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## Z Filter System

The **Z Carbon Filter** uses an advanced treatment system designed to treat the spirit in one stage and gives excellent results in a very short time. It is designed to provide the maximum carbon treatment possible.

The **Z Carbon Filter** achieves this by ensuring that all of your distillate comes into contact with all of your carbon. The 750mm continuous length of this unique filter system ensures the maximum contact time of the spirit with the carbon. Filtering, strictly speaking, is the process of removal of particles by passing them through a material finer than the particles we want to remove, what we are really doing is absorbing the by-products into microscopic holes in our carbon. The carbon is full of impurities after spirit is passed through it, the carbon cannot be reused.

### Your complete Z Carbon Filter contains:

Z Filter Cartridge (A)

Small White Screw Cap Top (B)

Large Black Nut with Hose Adapter & Washer ©

Large Black Nut with Hose Adapter, Washer and 500mm of Tubing (D) (not shown)

Large Black Nut with Washer and Z Filter Mesh Disc (E)

Z Carbon Universal (not shown)

Z Filter Papers x 5 (not shown)

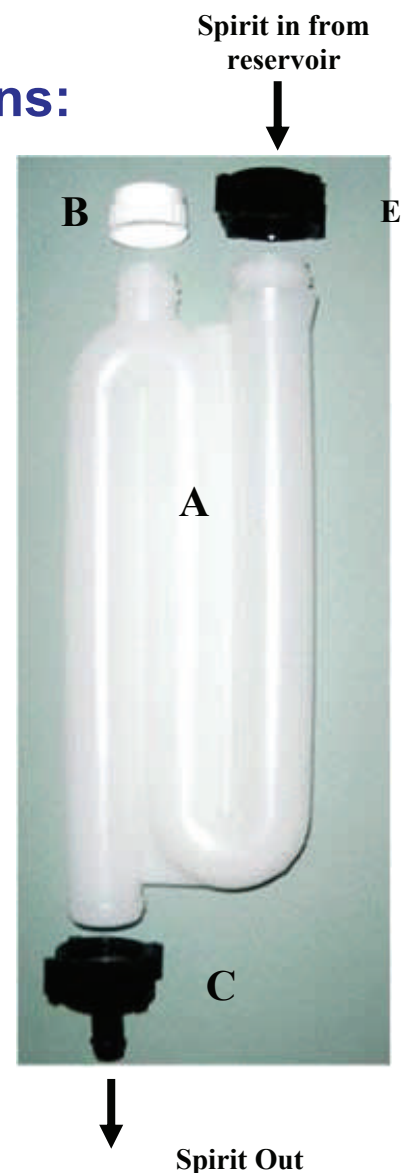
#### You will also need:

A funnel (not supplied)

If you have purchased your Z Filter as an upgrade then you will also need:

10 litre Pail Reservoir

10 litre Pail with hole drilled in lid to collect your spirit.



# Instructions for Assembly & Use

## Assembly

1. Attach the tubing on the Black Nut Adapter (D) to the tap on the 10-litre pail reservoir.
2. Check that the rubber washer is in place inside the black nut that will attach to the Z Filter.

## Distillate Preparation

1. Water the distillate down to 50%/V Alcohol with clean tap water. This makes it easier for the carbon to remove any impurities present.
2. After ensuring the tap is off, pour your distillate (spirit from the still) into the 10-litre pail reservoir.

## Z Carbon Filter Treatment

### Step 1—FIT Z FILTER PAPER

Unscrew the Black Nut with Hose Adapter (C) from the bottom of the Z cartridge and then remove the rubber washer. Insert a single Z Filter Paper and replace the rubber washer. Make sure there are no pieces of carbon in the thread, screw tightly back onto the Z Filter.

### Step 2—FILL WITH CARBON

Unscrew the white plastic cap and the Black Nut from the top. Use a funnel to fill each chamber with carbon. Leave about 10mm at the top of each chamber to allow for the expansion of the carbon that occurs when the carbon is wet. Securely refit the white cap and the black nut.

**NOTE:** Your Z Filter is supplied with the Z Filter Stainless Steel Mesh Disc correctly inserted inside the black nut between the washer and the black nut.

### Step 3—RINSE CARBON

It is simplest to use a garden hose for this task as it fits easily onto the black adapter on the bottom of the Z Filter (remove any hose fittings from your garden hose first).

Holding the Z Filter upside down, run water through the filter until the outflow runs clear for 30 seconds. Stop the water flow briefly, then again run water through the filter until the outflow again runs clear for 30 seconds. Repeat this one more time so that the water runs clear for 30 seconds for the third time. Three flushes are sufficient to remove the mineral salts and any loose carbon.

**NOTE:** Carbon rinsing is important to remove mineral salts from the carbon. Carbon rinsing removes the salts and prevents them from appearing as fine crystals in your spirit a couple of days after carbon treatment.

### Step 4—FILTERING

Once the carbon has been rinsed, turn the Z Filter upright, with the black nut and mesh to the top. Tap the Z Filter to drop the carbon from the top. Carefully remove the black nut and mesh. Ensure there is no carbon in the thread of the Z Filter and screw the filter into the black nut attached to the reservoir containing the spirit.

Place a 10-litre pail underneath the filter to collect the filtered spirit. Open the tap on the reservoir and wait while the spirit makes its way through the tube. This will take a few minutes.

Collect the first 150 – 200 ml, as this may contain some carbon, and return this to the reservoir. Fit the end of the filter into the hole in the lid of your collecting pail. You may need to adjust the length of the hose to suit your distilling environment. Once all the spirit has run through, tilt the reservoir to get the last spirit into the filter.

Check the strength of the filtered spirit, adding clean tap water to bring it to the desired strength. We recommend 40% or less.

After use, remove all nuts and caps and shake out the spent carbon. Rinse out the Z Cartridge with cold water, taking care to remove any carbon from the threads.

# Important Information

## Hints & Tips

- Your Z Filter comes ready to use with part (E) correctly assembled and attached. Remember for future usage that the stainless steel mesh disk needs to be inserted between the black plastic nut and the rubber washer.
- Your Z Filter comes with a packet of Z Carbon Universal. This carbon removes a wider spectrum of impurities and as such can be used to treat any distilled spirit.
- We recommend using a garden hose or similar when flushing your carbon with water prior to carbon treatment as it is flexible enough to easily fit on and off the hose adapter on the black nut (C).

## A word about mineral salts

Mineral salts are present in the raw materials used to make activated carbon. When spirit runs over activated carbon some mineral salts can be absorbed into the spirit. Later, once the temperature has dropped, these mineral salts start to become insoluble in the spirit and after a few days a fine sediment appears in the spirit. This fine sediment (which first appears as a milky haze and then drops to the bottom of the bottle) is the mineral salts originally from the activated carbon. These mineral salts are absolutely 100% safe (in fact essential for life!) but you don't want them in your spirit. This is why we recommend flushing the carbon with clean water. If you notice this problem in your spirit you can decant the spirit from the sediment and your spirit is safe to drink. Ensure that next time you increase the amount of water you flush the carbon with.

## Troubleshooting

### My spirit comes out gray from the filter?

The carbon has not been flushed properly prior to use. Flush the carbon as per the instructions making sure to repeat this. Take care not to knock the filter once carbon filtering has commenced. Or it may be that the wrong filter paper has been used. Check you have the correct filter paper.

### The spirit runs very slowly?

The filter has been over packed with carbon. When the carbon gets wet it expands and may block. Leave a 10mm gap at the top of both chambers of the filter.

### The spirit runs too fast?

This is unlikely to cause any problem as the filter is designed to work very quickly as all the spirit is forced to pass through all the carbon. If you are concerned with the speed then simply put your spirit through again.



## **Z Filter System Range**

### ***Consumables***

- Z Carbon Reflux 195g
- Z Carbon Universal 195g
- Z Carbon Universal 600g
- Z Filter Papers, 5 pack

### ***Replacement Parts***

- 13mm Z Filter Nut & Tail
- Z Filter Mesh Disk