

# D-D aquarium solutions ltd.

## D-Deltec Multi Compact External 'Hang On Skimmer' MCE600 With Media Chamber.

Congratulations on your decision to purchase a **Deltec Multi Compact 'Hang On Skimmer'**.

The MCE600 draws in 300 litres of air/hour. Compare this with the competition and you will see why we say that Deltec skimmers with their Patented Pin Wheel Impellor are renowned throughout the world and are unsurpassed in their ability to mix air and water to produce the fine-bubbled foam that is required for efficient foam fractionation.

The Multi Compact External skimmer is ideal for 'hang on' installation directly onto the outside of the aquarium or sump and requires no further supply pump for highly efficient operation.

For larger aquariums look at our **AP Series or Turbo Skimmers**.

**The MCE600 is suitable for aquariums with a water volume of up to 155 UK gallons (186 US Gallons, 700 lts) with normal stocking levels or 100 gallons (120 US Gallons, 450 lts) with heavy stocking levels.**

**Very Important Note:** *This skimmer has been extensively tested to ensure that under normal working circumstances its operation cannot lead to flooding to outside of the system and multiple safety systems have been fitted for that reason. If however, like all external skimmers, the outlet pipe back into the tank becomes blocked by a foreign object there is a possibility that the housing can then overflow and leak water from the aquarium.*

**Assembly:** When the skimmer arrives it is likely that it has been packed in a partially disassembled state to prevent damage in transit. Study the diagram overleaf to reassemble. Take the opportunity to disassemble the body and pump to familiarise yourself with the unit whilst it is in a dry state. Have a look at the Patented Pinwheel Impellor with its ceramic shaft and note the venturi pipe where the air passes into the pump. These are all parts that will require regular cleaning and inspection. Do not switch on the recirculation pumps however unless the pumps are immersed or flooded with water.

**Important:** As the skimmer is to be mounted externally to the aquarium we would recommend that before you install the unit in position you fill the body with fresh water from the mains supply over a sink to ensure that there has not been any damage in transit that may have caused the joints on the unit to leak. Even a slow leak can amount to a lot of water over a period of time.

**Positioning:** The **MCE600** Skimmer was designed primarily to hang externally on the outside of the aquarium however it will also stand inside or hang on the outside of a sump.

The performance of the skimmer is unaffected by changes in water level within the tank caused by evaporative loss etc and will operate as long as the suction pipe is cover sufficiently to prevent air from being drawn in through the strainer

**Installation:** Hang the skimmer body on the outside of the aquarium in a suitable position so that it is easy to access to carry out maintenance on the unit. One side of the skimmer is clear to allow the operation inside the body to be seen. It is not necessary however to observe this face and so the skimmer can be installed between the tank and a wall if required.

The skimmer sits on the black support bar where the outlet pipes come out of the body and is held in place by the clear retaining clamp, which tightens onto the outlet pipe with the supplied plastic screw.

The inlet pipe can now be fitted. This pipe, which is separately packaged, is fitted with a strainer on one end, which simply pulls or twists off for future cleaning. It is possible to shorten or extend the supply pipe so that it sits at the correct level and distance for each specific installation, as the joints are not glued.

The outlet pipe is extremely simple and consists of a 40mm clear pipe to direct water back over any stress bars and into the tank. To prevent bubbles from entering the aquarium we have devised an ingenious degassing plate, which pushes into the end of the outlet pipe and sits in a central position as shown on the diagram. As the water exits the skimmer it flows down the outlet pipe and under the degassing plate, spreading out on the underside before re-entering the tank free of bubbles.

It is also possible to extend the outlet pipe with the appropriate fittings however great care must be taken to ensure that the restriction caused by any additional pipework does not increase the head of water within the skimmer housing to a point where it overflows thus causing a flood. See very important note above.

**Operation and Setting:** With the unit secured in position, fill the body with tank water by removing the skimmer cup and pouring water down the opening until the pump is flooded to well above its top outlet. Refit the cup, initially positioned quite high out of the body, close the tap on the air intake pipe, plug the pump into a suitable supply and switch on.

The pump will now fill the skimmer and water will flow out of the outlet pipe back into the tank. Check that the venturi is clear and operating correctly by opening and closing the tap on the air intake line. This should produce a stream of bubbles into the skimmer body.

As with all water pumps it is possible to trap air within the body, which will affect the operation and noise produced by the skimmer. To remove this air, close the air inlet valve and switch the pump off and on at the mains a few times until no further air is released. If the vibration returns it is often possible to silence this quite effectively by simply sitting the pump on a thin sheet of sponge.

Open the air intake tap and set it to the 2 o'clock position. The body of the skimmer should now be white with fine dense foam.

**Leave the skimmer to settle down for a day or so before fine adjustment as the wetting agents on the surface of the plastic will prevent a true foam from being produced and until this happens the full capacity of the unit can not be achieved.** Close down the air intake tap and raise the cup slightly to prevent an initial wet skimmate from being collected or if the cup continually fills with a clear liquid. This is normally produced by removal of a conditioning compound that is found in some salts. A similar effect may be noticed after a thorough clean or after large water changes.

After two to three days, or earlier in a previously unskimmed tank, a thick crown foam will be produced at the neck of the skimmer. Move the skimmer cup up or down to collect this foam. Moving the cup downwards will result in an increased quantity of wetter foam and moving it up a darker, dryer foam which is preferable.

During normal use it is recommended that the skimmer cup is emptied every 2-4 days or as required. During this operation the cup should be wiped clean of any fatty deposits as build up of this waste product will greatly reduce the ability for the foam to climb the neck of the cup. Whilst cleaning leave the pump switched off, with the tap open, for 10 minutes to allow any salt deposits in the venturi tube to dissolve.

Do not run the pump for long periods with the airline tap switched off as this may damage the patent pinwheel impellor.

**Standard Media Chamber:** The chamber below the outlet pipe has been provided to allow the addition of media such as RowaPhos, carbon or biological media such as Siporax to be used easily and effectively in a position of good flow. Media used in this chamber must be contained in a bag to prevent carry over back to the aquarium.

To prevent the bag from floating up and blocking the outlet pipe, the skimmer comes as standard with a sliding outlet protection plate, which **must be fitted at any time that media is used in the unit.** This plate is fitted above the media bag with the horizontal section at its lowest point. The plate has a hole in the vertical section for ease of removal.

**Optional Media Box With Sliding Lid:** This item is available as an optional extra to allow use of the multi compact with a greater volume of media. Larger media such as Siporax or carbon can be added directly to the box, which has a perforated base and a perforated sliding lid. Finer media such as RowaPhos can be used by the addition of sponge top and bottom to prevent the media from washing out or by use of a mesh bag.

**Use with Ozone:** Deltec skimmers are suitable for use with ozone and will automatically suck the gas through the venturi hose. A maximum volume of 25 mg/h should be used on tank volumes that are suitable for this skimmer.

Do not use excessive ozone, as it is dangerous and can cause severe headaches. Should the skimmer performance deteriorate check the ozoniser for blockage. Ensure that it is not possible for water to siphon through the ozoniser by installing the unit above the skimmer water level.

**Maintenance:** The Deltec skimmer range should require very little adjustment and maintenance once set correctly, however due to the high levels of calcium in marine aquariums and large volumes of air drawn in, it is common for deposits to accumulate thus requiring periodical cleaning. Regular introduction of a small amount of RO water into the inlet tap whilst running may help to prevent any build up of salt and debris in the venturi.

The inlet strainer will require regular cleaning to remove debris and thus maintain water throughput.

The **MCE600** is fitted with an **Aquabee pump**, which like most aquarium pumps has a permanent magnet motor.

The drawback of a permanent magnet motor is that the impellor, on start up, can randomly rotate in either a clockwise or anti clockwise direction. In one direction the full pumping capacity is achieved and in the other a much-reduced flow is observed. In order to counteract this effect all Aquabee pumps are fitted with a little flap inside the outlet of the pump, which flips from one side to the other depending on the direction of rotation thus ensuring that the pump always operates at full duty. This is illustrated on the attached drawing.

It is recommended every 3 months, or when required, that the pump is removed from the skimmer having first drained the body of water. Strip down the pump to check and clean the impellor of debris. Ensure that the direction flap moves easily and if necessary soak the neck of the pump housing in white vinegar or kettle scale remover to dissolve any calcium carbonate deposits.

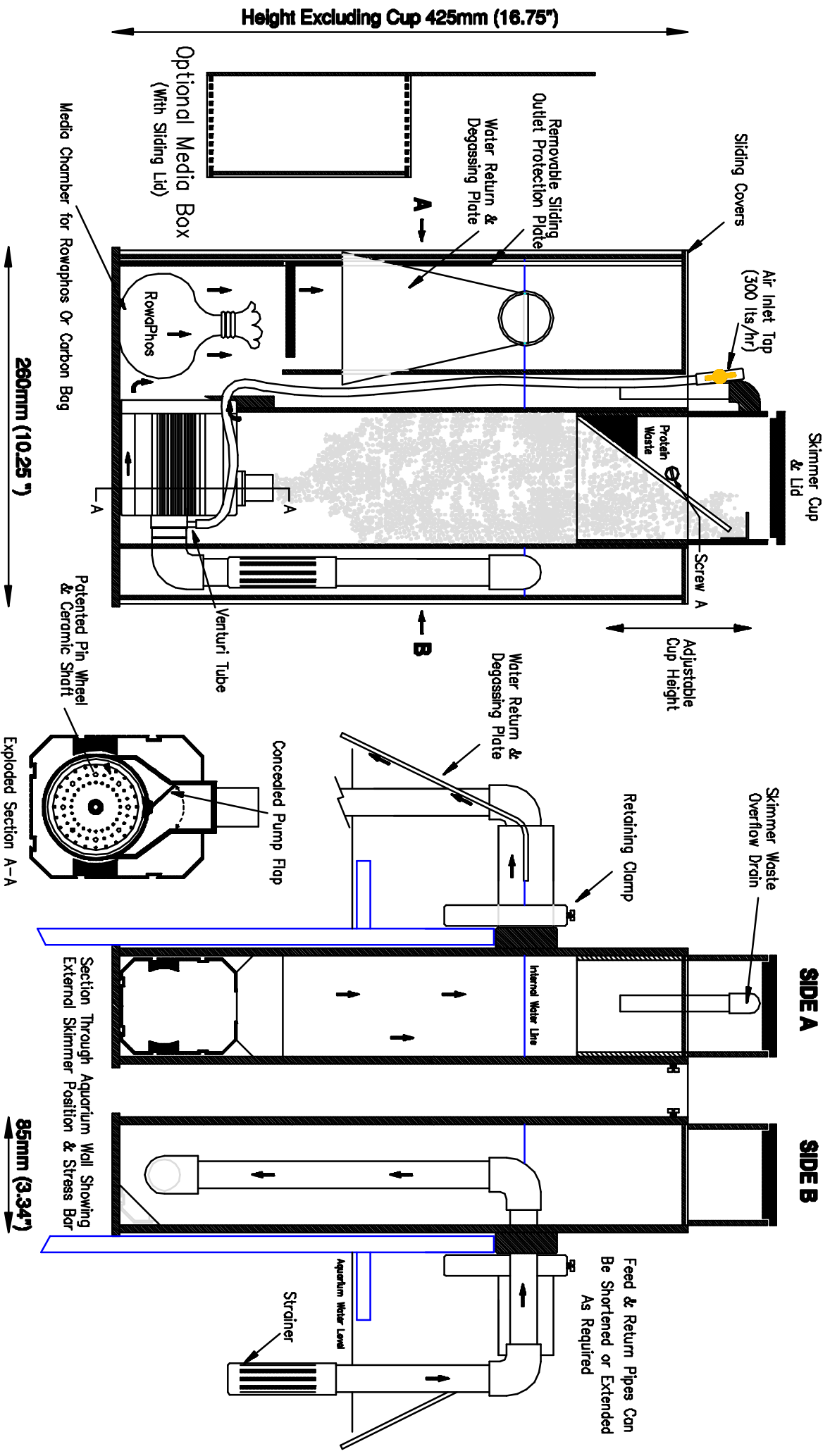
On older skimmers check for wear on the impeller by holding the two ends of the ceramic shaft between the thumb and first finger and look for excessive movement (slop). If this is found it should be replaced, as the loss of balance will cause unnecessary noise.

A build up of calcium, dust and salt can restrict or block the venturi inlet on the connecting pipework and reduce the skimming efficiency. This should be checked and carefully cleaned with a toothpick or fine drill rotated between the fingertips.

Having sorted out your skimming requirements we suggest that you visit our web site to look at the wide range of other products that are available for the knowledgeable marine aquarium keeper.

For further information on this or any other D-D product please contact us or visit our website on:

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