



Phase Dynamics, Inc.
Marine Division

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Barnacle Adjustment Module "BAM"



**Module in
A/C Strainer**



**Module in
2" Bronze Tee**

- 110-240 VAC 50/60 Hz or 12-24VDC
- Patent Pending Internal Fluorescent Coating to Optimize Energy Emitted
- Simple & Sealed electrical connections
- 3/2 (AC/DC) 16 AWG marine wire
- External LED Power Light
- UNS Alloy C95400 Bronze Material
- Overvoltage/Overcurrent Protected
- Double Sealed Electronics Section
- Sealed Electrical Connectors

Phase Dynamics Marine Division is pleased to offer a new class of Barnacle Prevention Modules. It is designed to prevent barnacle larvae from attaching to seawater plumbing systems, connection piping and inside of air conditioning condensing coils. The microscopic larvae are sensitive to a spectrum of ultraviolet light which "Stuns" them preventing their attachment inside of the system. If the larvae cannot attach themselves, they will continue out through the hull and not form a shell.

The unique patented design allows for simple installations within the filter system by replacing the filter cap or within the sea water lines after the through hull valve. The Module can be simply installed in various sea water hose sizes with adapters or directly plumbed into the through hull valve. The basic system is UNS Alloy C95400 bronze specifically for the marine environment.

Electronics are embedded within the module for simplicity and ease of installation. The system can be purchased with an AC or DC circuit for power. The module is connected to the 120/240 VAC powered sea water pump but alternatively can be connected to a constant DC power source of 12 to 24 VDC.

Barnacle Adjustment Module

Power Requirements:

Option AC: 100-240 VAC 10 Watts
Option DC: 10-28 VDC 10 Watts

Power Indication:

Blue LED on Lid

Module Characteristics:

Pressure Rating: 150 psi

Process Connections Available:

Adapters:

2" NPT TEE with BAM Module in Side
1 ¼" NPT, 1" NPT, ¾" NPT In Tee
GROCO AARG Strainer Cap ARG501
GROCO AARG Strainer Cap ARG-1001
GROCO AARG Strainer Cap ARG-1501
US Patent 10,494,283, others pending

Typical Module Dimensions: 3" round with 2" NPT -Male Thread by 2 5/8" Tall



The Cyprid Larvae: This is the second stage of the larvae which is looking for a place to “settle” permanently. At this stage it only has a few days to find the point of settlement or die. Also, at this stage of growth a second and third photosensitive “eye” is grown to assist in finding a colony of mature barnacles. These larvae are the only ones with photo-receptors. The mature colonies emit a red wavelength that attracts them. The barnacles are the only member of the shell families that cannot move once they are “settled” and they do not have a shell formed beforehand. The UV-A wavelength is used to make the larvae temporarily blind and not want to “settle” in the hoses and air-conditioning system. The strainer basket cannot catch them since they are still a larva of approximate size 0.020” or smaller before they settle.

This system is designed based on scientific data published in biological articles over the past 50 years. The UV-A light is less than 10 watts but effectively “stuns” the larvae instead of killing it. UV-A is not harmful to humans unlike the UV-B & C wavelengths and it does not kill bacteria. This system produces no harmful chlorine or hydrogen gas like other systems and is environmentally friendly. Multiple units can be simply placed at the through hull fittings to eliminate barnacles throughout the system including the long inlet lines on larger yachts. Other units can be placed at the strainer by replacing the plastic basket cap. This system can be installed without professional assistance.

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