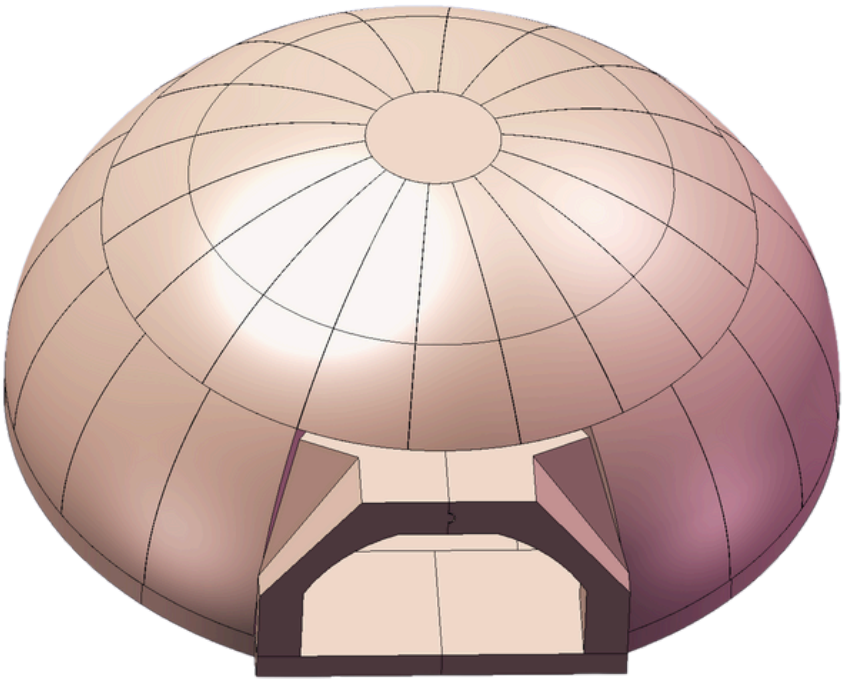
THE WOOD FIRED CO. – AUST. MADE – SINCE 2012

# 2025 Hybrid Brick Oven Kit

***OVEN ASSEMBLY INSTRUCTIONS AND GENERAL INFORMATION***

## ***850 BRICK OVEN - BRICK FRONT***



SATISFACTION GUARANTEE

# Tools & Materials Required

**Safety Equipment**

- Dust masks - P2 respirator
- Gloves - Nitrile gloves and gloves to protect hands to move bricks
- Safety glasses

**Tools Required**

- Timber hand saw or reciprocating saw with blade
- 4 or 5 inch angle grinder with diamond blade
- Small hand trowel
- Stanley knife. 25mm snap blade, works best.
- Wheelbarrow or plastic buckets
- Wooden or rubber mallet
- Cordless drill with driver bit
- Pencil or marker pen
- Shovel
- Tape measure
- Wire cutters
- Plastic pail and thick sponge
- Hammer and rubber mallet

-50mm masking tape

-2mm spacers ( can use same thickness coins or washer )

-2 x thick sponges for render layer

-thin concrete nails

**Additional Materials**

- BBQ foil – 1 roll from a thick foil or 2 rolls of standard kitchen foil
- Chicken wire – 5m roll of 50mm chicken wire

**Render mix components:**

- Sand Cement 20kg – 6 bags
- Builders clay – 2kg ( Boral or Cement Australia )
- Alternative: use Brickies Sand (contains sand and clay)
- Mix ratio: 3 parts Brickies Sand to 1 part General Purpose (GP) cement

# Understanding your kit and unboxing

Unboxing & Pre-Assembly Instructions

Your oven kit is delivered in two separate crates:

- Small Crate – Contains the front brick arch
- Large Crate – Contains the brick oven chamber and associated components

Step 1

Set aside the small crate. This contains the final piece required for assembly and will be installed at the end of the build.

Step 2

Open the large crate and remove the lighter components first, these include:

- Flue pipe
- Flue hat
- Oven door
- Ceramic fibre blanket

Place these components safely to the side for later use.

Step 3

You will now see the refractory core pieces and a granite entry piece. Carefully remove the granite piece and store it in a safe location to prevent damage during the assembly process.

Step 4

Identify the 300 x 300 x 50 mm WHITE insulation fire bricks and position them near your intended base area.
These bricks form the foundation of your oven and will be used first in the build.

# Warnings and Caution

**Building a brick oven in your backyard can be a rewarding experience, but safety must always come first. Incorrect installation or improper use can lead to serious hazards, including fire, carbon monoxide exposure, and structural instability.**

**One of the most common risks is failing to maintain proper clearance between the oven and nearby combustible materials, which can result in an unintended fire.**

**To ensure safe operation, follow all installation instructions carefully. The oven should be placed on a stable, non-combustible surface with adequate ventilation to prevent heat buildup and carbon monoxide accumulation. Always use heat-resistant materials for surrounding structures and ensure that the oven is built at a safe distance from fences, trees, and buildings.**

**Neglecting these precautions can cause severe property damage, personal injury, or even loss of life. Before beginning installation, thoroughly review the instruction manual and watch all provided tutorial videos.**

**If you have any doubts or need assistance, contact us—we're here to help ensure your oven is built safely and correctly.**

# Oven Kit Component Checklist

## Insulation & Assembly Materials

- Insulation Fire Bricks - White, 300 x 300 x 50 mm: 13 pieces
- High-Temperature Mortar Bag (20 kg): 1 bag
- Insulation Blanket (1.5 rolls): 1 unit
- CNC  timber Templates and Spacers -

## Flue & Ventilation

- Flue Pipe - 450 x 200 mm: 1 piece
- Flue Hat - 200 mm: 1 piece
- Black Ventilation Exhaust Cap: 1 piece

## Oven Entry

- Granite Entry Piece: 1 piece
- Double-Insulated Oven Door: 1 piece

## Firebrick Components

- 850 Firebrick Floor Pieces: 9 pieces
- 850 Door Arch Bricks - Type 850-6: 1 piece
- 850 Door Arch Bricks - Type 850-7: 1 piece
- 850 Chamber Bricks - Type 850-4: 12 pieces
- 850 Chamber Bricks - Type 850-5: 12 pieces
- 850 Chamber Bricks - Type 850-8: 16 pieces
- 850 Chamber Bricks - Type 850-9: 1 piece
- Firebrick - 230 x 115 x 25 mm: 2 pieces
- Firebrick - 230 x 115 x 75 mm: 2 pieces
- Firebrick - 230 x 115 x 75 / 63 mm: 2 pieces
- Firebrick - 230 x 115 x 75 / 51 mm: 10 pieces
- Firebrick - 50 x 115 x 75 / 51 mm: 12 pieces

CRATES

- 850 Brick Front crate : 1 piece - all items above in this colour are located in this crate
- 850 Brick BASE Crate: 1 unit - All items above in the colour are located in this crate

**LIMITED WARRANTY – WOODFIRED BRICK PIZZA OVEN KIT**

This Limited Warranty is provided by Sydney fire Bricks & refractories PTY LTD and applies to the original purchaser of the Woodfired Brick Pizza Oven Kit

1. WARRANTY COVERAGE
The Manufacturer warrants that the Product is free from material defects in workmanship and materials under normal residential use and service for a period of twelve (12) months from the date of original purchase.
If a defect arises and a valid claim is received within the warranty period, the Manufacturer will, at its sole discretion:
Repair the defect at no charge, or
Replace the defective component(s), or
Refund the purchase price (excluding shipping and handling), subject to proof of purchase.

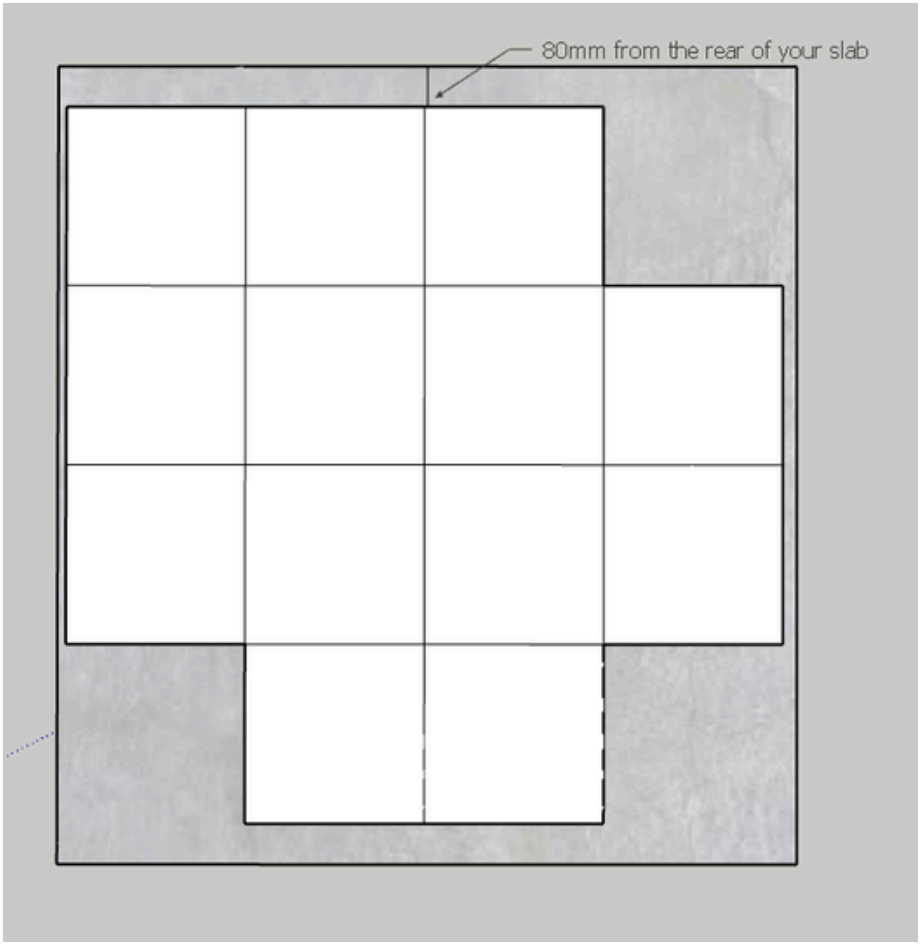
2. EXCLUSIONS AND LIMITATIONS
This Limited Warranty does not cover:
Damage due to improper installation not following provided instructions
Use of non-refractory mortar or sealants
Commercial or institutional use
Damage resulting from unauthorized modifications or alterations
Natural wear and tear, cosmetic blemishes, or cracks that do not impact structural integrity
Damage caused by weather exposure, improper maintenance, or misuse (including over-firing or use of accelerants)
This warranty applies only to kits assembled as instructed using the components supplied. Deviations from the assembly guide void the warranty.

3. CLAIM PROCEDURE
To file a warranty claim, the Customer must:
Contact the Manufacturer at [insert email/phone]
Provide proof of purchase and photographs of the affected part(s)
Allow reasonable time for inspection or return shipping if required
Shipping costs for returning the defective part may be the responsibility of the Customer, unless otherwise agreed in writing.

4. LIMITATION OF LIABILITY
To the fullest extent permitted by law, the Manufacturer shall not be liable for any indirect, incidental, or consequential damages arising from the use or inability to use the Product, even if advised of the possibility of such damages.
This Limited Warranty gives specific legal rights. Additional rights may vary by jurisdiction.

# 1:Assembly: Laying of the insulation bricks

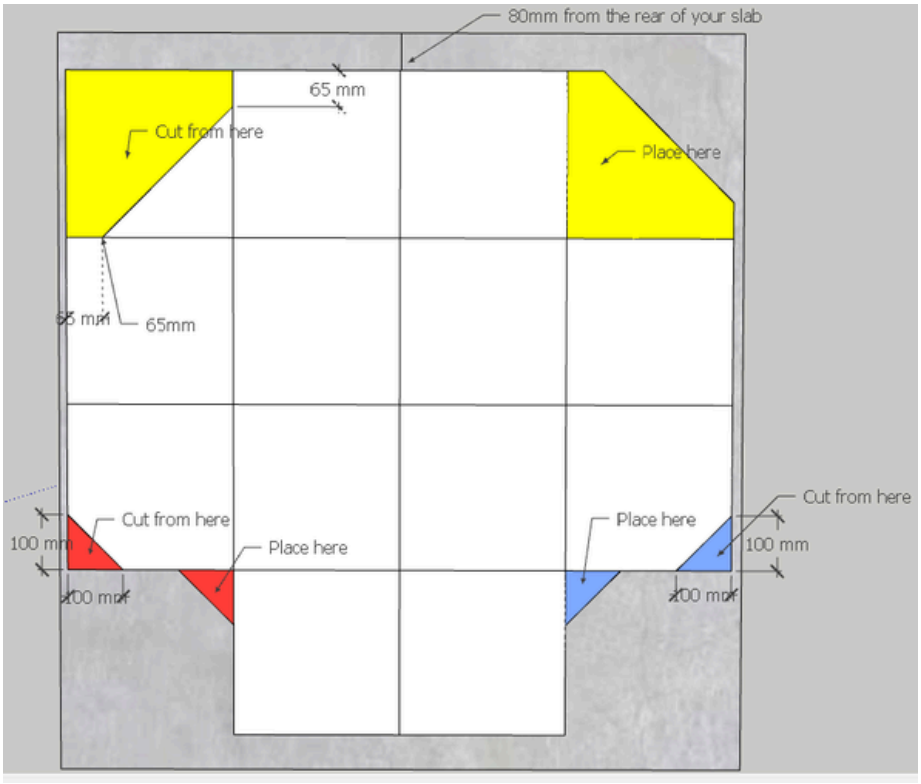
1. On your slab, lay your white insulation floor tiles in the following pattern starting 80mm from the rear of the slab




**Special Note**

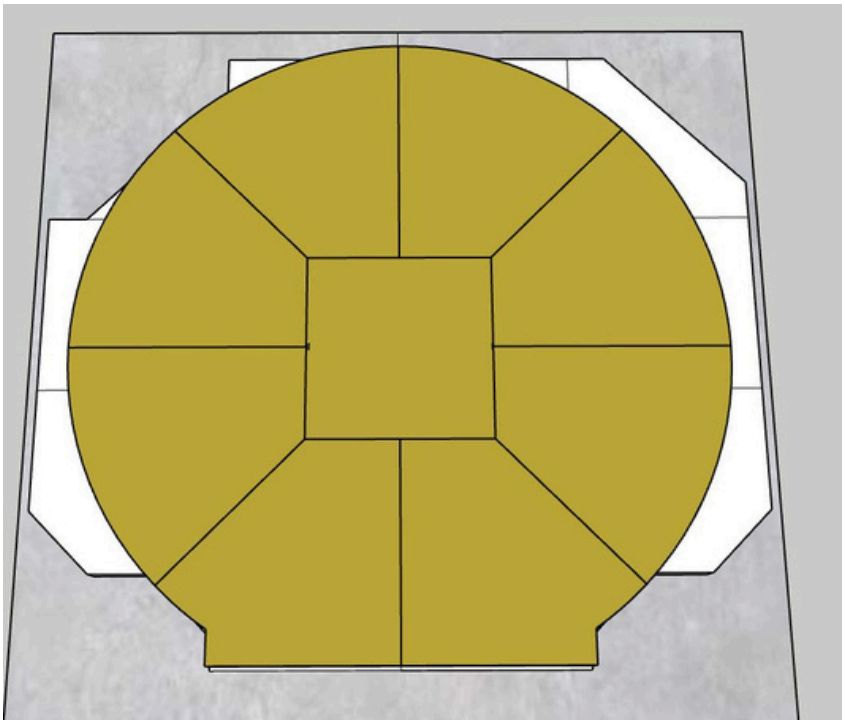
**Upon the manufacturing of the insulation floor tiles you may find some of them are uneven. If you need to Grind the edges down using your Angle grinder with the diamond blade do so. This will leave you with a flat surface to place your floor tiles on**

2. Using a pencil or Marker measure and cut the bricks above with your handsaw to the measurements stated and place where it says "Place here" .



# 2:Assembly: Laying of the fire brick flooring_

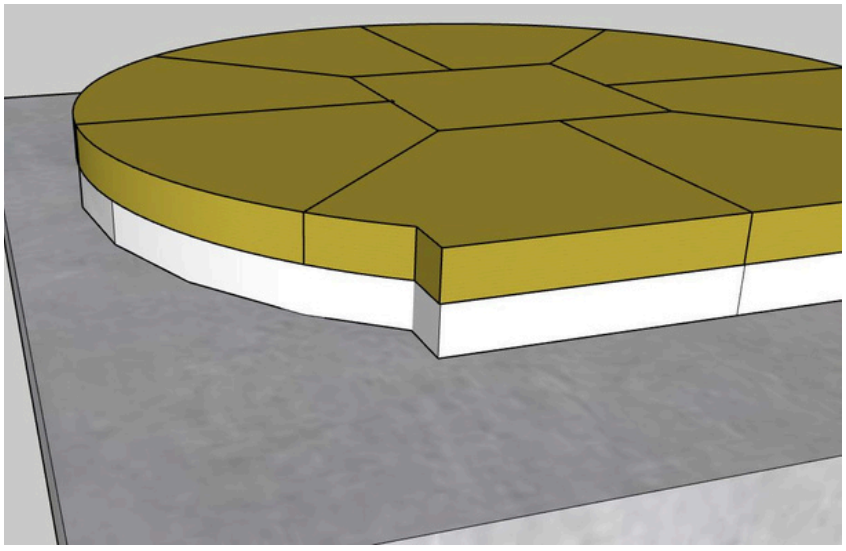
3. Lift your floor tiles up onto your insulation floor tiles starting from the back in the order you see there there is no need to mortar the tiles down



**Special Note**

**Upon the manufacturing of the firebrick floor tiles you may find some of them are uneven. If you need to Grind the edges down using your Angle grinder with the diamond blade do so. This will leave you with a flat cooking surface. We recommend wetting the edges of the tiles and gently grind down the lips to your floor tiles.**

4. Using your handsaw or Reciprocating saw, go around the perimeter of the tiles and trim any excess white insulating brick off so the insulation brick is flush to the floor tile.



# 3:Assembly:Installation of template system

5. Locate your templates  and Assemble as per Fig 1 and then place the templates in the centre of the flooring system as per figure 2. Equally spaced. See FIG 1 and FIG2

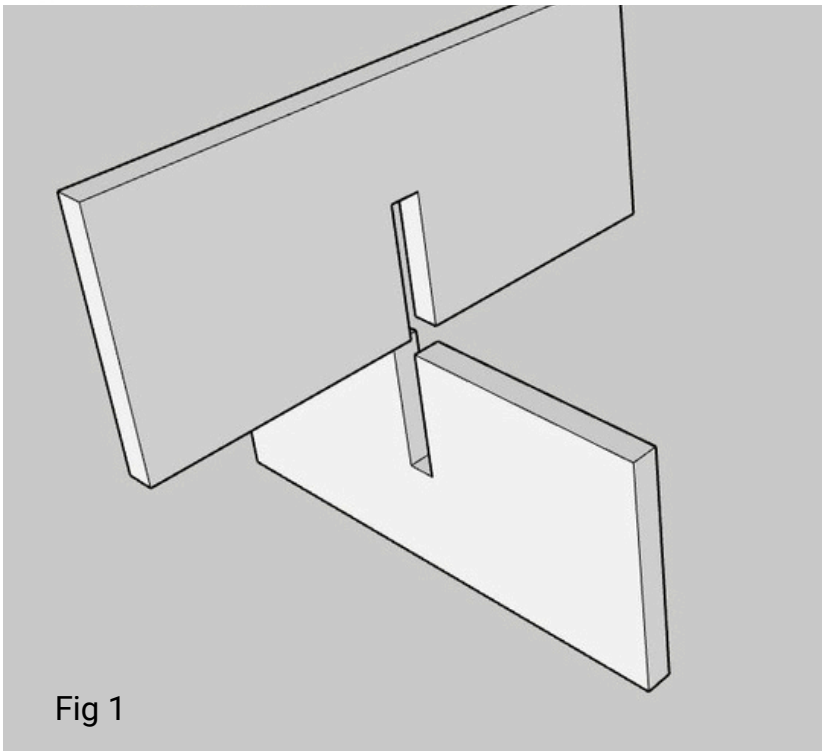


Fig 1

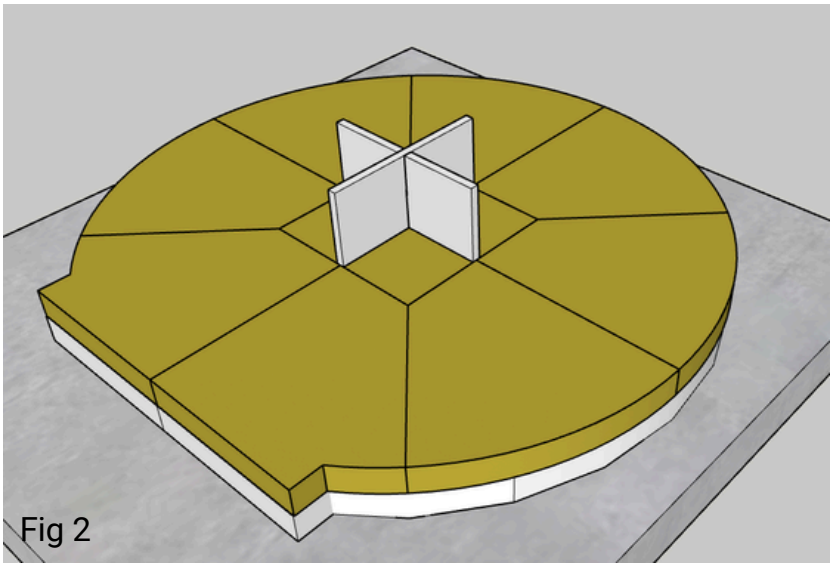


Fig 2

# 3:Assembly:Installation of template system

6. Next, put the plate with the 4 holes on top of the cross section and line the holes up with the upright board, as per Fig 3.

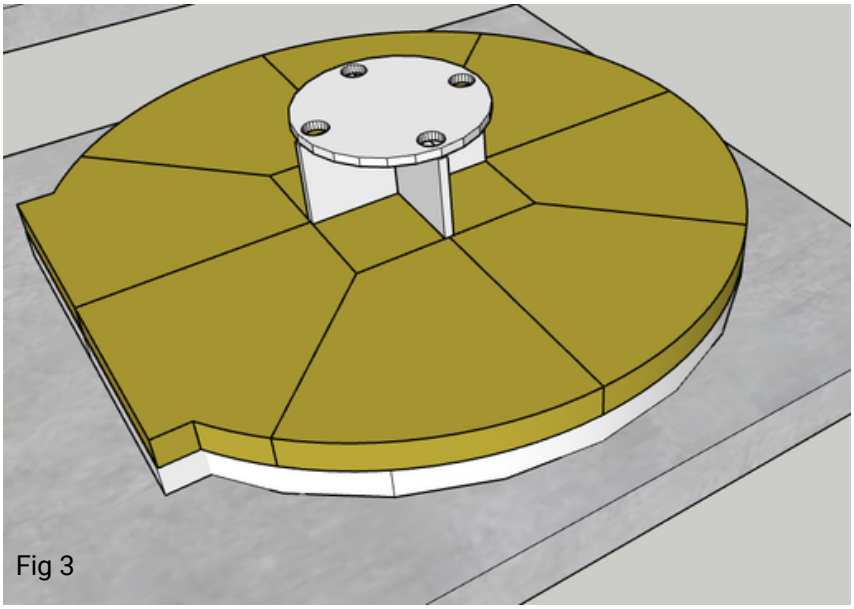


Fig 3

Repeat the steps above to create the templates stack as shown in Fig4

**Special Note**
**Tie a small rope through the hole in the middle circle plate, this will be used to pull the plate out and remove the jig once the oven is finished.**

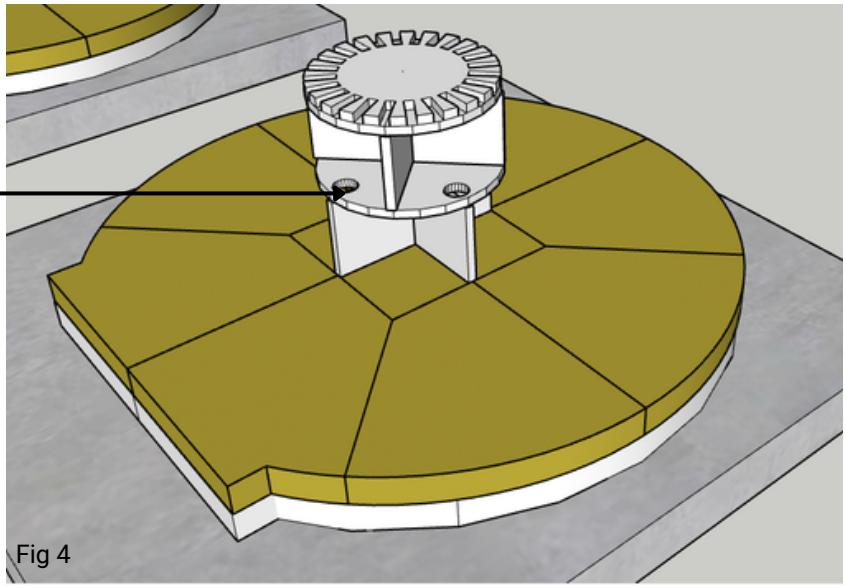


Fig 4

7. Locate your fins and place each one onto the notches on the top template as per fig 5

**Special Note**
**The front 5 fins have notches to support the door arch and must be placed at the front**

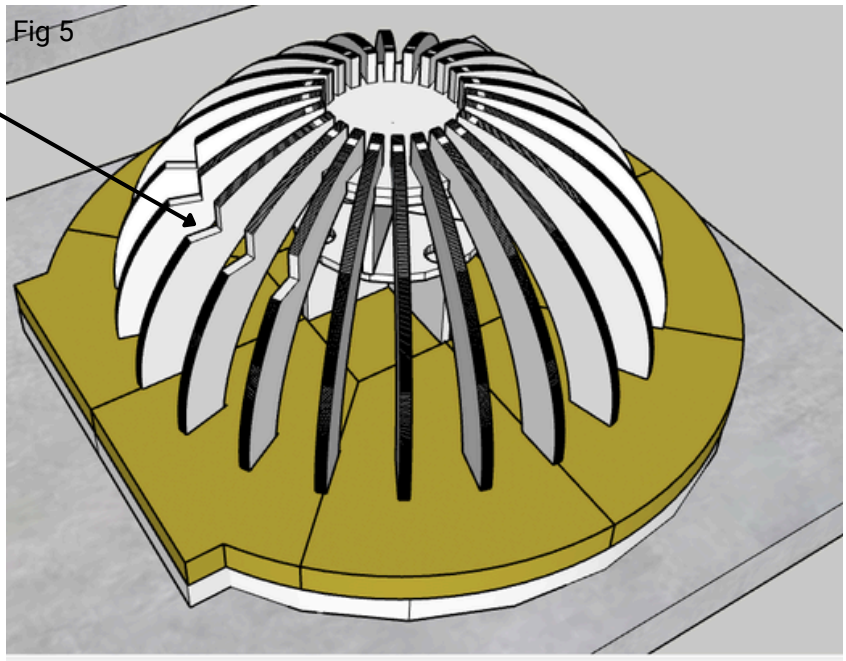


Fig 5

# 4:Assembly:Laying of the brick dome system

7. Locate the two front arch bricks, they will be marked 850-7 & 850-6.

Lift the 850-7 and 850-8 and place them inline with the floor tiles and on to the notched section of the wooden template as per figure 5 and figure 6- Make sure front arch brick match the front floor position.

Fig 6

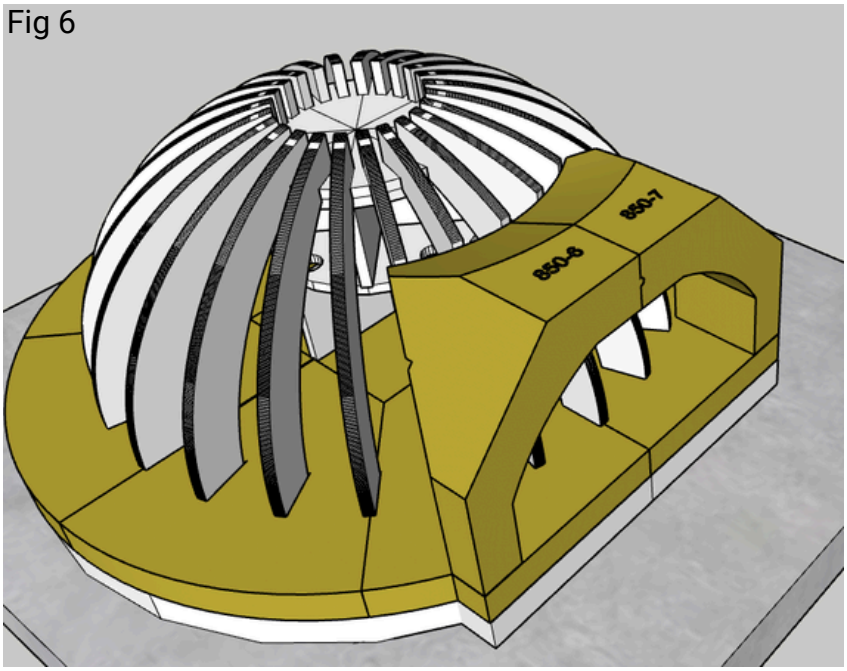
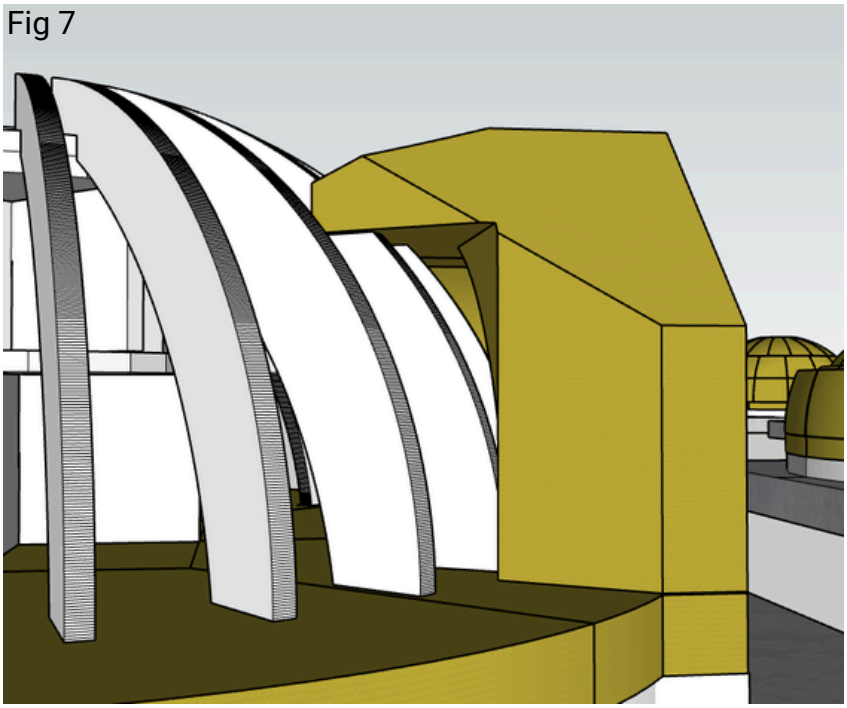



Fig 7



**Special Note**

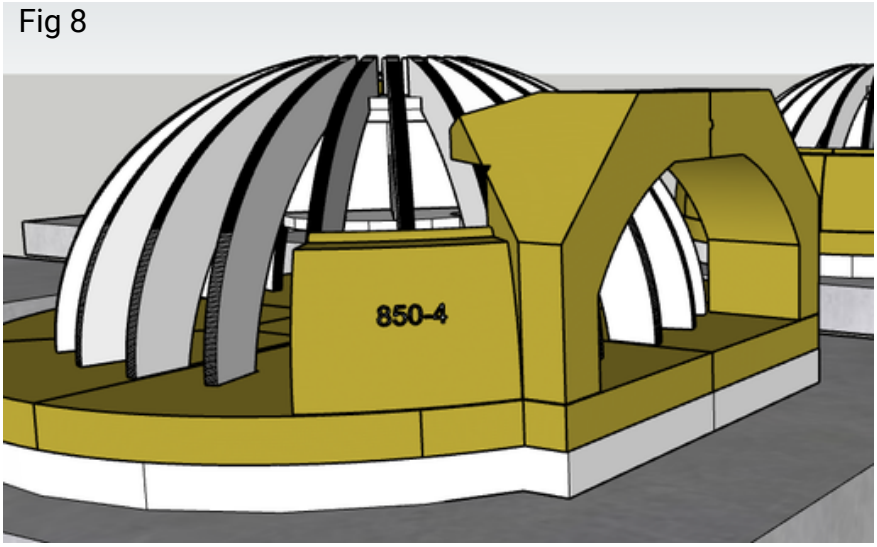
**The front 5 fins have notches to support the door arch and must be placed at the front**

# 4:Assembly:Laying of the brick dome system

8. Locate the 850-4 brick so you can begin the first layer

Line up the first layer with the front arch bricks so that the brick matches the shape of the below floor as per FIG- 8

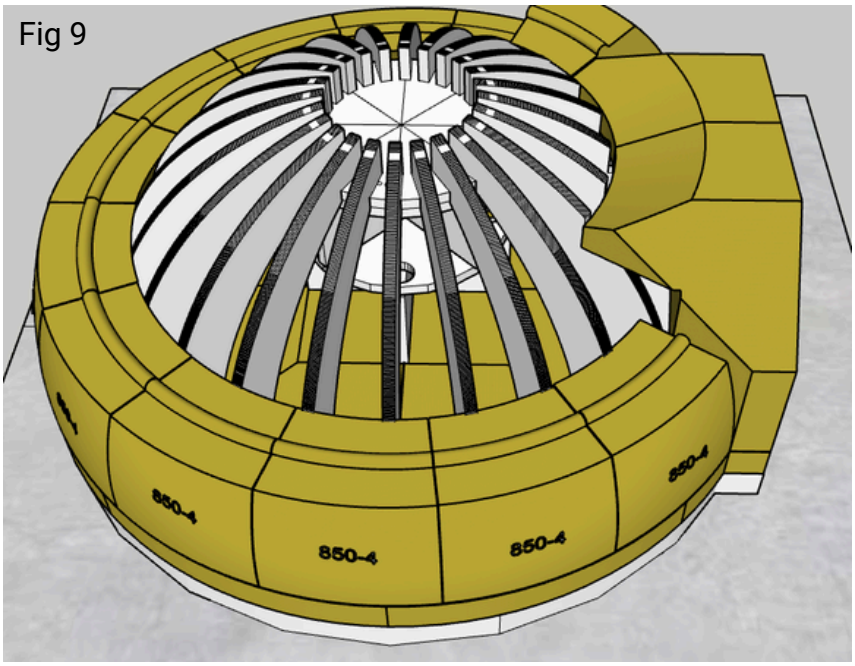
Fig 8




Complete the rest of the first course, keeping a 1mm gap between each brick, the first course should look like Fig - 9

You have now finished the first layer

Fig 9



# 4:Assembly:Laying of the brick dome system

9. Locate the 850-5 brick so you can begin the second layer

Line up the second layer with the front arch bricks so that the brick matches the shape of the below floor as per FIG- 10

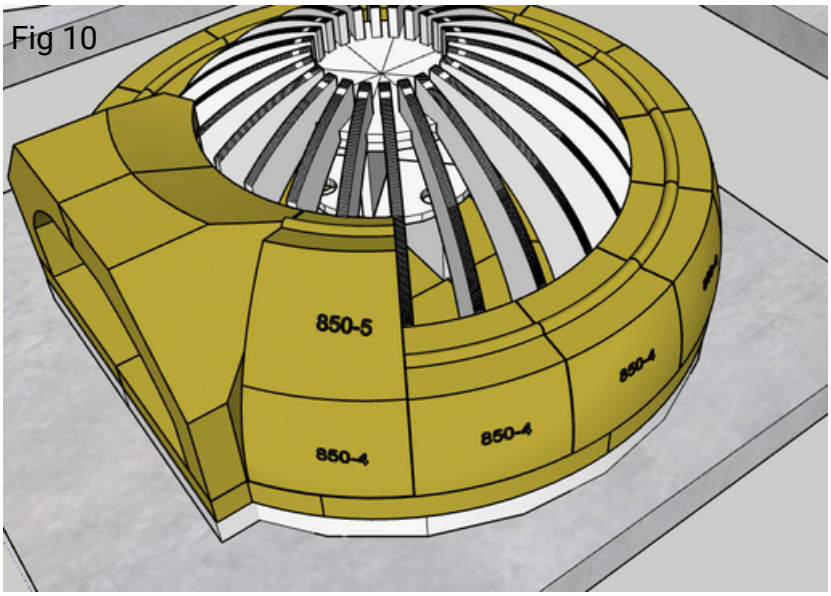


Fig 10

Complete the rest of the second course, keeping a 1mm gap between each brick, the first course should look like Fig - 11

You have now finished the second layer

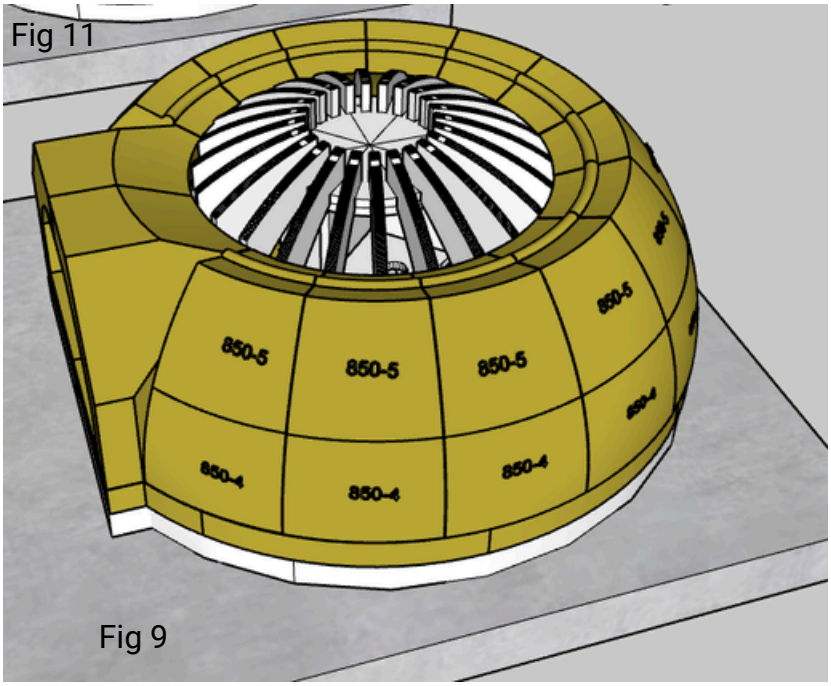


Fig 11

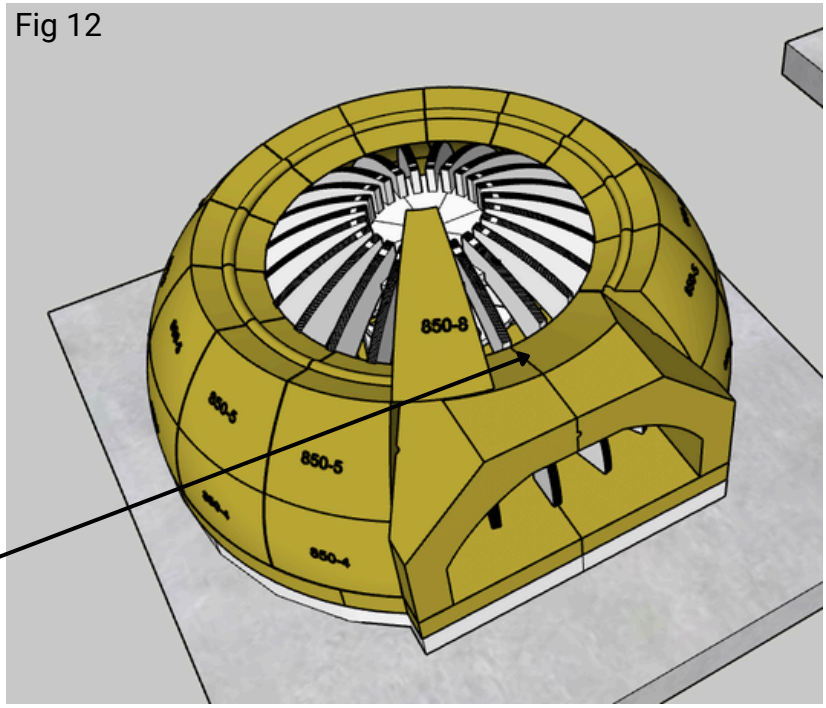
Fig 9

# 4:Assembly:Laying of the brick dome system

10. Locate the 850-6 brick so you can begin the third layer

Line up the third layer with the front arch bricks so that the brick matches the shape of the below floor as per FIG- 12

Fig 12




**Special Note**

**Use the supplied mortar on top of the front arch bricks where there is no tongue and groove, apply approximately 3mm of mortar - ONLY THE BRICKS THAT SIT ON TOP OF THE ARCH REQUIRE MORTAR**

**Special Note**

**Do not mix all the mortar, mix 50 percent of the mixture as you will not need the whole amount provided**

Complete the rest of the second course, keeping a 1mm gap between each brick, the finished third course should look like Fig - 13

You have now finished the third and final layer

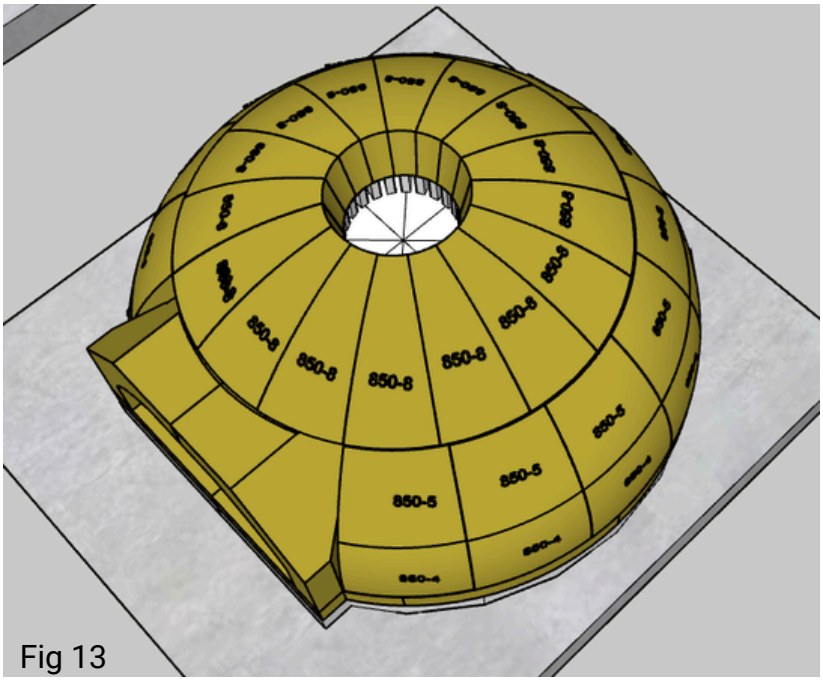



Fig 13

# 4:Assembly:Laying of the brick dome system

11. Locate the 850-9 ( PLUG )

**Special Note**

**Use the supplied mortar to smear a 3mm layer on the 850-9 plug**

Place the plug into the hole left in the third and final layer, the plug should sit almost flush with the 850-8 brick

Go through each layer of bricks once they have been layed, the gaps in each course should be between 1-3mm, there will be some exception's, but in general, the spacing should be even

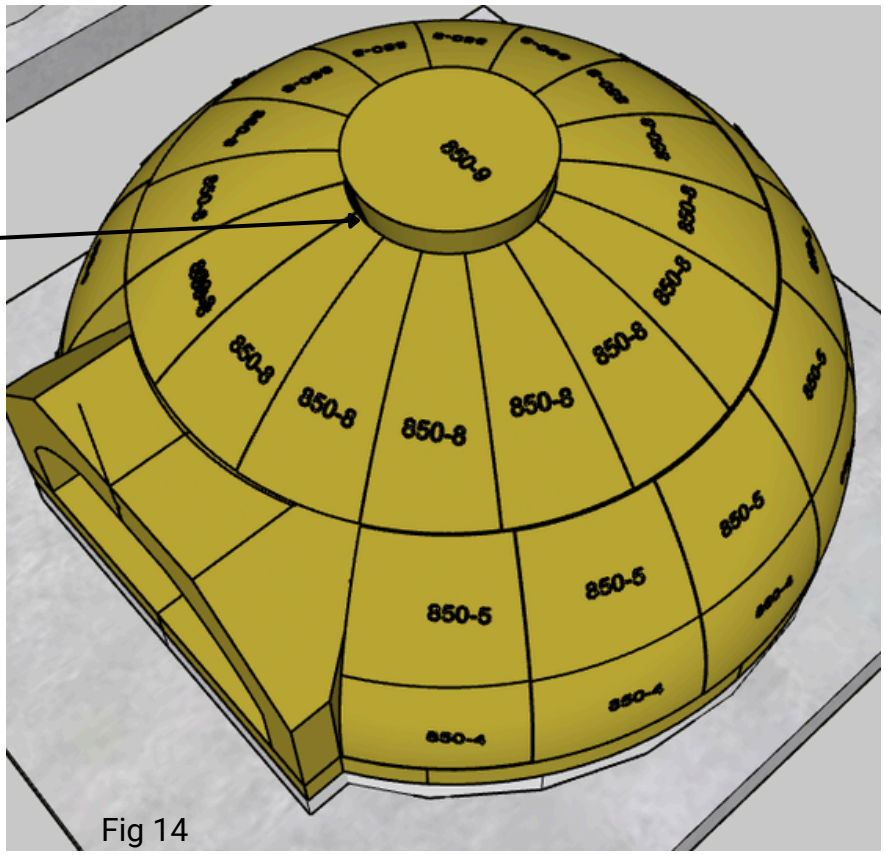


Fig 14

# 5:Assembly:Adding mortar to outside layer

12. Mix the mortar as per the instructions on the bag, once the mortar is mixed, apply it to all the vertical and horizontal joints - Apply to the joints with a small trowel and then push into the joint with a sponge so it is almost level with the surface

There will be a large gap between between brick numbers 7 and 8 where brick layer number 4 and 5, start with this point and fill

The mortar should be applied with a trowel (or you can uses gloves and push it onto the joints) to each vertical and horizontal joint.

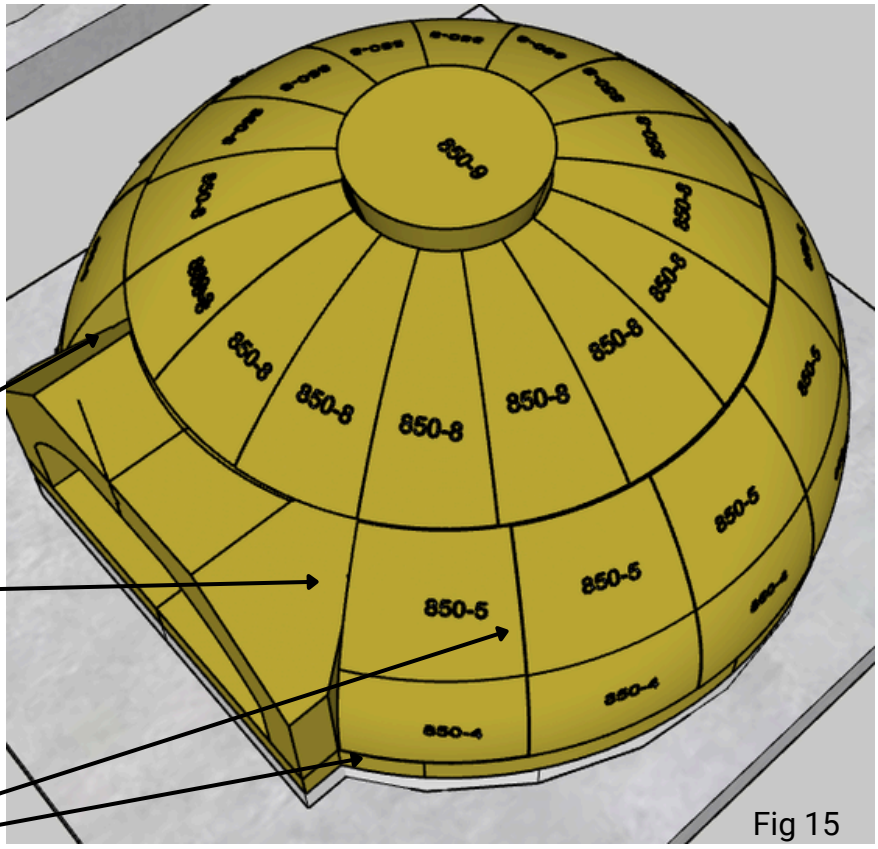


Fig 15


***You have now completed the dome construction, next step is to complete the brick arch if you have a brick front version or lay the stainless steel NEO front if you have the NEO version***

# 6:Laying your flue brick arch

13. Locate the granite landing piece and center it at the front of the oven- The granite should have the same spacing on the left and right hand side - See fig 16

Fig 16

**SPECIAL NOTE**

**Assemble the template by screwing in the small brace pieces to the two large sides that are marked with the positions for each brick - The jig should look like - See fig 16**

Use either foil, or a few layers of cling wrap to cover and protect your granite piece whilst you are working, this should be done before placing the jig on the granite before the next step - See FIG17

Fig 17

Place the assembled jig directly above the granite landing piece- You will need to use 2mm spacers as per FIG 17 between the granite and template. Once this is complete your template and granite should look like FIG18

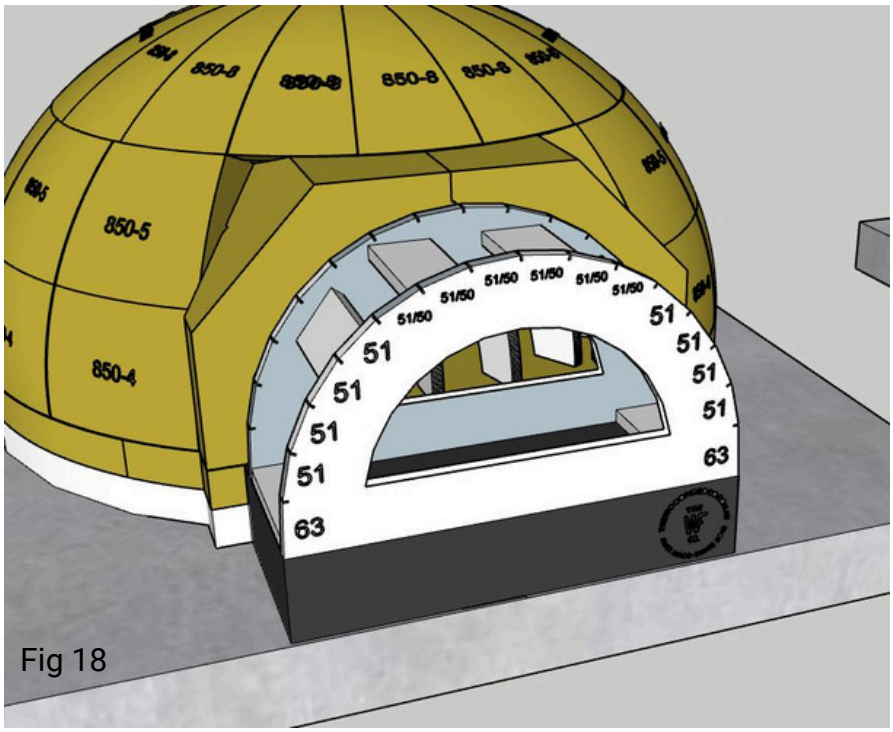



Fig 18

**SPECIAL NOTE**

**Make sure you clean your mortar joins as you go, keep a bucket of clean water and 2 sponges that you cycle and clean. If you do not clean your mortar joins as you go, the mortar will dry hard and be difficult to remove**

# 6:Laying your flue brick arch

14. Time to start laying your bricks. Prepare all the bricks which are needed to lay your arch, the template is numbered so that you match the brick to the corresponding place in the arch. See FIG 19 and FIG 20 **Do not begin until all bricks are located.**

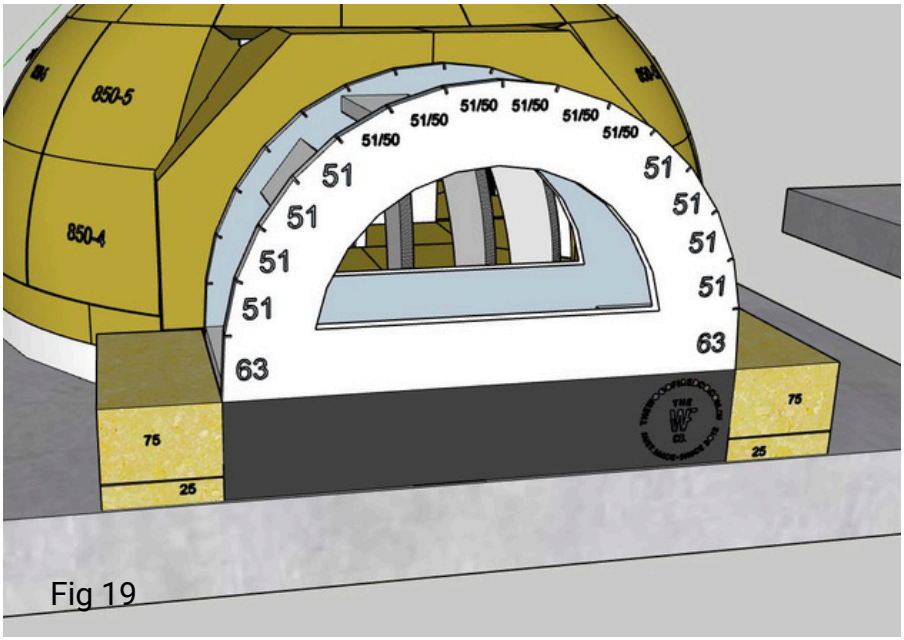


Fig 19

Lay a thin bead of mortar (2mm) to place under the first 25mm brick, this will act as the support for the arch, then apply another layer of mortar on top of the 25mm brick and lay the 75mm full size brick on top. You will now be level with the granite landing and you can begin to lay all the angled bricks.

**The template indicates the thickness of the brick required, this measurement is based on the smaller angled size EG: The brick will have 75mm on one face and 63mm on the other.**

Lay the arch using the mortar provided, make sure to take your time, the edge of each brick should sit directly against the face of the template and each brick should match up to the line.

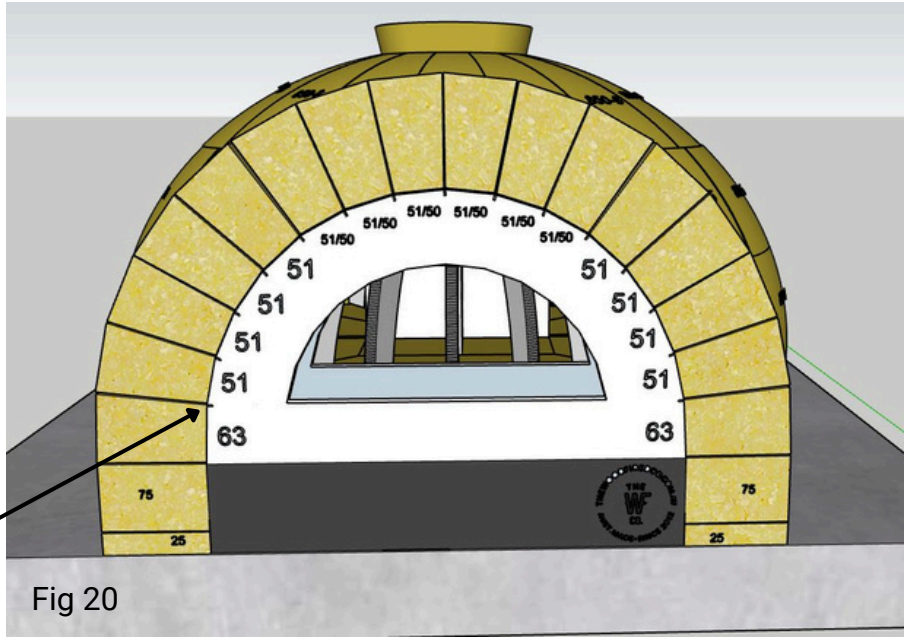


Fig 20

When you get to the last full size brick to lay, you then have to lay the smaller bricks that make up the flue outlet, these bricks are not full size. Continue to apply mortar to the bricks and lay as per FIG 21

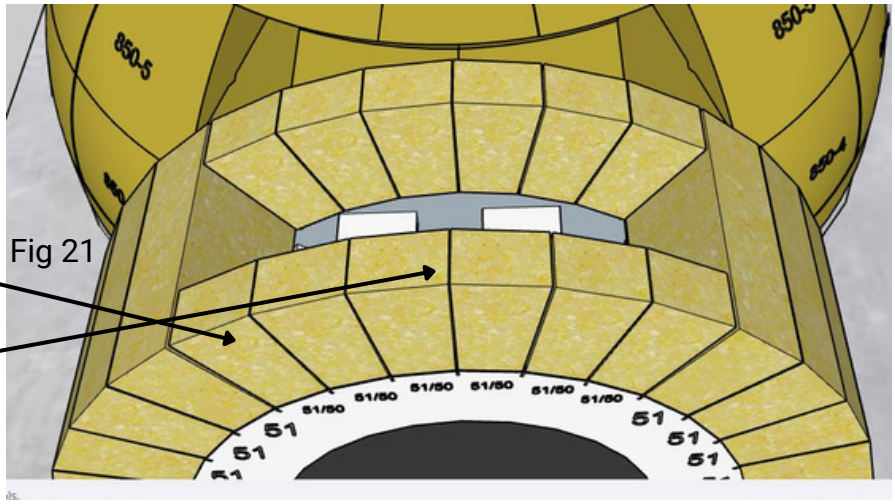


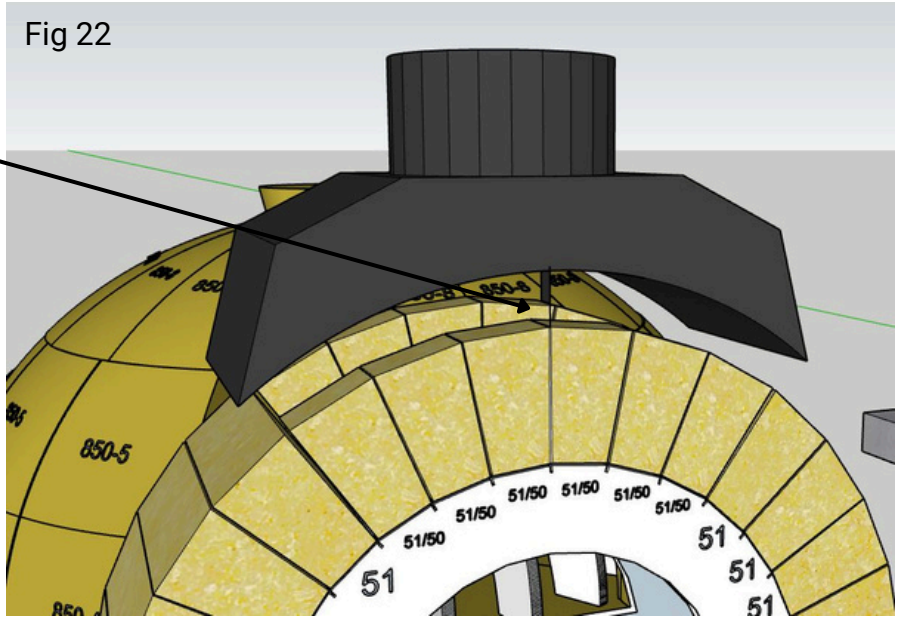
Fig 21

**SPECIAL NOTE: Do not mortar the center top joint until you need to attach the stainless steel flue cowling, there is a tab in the center that needs to go into the mortar joint.**

# 7:Placing on your stainless steel flue connector

15. Locate your stainless steel flue arch cowling. Use tape to mask along the front and back  edge of the cowl, this is to make sure that when you mortar the gap, the mortar does not mark the paint. See FIG 22

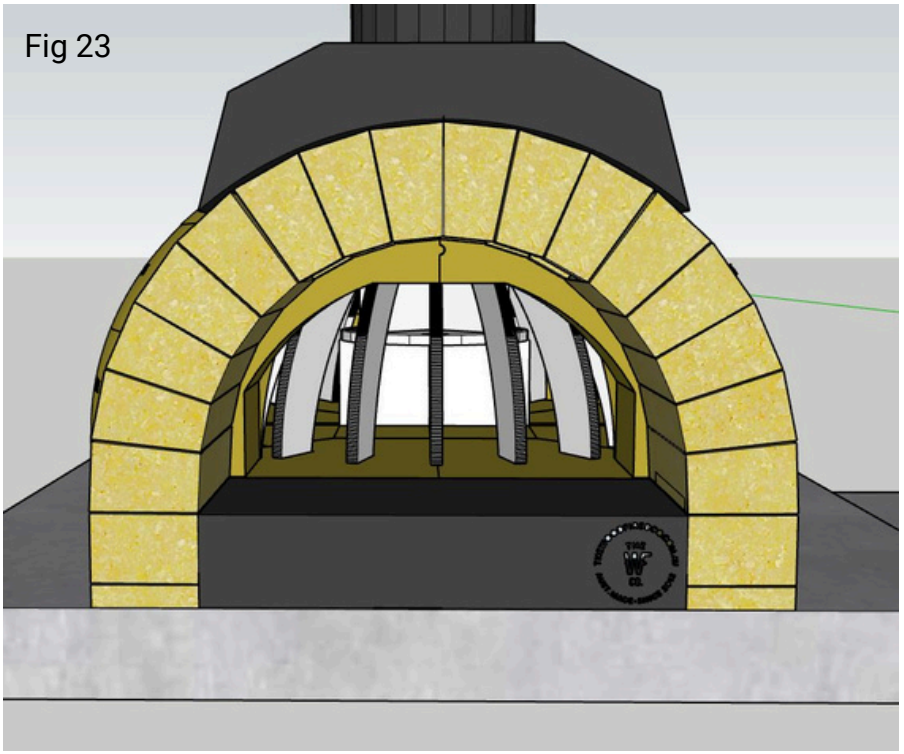
Fig 22




Line up the tab of the cowl with the center joint of the oven arch and use mortar to mortar the tab into the joint. See FIG 22

Once you have fitted the top flue cowl, you will need to fill the gap between the bricks and your cowl, apply some mortar into the groove and use a sponge to push in and clean the mortar so its smooth to the surface. The final product should look like FIG 23

Fig 23



Once you have mortared the top flue outlet and all the bricks in place use a clean sponge and fresh water in a bucket and clean the outside joints and remove any markings or excess mortar

# 7:Insulating your dome with blanket

16. Time to weatherproof and insulate your dome.

Get out your heavy duty foil ( Matador or Reynolds premium foil - Cover the dome with foil, making sure to overlap and tape the joints using 50mm masking tape so that the foil can act like a seal to the dome - See FIG 24

Fig 24

Run the foil up to the front brick arch and create a slight lip as per FIG 25

**SPECIAL NOTE: If you can not find thicker foil, you can use standard foil, just make sure it is tripled up to avoid holes.**

Fig 25

# 7:Insulating your dome with blanket

17. Get your blanket roll prepared and begin to wrap the dome with the blanket. Start from bottom of the dome and wrap the blanket horizontally across the belly. See FIG 26

**SPECIAL NOTE: Wear a mask and good clothing to avoid any irritation**


Fig 26

Once this has been complete it will leave a space on the top, cut blanket out and fill in the gap, this will complete your first layer. See FIG 27


Fig 27

Once your first layer has been completed, start to do the second layer. The second layer goes over the top vertically, start from against the brick arch and work towards the back, the blanket is very forgiving and can be cut to fill any spaces left. See FIG 28

**SPECIAL NOTE: Wear a mask and good clothing to avoid any irritation**


Fig 28

# 7:Insulating your dome with blanket

18: The goal is to create a tight, uniform mesh around the dome that locks the insulation in place and gives the  render a reliable surface to bond to. First step is to locate your chicken wire, this is what will lock in the blanket.

Start by putting concrete nails around the border of the oven inline with wear the blanket lands, before doing this make sure the blanket is compacted as much as possible, you can do these every 500mm around the base, you can then use these to tension the chicken wire. See FIG 29


Fig 29

Start by fixing the chicken wire securely to the base nails or screws around the oven's perimeter. These anchors set the tension points that will keep the mesh from sagging later. Start from one side of the arch and pull the chicken wire horizontally around the oven until you get the opposite end of the dome. See FIG 30

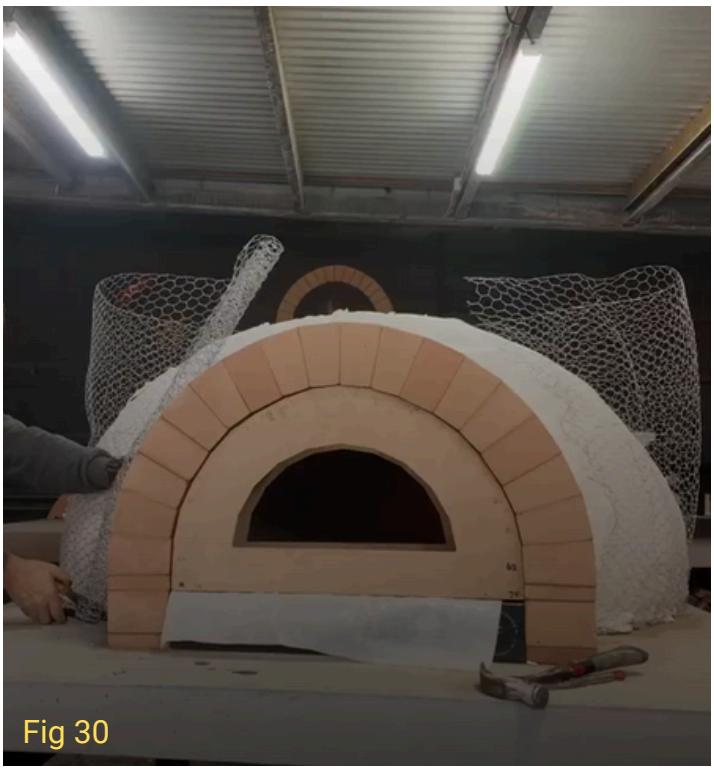


Fig 30

You will then need to pull the mesh in and stitch the joins so you can close the gap around the top of the oven, the chicken wire can be pulled in and will then need to be stitched into each other to create the tension. See FIG31

Use tie wire to stitch joints and overlaps so the mesh behaves as a single continuous skin. You can use the nails you have put around of the border to pull the wire in, do not put too much tension,  this may remove the nails.

Fig 31

Final Pass and Safety Check

Go over the dome, trimming or folding down any sharp ends. Nothing should protrude more than a finger's width (~25 mm).

When correctly tensioned, the dome should feel wrapped in a firm, spring-tight cage ready for the first render coat.

# 8:Rendering your oven

19: We are now getting to the final stage. Prepare your render material - You can mix the render in a wheel barrow, but the preferred method is to use a cement mixer.


Fig 32

Mix your sand and cement with premium clay, add water till you form a consistency that is thick, you want the render to be workable but not wet so that it sags down the side of the oven.

**SPECIAL NOTE: Mixture is, 1 20kg Bag sand and cement to 1 double handful of premium clay or fire clay. EG: 3 x 20kg bag of sand and cement to 3 double handfuls of clay**

Fig 33

**SPECIAL NOTE: Make sure you clean any mortar that has been marked on the brick work right away, if you leave mortar it could mark the arch bricks**

Once your render is mixed to the correct consistency start by placing two or three shovels of mixed render on top of the oven dome, you can then push the render tightly into the blanket whilst at the same time pulling the material down towards the base of the oven. See FIG 32 and 33

Repeat this step until the top half of the oven is covered. See FIG 34

Fig 34

**SPECIAL NOTE: If the chicken wire pushes away from the blanket, use the trowel to push the render back in and apply more mortar**

# 8:Rendering your oven

Once the top half of the oven has been completed you can start to render from the base up so that the bottom half of the blanket is completely covered with render, this time instead of pulling the material down, you push in and pull the material up so that it meets with the top section of render. See FIG 35 and FIG 36

Fig 35


Once you have the render completely covering the dome of the oven, spend some time with your trowel to get the oven shape nice and consistent, once this is done you can let the render dry for around an hour, once the oven is dry you can repeat the steps above again to complete the second coat. See FIG 36

Fig 36

Once the second coat has been completed, give the mortar 20 minutes to sit and slightly harden, you will then need to get a sponge and a clean bucket of water, the bucket of water is to keep handy so that the sponge can be cleaned and dried so you can continue to sponge the surface till it is clean and any marks from the trowel are removed. See FIG 37

**SPECIAL NOTE: Make sure you clean any mortar that has been marked on the brick work right away, if you leave mortar it could mark the arch bricks**

Fig 37

# 9:Cleaning and removing templates and finishing

Great news! You have almost finished your oven and its time to remove the front arch template and the main dome template.

**You should wait for the next day to remove these templates to give time for the mortar to dry completely.**

20: Pull out the arch template from the oven, this should slide out. If the template is tight, unscrew the screws and dissemble it slowly without using any impact which can damage the arch. See FIG38

Fig 38

**SPECIAL NOTE: Once you remove the template, there will be joints that have not been filed in, use a trowel to fill in these joints and then use a sponge to push in and clean the joint making sure to remove any excess mortar that has marked the bricks.**

21: Time to remove the dome template. Find the rope that was tied through the center hole of the jig and slowly pull on the rope so that the round jig comes out. The jig may still be a little tight, use a rubber mallet to hit the bottom of the fins so that they can collapse down and be pulled out. See FIG39

Fig 39

22: Time to fit your chimney and rain cowl. Simply place your 200mm flue over the top cowl and then connect the rain hat.

# 9:Curing and sealing of your oven

Moisture is the oven's biggest enemy over time. Once the render has dried (usually within 24 hours), the curing process must begin immediately. If moisture re-enters the oven during curing, it reverses the process and can cause long-term damage. When curing is complete, you must seal the rendered dome to prevent moisture from getting back in. A simple solution like Bondcrete, mixed with water and brushed over the dome, works well and is available at any local hardware store or an acrylic roll on render EG: Mac Render Roll on Rustic or a Rockcote roll on render

**Step 1 – Start with Heat Beads**

Use good-quality BBQ heat beads (available at supermarkets and hardware stores).
Heat the beads on a gas BBQ, fireplace or charcoal starter until they're white around the edges, you can even use
Place them in a metal pan and set the pan in the center of the oven. Target oven temperature: 100–150°C (no higher).You can leave the door slightly ajar to let air in and keep the beads burning. Because you're heating a cold structure, the heat will dissipate quickly. Patience is critical here — this step is protecting your oven for life.

**Step 2 – Maintain Gentle Heat (24–48 Hours)**

Keep the heat beads in the oven for at least 24–48 hours (longer is better).
Replace the beads with freshly heated ones as needed to keep the oven steady at 100–150°C.
This slow, steady heat pushes out deep moisture from the dome, drying it for life and preventing structural issues.

**Step 3 – Introduce Small Flames**

After the 48-hour bead process, you can begin lighting small fires.
Start with a minimal flame in the metal pan, positioned in the center of the oven.
Gradually add more timber, increasing the size of the fire slowly over several hours.
Continue building up until the oven reaches full cooking temperature.

**Key Reminders**
Never rush the curing process — it's the most important step in protecting your oven.
Keep moisture away during the entire curing phase.
Seal the dome once curing is complete to lock out future moisture.
✅ Done correctly, curing ensures your oven is fully protected and ready to perform for years to come.