

# Ice Cream Dispenser



## **What you will need**

- 12 volt 600kg linear actuator and battery. Two way switch, with wiring
- Length of plastic drain pipe and a screwed access plug
- Solvent weld
- 22mm push fit tank connector, 90° elbows and piping
- M10 threaded rod, threaded eyes, nuts and washers
- 3mm steel plate
- Wood and wood screws
- A freezer
- Paints with which to jazz it up
- Car body filler
- Angle grinder
- Powered drill with steel bits and hole cutting attachments
- Measuring and marking tools
- Saw and a file, or abrasive paper to clean up cut edges

## **Personal Safety equipment**

- Protective gloves (EN388)
- Safety glasses
- Wear ear defenders when using angle grinders

**Safety notes** Always take care when using power tools and, as a precaution, have a first aid kit to hand. Work on a stable surface, in good light. Wear all personal protective equipment and suitable clothing. Those under the influence of intoxicants should not engage with this project. If any injuries occur seek medical advice.

This is a reasonably complicated build, which relies on a frame that is strong enough to deal with the power of the actuator.



The frame is made to fit snugly inside the freezer with the actuator coming out the top.





Use the threaded eyes to secure the actuator to the top of your frame, so that the slide bar can move freely, up and down.



The reservoir that holds your ice cream will sit within this frame and be made from the push fit plastic plumbing fittings.





Glue the screw access hole into the drain pipe.



Cut a hole for the plumbing fittings to fit through.





The reservoir will need some support, so that the actuator doesn't crush your pipework.



You'll need a plunger that fits the internal diameter of the reservoir. Make this from car body filler, using a piece of pipe as a mould and some cling film to stop it from sticking to the sides..

To make the most of freezer space, the actuator will protrude from the top. The body of the freezer will add more strength to the frame.







Please make sure that all surfaces that come into contact with food are kept clean and hygienic.





## **General Safety Guidelines**

### **FLAMES**

When lighting fires, using naked flames or tools that can generate sparks, please ensure that there is adequate space in the surrounding area and that there are no dry or flammable surfaces nearby. Having water on hand or a sand bucket is a good safety precaution.

### **SOLVENTS**

When using glues or other solvents, it is important to ensure that they do not come into contact with your skin or food surfaces and ensure that they are used in a well ventilated area as they can be toxic. Be sure that they have dried so that all solvents have evaporated before preparing food.

### **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 power 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.