

The **RELIANT** Model WQA Aeration System

A REVOLUTION IN SHALLOW POND WATER QUALITY AND AERATION



The **RELIANT** Model WQA showing bubble stream and flow pattern during Stage 1. Only 1.5HP can move all the water in an 8 acre pond.



The **RELIANT** Model WQA dual blower, dual diffuser Water Quality and Aeration System being installed in a catfish pond.

The Reliant Model WQA 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, or brush, aerators the WQA is more efficient, less costly to operate and requires less maintenance.

The WQA is a two-phase system which utilizes two 1.5HP regenerative blowers. Phase 1 is the destratification phase which runs continuously, pushing every drop of water in the pond continuously. Moving the water destratifies the pond, eliminating the zero DO dead zone on the bottom of the pond. Phase 2 is a second blower that can be either manually or automatically initiated to provide DO at a rate which exceeds a standard paddlewheel aerator.

The use of this new Water Quality Aeration system will provide pond raised fish better overall water quality, the elimination of a zero-oxygen deadzone on the bottom of the pond, a healthy flow within which to swim, and more readily available dissolved oxygen. One 8' WQA should be used for every 8 acres of surface water. When positioned at an angle diagonal to the bank, the WQA will quickly begin to cause a circular flow around the pond—moving over 9 million gallons of water in a 24 hour period.

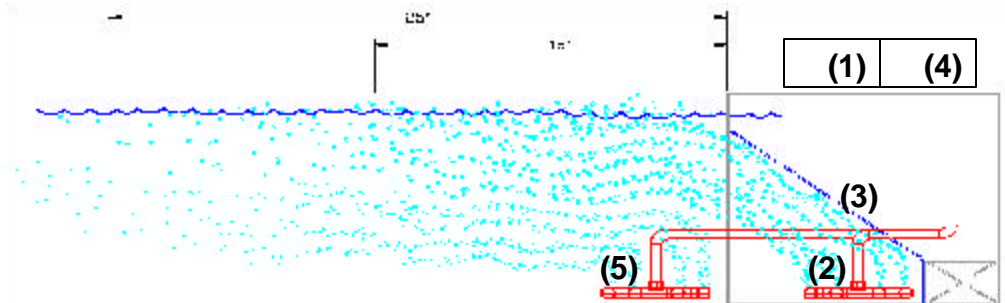
Features

- Only 3 HP at maximum power
- No moving parts
- Materials of construction—Marine aluminum, HDPE, Stainless Steel

Benefits

- Continuously moves pond water to completely destratify the pond
- Delivers more dissolved oxygen to the fish than a normal paddlewheel aerator
- Lowers energy costs
- Maintenance free for years
- Eliminates the bottom dead zone—reduces nitrogen and improves BOD/COD counts
- Relieves fish stress and provides more grazing area in the pond

HOW DOES IT DELIVER DISSOLVED OXYGEN TO THE FISH?



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 1 mm in diameter. These small bubbles are kept underwater for up to 20' due to their inability to rise above the larger, faster and horizontally moving bubbles. The 20' of residence time for the small bubbles at, 1 atmosphere of pressure, allows for diffusion into the water, providing the fish with fresh dissolved oxygen.

ADVANTAGES OVER A PADDLEWHEEL AERATOR

1. Less energy usage on an annual basis, even with one blower running all year long.
2. Over 9 million gallons of water movement in a 24 hour period guarantees continual pond turnover and destratification throughout the pond, even the bottom dead zone.
3. No annual motor maintenance—oil changes, belt changes, etc. The only maintenance on a WQA is to clean or replace two inexpensive filters every 6 months.
4. A continual addition of dissolved oxygen via the Phase 1 blower 24 hours per day, estimated to be very close to the pounds of oxygen per HP hour of a paddlewheel.
5. The addition of vastly more dissolved oxygen whenever the Phase 2 blower is activated. Industrial tests have shown that 20 pounds of dissolved oxygen per hour is commonly added by the Phase 2 blower/diffusion system.
6. 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.

Contact us -

TTechnautic
INTERNATIONAL, INC.

6500 Pratt Drive
New Orleans, LA 70122
Tel 504-242-8340
FAX 504-242-8887
sales@technauticinternational.com

www.technauticinternational.com