

# ALPHA

## AERATION SYSTEMS

### Natural Water Quality Management



Aeration is absolutely beneficial within any pond, lake or dam, and is vital for enhancing and maintaining water quality and clarity, as well as protecting aquatic habitats. The benefits provided by subsurface aeration will keep your water clean, clear, and healthy and balanced all season long.

Ensure your water quality by aiding the control of potentially toxic algae, oxidizing dissolved metals such as iron, lowering nutrient levels, breaking down harmful pathogens, reducing mosquito problems and eliminating foul odours — all by circulating the water and adding life-giving oxygen.

**SUBSURFACE AERATION** = Enhances water quality & clarity

**SUBSURFACE AERATION** = Boosts dissolved oxygen levels

**SUBSURFACE AERATION** = Controls toxic algae

**SUBSURFACE AERATION** = Reduces sludge & muck

**SUBSURFACE AERATION** = Removes foul odours & tastes

**SUBSURFACE AERATION** = Reduces excess nutrients & phosphorous

**SUBSURFACE AERATION** = Improves BOD & COD counts

**SUBSURFACE AERATION** = Protects fish & aquatic ecosystems

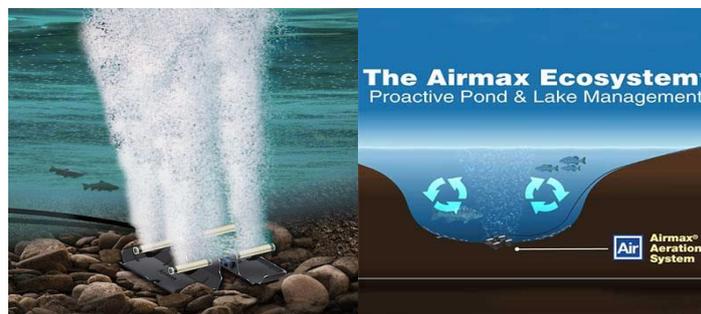
**SUBSURFACE AERATION** = Aids destratification, eliminating the thermocline

**ALPHA** Aeration Systems are designed for use in:

- **IRRIGATION DAMS & RESERVOIRS**
- **STOCK WATER PONDS & LAKES**
- **PROCESS WATER STORAGE TANKS, PONDS & LAGOONS**

Our systems utilize a shore-mounted air pump that delivers air to specialized diffuser plates that are self-weighted to sink to the bottom of the pond or lake. The diffusers create micro-bubbles that rise to the surface, circulating the water and saturating the water column with oxygen, rapidly resulting in cleaner, clearer water with less sludge and muck build-up.

# Airmax - Mains powered Aeration



**Airmax Aeration Systems** are designed for use in medium sized ponds, or large lakes and dams. For larger water-bodies multiple units may be required to oxygenate the entire water column. The devices are professionally designed to be very effective, efficient and easy to install. This is also the quietest aeration system on the market.

- High performance, high-quality & robust components
- Very quiet running & low cost of operation
- No power supply or cabling in the water
- Easy to install & maintain (All service requirements are land-based & easily accessible)
- Industry leading warranty

<b>Airmax</b>	<b>DIFFUSERS</b>	<b>WATER DEPTH</b>	<b>MAX AERATION AREA</b>
<b>PS10</b>	1	1.2 – 2.7 Metres	Up to 1000 m <sup>2</sup>
	1	2.7 – 3.6 Metres	Up to 2000 m <sup>2</sup>
	1	3.6 – 6.4 Metres	Up to 4000 m <sup>2</sup>
<b>PS20</b>	2	1.2 – 2.7 Metres	Up to 2000 m <sup>2</sup>
	2	2.7 – 3.6 Metres	Up to 4000 m <sup>2</sup>
	2	3.6 – 6.4 Metres	Up to 8000 m <sup>2</sup>
<b>PS30</b>	3	1.2 – 2.7 Metres	Up to 6000 m <sup>2</sup>
	3	2.7 – 3.6 Metres	Up to 8000 m <sup>2</sup>
	3	3.6 – 6.4 Metres	Up to 12000 m <sup>2</sup>
<b>PS40</b>	4	1.2 – 2.7 Metres	Up to 8000 m <sup>2</sup>
	4	2.7 – 3.6 Metres	Up to 12000 m <sup>2</sup>
	4	3.6 – 6.4 Metres	Up to 16000 m <sup>2</sup>

# ALPHAIR – Solar powered Aeration

**ALPHAIR Solar Aeration Systems** are designed for small or medium sized ponds, lakes or dams, and are great when you don't have any power source near your pond but still want to aerate. We have developed a solar aeration system that has no batteries, so only runs when there is sufficient sunlight.

ALPHAIR Solar Aeration systems come complete with a solar panel, air pump and necessary solar electrical components housed in a tough, durable and lockable enclosure, as well as self-weighted airline and weighted diffusers.

- **High performance, professional quality components**
- **Lowest cost of operation**
- **No power needed at the shore**
- **Easy to install & minimal maintenance required**

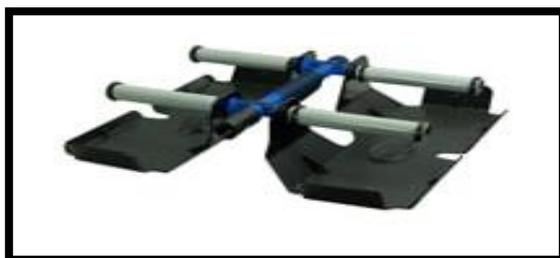


ALPHAIR	DIFFUSERS	WATER DEPTH	MAX AERATION AREA
SP20	1	1.2 – 2.5 Metres	Up to 1000 m <sup>2</sup>
	1	2.5 – 3.6 Metres	Up to 2000 m <sup>2</sup>
	2	1.2 – 2.5 Metres	Up to 2000 m <sup>2</sup>
	2	2.7 – 3.6 Metres	Up to 4000 m <sup>2</sup>

## DIFFUSERS & SELF-WEIGHTED AIR-HOSE:

These accessories are used with both the mains and solar powered systems.

- **ProAir-4 Weighted Diffuser** – An innovative maintenance-free sled design that keeps it submerged in water while maintaining an upright position.
- **Self-Weighted Airline** - This airline is kink-free & fish hook resistant.





Subsurface aeration prevents stratification by mixing oxygen throughout all layers of your water. Stratification is a process in which the water in your pond or dam separates into layers with different temperatures and oxygen levels within each layer. It is also the main reason why you'll experience the build-up of toxic sludge at the bottom of your pond or dam. This is because all the organic matter decomposing down there requires oxygen to be effectively dealt with. If not dealt with properly, this sludge will release a mass of nutrients, and in some cases toxins, into your water. This leads to odours, fish kills, algal blooms and aquatic weed growth so the inclusion of an aerator can be seen as a preventative measure when it comes to dam health.

By making use of a subsurface aeration system also creates a constant circulation between all levels and areas of your pond or dam. This discourages toxic algae and mosquitos from making your pond or dam their home and helps the beneficial bacteria in the water to thrive and perform at their best, consuming excess nutrients. This mixing process also makes your pond or dam a much safer place for any fish you may be stocking, as it means they will be able to utilise all areas of your pond or dam, rather than just the warmer water near the surface. This lets them swim away from predators and also greatly increases the survival rates of any bottom dwelling fish you may have.

Plus, subsurface aeration systems can help prevent fish kills and toxic odours from arising when your pond or dam turns itself over (which it naturally does whenever seasonal changes bring temperature differences). This is thanks to the fact that your dam aerator will have kept most layers of your water at a fairly uniform dissolved oxygen level and temperature, and prevented the sludge layer from building itself up to a dangerous level. This means your fish will generally stay healthy even during a turnover and stops you from ending up with a disgusting smelling dam that could possibly pose health risks.

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