

D-D aquarium solutions Ltd.

D-Deltec Turbo Skimmer Range.

Congratulations on your decision to purchase a **Deltec Turbo Skimmer**.

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 Turbo range of skimmers are ideal for sump installations and require no further supply pumps for highly efficient operation. For externally mounted units or for larger aquariums look at our AP Series Skimmers.

Choice of Skimmer: The initial choice of skimmer should be determined by the size of the aquarium system and the stocking level.

<i>Model</i>	<i>High Stocking Capacity</i>	<i>Normal Stocking Capacity</i>	<i>Depth of Water Required in the Sump</i>			
TS1250	500 lts (111 gals)	750 lts (167 gals)	Min Depth	100mm	Max Depth	150mm
TS1060	1000 lts (222 gals)	1500 lts (333 gals)	Min Depth	120mm	Max Depth	180mm
TS1060S	1500 lts (333 gals)	2000 lts (444 gals)	Min Depth	120mm	Max Depth	180mm
TS1064	2000 lts (444 gals)	3000 lts (667 gals)	Min Depth	120mm	Max Depth	180mm

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 remove the skimmer housing, body and pump and have a look at the Patented Pinwheel Impellor with its ceramic shaft. 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 unless the pumps are immersed or flooded with water.

Positioning: The Deltec Turbo Skimmers are designed primarily to stand in a sump however it would be possible to partially immerse the units directly into the aquarium as long as the maximum and minimum immersion levels are observed. The water level in the sump should be designed to be within the indicated levels given above however they can also be used in deeper sumps by raising the unit up on a shelf or suitable supports.

Operation and Setting: With the skimmer in position, allow the unit to naturally fill with water. Close the tap(s) on the air intake pipe(s), plug the pump(s) into a suitable supply and switch on.

Check that all of the pumps are operating by opening and closing the tap on each air intake in turn. 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 unit. To remove this air, switch the pump off and on at the mains a few times until no further air is released.

Observe the water level within the skimmer with the air intake valves closed. For all Deltec skimmers the ideal operating level for the water is just above the bottom of the black bayonet fitting for the removable cup (A). Adjust the water level by raising or lowering the weir plate (B) using the handle. Once the ideal level is achieved, the weir plate can be locked in position using the fixing screw.

Open the air intake tap(s) and set them 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 further adjustment to allow the surface of the plastic and biological foam to wet out fully as until this happens the true capacity of the unit will not be achieved and. Close down the tap slightly if an initial very wet skimmate is being produced 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 the level of the initial foam in the skimmer should rise to half way up the skimmer tube. Adjust the taps to achieve fine bubbles within the neck of the skimmer. Opening the air intake taps will result in an increased quantity of wetter foam and closing it a darker, dryer foam.

During normal operation it is recommended that the skimmer cup is emptied every 2-4 days and that during this operation the riser tube into the cup is 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. Ensure before removing the cup that the pumps are switched off and that the water level is below the bayonet fitting. Whilst cleaning leave the pump switched off, with the taps open, for 10 minutes to allow any salt deposits in the venturi tube to dissolve. Do not run the pumps for long periods with the airline tap switched off as this may damage the impellor.

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 50 mg/h per pump should be used with special manifolds available for multi pump units. 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 need 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 requiring periodical cleaning. Regular introduction of a small amount of RO water into the inlet tap may help to prevent any build up.

The whole range of Turbo Skimmers are fitted with **Aquabee**, which have permanent magnet motors.

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 the 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.

It is recommended every 3 months, or when required, that the pumps are 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.

Check for damage or wear of the sealing ring on the base of the cup and if necessary replace it.

The biological/degassing foam should be rinsed in aquarium water, (but not in the tank), once a month to remove debris.

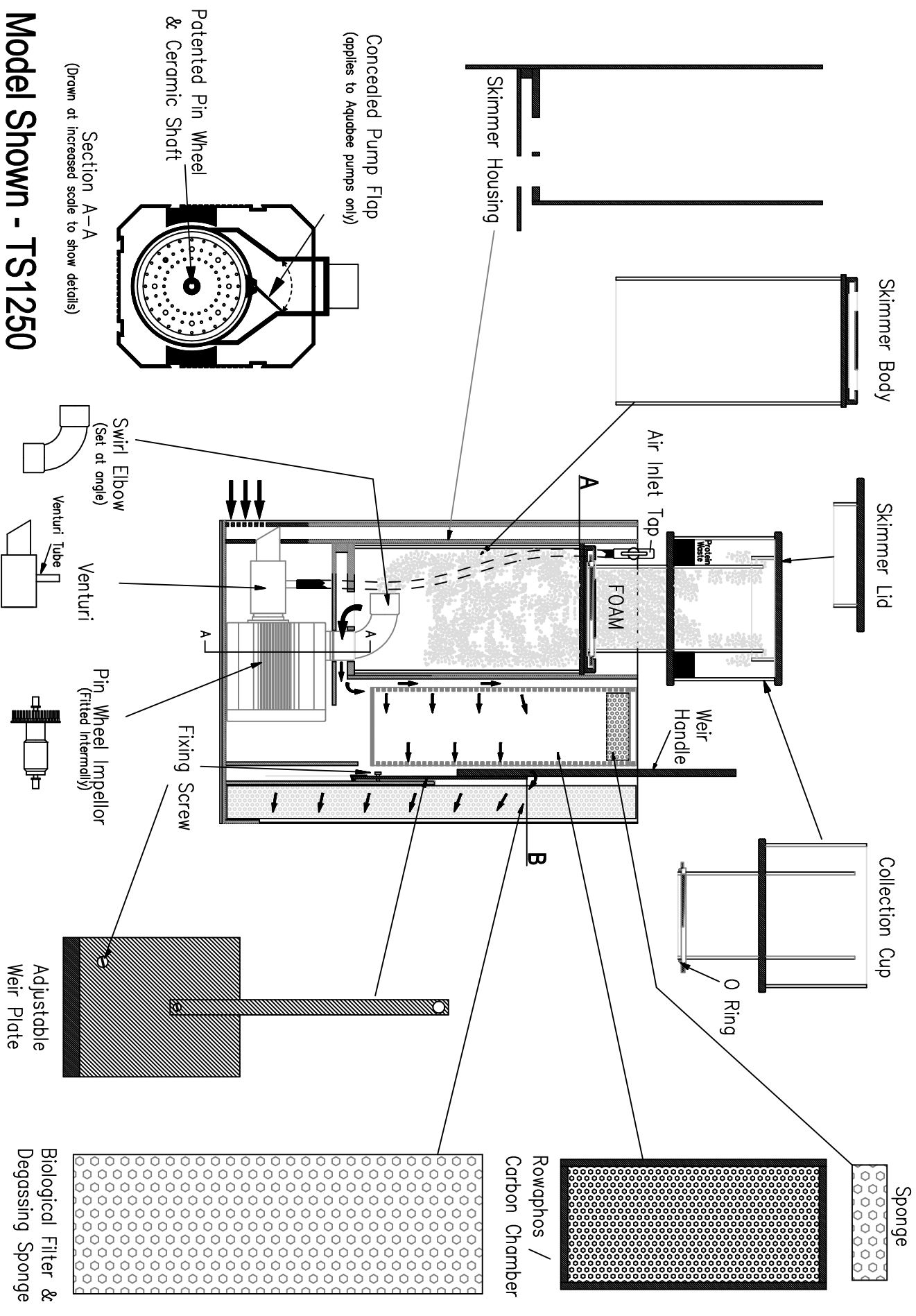
For further information on this or any other D-D product please contact us or visit our website on:

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Deltac Protein Skimmers - Turbo Series



Model Shown - TS1250