

The Ultra Pure Still

Instructions



Read thoroughly before use!

BEFORE FIRST USE

Read and follow all the instructions in this booklet, even if you feel confident using the product. Keep these instructions safe for future reference.

Please make sure you read the 'Important Safeguards' section carefully.

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. Maximum fill is Five Litres (5L). 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.

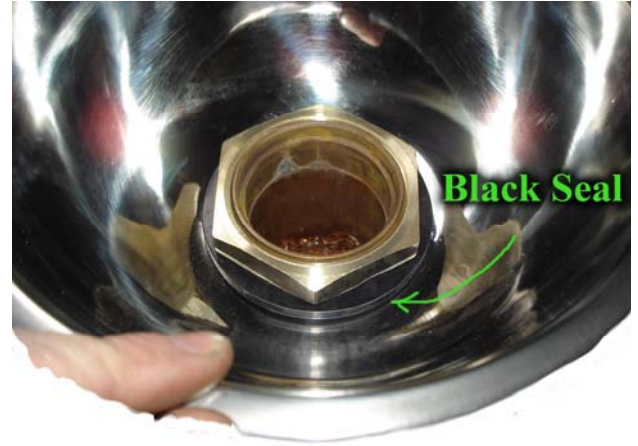
Failure to follow the above instructions could result in damage to the still, property or injury to the user.

READ AND SAVE THESE INSTRUCTIONS

Setting up

1. Insert the threaded part of the column through the lid (the one without the black seal around it). On the **INSIDE** of the lid, put the black rubber washer over the threads of the column and then screw the big brass nut onto the column. Make it fairly tight by holding the column and turning the bowl.

You can see how it goes in the picture.



2. Place the boiler on a **HEATPROOF SURFACE** on level ground.

3. If using the 5L boiler, place the bowl with the black seal on it so that the bowl is **INSIDE** the boiler. Make sure the little lip on the seal locates inside the rim of the boiler.

If you are using a different boiler, then disregard this instruction.



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. Make sure the thin copper output tube is sloping downhill all the way from the tap, otherwise it will leak from the little hole on the brass fitting. If you want to extend this tube, make sure you use a food grade product. **DON'T** use vinyl or PVC as it can leach poisons.

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 cooling system and 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. These connections can be seen in Figure 1.

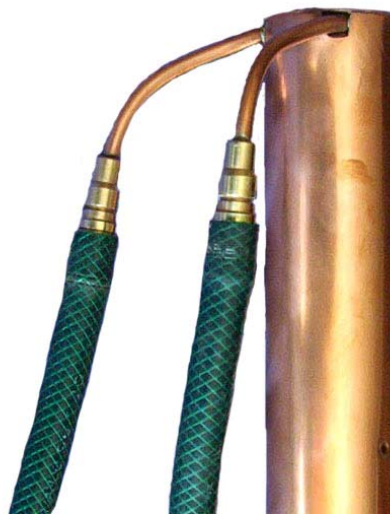


Figure 1 - Cooling water connections

8. Insert the thermometer into the small hole pointed to in Figure 2. 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. Figure 3 shows what it looks like in place and Figure 4 gives you an idea of how far it should go in.

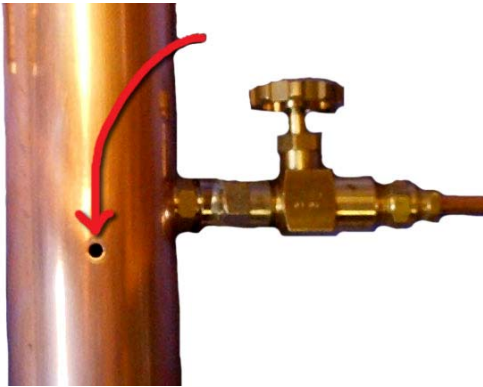


Figure 2 - The thermometer hole



Figure 3 - Thermometer in place



Figure 4 - Depth of thermometer

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.**
2. Don't turn on the cooling water until the thermometer reads 35C.
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 some other recycling system, just let it run flat out.

Distilling water

1. Fill the boiler to within 60mm from the top.
2. Set up the still as in the instructions before.
3. Open the valve fully.
4. 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.
5. Turn on the power to the boiler.
6. When the thermometer reads 35C, start the cooling water flow (from the garden hose).
7. The thermometer will read about 100C continuously.
8. Once the water is boiling, you should soon be getting spurts of hot, pure water from the output pipe.
9. Be sure to switch off the boiler before the liquid goes below the element. (Don't take more than 3L of water out of the still if you have filled it with 5L – always leave about 2L in the bottom)
10. 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 this information 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.

If you need further clarification, please contact me and I will point you in the right direction.

Distilling alcohol

WARNING – It is **NOT legal** to distil alcohol in many countries INCLUDING Australia without an appropriate licence.

Do not distil alcohol with this still in such countries without such a licence as it is completely illegal.

Cleaning

It is 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 is 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.

After running approximately 100L through the still, you will need to clean the mesh. 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 until the copper mesh is clean again, 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.

I don't recommend taking out the copper mesh inside the still for cleaning, as the way it is packed is critical.

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

Steam coming out of the top of the still

Cooling water is too slow – increase the flow a little until the steam stops.

If you are using a water pump, it may not be powerful enough. You need a pump capable of at least 3000L / hr or a max head height of 3m.

Liquid or steam coming from around the join between the lid and the still head

Unscrew the big brass nut, and put it back on as per the ‘setting up’ instructions.

Make sure it is tight enough, but not too tight.

If this doesn't fix it, check under ‘gurgling noises’.

The product coming out of the still is hot

This is normal for this type of still. It helps to evaporate any light volatiles that can cause smells or tastes.

Liquid pouring out of the top of the still, still rocking and making gurgling noises, cloudy output

The wash in the boiler is frothing up too much. **You must add a capful of ‘distilling conditioner’ from a home-brew shop.**

If it has started to do this after you have used the still several times, then the mesh may need cleaning – see the cleaning section.

If it continues to do it, then the mesh will need to be loosened a little - pull the mesh out of the column, re-roll it and put it back in loosely.

The product is coming out very slow

This still is set to run at about 1.5L per hour. Measure the output by placing a 1 cup measure (250mL) under the output with the still running. Time how long it takes to fill – it should take about 10 minutes. If it takes longer than this, then you will need to clean out the orifice.



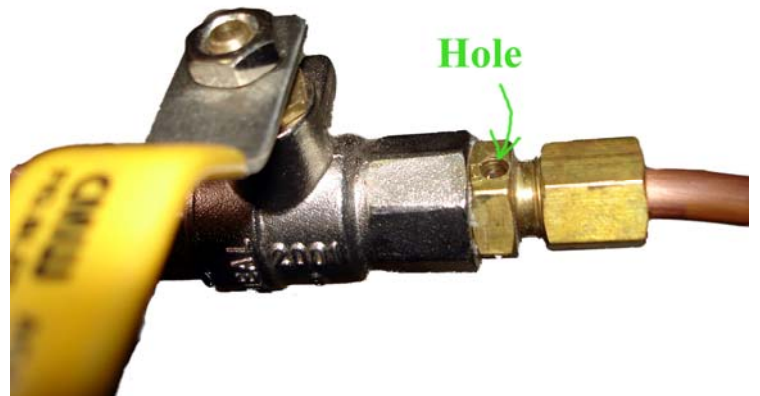
Remove the brass fitting that holds the output tube at the end of the tap

Small Hole



Very carefully clean out the tiny hole with a needle. DO NOT MAKE IT BIGGER, just gently clean it

When you put the part back on the tap, make sure the big hole is pointing upwards, otherwise it will leak.



Have fun, be safe, and be legal.

Greg
drink@puredistilling.com
ph: 0404 937 121



The Drought Buster

Cooling water recycling system

- **Uses only 2L water per hour**
- **Simple to setup and use**
- **Includes 3000L/hr water pump, fan, bucket and all hoses**
- **Stores compactly into bucket**

