

DIY MEAT SMOKER

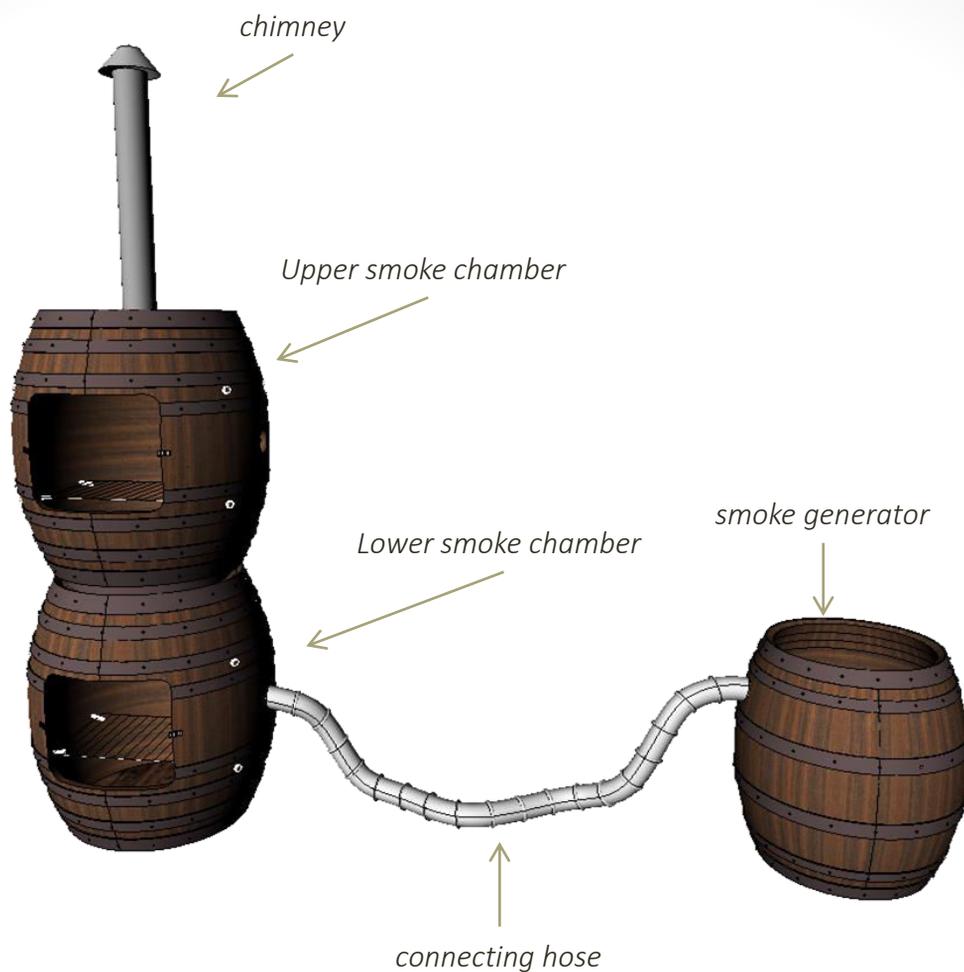


Brief: To create your own smoker you will need to source some of the following items or similar;

- 3 whiskey barrels
- 4" Diameter Aluminium hose about 6 metres long
- Metal racks (oven shelves or cooling racks will do)
- Aluminium foil food container
- Small barbeque
- Door catches
- 1" wood screws
- Charcoal
- Wood chips
- Chimney
- Long bolts or rod
- Handles

Tools;

- Jigsaw
- Drill with various sized drill bits
- Screwdriver
- Hole saw to the same diameter as your aluminium hose
- Tape measure



Step 1: First we need to create the smoke generator. To do this you will need to modify one of your barrels by cutting around the circumference about 13cm from the top to create a lid. Now measure 10cm down from your cut line and drill a hole using your hole saw. You may also want to fix a handle to the lid.

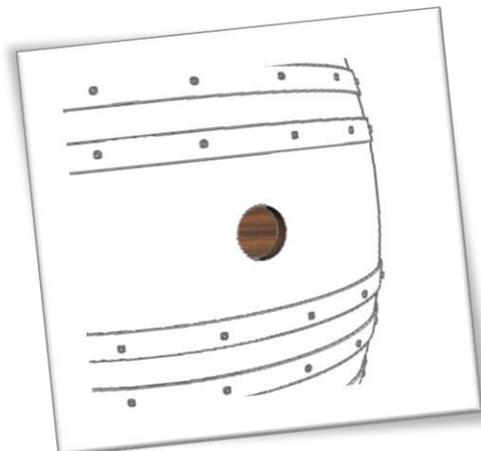
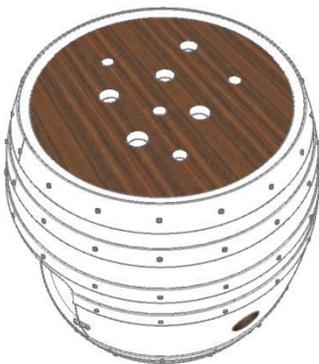


Step 2: You now need to make two chambers to place your food items on for smoking away from the heat source. This will require modifying your two remaining barrels.

- Mark out an opening for a door onto the barrel.
- Any of the bands around the barrel that will need to be cut through will need to be drilled and fixed with screws, (including the area which will make up your door).
- Cut out the door using a jigsaw.
- Secure the door using clips, these will allow the doors to be removed as required.
- Fix handles and retaining latch.



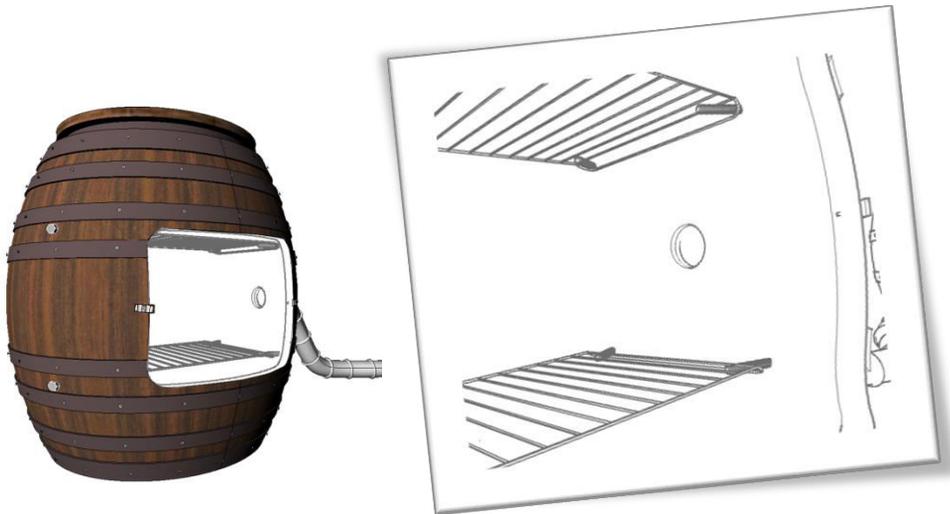
Step 3: To create the lower chamber, Use your hole saw to cut a hole into the side of the barrel to accept the aluminium hose and then several holes into the top to allow smoke to transfer into the upper chamber.



Step 4: To create the upper chamber;

Use your hole saw to cut several holes into the bottom for the smoke to enter from the lower chamber, and one hole at the top for the chimney. Now attach your chimney.

Step 5: Now we need to fit our shelves this is done by drilling holes on either side of the barrel and passing through a rod or long bolts to allow you to rest your shelves on or hang meat from.



Step 6: Stack your upper chamber barrel onto the lower chamber barrel.

Connect the aluminium hose from the hole in the smoke generator to the hole in the bottom smoke chamber to channel the smoke.



Smoke generator Overview

- Enclosure (we used a barrel, but you can use an incinerator dustbin etc.)
- Heat source (this can be a small barbeque to fit inside your enclosure)
- Smoke source (we used an aluminium foil takeaway tray which was filled with wood chips)

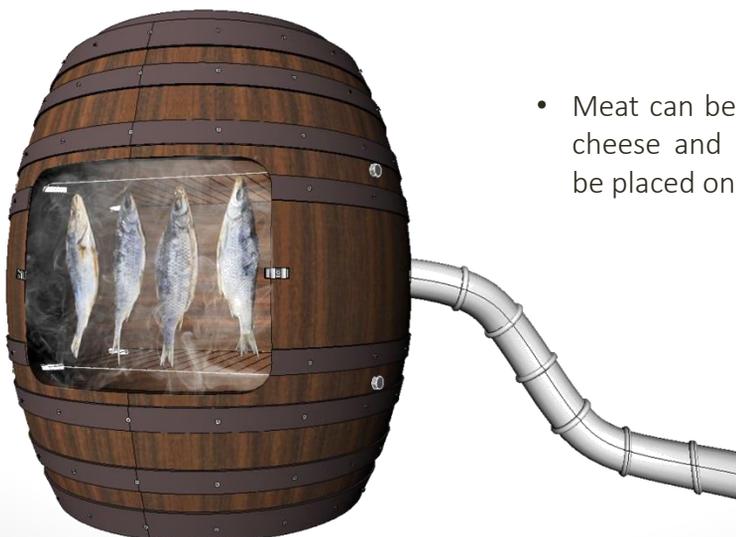
Connecting Hose

- Aluminium flue liner (this channels and cools the smoke before entering the smoke chambers)



Smoking Procedure;

- Place your barbeque into your smoke generator barrel and light the charcoal.
- Take a aluminium foil container, and fill with wood chips, fix lid and then make several 1cm diameter holes.
- Once the barbeque is up to temperature place foil container directly onto the hot coals, you may have to repeat this several times to maintain consistent smoke quality for the duration of your smoking.



- Meat can be hung using hooks, cheese and other produce can be placed on the shelves.

End user notice

- When building your smoker use all power tools in accordance with the manufacturers instructions and ensure all necessary safety equipment is worn at all times.
- Your smoker should only be used outdoors in well ventilated area.
- Smoking your food will take several hours, do not leave the smoker unsupervised at any time!
- Oak barrels are very heavy and may require multiple persons for lifting.
- When stacking barrels on top of each other ensure you are on firm and level ground.
- The smoke generator will become hot, keep away from children and pets.

Smoking guide

When carrying out smoking of food it is important to understand that there are two types of smoking to consider, choose the version that is safe for you; Cold Smoking and Hot Smoking both add flavour and help in keeping bacteria at bay, however one (hot smoking) is mainly designed as a way of cooking, so read the following notes carefully before attempting any food smoking yourself.

Cold Smoking – is carried out mainly to foodstuffs that will be preserved and stored to be eaten at a later date; for example cold smoking cured bacon that is then sliced and vacuum packed will potentially achieve an extra 4 weeks shelf-life compared to un-smoked bacon having a shelf-life of 6 weeks.

Just cold smoking raw goods will work, however it is safer that you cure your produce first to avoid spoilage or the chance of you eating something that maybe carrying bacteria.

Notes: Cold Smoking is up to 30c degrees

Usually cold smoked produce will be cooked at some stage before eating and will be safe to eat, however some cold smoked products like air-dried meats for example are designed to be eaten raw, so curing these meats first is essential.

Fish like the Whiting in the film are best wet cured in a brine solution of 50g sea salt per litre of water used, albeit the use of curing salt is better and safer (i.e. salt + saltpetre). Brine your fish for a minimum of 2 hours first, however curing them overnight will achieve better results. Once you have removed them from the brine, pat them dry with paper towel and leave them at ambient temperature to form a pellicle (i.e. sticky surface) before placing them in your smoker. They are ready when they are ready and not before, you cannot estimate the time, however as soon as you are satisfied with the colour and taste, then they are ready.

The exceptions in brining fish are; salmon, tuna, swordfish and other firm fleshed fish is that they benefit more from dry curing, using a ratio of 16g - 20g salt per kilo of meat. Again after curing pat dry with paper towel and leave to form a pellicle before smoking as it is the pellicle acting like a glue that allows the smoke to stick to the surface of the product.

Tips: a whole salmon side filet can be cured for 8hrs, left to form pellicle for 8hrs and finally cold smoked for 8hrs

Products that are best cold smoked are cheese, vegetables, garlic, salmon, ham, bacon, pastrami and more

Sausage like the fresh ones in the film can be cold smoked but do require cooking in order to be safe to eat (unless cured first).

Hot Smoking is described to foodstuffs that are smoked above 30c degrees and albeit most hot smoking is done in the mid to late 60's centigrade ideally you need to reach 71c + of which is a SAFE cooking temperature.

Just like cold smoking, hot smoked produce is at it's best if it as been cured first, however if you are choosing to eat hot smoked goods immediately then you can omit the curing process if you so wish.

Meat Joints of 2.5kg plus like pork, beef or lamb are better dry cured (applying 30grams of curing salt per kilo of meat used for appx 2 weeks then left to form a pellicle (i.e. a sticky surface) before smoking (usually an eight hour period is long enough to form this). Cold or Hot smoke until you are happy with the colour, texture and internal temperature.

The pellicle can also be achieved by brushing on a sugary marinade to the salmon or by melting some apricot jam and applying a coat or two.

You could smoke your own sea salt first before using it to cure your meats as this will add a greater dimension to the flavours and your experience.

Fuel choices for smoking food and a point to remember is that oxygen can be suppressed easily when using a fine sawdust thus getting into providing a smoke more readily and by being safer than other fuels by not being able to ignite into a fire. The coarser the fuel material the higher the risk of oxygen being available to ignite your fuel, so always THINK SAFE !

Handy hints and tips!

Use fine sea salt for better flavours

Use of salt inhibits bacteria

Use of curing salt (i.e. salt & saltpetre) inhibits bacteria as well as keeping Botulinum at bay

Do not remove any curing liquid until the end of the curing time

Inspect your meat daily

Curing poultry is best achieved with the use of Table Salt, as curing salt will give the appearance of the birds being pink in colour after cooking and thus implying the meat is uncooked.

If in doubt seek professional advice before using

Helpline and guides for the use of curing agents:

http://www.lucas-ingredients.co.uk/trub_drycuring.htm .

Smoking Guidelines and Expert Help !

www.hotsmoked.co.uk

<http://forum.bradleysmoker.com/>

www.lecharcutieranglais.com