

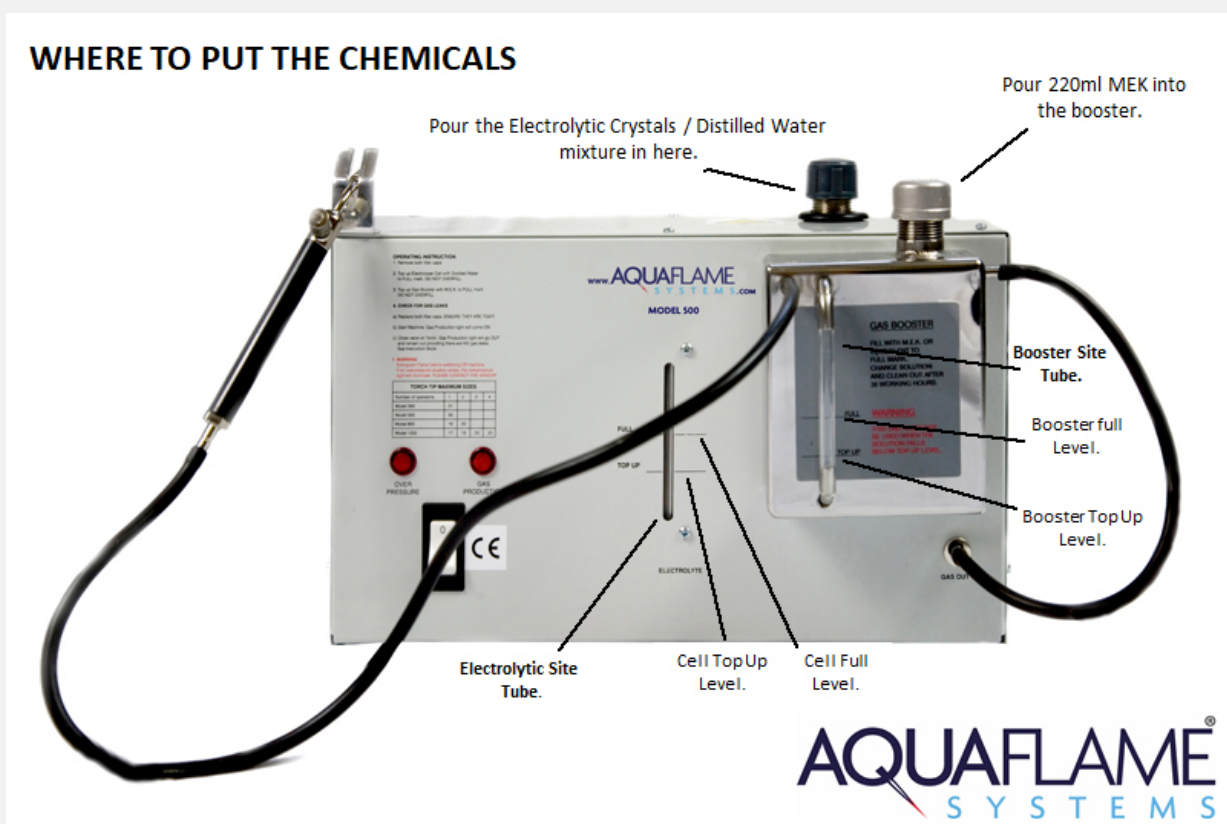
GETTING STARTED WITH AQUAFLAME – SET UP INSTRUCTIONS

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.

Please read the MSDS information relating to the Electrolytes and MEK – this can be found on the Aquaflame website in Manuals & Literature. Both materials should be handled with care. The electrolyte flake / solution is highly corrosive and the MEK is flammable. Please handle both materials with care.

To ensure best results please follow these instructions with care.



FILLING THE CELL

It is necessary to fill the cell with Electrolyte crystals. These are dissolved in water.

*PLEASE NOTE THAT IT IS VERY IMPORTANT **NOT** TO OVERFILL THE CELL.*

ALWAYS WEAR ADEQUATE FACE & HAND PROTECTION

The filling of the Cell is done in three stages:

1. Mixing of the electrolyte crystals with deionized water
2. Filling the machine to the bottom of the sight tube with an initial fill so that the liquid contents of the cell are visible at the bottom of the sight tube
3. Topping up the contents of the cell to the correct level. Take care to add the correct quantities of deionised water and MEK

DO NOT OVERFILL THE CELL AND ALWAYS FILL THE CELL SLOWLY AND CAREFULLY.

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NOTE: ONCE IN SOLUTION THE TEMPERATURE OF THE MIXTURE WILL RISE AND AN ACRID VAPOUR WILL BE GIVEN OFF. DO NOT BREATHE IN THE FUMES.

The above process varies slightly for each machine because the cells are different sizes. Please follow the FILLING PROCEDURE below.

MODEL 500

1. Empty the preweighed 300gms crystals into one of the jugs and measure out 800ml water into the other jug. Carefully pour all the water onto the crystals and using the stirring rod dissolve all the crystals into the water. **Please ensure that the stirring implement is clean.**
2. Slowly and carefully pour all the mixture into the cell. The liquid should now be visible at the bottom of the sight tube.
3. Top up the cell with 350ml of deionized water.

MODEL 800

1. Empty the preweighed 600gms crystals into one of the jugs and measure out 1250ml water into the other jug. Carefully pour all the water onto the crystals and using the stirring rod dissolve all the crystals into the water. **Please ensure that the stirring implement is clean.**
2. Slowly and carefully pour all the mixture into the cell. The liquid should now be visible at the bottom of the sight tube.
3. Top up the cell with 1000ml of deionized water.

MODEL 1200

1. The Model 1200 requires two sets of crystals to be added.
2. Empty the first preweighed 600gms crystals into one of the jugs and measure out 1250ml water into the other jug. Carefully pour all the water onto the crystals and using the stirring rod dissolve all the crystals into the water. Slowly and carefully pour all the mixture into the cell. **Please ensure that the stirring implement is clean.**
3. Repeat the above process with the other set of 600gm crystals so that the cell now contains two x 600gms crystals and 2 x 1250ml deionized water.
4. Top up the cell with 1000ml of deionized water and then add a further 800ml deionized water.

FILLING PROCEDURE

1. Remove the top cap on the machine. Insert the funnel provided into the cell filler tube.
2. Pour all of measured quantity of mixture slowly into the cell. **IT IS IMPORTANT TO FILL SLOWLY AND CAREFULLY TO PREVENT OVER FILLING**
3. It is important that all the dissolved electrolyte is put into the cell.
4. Add the top up water very slowly with deionised water until the level appears at the bottom of the sight tube.
5. Do not start the machine.
6. Gently tip the machine forward through 45 degrees to clear any air bubbles in the sight tube.
7. Add the top up deionized water.
8. Refit the top cap and tighten to hand tight.

2. FILLING THE GAS BOOSTER

It is now necessary to fill the Gas Booster with MEK (Methyl Ethyl Ketone). **PLEASE NOTE THAT IT IS VERY IMPORTANT NOT TO OVERFILL THE GAS BOOSTER.** Please take care to measure the correct quantities. The filling of the booster is done in two stages – an initial fill before the machine is pressurized followed by a top up after starting the machine.

1. Remove the filler cap on the gas Booster
2. Measure out 220mls of MEK (Methyl Ethyl Ketone).
3. Slowly and carefully pour the MEK slowly into the booster. **DO NOT OVERFILL THE BOOSTER.** Fill only to just above the lower level steel tube. The level will increase during use.
4. Gently tip the booster backwards and forwards through 45 degrees to clear any air bubbles inside and in the sight tube.
5. 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 GAS BOOSTER & TORCH

1. Connect the short length of rubber hose provided to the gas outlet on the machine. This is marked "Gas Out" on the front right hand bottom corner.
2. Connect the other end to the "Gas In" connection on the gas booster.
3. Position the booster on the front of the machine locating the mounting clip into the rectangular hole provided in the front panel.
4. Connect the long length of the rubber hose to the "Torch" connection on the Gas Booster, and the other end to the torch.
5. Fit a suitable 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 hole size. **NB. Always increase or decrease the flame size by changing the torch tip. Do not reduce the flame by closing the torch valve as this will result in flame burning back and damaging the torch tip**

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.

1. Plug the machine into the mains and switch on at the socket.
2. Ensure the torch valve is closed.

3. Press the on/off switch on the machine which will start up.
4. The right hand light should also come "on" and then go out again after a few seconds.
5. **IT SHOULD REMAIN OUT AS LONG AS THE TORCH VALVE IS CLOSED (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.
6. Open the torch valve.
7. Allow 1-2 minutes for the air to clear through the machine and hoses before lighting the flame.

CELL TOP UP

1. Check the level of the electrolyte liquid in the Cell Sight Tube.
2. Switch off the machine.
3. Remove the cell cap and SLOWLY add deionized water until the level reaches the full mark.
4. **DO NOT OVERFILL**
5. Replace the cell top cap

BOOSTER TOP UP

1. Check the level of the MEK in the MEK sight tube.
2. Remove the booster cap and slowly add more MEK until the level reaches the full mark.
Please note that You will only need to add 5-10ml DO NOT OVERFILL
3. Replace the booster cap and tighten to hand tight.
4. For the first week of use check the levels in the cell and the booster TWICE DAILY.

6. CHECKING FOR GAS LEAKS

This has been described in the previous paragraphs. **THE RIGHT HAND LIGHT COMING ON WHEN THE GAS SYSTEM IS SEALED INDICATES A GAS LEAK.** The machine is designed to run with maximum size torch tip supplied without gas leaks. Please see the front of the machine showing the maximum tip sizes for each machine. 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.

7. INSTALLATION OF THE MACHINE

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.

8. DAILY MAINTENANCE

It is good practice to perform a daily check of the liquid levels in the cell and the booster. Depending on the amount of use the chemicals in the cell and the booster will need to be topped up.

ELECTROLYTE CRYSTALS

Only add top quality deionized / distilled water to the cell. **NEVER AT ANY TIME ADD FRESH CRYSTALS TO THE CELL. TOP UP ONLY WITH DEIONISED OR DISTILLED WATER.** New crystals are only added at service time.

BOOSTER LIQUID (MEK)

The MEK liquids used in the gas booster are very volatile and more will be used when the ambient temperature is high. For the first week of use, 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.

Follow the following procedure for topping up the levels in the cell and the booster:

1. Switch off the machine
2. Check the level of the electrolyte liquid in the Cell Sight Tube.
3. Remove the cell cap and **SLOWLY** add deionized water until the level reaches the full mark.
4. **DO NOT OVERFILL THE CELL**
5. Replace the cell top cap
6. Check the level of the MEK in the MEK sight tube.
7. Remove the booster cap and **SLOWLY** add more MEK until the level reaches the full mark.
8. **DO NOT OVERFILL THE BOOSTER.**
9. Replace the filler caps and tighten hand tight.

9. OVERFILLING THE CELL

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

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

9. CONTACT DETAILS

For further information or questions please contact:

Aquaflame Systems

Unit 5, Boulton Industrial Estate

Birmingham B18 5AU

Phone: +44 (0)121 211 1088

sales@aquaflamesystems.com