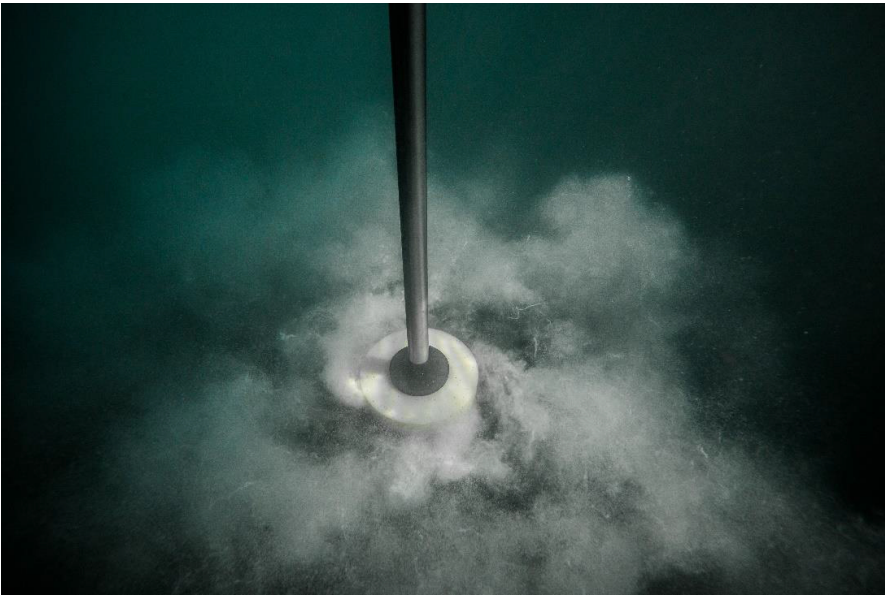




**Assembly & Installation Instructions
for the
VaraCorp Aerator**

13501 Ranch Road 12, Suite 103 Wimberley, Texas 78676
800-801-6685



Underwater view of turbine



Example of Anchor Post Installation

VaraCorp LLC

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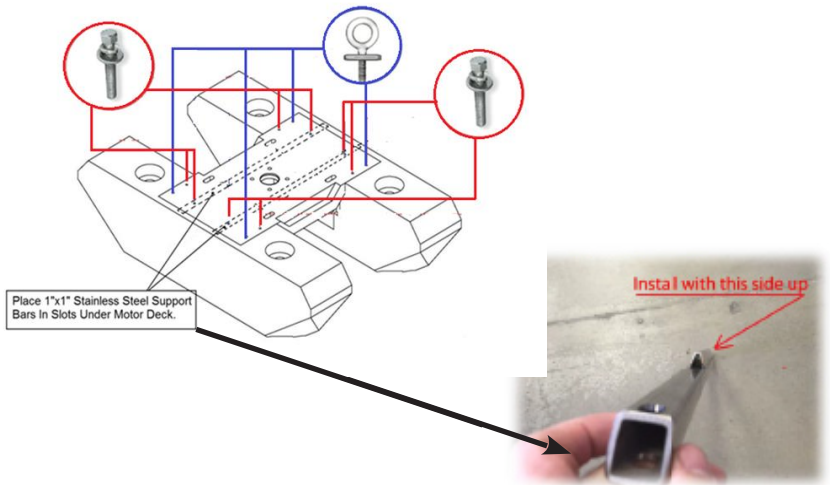
VaraCorp Turbine Aerator

1. All electrical connections should be made by a licensed electrician.
2. ***If the motor turns in a counter-clockwise direction, reverse any two hot wires.***
3. After the electrical connections are made to the motor, lay the two pontoons side by side on the ground and place the (reinforcing) stainless steel square tubing into the slots on the pontoons. See diagram and further instructions below.
4. Mount the motor deck onto the pontoons. It will snap into place in the receptacles in the pontoons.
5. After applying *Loctite* (i.e. removable thread locker) to **the eye** bolt threads, insert the eye bolts through the motor deck and through the holes in the square tubing and bolt down to the embedded nuts in the pontoons snugly. The eye bolts are used to secure the pontoons to the shore or bank with guy wire. See diagram below. ***Do not attempt to pick up the aerator using these pontoon eye bolts!*** Instead, use the lifting strap provided (see image below) to lift the aerator.
6. Apply *Loctite* to the eight (3/8-inch x 2¾-inch) hex head bolts and then use these to bolt down the rest of the motor deck to the pontoons using the washers supplied.
7. Place the motor onto the motor deck and bolt it down using the large ½-inch motor bolts, large flat washers, lock washers, and removable *Loctite*.
8. Lift this pontoon assembly off the ground using a bucket truck or similar equipment. See image of lifting strap below. Then, insert the pontoon legs into the four holes on each end of the pontoons. Secure these legs in place using the grey PVC end caps, included.
9. Attach the stainless steel guy wire to the eye bolts on the motor deck. Use enough length of guy wire to reach from the aerator to each side of the lagoon. See diagram below.
10. Assemble and then attach the air turbine (i.e. round rotating disk) to the lower end of the air shaft using the separate instructions that are included below.
11. Slide the other end of the air shaft onto the motor shaft and insert the Allen screws into the threaded holes located on the motor shaft. The Allen screws already have *thread locker* applied to the threads (if not, apply removable *thread locker* before inserting them.) Tighten snugly, but do not over tighten.
12. Gently move the aerator over to the lake or lagoon and lower slowly into the water using a bucket truck or other lifting vehicle.
13. ***The stainless steel air shaft is a precision-made component. Never grab it to use as a lever in lifting or moving the aerator. If you bend it, even slightly, you will void the warranty.***
14. Never let the turbine/air shaft drag on the ground or the bank of the lagoon.
15. Attach the electrical wire to the motor control box on the shore and attach the guy wire to the anchor posts on the bank of the lagoon.
16. Turn on the aerator.
17. There should be very little, if any, vibration in the aerator while it is operating. If the aerator vibrates excessively, turn it off immediately and locate the source of the vibration (such as a loose air shaft).
18. If you are using a VFD control panel, set the rpm to rotate between 1200 and 1750 rpm. Find the rpm setting that provides you the most efficient performance. A good starting point is 1750 rpm. Call us if you have questions. (800) 801-6685
19. The aerator will perform best if it is allowed to run continuously. Avoid frequent starts and stops since this will shorten the life of the motor.

Aeration Pontoon Assembly

Fasteners

- 8 – 3/8 -16 x 2-3/4” HCS Stainless.
 - 12 - 3/8 x 1” O.D. Flat washers.
 - 12 - 3/8” Lock washers.
 - 4 - 3/8-16 x 3” Eye bolts Stainless.
 - 4 - 3/8-16 Nuts (*thread the nuts onto Eyebolts, then add washer*).
 - 4 – 1/2-13 x 2” HCS Stainless Steel (Motor bolts).
 - 4 – 1/2 x 2” O.D. flat washers.
 - 4 – 1/2” Lock washers.
- O.D. = Outside Diameter



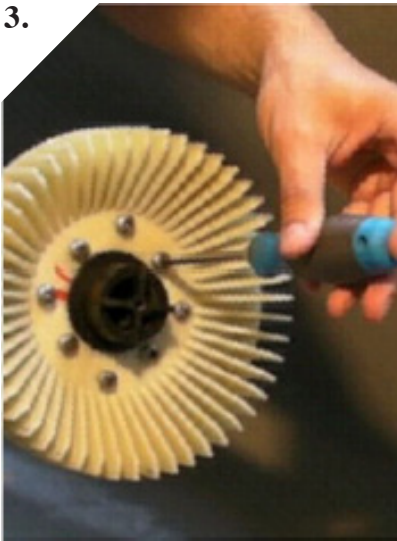
1. After the electrical connections are made to the motor, lay the two pontoons side by side on the ground and place the (reinforcing) stainless steel square tubing into the slots on the pontoons **with round side up.** (See photo above.)



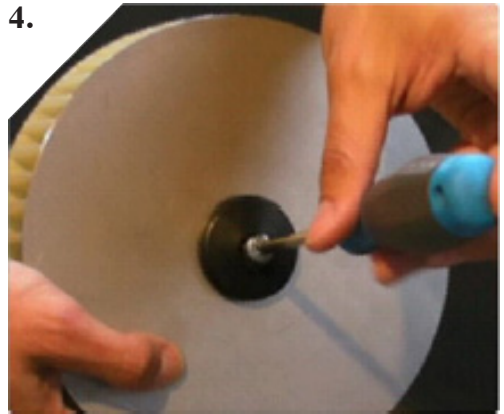
1. Slide the black coupler onto the lower end of the air shaft.



2. Insert the retaining pin through the coupler and the hole in the air shaft.

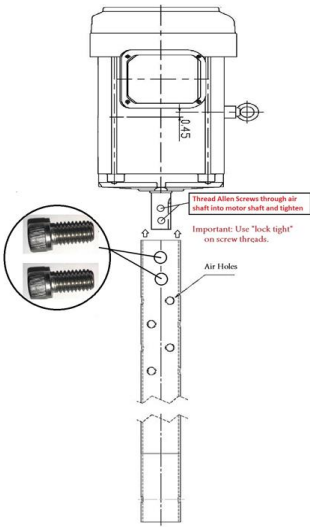


3. Attach the white turbine to the black coupler using the eight screws which are provided.

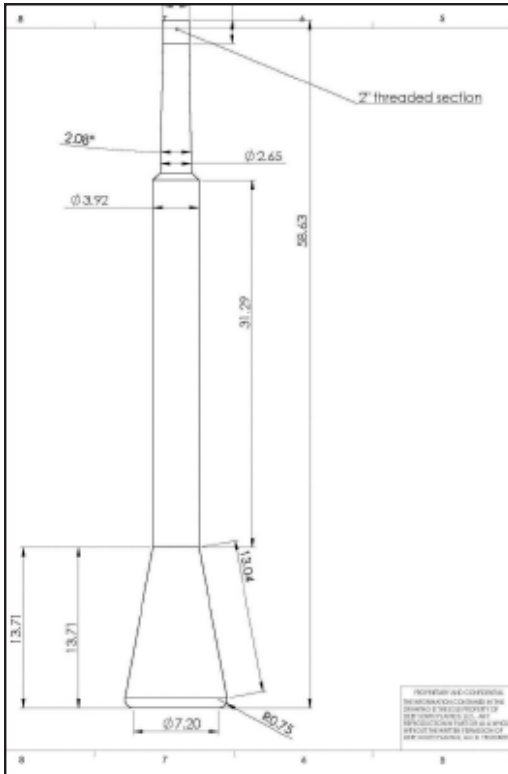


4. Attach the stainless steel end plate to the bottom of the turbine using the plastic washer.

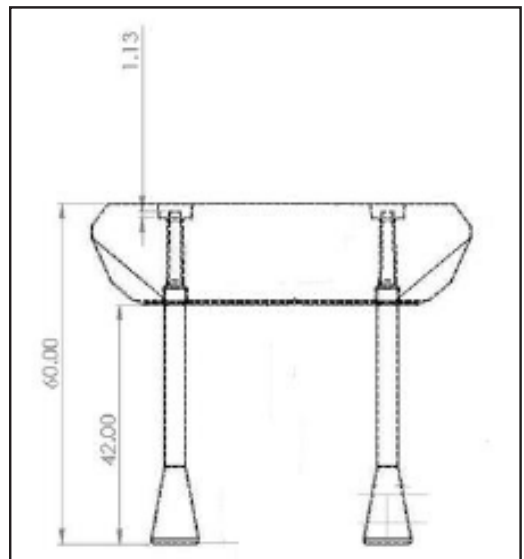
Motor Shaft
to Air Shaft
Assembly



Optional Low Water Legs



Insert low water legs into the sockets on each pontoon and secure with 2-inch grey, threaded Schedule 80 PVC end cap (supplied.)



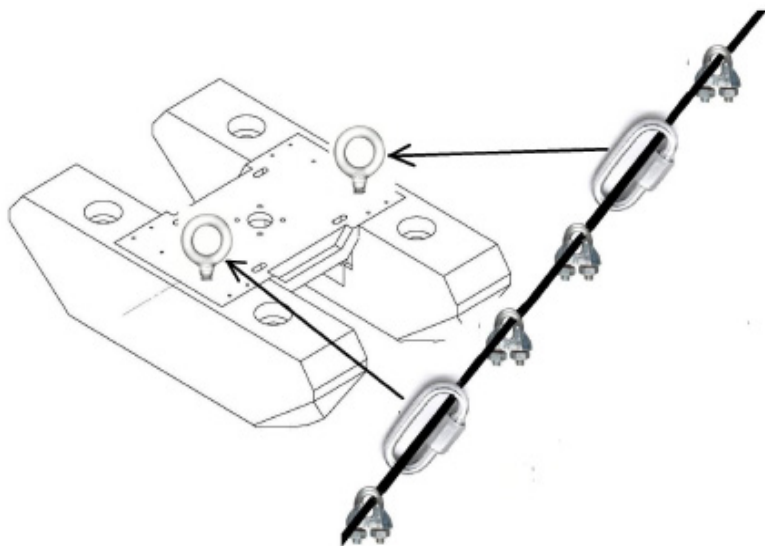


Pontoon Attachment to Cable

4 – 3/16 Cable Clamps

2 – Quick Links

(Use minimum 1/4 inch Stainless Steel Cable)



Secure “quick links” to pontoon eyebolts and guy wire, and then place cable clamps on each side of “quick links” to hold the quick links in place.

Guy Wire Tension

Install guy wire with enough slack to allow for the different levels of water. See photo below. Secure both cable ends to the anchor posts on the shore.



U-Bolt of all clips on
dead end of rope.

Correct



Staggered Clips

Incorrect



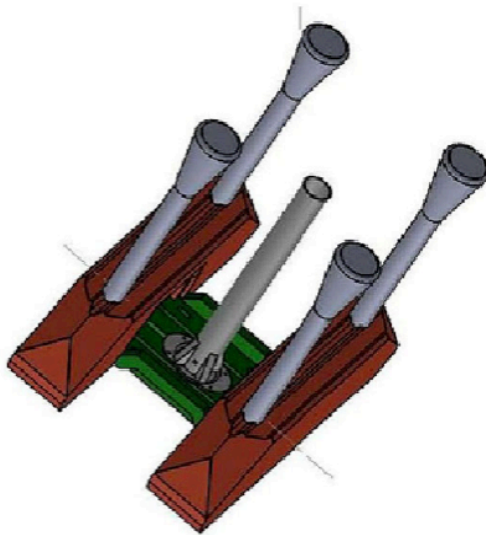
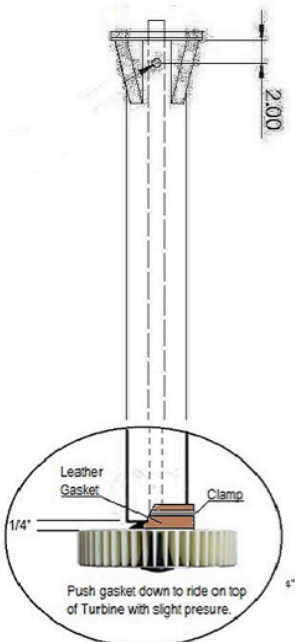
U-Bolt of all clips on
live end of rope.

Incorrect

Optional Debris Sleeve

Use this option when rags or string could wrap around the air shaft.

Cut the end of the debris sleeve to length by first mounting the sleeve under the motor deck and over the air shaft with the black hub coupling attached. Refer to *Turbine Assembly* above for an image of the black hub. Where the smooth top of the white turbine bolts to the hub is where the sleeve needs to be cut $\frac{1}{4}$ inch shorter. Then, slide the clamp and leather gasket (presoaked in water to soften it) onto the sleeve. See image below. Next, bolt the white turbine onto the hub. You should now have approximately a $\frac{1}{4}$ -inch gap between the end of the sleeve and the turbine. Slide the leather gasket down on top of the turbine with slight pressure (to insure a good seal with no gaps). Tighten the hose clamp around the leather gasket and spin the turbine by hand to make certain there are no gaps. ***Do not run the motor out of the water with the gasket in place.***



Use included lift strap as shown below.





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