

Precision Marine Systems

Congratulations on the purchase of a state of the art protein skimmer manufactured by Precision Marine Systems. READ ALL INSTRUCTIONS and complete the warranty card and return within ten (10) days to benefit from the one (1) year limited warranty.

Venturi Series ES100 Instructions

Plumbing and installation

Choose the correct water pump skimmer. Here are some suggestions:

Mag 9	👉
Sedra 7000	👉👉
GenX PCX30	👉👉👉

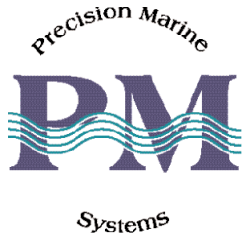
~While other pressure pumps may work well with your skimmer, we know these will work well.~

REMEMBER: The greater the volume and pressure (psi) generated by the water pump, the better the venturi will perform.

- 1) You will need a valve on the drain of your skimmer. For best control, a gate valve is recommended for water flow from the drain of your skimmer. This component is offered as an option and most Precision Marine dealers offer these. Simply attach with a 1" close nipple.
- 2) A ball valve is recommended anywhere on the input line to the skimmer from the water source.
- 3) Connect venturi valve to skimmer using ½" black nipple provided (wrap each side in the opposite direction of threads with 2-3 wraps of teflon tape first). Thread into skimmer body HAND TIGHT ONLY.
- 4) A 5/8" barb fitting is provided for use at the Venturi. If needed, glue black barb into the venturi using PVC cement. Do not allow the glue to drip into the venturi valve. The outside of the venturi has ¾" SPGT connection if this is better for your application.

When installing threaded connections, wrap each threaded fitting only 2- 3 times with teflon tape and DO NOT OVER-TIGHTEN. Over-tightening can crack the wall of the protein skimmer.

- 5) Be sure o-rings and mating surfaces are clean prior to assembly to assure a good seal. Do not over-tighten thumbscrews holding down cup, hand tight is sufficient for good seal
- 6) Be sure venturi anti-siphon line is always above skimmer water level or in sump. Attach one end to the venturi, and the other into the stay integrated into the threaded flange at the top. Should the water pump be turned off, and this line is below skimmer water level, water will come out of it.
- 7) Water return line (from skimmer to sump) must not rise more than half the height of the skimmer. The higher the return, the slower the drain flow. NEVER reduce the size of this drain line. The skimmer can be placed as far from sump as necessary providing this rule is followed.



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Plumbing and installation cont'd...

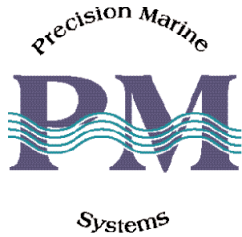
- 8) Always return water (from skimmer) ABOVE running water level in sump. Whenever possible, return water onto a sponge. Most reservoirs have a sponge chamber for bubble removal. This will remove stray air bubbles that return to sump. When using ozone, return effluent water to the sump over activated carbon.skimmer.
- 9) Connect a length of 5/8" flexible tubing from the skimmers' cup drain to a Precision Marine Systems' Waste Collector. The only vent is the cup drain. If you are not using a Precision Marine Systems' Waste Collector, *do not* immerse drain hose in liquid.

Operation

- 1) Before running your skimmer, be sure positive connections are made between pump and skimmer return and sump, and drain and collection cup. All connections should be clamped.
- 2) Open drain valve fully.
- 3) Turn on pump.
- 4) Close drain (gate) valve to achieve desired water level in reaction chamber. Start with air/water level breaking approximately 1/2" from the skimmer's neck.

Operating Tips...

- 🔗 Freshly mixed saltwater can cause excessive wet foaming action. Lower water level in reaction chamber after water changes and/or if the tank is newly set up for 24-48 hours.
- 🔗 Most foods, your skin, and some additives break surface tension in the water. For this reason your skimmer will run flat (simmer) after coming in contact with these compounds. Don't worry, your skimmer will be back to work in no time.
- 🔗 This protein skimmer requires 24 - 48 hours to "break-in", depending upon dissolved organic load. Be patient. After "break-in", the driest foam possible is most desirable. Using the drain valve, raise or lower water level in the reaction chamber to achieve this.
- 🔗 Be sure water level in reaction chamber is steady and consistent. Only minute adjustments on the gate valve are necessary.
- 🔗 A rising water level overnight can mean a big mess in the morning. If you are unsure, run the cup drain line back to the sump temporarily.



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Maintenance...

Regular cup cleaning will keep your venturi skimmer operating at peak efficiency. Simply loosen the thumbscrews, twist and remove the cup and clean with freshwater. The cleaner the neck of the cup is kept, the easier it is for foam to evacuate into the cup and to your waste collector.

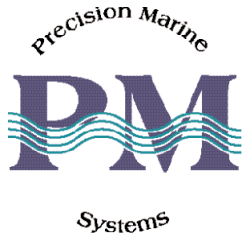
Besides regular cup cleaning, your venturi will need to be cleaned. Intervals are dependent upon pre-filtration before the water hits the venturi, and the additives you add to your tank, especially calcium hydroxide. Follow the simple instructions below...

Servicing your venturi...

Over time, salt deposits will accumulate inside the venturi. To dissolve the salts, follow the below procedure...

- #1 While your skimmer is running, allow the venturi to draw 4oz. of hot water into the black noprrene tubing. Repeat as necessary. This will dissolve any salt deposits that have built up. If it has been too long since your last service, it may be necessary to do a more intensive cleaning. See method #2 below.
- #2 While your skimmer is running, remove the black noprrene tubing from the venturi. Using a toothpick, scrape the salt deposits inside the air intake of the venturi. You can use a paper clip too, just be sure not to scrape too hard and damage the inside of the venturi. If it has been too long since your last service, it may be necessary to do a more intensive cleaning. See method #3 below.
- #3 Remove the entire venturi assembly and soak in straight vinegar overnight. Be sure to rinse well and re-attach.

Lastly, we at Precision Marine would again like to thank you for purchasing one of our products. All Precision Marine components are Hand-built with pride in the U.S.A.



Precision Marine Systems

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Limited Warranty

Precision Marine Systems, Inc. warrants this product against leakage due to defective sealant and workmanship defects as follows:

For a period of one (1) year from the date of purchase, Precision Marine Systems, Inc., will at its option either replace or repair the defective product when used and installed within the guidelines of the instructions. After this one (1) year period, you must pay for all repair charges. All repairs must be performed by Precision Marine Systems.

Drilling holes anywhere in the filter or in any other way altering the filter after the original manufacture by Precision Marine Systems, Inc. at their home offices in Houston, Texas will void all warranties. This warranty does not cover any damage due to accident, misuse, abuse, negligence, or your failure to follow FILTER INSTALLATION INSTRUCTIONS.

To be effective, warranty card must be signed by purchaser and dealer and mailed along with a copy of the original sales receipt to the address listed above within ten (10) days of purchase. We suggest that you retain the dealers dated bill of sale as evidence of the date of purchase.

THIS WARRANTY CARD MUST BE SIGNED BY BOTH THE PURCHASER AND DEALER AND MAILED ALONG WITH A COPY OF THE ORIGINAL SALES RECEIPT WITHIN TEN (10) DAYS OF PURCHASE.

BUYER'S NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

STORE NAME: _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

FILTER TYPE/MODEL _____ DATE PURCHASED _____

I HAVE READ AND UNDERSTAND THE ABOVE WARRANTY AND FILTER INSTALLATION INSTRUCTIONS.

CUSTOMER'S SIGNATURE: _____

DEALER'S SIGNATURE: _____