

alcoengine

Pot Still – Instruction Sheet

PART#:
KL04633



IMPORTANT SAFEGUARDS

When using any electrically powered product, basic safety precautions should always be followed, including the following:

WARNING – to reduce the risk of fire, electrical shock or injury to persons or property

- **WARNING** – Do not touch the metal parts of the still without gloves during or after operation – it will be **VERY HOT** and could cause burns.
- **WARNING** - Do **NOT** open the lid while liquid is boiling.
- **WARNING** – Use in a well ventilated area away from naked flames.
- **WARNING** – Do not overfill boiler. **IF THE BOILER IS OVERFILLED THERE IS A RISK THAT BOILING LIQUID MAY BE EJECTED.**
- Regularly inspect around the inlet of the power inlet socket for liquid or moisture. If liquid is evident around power connectors, do not use appliance and dry thoroughly before use. If liquid is present continuously, check for water leakage and if necessary return to supplier for repair.
- Always operate the still from a power source of the same voltage, frequency and rating as indicated on the product identification plate.
- This appliance is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely.
- Young children should be supervised to ensure that they do not play with the appliance.
- This appliance should be used with a residual current device (safety switch). Consult a qualified electrician for advice.
- Do not operate any product with a damaged cord or plug, or after the product malfunctions or is damaged in any way. Return the complete product to the place of purchase for inspection, repair or replacement.

- To reduce the risk of electric shock, do not immerse or expose the product or flexible cord to rain, moisture or any other liquid other than those necessary for the correct operation of the product.
- Switch off and unplug from outlet before filling, emptying or when not in use and before assembling or disassembling parts and before cleaning.
- Do not leave appliance unattended when switched on.
- Do not use appliance for other than its intended use.
- Always keep appliance on a level surface before, during and after use.
- Do not move the appliance when it is switched on.
- Do not switch on unless there is liquid covering the element in the boiler.
- Do not switch on unless the lid is in place.
- Do not let the cord hang over the edge of a table or bench or touch a hot surface.
- The use of attachments or accessories may cause personal or property hazards or injuries.
- This product is intended for normal household / domestic use only. Failure to follow the above instructions could result in damage to the still, property or injury to the user.

Setting up

1. BEFORE USING THE STILL FOR THE FIRST TIME, TURN THE STILL UPSIDE DOWN AND RUN PLENTY OF CLEAN WARM WATER THROUGH THE BOTTOM. This will clean out any manufacturing residues.
2. Insert the threaded part of the column through the lid. On the INSIDE of the lid, put the white rubber washer over the threads of the column and then screw the big brass nut onto the column. Make sure it is fairly tight by holding the column and turning the lid, but not too tight. You can see how it goes in the picture.
3. Place the boiler on a HEATPROOF SURFACE on level ground.
4. Place the lid and column on top of the boiler.
5. Make sure the lid is centred on the boiler and close the clamps to hold the lid down.
6. If you want to extend the output tube, make sure you use a food grade product. DON'T use vinyl or PVC as it can leach poisons. The best thing to use is beverage line from the home brew store (it is used for kegs).
7. Connect the cooling water by connecting a garden hose to one of the brass connectors at the top of the still. Connect another piece of garden hose to the other top connector and let this hose run into a drain, or better still, the garden. It doesn't matter which one the water goes in and which one it comes out. I strongly recommend the use of a water recirculating system for your cooling water instead of wasting it. Contact your dealer for more information on our pumps. The quality of the cooling water is not important, as the still is designed so that this water will never come in contact with the product.
8. Insert the thermometer into the small hole in the side. Make sure it goes in about 4cm. There are spots that need to be pushed through a little harder as these are what grip the thermometer. The photo gives you an idea of how far it should go in.

Your still is now ready to use!

You should give the still a good run through with water to become familiar with its operation and to clean anything out that may be left from manufacture and transport.

Minimising amount of cooling water used

1. Unlike other stills, THE COOLING WATER DOES NOT IN ANY WAY CONTROL THE TEMPERATURE SHOWN BY THE THERMOMETER OR THE PURITY OF THE OUTPUT. DO NOT ATTEMPT TO CONTROL THE STILL HEAD TEMPERATURE BY REDUCING COOLING WATER FLOW! If you turn the cooling water down to try and raise the temperature, your product will steam out the top and very quickly be gone. You will get a very low yield and poor quality.
2. You do not need to turn the cooling water on until the thermometer reads about 30C.
3. Start flow at about 1L per minute
4. Once the still is running properly, you can slowly reduce the amount of water flowing until the copper pipe where the cooling water is coming out is quite warm.
5. If you see vapour or liquid come out of the top of the column, then you need to increase the water flow.
6. If you are using a pump or other recycling system, just let it run full speed – there is no reason to reduce the flow rate.

Distilling water

1. Fill the boiler with water. Leave at least 100mm from the top of the boiler.
2. Set up the still as in the instructions before.
3. Place a clean cup or other collection vessel under the copper pipe at the side of the still. Preferably use glass as it will not smell or taste like plastic may.
4. Turn on the power to the boiler.
5. When the thermometer reads 30C, start the cooling water flow (from the garden hose).
6. The thermometer will read about 100C continuously.
7. Once the water is boiling, you should soon be getting hot, pure water from the output pipe.
8. Be sure to switch off the power before all the water in the boiler is used.
9. Turn off the cooling water.

WARNING – DO NOT TOUCH THE METAL PARTS OF THE STILL DURING OR AFTER OPERATION. IT WILL BE VERY HOT. USE GLOVES AND EXTREME CARE IF TOUCHING THE STILL WHILE HOT.

Essential Oils

The topic of essential oils is a huge one, and cannot be covered completely in this guide. There is information available on the web, or in books, but the information below will tell you how to distil them once you know which method to use. Have a look at www.homedistiller.org this has a bit of information.

Most types of oils are extracted by steam distillation.

Put enough water in the boiler to cover the element, plus a bit more.

Place a wire basket or similar so it hangs above the water in the boiler. Arrange your leaves etc in this basket.

Distil as per water.

The first few mL of product will be the oil you are after, the rest will be more like flavoured water. Some things like rose petals produce only a VERY small amount of oil.

Some products need to be water extracted.

Soak the leaves etc in water for several days. Strain the liquid off and pour the liquid into the boiler, making sure there is enough to cover the element. Distil as per water. Collect in small amounts as each will have a different character.

Other products need to be alcohol extracted. Follow the same instructions as for water extraction, but soak in alcohol instead of water.

Cleaning

It is VERY IMPORTANT to rinse the boiler and inside of the column with hot tap water shortly after you have finished using the still, as spent mash can become corrosive.

You can easily clean the inside of the column by just running hot tap water through it.

Turn it upside down under a tap and let water run into the column and out the top of the still.

If you do not clean it properly, then you may get blue liquid or crystals coming out the next time you use it. If this happens, get some Citric Acid from your home brew store. Mix a tablespoon of acid with half a litre of boiling water in a plastic container. Place the still head upside down inside a bucket, and pour the hot acid into the bottom of the still. When it has all run through the still, collect the acid and run it through again a few times, then rinse out the still head thoroughly with hot water. Mix up a few teaspoons of Bicarbonate Soda (from the supermarket) in some water and pour this through the bottom of the still to neutralise any remaining acid, then rinse again with hot water. If you do not neutralise it with the Bicarbonate Soda, it will corrode again.

You can clean the outside with any type of copper polish, vinegar or even steel wool. If looks don't matter to you, then it is perfectly OK to let it stay the way it is. Copper naturally turns brown over time.

TroubleShooting Checklist

Running through this troubleshooting checklist will assist us with troubleshooting any issues if lodging a warranty claim. Please ensure you have thoroughly checked through this list prior to lodging a claim.

1. What pump are you using?
2. What is the coolant water temperature before and after running through the condenser coil in the still?
3. What is the cooling water flow rate after running through the condenser coil in the still?
4. What temperature is the still set to and how much power is the boiler set to?
5. Which output orifice is being used and is it clear from blockages?
6. What was the recipe used to make the wash?
7. What was the ABV of the wash determined by hydrometer readings before and after fermentation?
8. What is the purity of your distillate?
9. Has the still been cleaned recently?
10. Is the copper packing evenly distributed throughout the still, packed not too tight and with no blockages?
11. How much wash is in the boiler and has distilling conditioner been used?

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