

# Aquacleaner Environmental

“The Ultimate Under Water Dive Recovery System”

P.O. Box 8 Lancaster N.Y. 14086 (585) 752-7930

## The Ultimate Dive Recovery System



### Profile on our System:

The Aqua Cleaner is the Ultimate Under Water Dive Recovery System because it provides law enforcement divers with a complete system that allows them to sift through and move large amounts of soil that would be impossible to move manually. Our system provides divers with all the tools necessary to work in the unforgiving terrains they find while working underwater. No matter how skilled a dive team may be, the idea of them poking and prodding there way through a waters bottom is an undaunting, pain staking task that until now seemed to be the only way to accomplish these goals. Now with the Aqua Cleaner, a dive team can move unrestricted without air tanks, and move large amounts of soil while sifting through it to find whatever it is their looking for.

# Introduction

When a dive recovery team enters a body of water and attempts to feel and sift their way through the bottom, the tools and techniques they have are very limited. Visibility is typically very poor once they start stirring up the bottom, and their ability to move soil and penetrate down into the layers of soil is difficult and unforgiving. Further complicating the divers job is the fact that due to tides, currents and shifting bottoms, objects that are being sought after may be buried in deep amounts of soil.

The Aqua Cleaner is essentially an industrial based underwater vacuum cleaner that is capable of sucking up and filtering large amounts of soil with ease. Typical hydraulic pumps require all material to pass through an intake and then through the pump impeller. The types of debris that a police dive recovery team would be looking for would never be able to pass through the impeller and hence your typical hydraulic pumps are therefore useless. The principle feature of the Aqua Cleaner operates with a venturée, which creates a suction type of dredging system which allows solids up to 5" to pass through the hose without ever going through the impeller, thus making it ideal for the recovery of large objects such as a small gun or knife. The suction at the nozzle is so strong that objects larger than 5" will usually find themselves stuck on the nozzle, and can be brought up to the surface to be identified. The Aqua Cleaner can easily clear an area that is 27' long X 10' wide X 1' deep in just one hour.

## How it Works

The Aqua Cleaner is a portable machine that is transported on a small utility trailer. Once you get it to a crime site, it is easy to move into the water and takes about a half an hour to assemble. The machine sits on a 4' X 8' pontoon and is totally self contained. Two 9.0 hp Honda motors sit on the pontoons and provide a mass amount of suction through the venturée. The system requires two people to operate it; one diver and one man on the surface sifting through the material that is coming from the bottom. The diver can work under water without the use of air tanks because there is an air compressor attached to one of the motors that pumps fresh, filtered air to the diver down below. Material that comes from the bottom exits the discharge hose onto a sleuth box and into a bagging system. The machine is equipped with two large 50-pound onion bags that allow the water and soil to leach out, and capture all solids. An adjustable flap separates the 2 onion bags so that when one is filled, water and debris can be detoured to the other bag thus allowing the full bag to be replaced without stopping the machine and the process. An optional second air compressor can be attached to the second pump so that 2 divers can work together underwater.

## Applications

The Aqua Cleaner is perfect for the retrieval of guns, knives and bodies that are under water. While the machine itself cannot suck up a body, it can move a tremendous amount of soil (approximately 12 cubic yards per hour), which will allow divers to uncover and recover anything that may be looking for.

The Machine comes with a standard 20' intake hose but can operate in depths up to 40' with a corresponding hose. The bagging system can be removed and replaced with a silt jet that allows you to hook up a discharge hose that will carry material to the shoreline where it can be thoroughly examined. The maximum range that material can be pumped is approximately 120' with a minimum lift up a shoreline.

The Aqua Cleaner can also clear the way for divers to examine shoreline areas by removing certain types of aquatic vegetation so that the shoreline is less obstructed.

## Specs on the machine:

Power – (2) 9.0 Hp Honda Motors

GPM - 1200 (gallons of water per minute)

Debris Capacity – 12 cubic yards per hour (about a lg dump truck)

Air Compressor with 25' air hose

Sleuth Box

Bagging System

4 Section Pontoon harden plastic

5" Intake Hose

## Optional Features:

Second Air Compressor - allow 2 divers to operate under the water at the same time

Silt Jet – This replaces the bagging system and allows material to be pumped through an extended discharge hose and onto the shoreline (this is very helpful when you need to remove a large quantity of soil).

Second Pair of Motors – these are mounted on the rear of the pontoon and are used to aid in larger dredging projects by increasing the amount of material that can be moved to 16 cyds.

Refuge Barge – This is an additional pontoon that sits along side the Aqua Cleaner and provides a place for the debris bags so you don't have to continually run back to the shoreline.



