

RED SEA C-SKIM DELUXE



Before set-up. The skimmer looks imposing and very different to practically anything else on the market. (Photo: Courtesy Red Sea)

You don't have to be a marine aquarist for long to become familiar with the basic design of a protein skimmer. It consists, more often than not, of a clear acrylic or plastic chamber into which air bubbles and water are mixed. The resulting foam is then collected in a cup thereby removing undesirable organic material from the water. With this in mind we were initially very surprised when presented with Red Sea's new C-Skim as it looks a bit more like an external canister filter than a typical skimmer. The C-Skim is another new product from the company that brought you the Berlin skimmer over 10 years ago and the C-skim could make as significant impact on the marine hobby in the UK as its predecessor did way back then.

We hope that Red Sea won't mind us expressing the opinion that they seem to be experiencing a renaissance in the marine hobby. The launch of the Red Sea Max aquarium over nearly two years took the hobby by storm and thousands of this self-contained "plug and play" system have been sold worldwide and on the coat-tails of this comes their Pro Range of test kits, two of which are reviewed elsewhere in this issue. Only

recently the Berlin was remodelled with needle wheel pump driven Berlin X2 Turbo and they have also come up with a winner with the nuisance anemone eliminator, *Aiptasia X*.

So what does the C-skim offer in the way of innovation that can be seen in the rest of Red Sea's marine range of products? Well, plenty to be sure but before we focus on these it is necessary to get the unit up and running and to assess its performance and ease of use. The C-Skim must be fitted with a pump supplying it with between 1000 and 1500 litre per hour. The pump providing the bubbles via a pin wheel into the skimmer body is supplied and delivers 450 litres of air per hour.

properly. The collection cup of the C-Skim is similar in design to the Berlin X2 with a recessed viewing window, called FoamView, enabling owners to see exactly what height the fizzing air/water mixture is sitting at even when the cup is getting dirty. The cup has a plug that can be removed if a drainage pipe is to be fitted.

The more technically minded of you might like to know that the C-Skim incorporates an internal design called a peripheral flow close loop skim chamber. What this means is that the central area for mixing of air and water is not unduly disturbed by feed water entering the unit or by water leaving the skimmer and foam forms more easily. This arrangement also aids in the removal of microbubbles prior to leaving the skimmer.

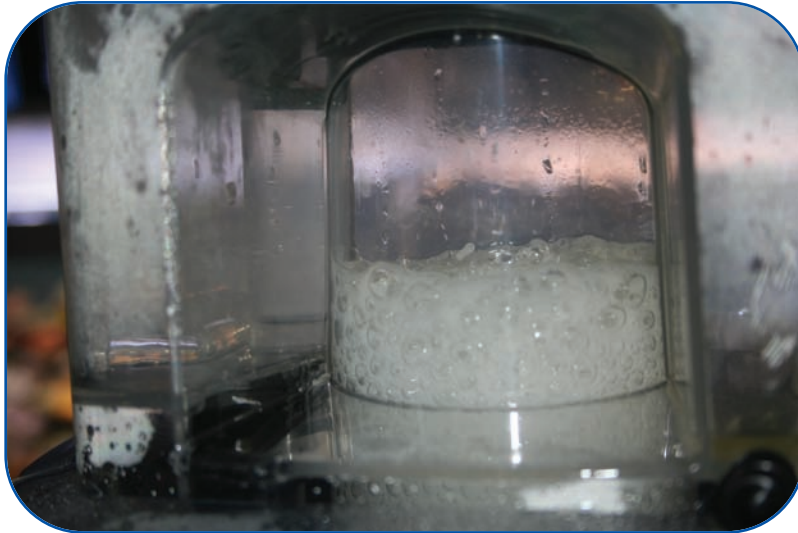
Returning to the skimmer itself we connected it to a system containing a couple of hundred kilos of live rock. We already ran a skimmer on this system and so had a reasonable idea of the quantity of skimmate it produced. Siting the skimmer is quite easy although it does



Before set up we can see some of the important features of this skimmer. The internal circulation pump sits beneath the outlet elbow, the latter being stepped internally to accommodate rigid pipe in metric or imperial sizes. The top left control knob sets the operating mode of the skimmer between "Flush" and "skim". The lowermost knob controls the height of air/water mixture in the skimmer itself. The nipple on the right is for attachment of the feed pump.

This is an impressive statistic and competes favourably with the skimmers of other manufacturers rated for larger aquarium volumes. Attachment of the delivery pump is easy and safe as the nipple on the skimmer has a locking sleeve that clamps the pipe in place. Once the supply pump has been attached the skimmer can be turned on.

The reaction chamber of the skimmer is hidden from view and so the aquarist is deprived of the traditional view of swirling air/water mixture. However, the large collection cup does enable hobbyists to see enough of what is going on to be content that the skimmer is working



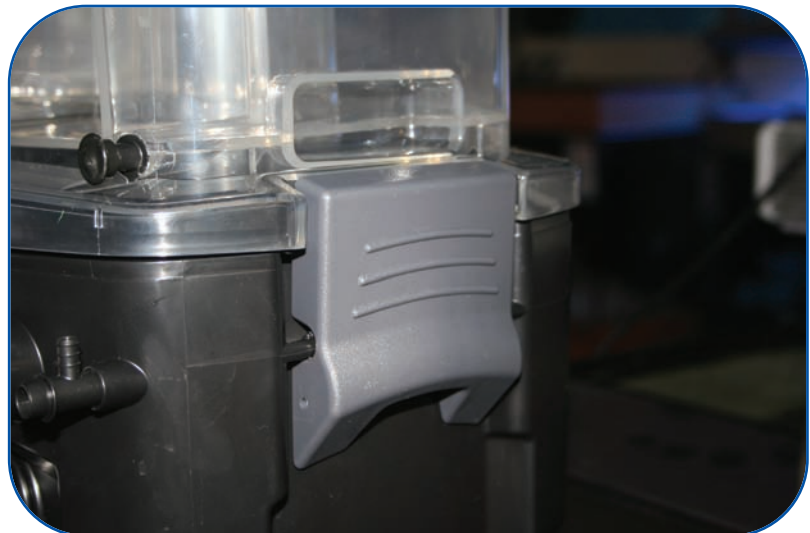
Setting the height of the air/water mixture is easy with the very precise control knob. Here, after only a few minutes, we can already see organic material being concentrated by the foam.

the days of our trial progressed we noted that the C-Skim was out-performing the existing model significantly producing a thick dark skimmate. Within a few days the skimmer itself was beginning to develop some deposits of organic material around the inside of the collection cup. Now this is where the innovations of the C-Skim come into their own.

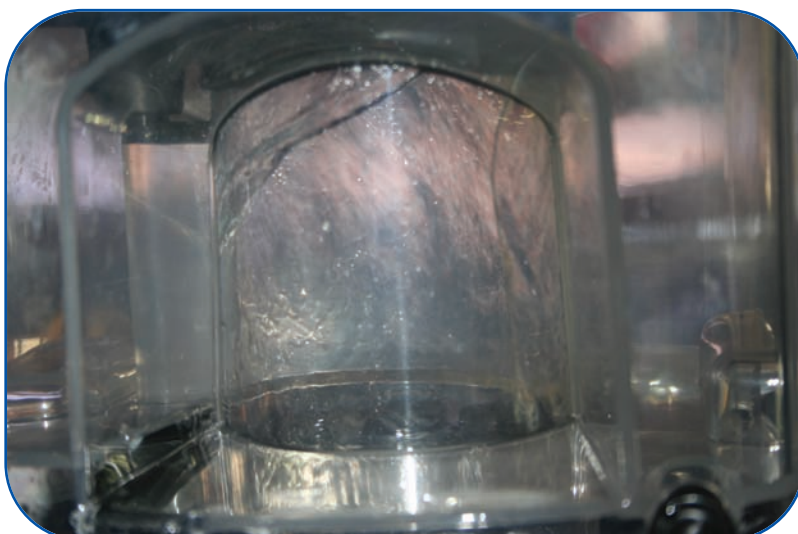
Around the top of the internal cylinder of the collection cup there is a plastic ring. This is connected through some clever pipework to the water feed of the pump. Changing the position of the selector knob on the left hand side of the skimmer body means that water is diverted to this ring and it effectively flushes the dirt and debris back into the skimmer reaction chamber. Once clean the selector knob position is changed

have a relatively large footprint. Hang-on installation is not an option for skimmers of this size and so this unit can be placed inside or beside a sump aquarium. The return water elbow of the skimmer will fit metric or imperial pipes through an innovative stepped insert. As looks and convenience were not as important to us as to many aquarists we were able to place the C-Skim directly on top of the aquarium so that we could keep a close eye on it.

Setting the skimmer is very easy. There is a control knob located on the front of the skimmer that offers precise adjustment of the level of the water/air mixture in the skimmer chamber. Within minutes we had the skimmer set where we wanted it and began to wait to see what would happen. Within 30 minutes we were collecting our first skimmate. As



The collection cup is held in place by a pair of clamps you might usually expect to see on a canister filter rather than a protein skimmer.



Looking through the Foam View recess in the collection cup the washing action of the C-Skim can be clearly seen.

again and the skimmer deposits the debris into the collection cup. This is a beautiful system that means the regular cup removal for cleaning is reduced in interval dramatically. Throughout the course of our trial the cup required no additional cleaning. Aquarists worried that the selector knob could be set incorrectly should be reassured that there is a definite click in each position.

Sceptical aquarists might view this cleaning innovation as a gimmick but they should consider that skimmer performance can be reduced by 40-50% when dirty. Skimming can be such an important component of any marine aquarium and the facility to keep it running at optimum performance levels with this degree of ease is a welcome innovation indeed.



The cleaning ability of this skimmer is facilitated by a ring at the top of the skimmer cone.

Red Sea Ratings

Fish Only Aquarium

1200 litres
300 gallons

Soft Coral Aquarium

700 litres
175 gallons

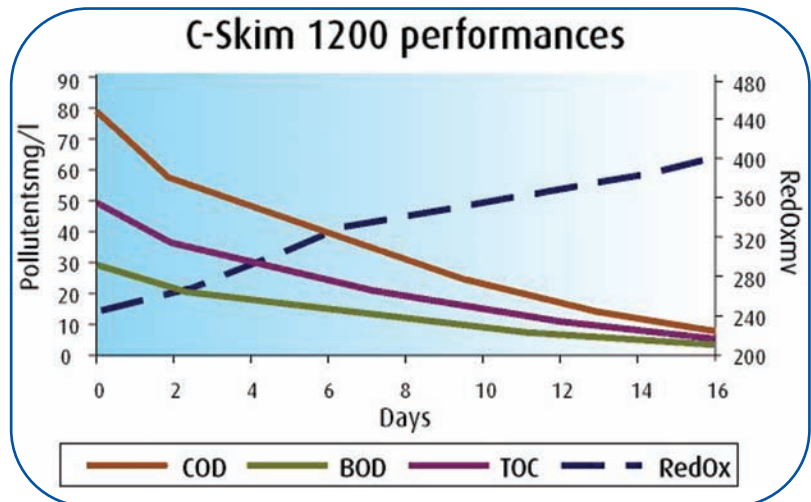
Stony Coral Aquarium

400 litres
100 gallons

the ability to self-clean it makes it a very desirable piece of kit for serious marine aquarists. Retailing at a smidgeon under £350 it is up against some fierce competition from long-established manufacturers but Red Sea have got it right with their unique approach that couples ability with innovation. By the

Red Sea has rated the skimmer according to its application. They appreciate that the type of system the C-Skim is added to is important in determining its performance. Fish-only aquaria do not require water quality to be as pristine as systems designed to house a variety of small polyp stony corals and therefore the C-Skim is rated at 400 litres for the latter and 1200 litres for the former. Mixed reef aquaria with abundant polyp colonies and soft corals fall somewhere in-between at 700 litres. This realistic, and Red Sea assure us distinctly conservative, rating system should be welcomed by aquarists rather than the often vague "up to x litres" offered by other skimmer manufacturers.

We rate this skimmer. We rate it very highly indeed. Its performance is superb as a stand-alone device but coupled with



Long-term pollutant reduction (Image: Courtesy Red Sea)



C-Skim washing system (Photo: Courtesy Red Sea)

time that you read this review it will be on sale in the UK. If you are looking for ability and ease of use in your aquarium components then you might want to look no further than the C-Skim.

Product reviews continued...