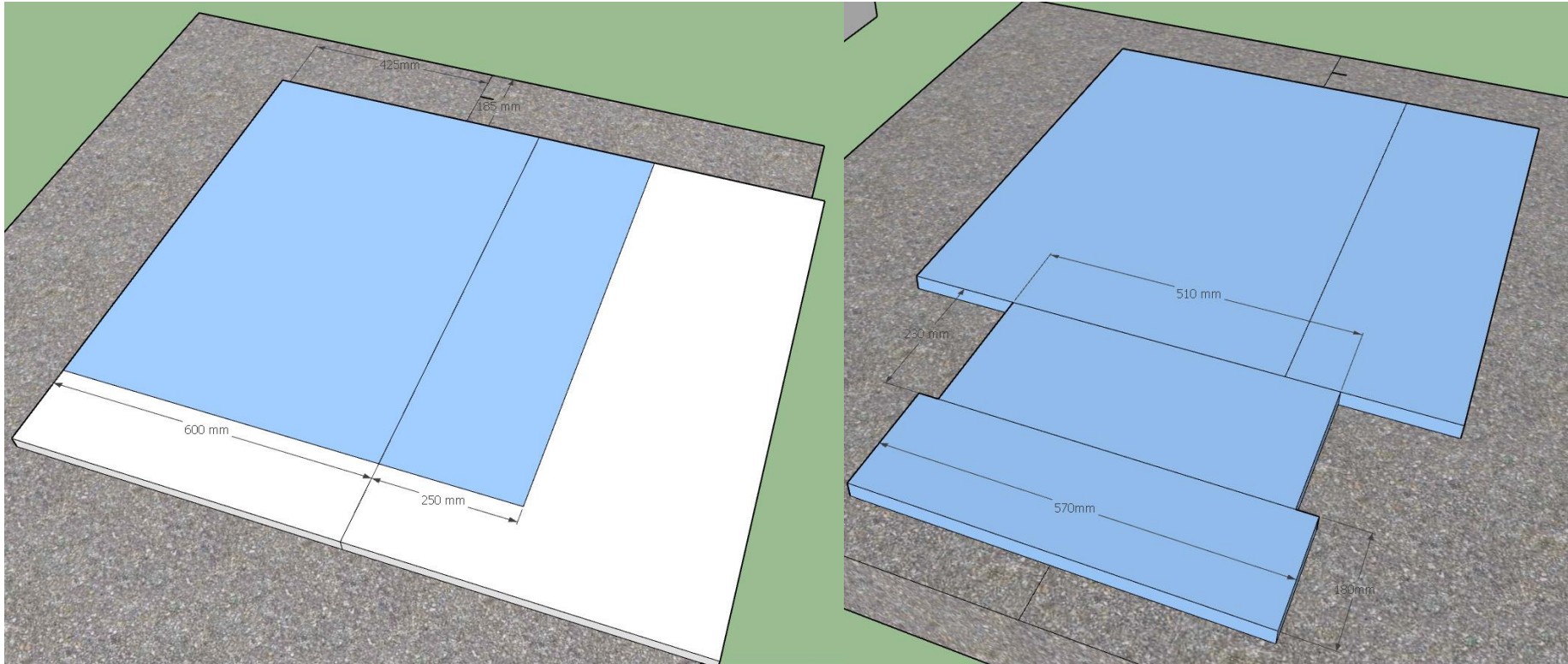


Half moon chamber pieces

Rear wall pieces

White insulation Brick

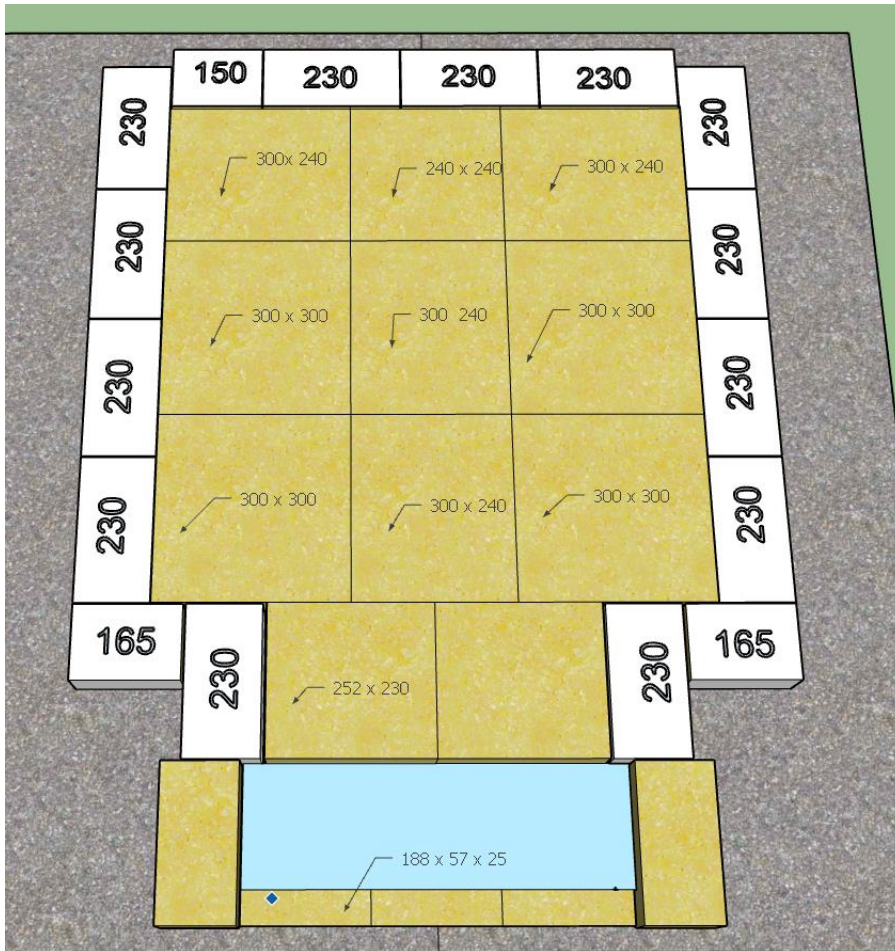
# Layout



Lay your calcium silicate board in the center of the slab and 185mm from the rear of the slab – you will have 25mm

You now need to cut your insulation board with a handsaw. Measure the pieces you need on the above diagrams. These pieces are to be used to support the front tiles of the oven. GO ahead and cut the off cuts with a handsaw first and sit them aside

# Laying your floor tiles & IFB bricks



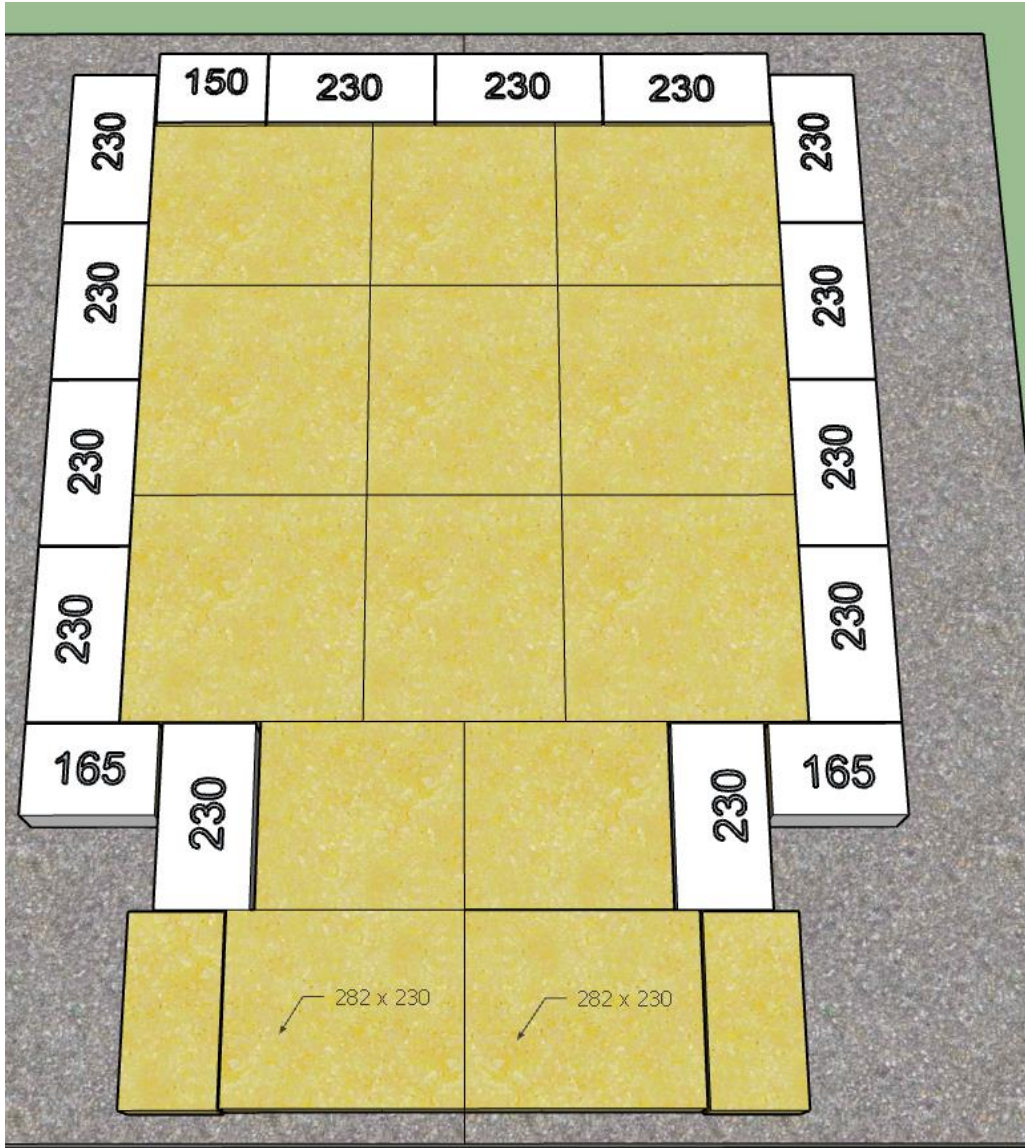
After you have completed cutting the insulation board you need to lay your floor tiles and IFB Bricks. Sit your tiles loosely on top of the calcium silicate board.

This should complete the floor then you can start to lay your IFB bricks against the floor tiles directly to the slab. Using the IFB bricks following the sequence to the left. Mix the Airset mortar thoroughly and using a scraper butter the bottom and sides of the IFB brick and tap down. Please only use a thin amount of mortar



Please note the picture you see are for a 1mtr Tunnel oven and are to be used as a guide only

# Finished Oven floor



Find the door arch floor tiles and place on top of your insulation board here loosely

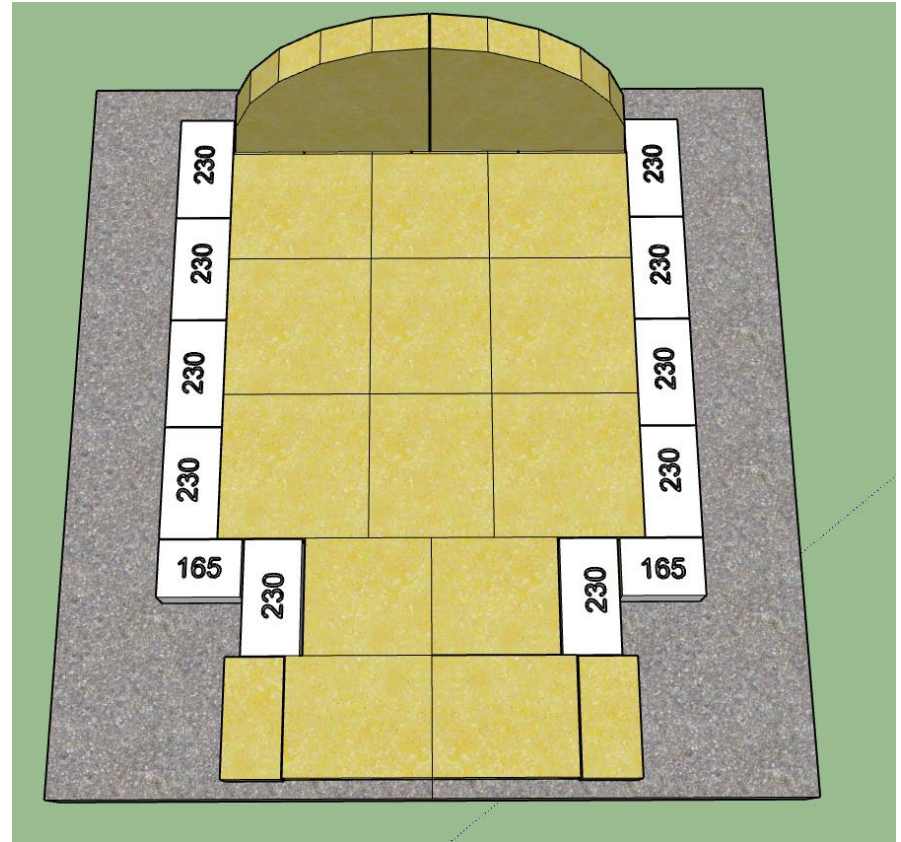
You have your finished floor tiles and now its time to build the chamber..

Don't forget to grind and major lips in the floor tiles to save from your pizza peel getting caught and flip them over so the ground edge faces the insulation board





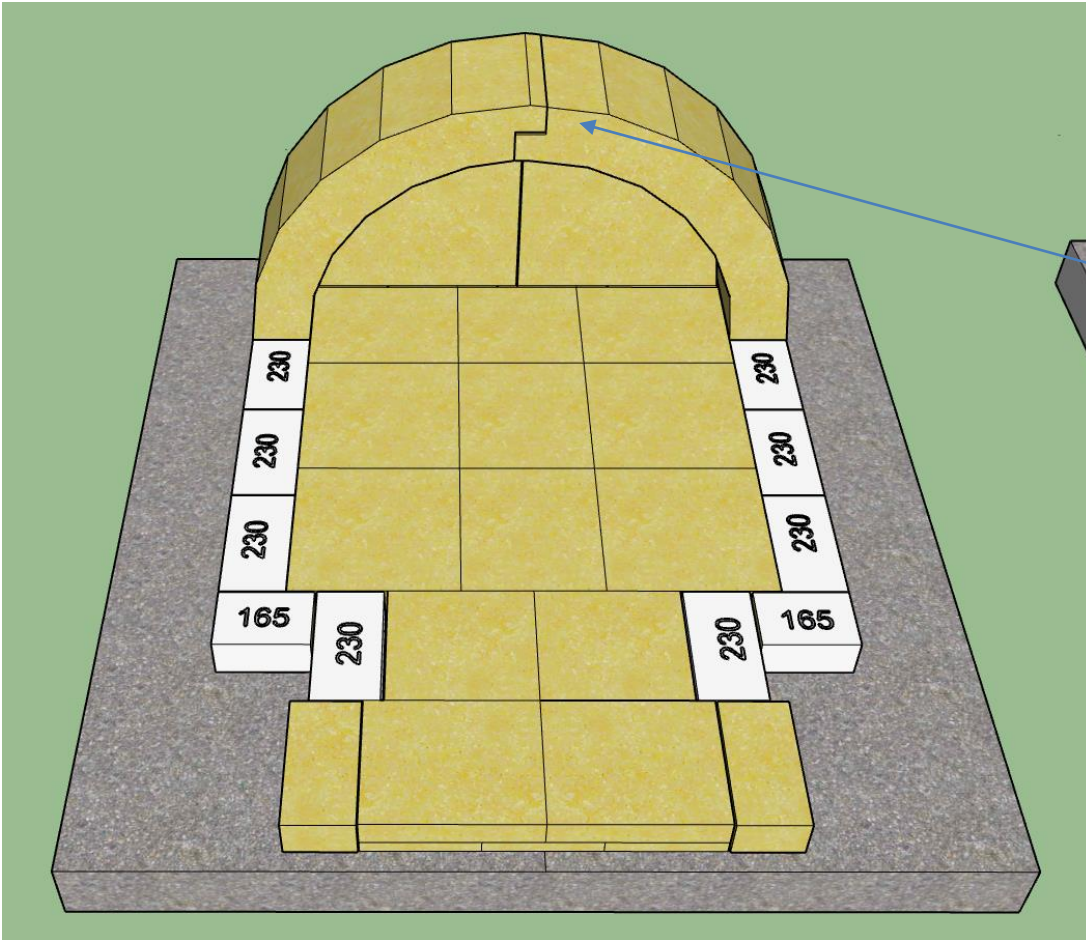
# Chamber construction



Here is where the magic begins! On the rear IFB bricks spread a thin amount of airset mortar  
Your 2 Quarter circle pieces are to be lifted into place on the rear IFB bricks and mortar bed so that the edges are in line with the exterior edges of your floor tiles. Before the second piece is lifted upon the rear IFB bricks put a thin bead of mortar in between and push together – using a wet sponge wipe off any excess mortar. Then repeat the thin bead of mortar on the top of the rear pieces. Be careful, heavy pieces.

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# Chamber construction

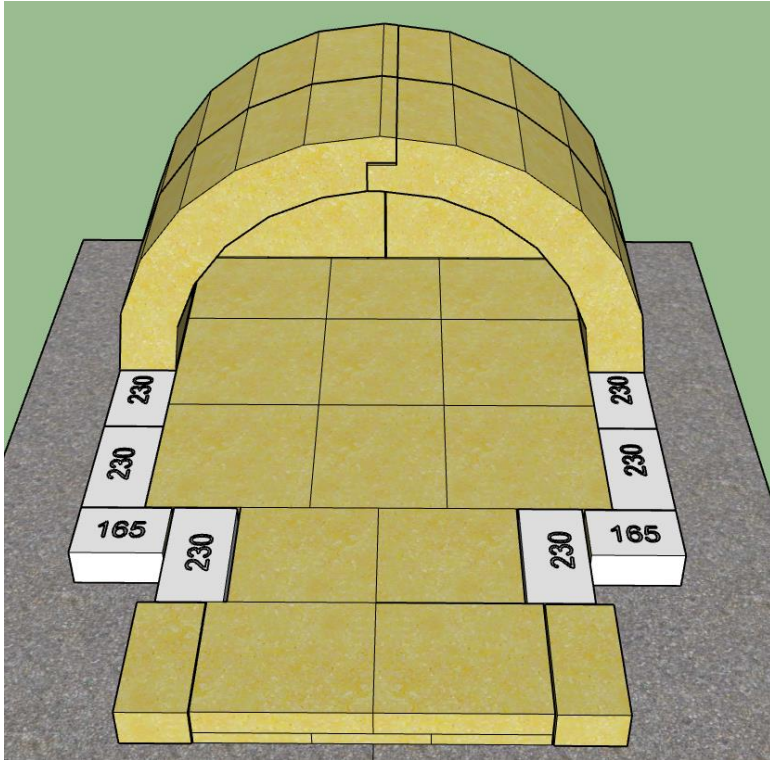


Go ahead and start lifting your pieces in place to start the chamber buttering the underside of the chamber piece with the aiset mortar in between the IFB and chamber. The pieces should join at the top and the gap should be minimal. You will notice a tongue and groove please make sure you have the correct pieces to lock into each other



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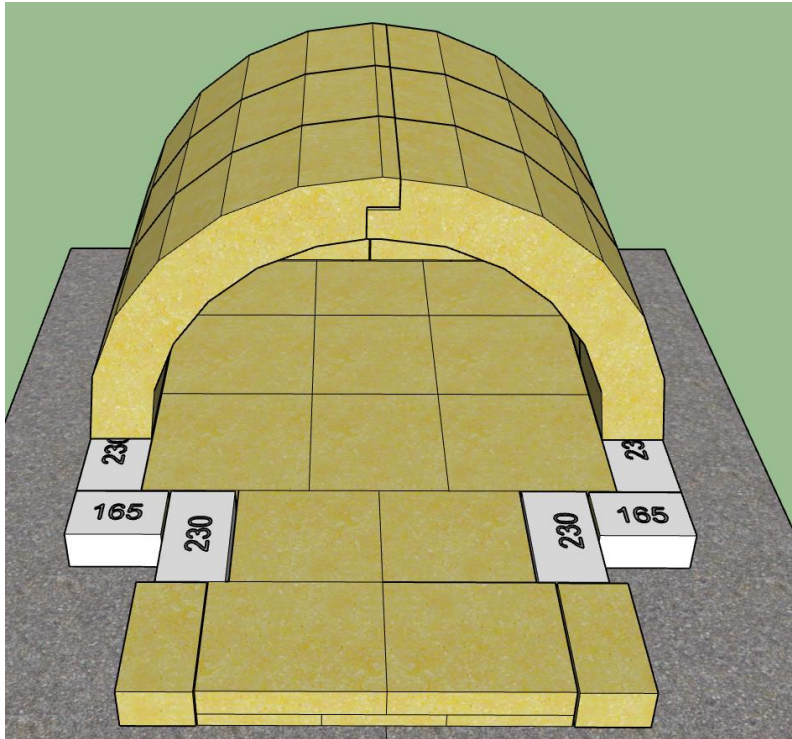
# Chamber construction



Continue the same process with each piece until the chamber is completed. To help the pieces stay in position you can cut timber pieces or use bricks to support them during the drying process.

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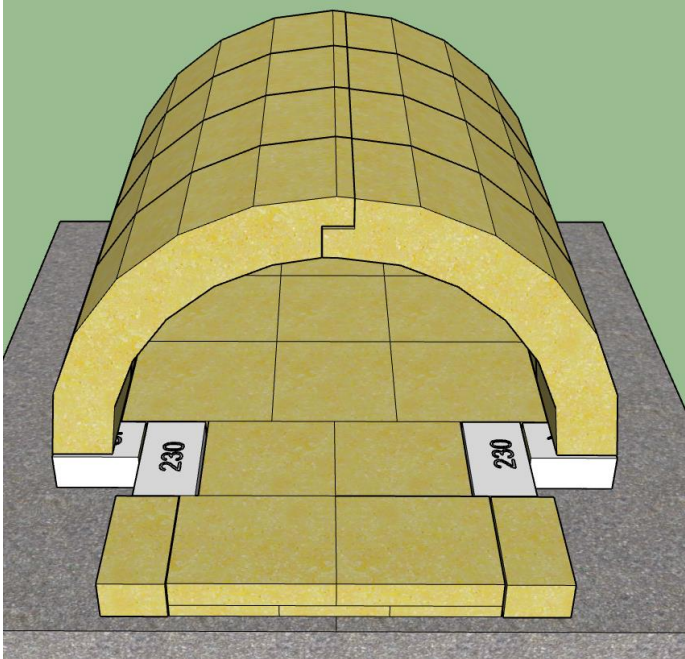
# Chamber construction



Make sure you have filled in all the gaps in between the joints putting a thin layer of mortar not thicker than 2mm

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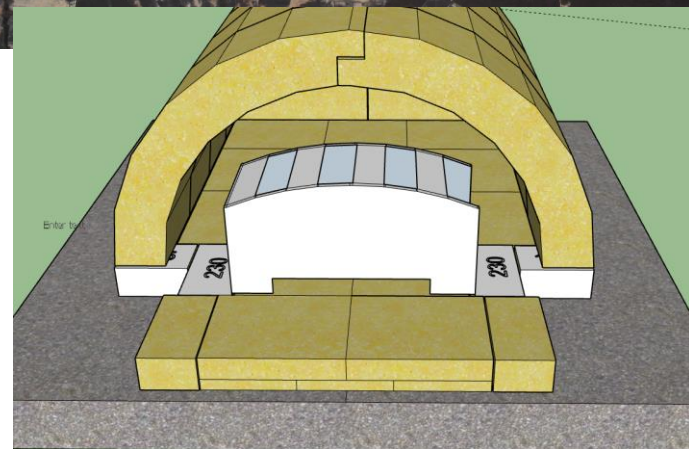
# Chamber construction



Chamber complete!

Screw or nail your door arch template (smaller) together using timber at approximately 180mm long - only 6 battens needed.

make sure you have placed 4 x 2mm spacers under the door arch template so it can be removed to make the template drop instead of pulling it out in which may disrupt the bricks.



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# Building your door arch

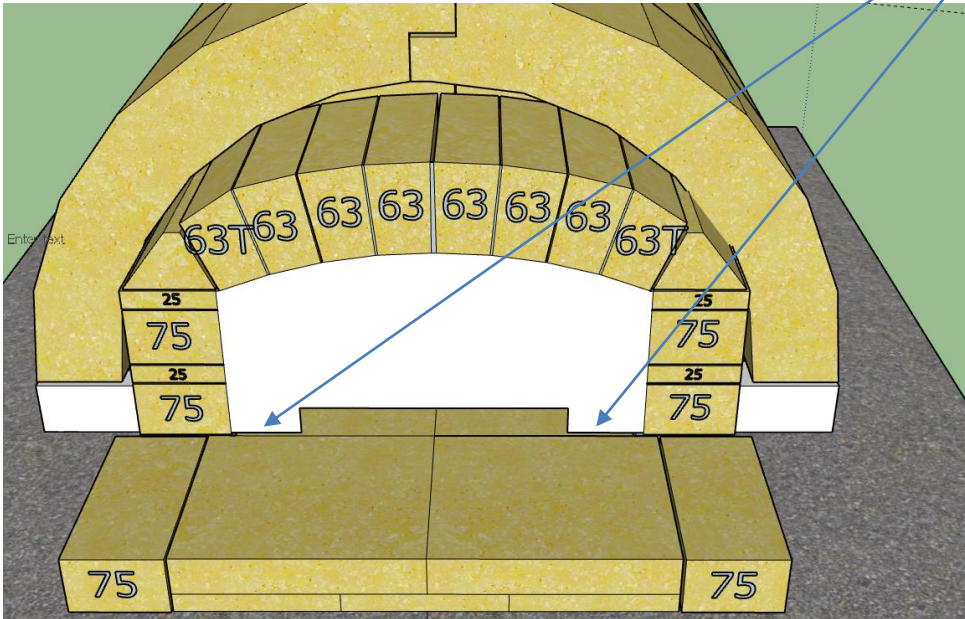
After screwing your template together place this in the centre of the Door arch tiles and don't forget to use 3mm packers under each Point of the door arch base. These can be removed to pull the template out with disturbing the brickwork.

To start building your door arch only butter the bricks to 2-3 mm between bricks and tap down gently.

This will bring your door arch support bricks level  
With the bottom of the door arch template

The following are the bricks for the door arch.

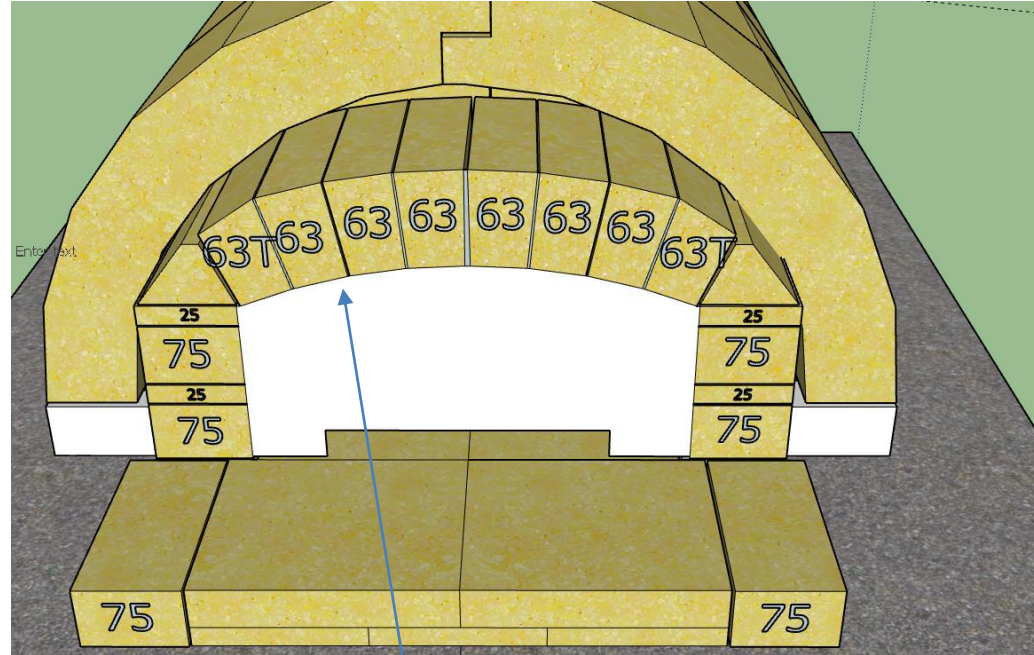
- IFB - 230 x 115 x 75mm IFB
- 230 x 115 x 75mm hard brick
- 230 x 115 x 25mm hard brick
- 63 – 230 x 115 x 75/63 hard brick
- 63T – 230 x 115 x 75/63 taper cut
- 75B – 230 x 115 x 75mm TAPER CUT



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# Front wall



Your Door and flue arch templates have notches on them for each brick to fit perfectly. You will see this if you look closely, for each notch it's the correct brick to suit.

If you have found you have gone over a notch something is incorrect, go back and check your positioning. Remember using the airset mortar only 2-3mm joints

You will find there will be a GAP above the door arch and left and right of the door arch. For the gap either sides of the door arch you MUST use the castable supplied the fill in the gaps. Mix it with water in a bucket until it's a doughy consistency and fill in the voids and smooth off. This will lock the door arch into place.

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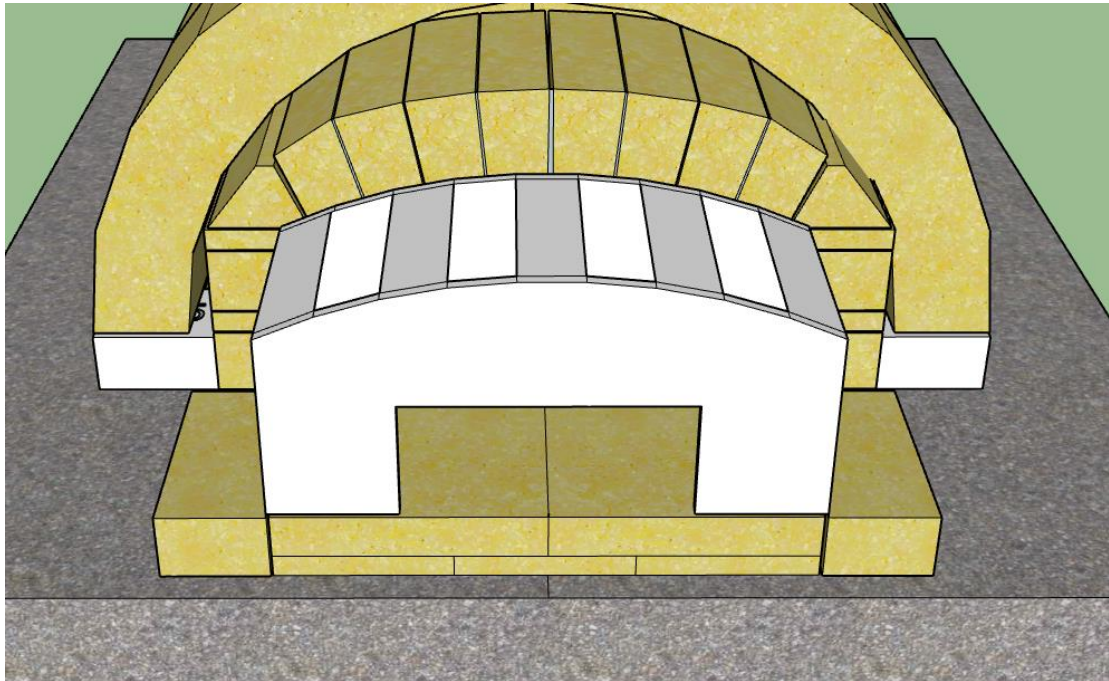
# Door Arch & front wall completion

When you have finished the door arch leave the template in for at least an hour before removing it. You can also leave it in while building the chamber if you like.

Remember to knock out the spacers first to let the template drop before removing the template.

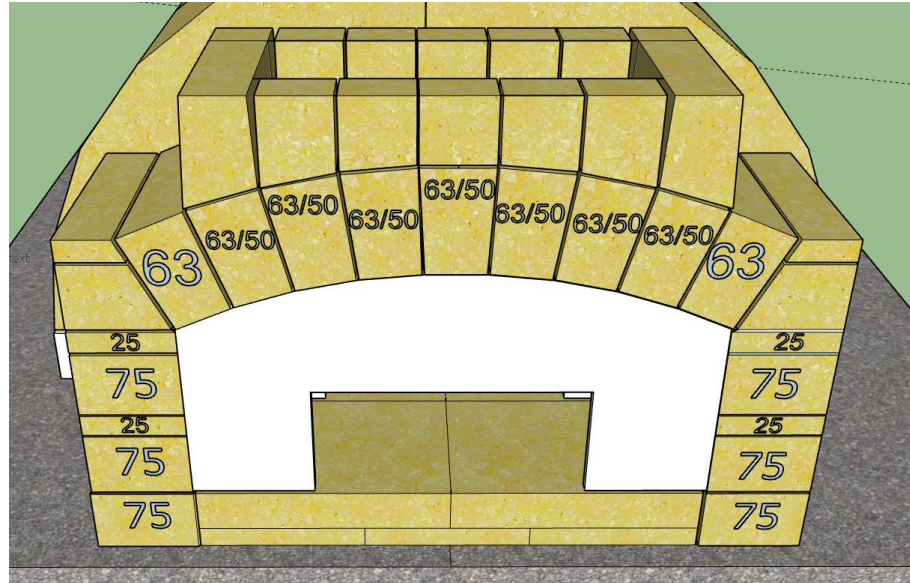
Clean any mortar joints as you go with a damp sponge NOT WET.

Then screw your flue arch template together and repeat the same process as the door arch though in the following combination





# Building the flue arch



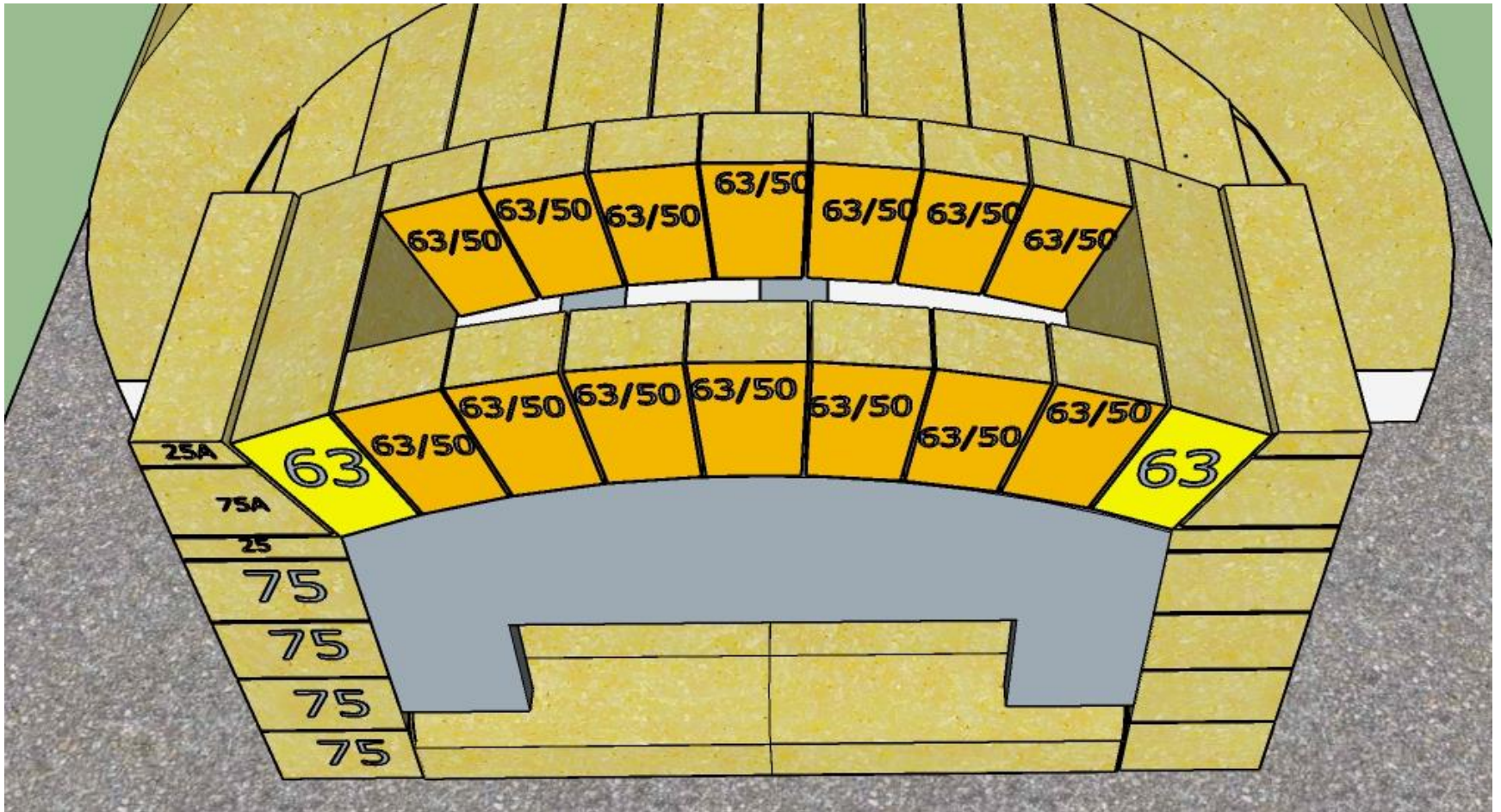
Please start off by DRY laying your front floor tiles including the underfloor tiles then place your template with the spacer/packer under each point of the template. This will be easier to pull the template out at a later stage.

Using the above middle picture lay your bricks with a 2-3mm butter joint with the airset mortar. Until you reach the peak of the template. don't forget to wipe away any excess mortar while you go.

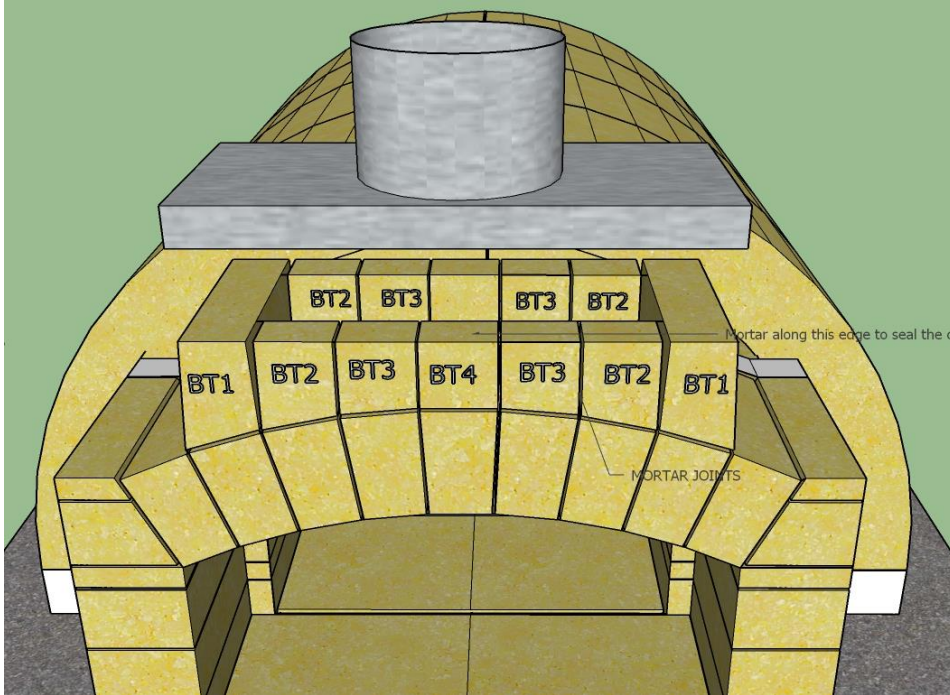
When you reach the top lay your bricks to the following sequence. The template does have notches in them to see where each brick is placed. If you go over these notches you will need to make your mortar joints smaller.

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# Building the top of the flue arch



# Brick trim and exhaust



You can dry fit these first with the flue cap on top to get exact spacing. Once you have done this start going from left to right using the airset mortar and lay each brick. Keep using a damp sponge wiping away any excess mortar.

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# Mortar flue exhaust cap



Put a thin bead around the top of the brick exhaust creating a seal and push the stainless cap down to secure

Please wait at least 2 hours before removing the front template by gently taking the spacers out. Don't forget to wipe away any excess mortar and fill the joints.

While your arch is drying you can proceed with the weatherproofing and insulating.



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# Weatherproofing



- Before you attempt to insulate the oven wrap the ovens chamber in aluminium foil like a hot potato. You can do 1 layer or 5 layers the more the better. This stops the water from getting into the chamber over time.

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# Insulation and chicken wire



Ceramic insulation blanket can be irritable  
And a dust mask and gloves must be worn  
when handling this product....

Roll the ceramic blanket around the ovens base and trim it so it hugs the chamber – cut pieces to infill the areas of the chamber that you can see.  
You should now not be able to see any of the chamber.



2<sup>nd</sup> layer – roll it the opposite direction over the top of the oven overlapping the joins and continue to do this until a complete second layer has been done.

Tuck the edges in around the flue arch



Roll your chicken wire around the base of the oven.  
Punch in a concrete nail if needed and secure it to the nail. Then use another concrete nail behind the other side of the flue arch to pull the wire tight. Then cut the wire to hug the chamber and secure it down.

# Render your oven

- **RENDER MIX = 8 Bags of 20kg BORAL SAND CEMENT + 10 handfuls of Boral builders clay**
- **When using the sand cement, mix 4 -5 - 20kg bags first with 6 handfuls of builders clay together and render the oven. Then with the final layer 3-4 - 20kg bags sand cement & 4 handfuls of builders clay. – If you don't find the BORAL brand of clay and cement its ok.**
- Once this is done mix your render ( above) and form over the top to create a rough layer covering the chicken wire , If you see the chicken wire its not a worry, the first coat is the rough coat. Wait till the render is touch dry say 1hr. Then mix another lot of render to do the final coat. Make sure this coat covers the entire oven and no chicken wire must be seen. After you have finished the final coat wait till its touch dry and in a circular fashion use a damp sponge to give you a fine. Total render thickness should be about 30mm.
- Moisture is the ovens biggest enemy over time !!
- When the render has dried, usually 24hrs later the curing process must begin straight away. During the curing process no moisture must get into the oven otherwise you are reversing the curing. ( curing instructions below). When the curing process is finished you must seal the rendered dome to prevent any moisture getting back in..
- Bondcrete can be used as well as part of the render. This mixes with water used to make the render and seals the oven. This is available from any local hardware store.



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# Moisture and curing

- Curing your oven.
- Recommended curing is good quality BBQ heat beads available at supermarkets and hardware stores. Heat them up on a gas bbq or fireplace until they are white around the edges. Place them in a metal pan and put in the centre of the oven keeping the oven at roughly 100 – 150 degrees- no higher. You can close the door entirely or keep the door ajar a few centimetres to let the air in to keep the heat beads going. The heat will dissipate quicker than usual as you're heating up a cold structure. PLEASE BE PATIENT as its protecting your oven for life. The heat beads are to stay in the oven for a **minimum** 24 – 48hrs (the longer the better) replacing the heat beads with new ones that are hot to keep the heat at 100 – 150 degrees. This pushes any moisture out of the oven and dries it for LIFE to prevent any issues. After the 48hr process then you can start to light a small fire in the metal pan keeping the flame very minimal. Push that into the centre of the oven. Slowly build the temperature up and add more timber until your fire is large.
- You will notice the ovens chamber changing colour and getting very hot. That's a good sign, its pushing and moisture out!! The back of the door will sweat as well. When the oven has changed to its dry colour and the door has stopped sweating your good to go.
- You can cure the oven to temperature and keep tending to it for the duration of the process or do it in small time frames say over a week. As long as the oven stays dry during the process you are good to go.
- Make sure after rendering and curing you keep the ovens rendered chamber out of the rain or from any moisture. If moisture gets in the oven before sealing you need to start the curing process again. The ovens chamber and render must be completely dry before sealing. Once this is done your ready to cook!

# Moisture and curing



## Sealing your oven

Your oven is now completely dry and you must seal it to prevent any moisture getting back in. We recommend products.

Silasec Remember to follow the sealant manufacturer's instruction on the tin and recoat after 12 months or so. REMEMBER ONCE YOU HAVE CURED THE OVEN IT MUST STAY DRY INSIDE OR THIS CAN CAUSE THE OVEN NOT TO HEAT UP TO TEMPERATURE AND CRACKING

# Firing and maintenance

- **First firing**

- Upon your first firing please remember your heating up a structure this takes time. Light a small fire on the floor cooking tiles just inside the door archway at 6 o'clock so its receiving sufficient oxygen to become larger. After you have a large fire inside the door arch or middle of the oven then move the fire to either 3 o'clock or 9 o'clock inside the oven up against the chamber wall. The flame needs to travel the entire length of the chamber to heat the other side of the oven. Your chamber will turn black on the inside. This is because the carbon from the timber is burning off and the oven is NOT hot enough. When you have a large fire inside the oven for a long period of time you will notice the chamber in areas start to turn white. This means the oven is heating up. Once the oven turns 75% white or 100 % white your oven is hot enough to cook pizza !

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- To maintain this heat you will have to keep stoking the fire with timber to keep the temperature up.
- Please note the door on the oven is not to be used at any stage upon the firing up and cooking. It is only meant to be used to keep the heat in overnight or between use.

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- After you have used the oven and it is hot you can leave the fire in the oven and close the door. The oven will eventually cool down within 24 – 48hrs. To clean the floor of the oven simply scrape the floor to remove any food and scrape with a wire brush. Once the oven has cooled down you can take the Ash out and gently wipe the floor clean with wet, hot cloth.

- **Maintenance of your oven.**

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- If you notice small hairline cracks in the oven, not to worry it does happen. There are many reasons for this.
- Every 6 months add a sealer to the ovens chamber to help protect it from any moisture re-entering the oven.
- If your stainless steel front starts to lose a little paint, just spray some touch up paint on it to keep it looking great.