

Model WQA Water Moving Aerator



What is this aerator doing that no others can do?

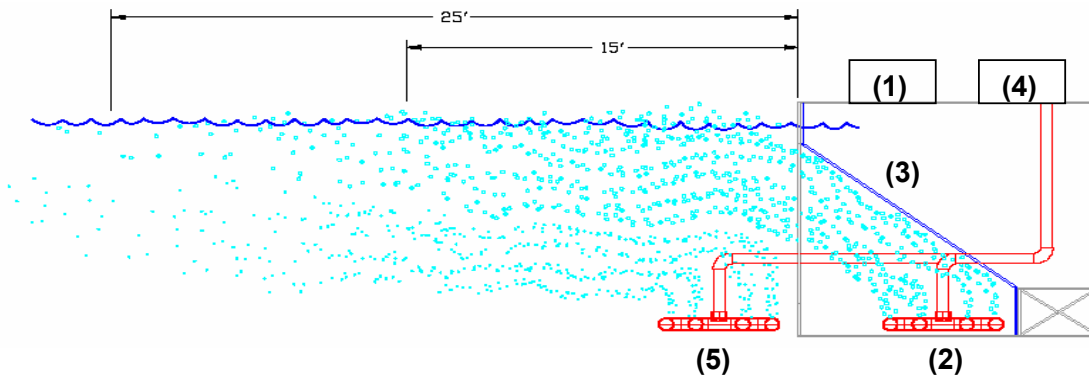
Answer – Moving from 2 to 5 acres of water with only 2 HP of energy, and adding 20 lbs of DO per hour with only 2 more HP of energy use!!

The Reliant Model WQA Water Moving Aeration System is not just an aerator, but it is a water mover with the ability to deliver large amounts of dissolved oxygen (DO) using a minimum of energy. When compared to standard paddlewheel, hose diffusion, spray (fountain) or aspirating aerators, the WQA is more efficient, less costly to operate, and requires less maintenance.

The WQA is a two-phase system which utilizes two 2 HP regenerative blowers. Phase 1, using one of the blowers, is the de-stratification phase, pushing every drop of water in 2 to 5 acres (depending upon water depth) of a pond or lagoon continuously. Phase 2 is a second 2 HP blower that can run continuously, or initiated manually or automatically, to provide DO at a rate which exceeds other aerators designed for shallow water ponds or lagoons.

The use of this new **Water Quality Aeration** system will (1) provide better overall water quality, (2) eliminate the zero-oxygen dead-zone on the lagoon bottom, (3) provide constantly moving water, and (4) provide dissolved oxygen at a controlled rate in order to save energy and oxidize waste gases. One 8' WQA will move over 9 million gallons of water in a 24 hour period.

HOW DOES THE MODEL WQA WORK?



The key, and patented, elements of the WQA is it's two regenerative blowers, each connected to a set of bubble forming diffuser grids. The Phase 1 blower (1) runs 24 hours per day and feeds the rear-most diffuser grid (2) which allows large 1-2 cm. bubbles to rise quickly into a 45° baffle (3), pushing water at a velocity capable of moving over 9 million gallons of water per day. These large bubbles stay on the surface for up to 25' in front of the WQA. When the Phase 2 blower (4) is initiated, either manually or automatically, it feeds air to the industrial diffuser grid (5) located forward of the base of the WQA. The bubbles emitted out of the diffusers are approximately .8 mm in diameter. These small bubbles are kept underwater for up to 35' due to their inability to rise above the larger, faster and horizontally moving bubbles caused by the primary, coarse bubble diffuser. The 25' to 35' of residence time for the small bubbles, at 1 atmosphere of pressure, allows for oxygen diffusion into the water, providing the addition of continuous increases in dissolved oxygen.



The Model WQA out of the water, ready for installation. Weighing less than 600 pounds, it is simple to install because it floats in less than 4 feet of water depth. It can be tethered to the bank or out in the lagoon, whichever is preferred.

In the water, the Model WQA provides a low profile. Notice that there is very little white water in front of the unit. An unspoken rule never heard from other aerator manufacturers is that “white water is wasted energy and oxygen.” This lack of white water speaks volumes of the efficiency of this lagoon water moving and aeration system.



For ponds and lagoons that freeze during the winter, the Model WQA can be provided with an 'Ice Option'. This option utilizes a third blower and an extra external manifold that will provide a continuous bubble curtain around the WQA so that it floats normally, even when it is surrounded by ice.



Reliant blowers are weatherproof and consist of a cast aluminum, anodized housing. The blower motors are 2 pole electric, asynchronous, with class F tropicalized insulation. Reliant blowers carry a 3 year warranty.



The Reliant tube diffusers are a revolutionary, patented design of industrial grade diffuser made out of HDPE (high density polyethelene). These diffusers are resistant to chemicals, and they are specifically designed to be robust in construction. They have an expected life of at least 10 years. There is no flexing of the tube walls to stress the wall structure. The diffusers have a 3 year factory warranty.

Maintenance



Change 2 blower filters per year – under \$200 total!

Model WQA Water Moving Aerator

Features

- Only 4 HP at maximum energy use
- No propellers or shafts to foul
- No belts or gearboxes to break or require maintenance
- Non-corrosive materials of construction—Anodized aluminum, HDPE, Stainless Steel

Benefits

- Continuously moves lagoon or pond water for complete de-stratification
- Delivers more dissolved oxygen to the water
- Lowers energy costs
- Practically maintenance free for years
- Eliminates trapped nitrogen and ammonia gases, and improves BOD/COD counts

ADVANTAGES OVER OTHER LAGOON AERATION SYSTEMS

- Less energy usage on an annual basis - per area covered.
- Over 9 million gallons of water movement in a 24 hour period.
 - Guarantees continual water turnover and de-stratification throughout the lagoon – mixes algae and eliminates blue-green algae stratification.
 - Moves ALL the lagoon's sludge in a slow, non-violent manner – allowing for sludge turnover for continual degradation by natural bacteria.
- No annual motor maintenance—oil changes, belt changes, etc. The only maintenance on a WQA is to clean or replace two inexpensive filters annually.
- The addition of up to 20 pounds of dissolved oxygen per hour.
- If used in a fish grow-out or recreation lake, the fish in the pond face less stress, more grazing space throughout the pond, more evenly distributed dissolved oxygen, and a constant flow into which to swim.

THE MODEL WQA WATER MOVING AERATOR

Finally, a lagoon or pond aerator that is designed for function over power.

Offering the ability to re-habilitate large waste lagoons by providing a cost effective way to breakdown sludge naturally, using minimal energy, and putting aeration throughout the water column – where it is required.

RELIANT

Water Technologies

141 Robert E. Lee Blvd. - #284
New Orleans, LA 70124
Tel 504-242-8340
FAX 504-242-8887

sales@reliantwater.us.com
www.reliantwater.us.com

Represented by -