

GETTING STARTED WITH AQUAFLAME – SET UP INSTRUCTIONS

Thank you for purchasing an Aquaflame. If set up correctly your Aquaflame will give many years trouble free operation. Before starting work it is necessary to fill the cell and the booster, connect the torch and perform a leak test. The document below lays out the procedure.

1. FILLING THE CELL

It is necessary to fill the cell with the Electrolyte crystals supplied which are dissolved in water. Mix the crystals with deionized water in the following ratios.

Aquaflame Model 500 = 1.00 litre deionized water with 300gms crystals

Aquaflame Model 800 = 1.75 litres deionized water with 600gms crystals

Aquaflame Model 1200 = 2 x 1.75 litres deionized water with 2 x 600gms crystals

ALWAYS WEAR ADEQUATE FACE & HAND PROTECTION

Using a clean polythene container, measure out the correct quantity of distilled water. Pour in all the Electrolyte crystals supplied taking care not to splash the liquid. Slowly stir the mixture until the pellets have completely dissolved. NOTE: The temperature of the mixture will rise and an acrid vapour will be given off.

DO NOT BREATHE IN THE FUMES.

Remove the top cap on the machine. Insert the funnel into the cell filler tube. Pour all of measured quantity of mixture slowly into the cell. Then top up very slowly with deionised water until the level appears in the sight tube. Carry on slowly adding deionised water until the level is between the top up and full level. The level will rise to the full mark when the machine produces gas. Gently tip the machine forward through 45 degrees to clear any air bubbles in the sight tube. Refit the top cap and tighten to hand tight.

2. FILLING THE GAS BOOSTER

Remove the filler cap and, fill the gas booster with 220 milliliters of Methyl – Ethyl – Ketone. Fill slowly allowing the level to stabilize in the sight tube.

Fill only to just above the lower level steel tube. The level will increase during use.

Fit on the Top Cap making sure that the rubber washers is in place NOTE: a smear of grease, petroleum jelly or silicone will assist. Tighten to hand tight.

3. CONNECTING THE TORCH

Connect the short length of rubber hose provided to the gas outlet on the machine. Connect the other end to the “Gas In” connection on the gas booster, and position the booster on the front of the machine locating the mounting clip into the rectangular hole provided in the front panel.

Connect the long length of the rubber hose to the “Torch” connection on the Gas Booster, and the other end of the torch.

Fit the torch tip to the end of the torch using a screw action clockwise for ¼ to ½ a turn, making sure it is fixed tight. The maximum correct size to use is indicated on the front of the machine, the smaller the number the larger the holes size.

4. STARTING UP THE MACHINE

DO NOT PLUG INTO THE MAINS YET. The machines have automatic gas regulation and an over pressure warning light. On the front panel are fitted two lights. The right hand of the two lights indicates that the gas is being produced, and will pulse on and off when the machine is operating correctly. The left hand light indicates only when overpressure conditions exist. At maximum pressure the right hand light will go out indicating production has ceased.

The understanding of this information is of paramount importance as these lights are used to detect gas leaks.

In operation, if the torch valve is closed and the machine is switched on then both lights should remain out because the gas system is sealed. If the torch valve is opened then gas will escape from the torch tip and the gas pressure in the system will fall. At a pre-set level the right hand light will come on indicating that gas is being produced.

This right hand light should pulsate all the time the machine is in use with gas coming from the torch tip.

Now plug the machine into the mains and switch on at the socket. Ensure the torch valve is closed and then press the on/off switch on the machine which will start up. The right hand light should also come “on” and then go out again after a few seconds. **IT SHOULD REMAIN OUT AS LONG AS THE TORCH VALVE IS CLOSE (20 SECONDS IS LONG ENOUGH).** The lights should operate as described at the beginning of this section. If the above function occurs “as stated” the machine is ready for use.

NOTE: The liquid level will rise in the sight tube on the gas booster. Leave the machine running for about two minutes before lighting the flame to allow any air to clear from the system, and then light the torch up.

5. CHECKING FOR GAS LEAKS

This has been described in the previous paragraphs. A gas leak is indicated by the right hand light coming on when the gas system is sealed. The machine is designed to run with maximum size torch tip supplied without gas leaks. Running the machine with a gas leak or too large a torch tip will cause overheating and possible damage. This damage is not covered under guarantee as it constitutes misuse. If In doubt, ASK – check with the factory or your distributor.

To check for gas leaks close the valve on the torch and switch the machine on. The right hand light should remain OFF. If the Right hand light starts pulsating it means there is a gas leak. This is invariably because the caps on either booster or the cell are not tight enough. If the caps are tight gas is probably leaking from the neoprene hoses – check these to find the leak. If the machine is still leaking after these checks contact Aquaflame direct or your local distributor.

The machine should be positioned near the work bench so that the rubber tubes to the torch are not tight. All sides of the machine must be free of obstruction so that a free flow of air throughout the machine can be achieved. The torch rubber tube can be extended to a maximum length of one and a half metres.

Use only top quality distilled or deionised water.

DO NOT ATTEMPT TO SIPHON THE LIQUID FROM THE CELL BY MOUTH. IT IS HIGHLY CAUSTIC AND CAN CAUSE SERIOUS BURNS TO THE MOUTH.

If the machine is overfilled, contact the factory before switching on the machine.

Generally the gas booster will require topping up when the machine requires distilled water. However, the liquids used in the gas booster are very volatile and more will be used when the ambient temperature is high. For the first week, check the level twice daily. Allowing the liquid level in the gas booster to fall below the “TOP UP” level mark in the sight tube can cause “blow back” which can damage the machine. The repair would be chargeable. Close the torch valve thus extinguishing the flame, and then switch off the machine at the mains. Remove both the gas booster filler cap, and the cell filler cap, and allow a few seconds for the liquid level in the sight tube to drop. Refill to just above the lower steel tube. **DO NOT OVERFILL.** Replace both filler caps and tighten hand tight.

