

*Chiller condenser coil cleaning instructions.*

**What product do I use?**

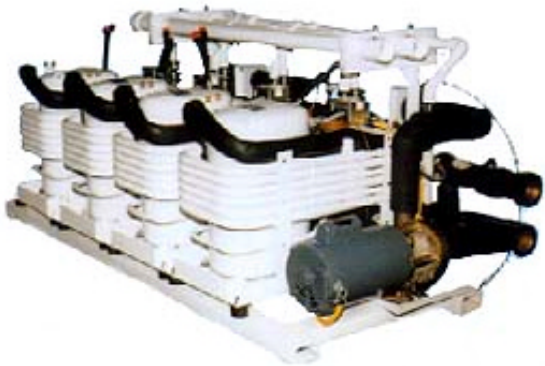
- For **ALL** seawater applications, **Barnacle Buster™** is the only choice for safe, fast, and consistent results.
- Also available in a concentrated form, one gallon of **Buster Concentrate™** makes five gallons of **Barnacle Buster™**

**How much Barnacle Buster™ do I need?**

- First, measure the lengths and diameters of all hoses and piping associated with the raw water cooling system.
- Next, cross reference them with the pipe gallonage chart (see separate sheet).
- Finally, add up all your finding. *Remember to add enough for your flushing equipment.*



*As a guide, the adjacent chart reflects the most common requirements.*



Unit Tons	0 ~ 8	8 ~ 15	15 ~ 24	30 ~ 40	50 ~ 75
Gallons of Barnacle Buster™	6	12	18	25	30

**Cleaning Options:**

There are two methods to choose from when cleaning your seawater system.

- ▶ **OPEN-LOOP RECIRCULATION:** This is the quickest and most preferred method. It requires the recirculation of the product and the aid of a flushing system or system pump.
- ▶ **IMMERSION:** This is the simplest method of cleaning but also the longest. It involves filling the entire system and allowing it to work overnight.

**TRAC recommends open-loop flushing for systems with large amounts of growth .**

**When to use Barnacle Buster™?**

- As a general rule of thumb, flushing your air conditioning system once a year is a good preventative maintenance measure. *This is especially important on systems that operate in warm seawater.*
- Monitoring your air conditioning system's amperage draw is an excellent way to determine system efficiency. As growth forms inside the condenser coil, heat transfer will be greatly decreased causing efficiency to drop. Thereby causing the compressor to work much harder—thus increasing amperage draw. *Flushing before the problem gets worse could save you a world of headaches!*

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### **Open Loop Recirculation Method:**

***Make certain to secure the air conditioning system by turning off the supply power breaker and CLOSING ALL SEA VALVES.***

- First, find the best locations to inject and recover Barnacle Buster™. One of the biggest advantages of using any of **TRAC's** products is the ability to not only include the condenser coil, but all the adjoining pipe and hose work as well. With this in mind, try to choose points which will include as much of the system as possible.

***Inlet:*** REMEMBER TO CLOSE THE SEA VALVE!

On most installations, the chiller plant has provisions for connecting to a shore-side cooling tower for use when the vessel is out of the water. This is an excellent location to inject Barnacle Buster™.

***Recovery or Outlet:*** As with the inlet, the cooling tower outlet connection serves as a great location to recover the Barnacle Buster™ solution.

- Now, with both your injection and recover points ready, hook up your flushing gear. Connect the discharge from the Port-O-Flush (or your own flushing unit) to the inlet point. Then connect the recovery point to the return hose. *You can also use your systems pump and a bucket if you desire. On larger systems you can even use the sea strainer as the bucket.*
- Now you are ready to recirculate and clean you're A/C system. TRAC recommends that you do a test-flush with water first to make certain you have no leaks. If everything looks good, replace the water with your predetermined amount of Barnacle Buster™.
- Recirculate for at least 2 to 3 hours. If there is an excessive amount of buildup recirculate for 3 to 6 hours.
- When flushing is complete, rinse the system with freshwater to remove any loose debris or leftover Barnacle Buster™. Reassemble the system and run the unit to ensure there are no leaks.

***TRAC Tip:***

*Reversing the flow, mid-flush, will greatly reduce your flushing time.*

### **Immersion Cleaning Instructions:**

***Make certain to secure the air conditioning system by turning off the supply power breaker and CLOSING ALL SEA VALVES.***

- Making certain the sea valve is closed, remove the suction hose attached to the valve and place it in a bucket filled with Barnacle Buster™ .
- Start the A/C raw water pump until you see Barnacle Buster™ coming out of the overboard discharge.
- Next, secure the pump and allow the product to work in your system for 12-18 hours.
- When complete, reconnect the suction hose, open the sea valve, and run the system for 5-10 minutes making certain you have removed all of the Barnacle Buster™ solution.

***TRAC Tip:***

*If the system is already hooked up to a cooling tower, simply add Barnacle Buster™ to the towers catch pan and watch it go to work. Using this method you can leave the unit online while cleaning it!! Make certain not to leave Barnacle Buster™ in the system for more than 24 hours.*

***TRAC Tip:***

*For best results on severely clogged engines, add more Barnacle Buster™ every 4 hours.*

**NOTE:** Magnesium/Zinc anodes will need to be removed before you start flushing or replaced after flushing is complete.