



MR Series Protein Skimmer

Congratulations on your purchase of a MRC Protein Skimmer; the finest filtration in the world.

Please read the instructions in its entirety before starting to assemble your reactor in order to assure proper assembly and operation.

The reactor comes disassembled for shipping. Refer to these instructions and assembly diagram for set up. Failure to follow the assembly instructions could cause skimmer to malfunction.



Section A: Assembly

-  Install the provided O-ring gasket in the groove on the top flange of the skimmer body.
-  Partially screw the 8 nylon thumbscrews in place (approx ¼ inches).
-  Place the upper riser tube on the lower body and turn to lock the upper tube to the body using the nylon screws.
-  Hand tighten the nylon screws. Do not over tighten. The upper tube should now be secured to the lower body.
-  Screw the injector in to the 1 inch bulkhead located next to the riser tube on the top of the box. Teflon tape is needed and is already on the injector threads.
-  Screw the silencer into the injector tube. Teflon tape is not needed for the needle valve.

Section B: Skimmer Installation and Operation

The protein skimmer can be used either inside or outside of a sump. Do not raise the water level of the skimmer above the height of the holes found on the Beckett Injector. This will cause water to exit via the silencer.

In-Sump Installation

See Pump Chart for recommended pumps for in-sump applications. External installation is recommended.

-  Connect and open the gate valve to the skimmer. The gate valve is shipped in the closed position.
-  Place the skimmer inside the sump.
-  Connect the skimmer pump to the fitting at the top of the injector.
-  Make sure all flange screws are tight and that the gate valve and needle valve are completely open.
-  Turn on the pump and adjust the water level of the skimmer to 2 inches above the skimmer box by slowly closing the gate valve. You may have to adjust this level up or down depending on your system; this is just a starting point.
-  Allow a 24 hour break-in period at this level before adjusting the needle valve. After this period, the needle valve may be adjusted down to decrease bubble size.

Out Of Sump Installation

See Pump Chart for recommended pumps for out of sump applications. For best results, install the skimmer above the water level of the sump. This will eliminate back pressure and make adjusting the skimmer much easier.

-  Connect a 1 ½ drain line from the skimmer to the sump. The gate valve may be connected along any part of the drain line. PVC Cement should be used to connect the parts of the drain line and allowed at least two hours to cure before use.
-  Connect the skimmer pump to the fitting at the top of the injector.
-  Make sure all flange screws are tight and that the gate valve and needle valve are completely open.
-  Turn on the pump and adjust the water level of the skimmer to 2 inches above the skimmer box by slowly closing the gate valve. You may have to adjust this level up or down depending on your system; this is just a starting point.
-  Allow a 24 hour break-in period at this level before adjusting the needle valve. After this period the needle valve may be adjusted down to decrease bubble size.

Adjusting the Skimming Rate

Raising the water level of the skimmer or increasing the air flow will cause the skimmer to skim wetter. Lowering the water level or air flow will cause the skimmer to skim drier. A combination of the two will allow for the desired skim rate. Raise the water level by slowly closing the gate valve. Make small adjustments at a time.

Section C: Cleaning the Skimmer

If the Riser Tubes have collected a dark film, it is time to clean the skimmer. The skimmer will still function while it is dirty, though less efficiently.

Cleaning the Skimmer Body

-  Turn off the skimmer pump.
-  Loosen the nylon screws that connect the riser tubes and twist off the collection cup. It is not necessary to remove the screws.
-  Loosen the nylon screws and remove the lid for the Collection Cup.
-  Using an acrylic safe pad wipe down the Riser Tubes and Collection Cup and rinse with clean water, removing all waste from the tubes and cup.
-  Reassemble in the reverse order making sure the O-Rings seat properly.





Cleaning the Injector and Beckett

The Injector Assembly can be easily disassembled for cleaning. This should be done at least once a month or whenever there is a noticeable decline in bubble output.

- Turn off the skimmer pump.
- Disconnect the skimmer pump from the top of the injector.
- Loosen the nylon thumb screws.
- Turn the top of the injector to unlock the Beckett and lift to remove the injector top and Beckett.
- Remove the two O-Rings found on the Beckett.
- Open the Beckett housing and clean to remove any buildup and debris.
- Reassemble in the reverse order.

