



CHOCOLATE FOUNTAIN

JAMIE & JIMMY'S FRIDAY NIGHT FEAST SERIES 6

Overview

Chocolate is a treat and a chocolate fountain is the ultimate way to indulge in chocolate! Although you can buy small plastic chocolate fountains, to hire a full size one can cost a significant amount of money. This version of a homemade chocolate fountain involves some plumbing, metal work and use of electronics, but once you've got it flowing, there will be no looking back!

What you will need

- Plate warmer (300W)
- 500mm Paella Dish
- Mixing Bowls. Various sizes
- Copper pipe 22mm
- Brass compression fittings
- 12V Caravan water pump x3
- 12V Power supply + wire
- Saucepan lid
- Fasteners
- Sturdy table

- Brass wall plate elbow fitting

Tools & Safety equipment

Tools

- Pipe Cutters
- Spanners
- Drill
- Various Drill bit sizes
- Taper Drill bit
- Pen/Pencil
- Ruler
- Hex driver

- G-Clamp
- File

Safety

- Safety gloves
- Safety goggles
- Appropriate clothing/ footwear

How to build a chocolate fountain

I. Prepare base of fountain



- The base of the chocolate fountain will sit inside the paella dish, which sits on top of the plate warmer.
- Remove the saucepan lid handle with a screwdriver.
- Drill three holes in the middle of the lid, and attach a wall plate elbow fitting using screws.
- This lid will hold up the rest of the chocolate fountain.

II. Build chocolate fountain

- Decide how many tiers you want for your chocolate fountain. Each tier will have a metal bowl. Use the largest bowl at the bottom of the fountain, and the smallest at the top.

- Find the center of the bowls and create an indentation as a guide, then using the tapered drill bit, secure the metal bowl to your workbench, and drill a large hole in each of the bowls.



- Using a pipe cutter, cut copper piping to the lengths required for your chocolate fountain. The length will depend on how many bowls/tiers you have on your fountain but be aware the higher the fountain the more power needed to pump the chocolate around. We cut our pipes 20cm long.
- Attach copper pipe compression fittings and place the bowl on top, this will hold the bowl in place. Repeat this for each bowl. Tighten the fittings with a spanner.



III. Attach top reservoir

- The final bowl at the top of the fountain should be placed upside down on top of a larger bowl below, and attached with compression fittings. This acts as the reservoir - where chocolate will collect and then slowly ooze down on top of the bowls below.



IV. Base reservoir

- The paella dish forms the bottom reservoir of the fountain and is where the chocolate collects, is gently heated and then pumped through the copper pipes.
- Drill a hole at the edge of the bottom of the paella dish using the taper drill bit.
- File down the edges with a file.
- Attach copper fitting with a rubber seal to the hole in the paella dish.



V. Set up chocolate pump system.

- To pump the melted chocolate up to the top of the fountain requires some force. Three caravan water pumps to be precise!
- Line up your 12v pumps so that they can pump in parallel. This means that they will all pump at the same time, with an equal amount of chocolate flowing into them. This increases the flow rate.
- Place them onto a piece of wood and attach with screws.
- Measure and cut copper piping so that one pipe is split to deliver chocolate to all three pumps.
- Measure and cut copper piping so that the pumps are attached to one pipe - the outlet pipe.
- Use various compression fittings to get this system to be in place.
- The outlet pipe of the pump system should also have a valve attached to be able to drain the whole system and cleaned after use.
- Crimp motor wires and wire into 12V power supply.





VI. Chocolate fountain table

- The pumps need to be safely secured underneath the chocolate fountain.
- Using a sturdy table, turn it upside down and using wood screws, drill several holes into the pump wood mount and attach to the table.
- Attach the 12v power supply under the table with wood screws.



VII. Attach paella dish to pump system.

- Place table upright.
- Add plate warmer to the table.
- Place paella dish on top of plate warmer.
- Cut copper pipe so you can attach to the pump system to the bottom of the fountain and use compression fittings to attach the whole system together.
- The drain pipe from the paella dish attaches to the pump inlet pipe.

- Place the metal bowl fountain in the paella dish in the middle and attach the pump outlet pipe to the base of the fountain.
- Go around every single compression fitting and tighten with a spanner so no chocolate can escape!



VIII. Preparing the fountain for use

- As you can imagine, it is a food safety priority to ensure that the chocolate fountain is clean and cleaned before each use. Place hot water in the paella dish and pump around the fountain then drain before use. Be aware that the water will flow very fast around the system.
- The chocolate used should be at least 50% cocoa solids - otherwise the chocolate sticks inside the metal pipes, clogs up and doesn't flow properly.
- We recommend 10KG of chocolate with at least 500ml of sunflower oil mixed to ensure the liquid runs fast enough. Melt the chocolate using a bain marie. Then pour this into the paella dish. Not into the top of the fountain.
- Turn on the chocolate fountain and see the chocolate flow down!



Specific Safety Notes

- This build requires full cleaning before and after each use.
- Ensure that the electrics do not get water or chocolate on them.
- This build should not be used for more than 1 hour at a time, as the chocolate loses its consistency and won't flow well.
- Use hot water to clean the chocolate out at the end of use and ensure the water is pumped through the fountain for at least 20 minutes before it is stored.

End User Notice

Only use power tools in accordance with manufacturers instructions. Ensure all necessary safety equipment is worn at all times. The instructions in this document are intended as a guide only, any building you do is at your own risk. You should regularly assess the safety of the Build during construction and afterwards.

General Safety Guidelines

Food Prep

Please clean all surfaces thoroughly before serving food and ensure raw food preparation areas are not also used for cooked food serving and presenting.

Tools

When using tools, please ensure that you have read the instructions carefully and that you have the correct Personal Protective Equipment to operate them safely. If you are not experienced at using them seek help or advice from those more experienced on how to use them safely.

Heat

Please be mindful that the hot plate gets hot and can retain the heat for a long time. Make sure others are kept at a safe distance and that you use the correct Personal Protective Equipment (PPE) including protective clothing when handling or working near these builds. Once you have finished using the build, remain a safe distance from the build ensuring that it has cooled fully before moving it.

Children

Make sure that children and others are kept at a safe distance throughout the making of the build and whilst you are using it. Ensure that the build is given enough time to cool fully before you leave it unattended.

Personal Protection Equipment (PPE) Safety Guidelines

| TOOL | ADVICE |
|---|--|
| For any tasks that will generate dust / particles a dust mask is advised | |
| ANGLE GRINDER | <ul style="list-style-type: none"> ● Hearing Protection ● Safety goggles ● Dust mask ● NO GLOVES (spinning equipment) ● Long sleeve cotton clothing ● Safety boots |
| JIGSAW | <ul style="list-style-type: none"> ● Safety goggles ● Dust mask ● NO GLOVES (spinning equipment) ● Safety boots |
| MITRE or CHOP SAW | <ul style="list-style-type: none"> ● Safety goggles ● Dust mask ● NO GLOVES (spinning equipment) ● HEARING PROTECTION ● Safety Boots |
| MIG WELDER | <ul style="list-style-type: none"> ● Welding clothing ● UV welding mask ● UV eye protection for observers ● Welding gloves |
| IMPACT DRIVER (DRILL) | <ul style="list-style-type: none"> ● Safety goggles ● NO GLOVES (spinning equipment) |
| HAND SAW | <ul style="list-style-type: none"> ● Safety boots ● Safety Gloves to be worn for all non rotating saws |
| FILING | <ul style="list-style-type: none"> ● Gloves (especially for metal work) |
| HACK SAW | <ul style="list-style-type: none"> ● Safety boots ● Safety Gloves to be worn for all non rotating saws |
| BENCH DRILL | <ul style="list-style-type: none"> ● Safety goggles / Bench drill guard ● Safety boots |
| WIRE CLIPPERS/CUTTERS | <ul style="list-style-type: none"> ● Safety goggles |

| | |
|-----------------|---|
| LIGHTING FIRES | <ul style="list-style-type: none">● Fire safety gloves (for putting coals onto a lit fire)● Bucket of water● Suitable Fire extinguisher● Fire poking tools (metal) |
| CHISEL/HAMMER | <ul style="list-style-type: none">● Safety Goggles● Safety Gloves |
| TAPER DRILL BIT | <ul style="list-style-type: none">● Safety goggles● SAFETY rigger GLOVE for securing metal bowl. |