

## Frequently Asked Questions

**Thank you for the opportunity and privilege to introduce our CaviBlaster® products.**

These FAQ's (Frequently Asked Questions) will help you understand some of the basic concepts of our underwater cleaning systems using Ultra-Cavitation. This list will help both new users as well as those that need to brush up on their current knowledge about our CaviBlaster® units.

### **The CaviBlaster® underwater cleaning systems.**

Our underwater cleaning systems “The CaviBlaster®” employs a revolutionary technology known as **Ultra-Cavitation** for underwater cleaning using much lower pressures than conventional equipment. These systems are significantly more effective, efficient and ergonomic than traditional systems such as pressure-washers/water-blasters, or grit blasters, and they eliminate the dangers associated with the use of high-pressure cleaning equipment.

These CaviBlaster® systems **remove marine growth in significantly less time and with better results** than traditional water and grit blasters, while costing less to operate. The compact CaviBlaster® units clean steel, concrete, wood, rubber, fiberglass or fabric, without damaging existing surfaces or surface coatings. The more powerful CaviBlaster® models will quickly clean surfaces to bare metal, stripping away heavy fouling and oxidation. Our biggest CaviBlaster® is known as the ConcreteBlaster®, and is powerful enough to crush concrete.

### **Key advantages of the CaviBlaster® include:**

- Compact and light weight
- Zero-thrust tools are easy to use and ergonomically friendly
- Cleans all surfaces without damage
- Low O&M cost
- Higher production rates with better results
- All of our units are available as gasoline, diesel, or electric versions.

## General Questions

**Q. What are the main components of a CaviBlaster® ?**

R: Pressure pump, the driver motor, Pressure regulator, safety valve, electrical systems (optional), feed pump (optional), skid or wheel mount, Cavitation Gun and High Pressure hoses.

**Q. How do I choose the right unit for my project?**

R: It depends on the size of the project, surface to be clean, density of the fouling to be removed, coatings and oxidation of surfaces, depth of the cleaning requirements, please look for our *CaviBlaster Selector* doc at our website.

**Q. May I change the components on a CaviBlaster unit ?**

R: The optional equipments are, balanced or unbalanced diver gun, ROV lance, cavidome or dobledome surface cleaner.

**Q. What power sources are available for CaviBlasters?**

R: All of our units are available in Diesel power and Electrical power, and some of our smaller units are also available in Gasoline power.

**Q. How long is your lead production time?**

R: From 15 business days to 45 business days depending on the unit.

**Q. Do you ship internationally?**

**R: Yes, we can manage your shipments or use your preferred carrier, worldwide.**

**Q. May I pick up directly at your factory?**

**R: Yes, you can pick up your units at our facilities in Florida USA.**

**Q. Do you offer financing?**

**R: We do have relationships with a few financing institutions that understand our products and have serve our clients in the past.**

**Q. May I just buy the Guns?**

**R: We DO NOT sell the CaviDyne Guns or any other tools separatedly, because they just work excluseviely with our equipments.**

**Q. What is the smallest equipment that you have?**

**R: Our smallest equipment is the CaviBlaster 0625, (6 gpm / 2500 PSI), please see our catalog for more information.**

## Technical Questions

**Q. What is the optimum distance from cleaning surface to CaviDome nozzle and can the distance between cleaning surface & the nozzle be adjusted?**

**R:** The physical clearance for all domes is fixed and not adjustable, as determined by the wheel diameter and the dome / spindle height. For the Model 1222 Series the clearance is 40 mm/1.6”.

**Q. How often should the filter be cleaned?**

**R:** When using an open water source, the inlet strainer and the main water filter of the power unit should be inspected for debris and fouling prior to and after use; clean as necessary. Caution must be observed when suspending the inlet suction hose approximately a foot or so under the open water surface and not dropped to the bottom where it can suck in debris from the bottom.

**Q. What is the spray rotation rate?**

**R:** The nozzle spindle is free spinning, typically estimated to be approximately 200 RPM. Rotational rate is variable depended on supply pressure of the power unit.

**Q. What is the vacuum suction force of cleaning disc that ensures that it adheres to the cleaning surface?**

**R:** The force is determined by the water flow velocity forced out from under the dome skirt by the system pressure. A window is molded in the dome housing to reduce the holding suction. The force has not been calculated and varies with different size CaviBlaster power units. The holding force can be adjusted by covering a portion of the window to increase the holding force.

**Q. Do you have any photos to illustrate marine growth in mild, moderate, and severe condition?**

R: Due to infinite variety of fouling a library of such is impractical.

- a) Mild: grasses, algae, veliger / juvenile mussels, less than ½” thick.
- b) Moderate: ½” to 1 ½” grasses, barnacles, small mussels, tube worms.
- c) Severe: exceeding 1 ½” barnacles, mussels, other calcified growth.

**Q. If you want to get the maximum cleaning effect, please suggest what calibre and flow of nozzles are recommended.**

R: The higher the flow and pressure, the more cavitation, and the faster the cleaning effect. Calibration of nozzles to match output of power unit is required to create cavitation. Nozzles are not interchangeable between different size power units. Also, periodic calibration of the power unit is necessary to achieve maximum cleaning of all CaviBlasters. Calibration instructions are found in the power unit Operation Manual, For instance, Model Cavidome 1222, the width is 325mm in mild/moderate/severe cleaning is 432/406/381mm.

**Q. Is there any bigger disc which can increase the cleaning efficiency?**

R: Not at this time. This concept has not been studied. However, domes can be ganged together. Power units must provide sufficient output to activate cavitation in each dome unit. The model Cavidome 2828, the cleaning width is 950/900/850mm, cleaning velocity is 0.3m/s, 0.15m/s 0.07m/s.

**Q. Why is the double disc cleaning velocity slower than the single disc?**

R: In order to avoid the influence of cavitation in jet flow.

**Q. What is the cleaning velocity of the double dome?**

**R:** As varied as fouling is, the cleaning efforts will vary also. The cleaning velocities are best estimates only. No significant studies have been undertaken, only field reports. Classifying the severity of fouling is considered to be subjective at best, hence cleaning velocities tend to be subjective.

**Q. To get maximum effect from the CaviDome can you use it with the most powerful power unit e.g. the 2040?**

**R:** As noted previously, higher the flow available and velocity of flow (as driven by pressure), the more cavitation available for increased cleaning. However, cavitation nozzles must match the output of the power unit as designed. Hence a 2040 has more flow than a 1222, but the 1222 dome will not work with the 2040, as cavitation nozzles are specific and not interchangeable with different power units of different output.