



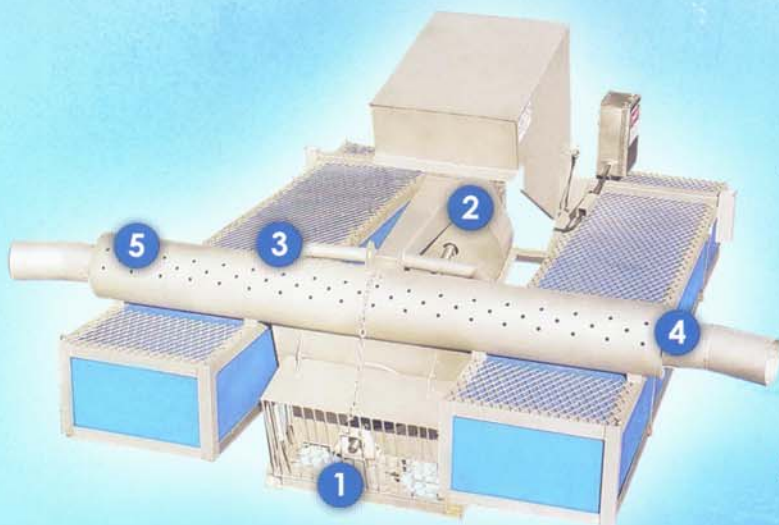
A new, cost-saving way to aerate.



ADVANCED, EFFICIENT, COST-SAVING

The Airmaster Aerator Turbo is one of the most advanced and efficient aerator technologies on the market today. Our unique, patented design achieves high-capacity water movement with aeration while consuming less power with lower maintenance costs than competitive technologies. Available in 10 to 50 hp units. Ideal for industrial, municipal, and agricultural applications.





1 Impeller. Water is drawn from below the surface into the bar-screened area. Depth of water draw can be adjusted. Smaller units draw from the front of the impeller, the largest unit draws from the front and the rear. The impeller can pump up to 1.5-inch-diameter solids. Water is fed into the large 305-L stainless steel discharge manifold pipe.

2 A toothed, synchronous drive system powers a single shaft that drives the Turbo Blower and the water pump impeller. No gear box is used. Variable/adjustable to suit owner needs.

3 Two- or three-inch diameter pipe carries the oxygenated air mix from the Turbo Blower to the reduced diameter areas of the discharge pipe. This air permeates the waste water and forcibly discharges it.

4 Reduced-diameter exits on the discharge pipe include vanes to induce a vortex to create negative pressure zones, increasing the amount of air that can be injected. Pipe diameter ranges from 10 to 16 inches in the center, 6 to 10 inches at the ends.

5 The impeller action and the top and side discharges create large circular mixing areas, raising the dissolved oxygen level over very large oxygen-deficient areas. The spray controls foam pulled toward the intake and assists with cooling and aeration.

A Severe-duty Motor. Covered by a motor hood made of 304-L stainless steel. The hood covers the motor, drive belt, and maintenance-free pillow-block bearings. Hinged, the hood prevents direct exposure to rain, sleet, snow, sun, and water spray. The motor powers the turbo blower, impeller, and oxygen generator.

B Stainless-steel-covered Floats. Expanded polystyrene core with a hybrid urethane coating which is impervious to diluted acids, alkalis, and petroleum products. Outer covering is 305-L stainless-steel expanded metal. Each float can bear the weight of a 240-pound service technician.

C Turbo Blower. Six blades, 316-L stainless-steel construction. Drawing power from the single motor, the Turbo Blower, in conjunction with an oxygen generator, injects air into the wastewater stream for the maximum oxygen transfer available.

D Discharge Manifold. 305-L stainless steel pipe with reduced-diameter ends that spray one-third of the flow through the perforations along its top length while throwing the rest out the ends for a large area of influence. The high-pressure discharges strip dissolved gases, VOCs, and ammonia.

AIRMASTER AERATOR TURBOS IN ACTION

Airmaster has replaced conventional aerators with two to three times the horsepower and still achieved the same results, while saving money on energy expenditure. Effective for water treatment, wastewater treatment, industrial, aquaculture, and agriculture applications. We excel in extreme conditions!

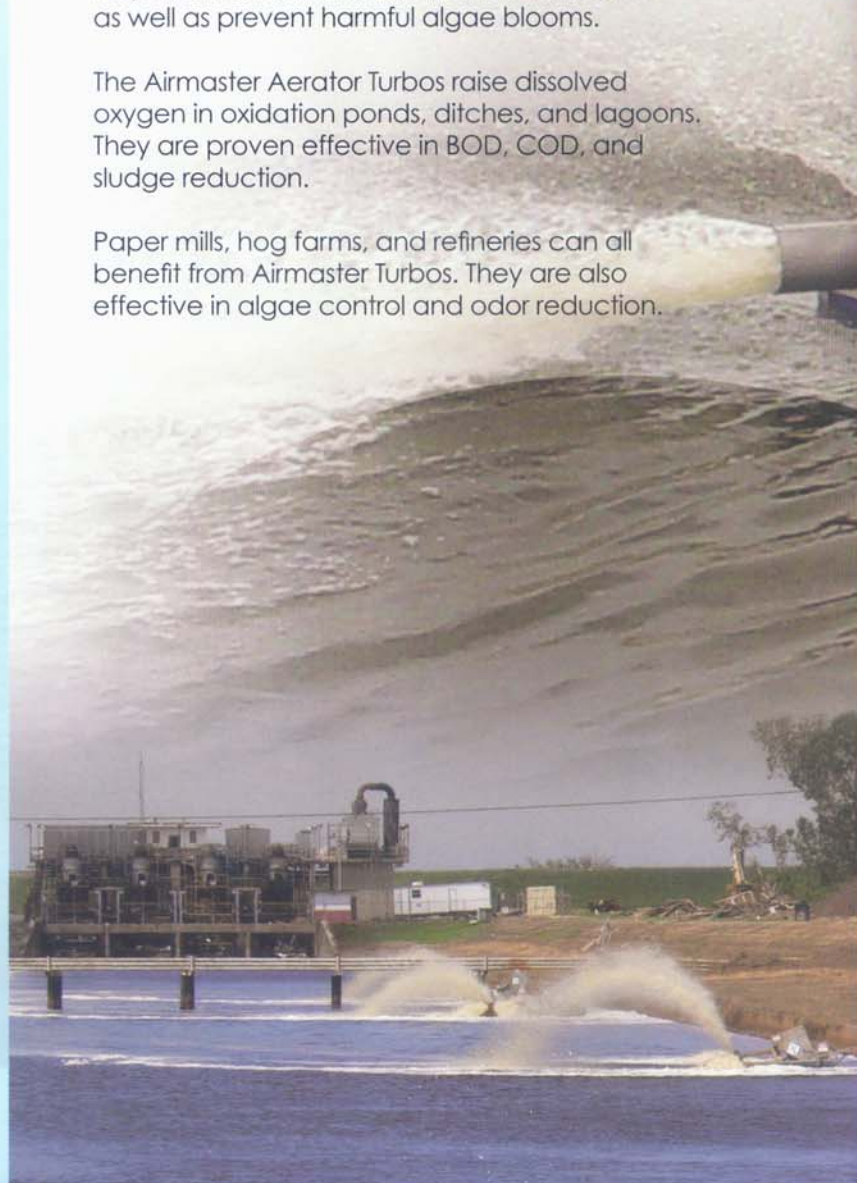
Airmaster Aerator Applications:

- Alligator Processing
- Canning Facility
- Catfish Processing
- Cattle Truck Washout Facility
- Cheese Processing Facility
- Chemical Plant
- Chicken Processing
- Compost Facility
- Correctional Facility
- Dairy Processing Facility
- Egg Washing Facility
- Emergency Response to Natural Disasters
- Fertilizer Manufacturing Facility
- Groundwater Remediation (V.O.C.)
- Lake & Pond Management
- Landfill Facility
- Mobile Home Parks
- Municipal Wastewater Facility
- Plywood Facility
- Pork Smoking Facility
- Poultry Rendering Facility
- Power Plant
- Private Wastewater Facility
- Pulp & Paper Mill
- Refineries
- Rural Schools
- Shrimp Processing Facility
- Steel Mill
- Textile Mill
- Turkey Processing Facility

After Hurricane Katrina, the US Army Corps of Engineers used 28 Airmaster Aerator Turbos to help reduce organic and petroleum-based contamination of water being pumped out of the New Orleans area. The increased oxygen helped avoid fish kills and anoxic dead zones as well as prevent harmful algae blooms.

The Airmaster Aerator Turbos raise dissolved oxygen in oxidation ponds, ditches, and lagoons. They are proven effective in BOD, COD, and sludge reduction.

Paper mills, hog farms, and refineries can all benefit from Airmaster Turbos. They are also effective in algae control and odor reduction.



Select locations using Airmaster Aerator Turbos:

U.S. Army, Iraq. The U.S. Army, through KBR, has ordered an Airmaster Aerator model #AA256SSX. This is a "Severe Duty" 25-hp, 380-volt, 3-phase, 50 Hz aerator, capable of pumping 5,040,000 gallons of wastewater a day.

Cattle truck washout facility, CO. Installed one 25-hp Airmaster; reduced sludge, odor, B.O.D., and ammonia.

Ham smoking facility, MO. Installed two 25-hp Airmasters in wastewater lagoons; within 24 hours all odor was eliminated.

Poultry rendering facility, AR. Had a diffused air system with total of 1,100-hp of blowers, achieving a dissolved oxygen level of 0.9 mg/L. Installed three 50-hp Airmaster Magnums and turned off 550 hp of blowers, achieving a dissolved oxygen of 3.5 mg/L.

Steel mill, IN. Installed three 50-hp Airmaster Magnums to cool 75 MGD of process water; thus eliminated need to construct a 7-million-dollar cooling tower.

Paper mill, NC. Replaced eleven (11) 75-hp floating aerators with eleven (11) 25-hp Airmasters. Performance was superior with added benefit of sludge reduction and defoaming.

Paper mill, TX. Replaced two 60-hp floating aerators with one 50-hp Airmaster Magnum. Currently using 4 Airmaster Magnums.

Power plant, WV. Seven 50-hp Airmasters with 14-foot hinged draft tubes installed in a 40-foot deep, 75-acre lagoon. Lowest dissolved oxygen at 40 feet is over 5.0 mg/L for ammonia reduction in fly ash.



THE AIRMASTER AERATOR TURBO DIFFERENCE

There are two basic methods to aerate wastewater — mechanical surface aeration by agitation and submerged bubble diffusers. Airmaster combines both processes into one surface unit, achieving both efficient mixing and efficient oxygen transfer.

Airmaster Aerator Turbo Features:

- High-capacity water movement with aeration incorporated in a discharge manifold.
- Turbo air blower combined with oxygen generator for maximum oxygen transfer.
- Performance exceeds aerators with over twice the horsepower, saving energy costs.
- Less expensive to purchase than fine-bubble aeration systems and less expensive to maintain.
- Produces two or four distinct mixing zones (depending on horsepower) for complete vertical and horizontal mixing of the biomass. Oxygen transfer is over three pounds of oxygen per nameplate horsepower per hour, under normal conditions.
- Synchronous belt-drive system means the speed, performance, and energy consumption of an aerator can be changed by the owner.
- Reduced maintenance needs by using stainless-steel construction, maintenance-free bearing system, hinged intake housing for ease of cleaning, and no gear boxes or gear reducers.
- Effective in BOD, COD reduction; algae control; odor reduction; and sludge reduction.
- De-foaming spray.
- Floatation is impervious to diluted acids, alkalines, and petroleum products.
- Unique design enhances the performance of existing aeration equipment.
- One-year warranty.

PERFORMANCE DATA

Airmaster Aerator Turbo (U.S Patent No. 6,325,842)

MODEL SIZE	MOTOR REQUIREMENT	VOLTAGE	GPM	GPD	POUNDS* OXYGEN/HOUR	POUNDS OXYGEN/DAY
AA101SS	10 HP	230/1 PHASE	1,325	1,908,000	25	600
AA103SS	10 HP	208/230/460/3 PH	1,400	2,016,000	30	720
AA153SS	15 HP	208/230/460/3 PH	2,100	3,024,000	45	1,080
AA203SS	20 HP	208/230/460/3 PH	2,800	4,032,000	60	1,440
AA253SS	25 HP	208/230/460/3 PH	3,500	5,040,000	75	1,800
AA50355XM (Magnum)	50 HP	208/230/460/3 PH	8,060	12,500,000	150	3,600

* Approximate transfer rate based on OTR of 3.0 lbs/HP/HR



PERFORMANCE, DESIGN, & WARRANTY SPECIFICATIONS

We pledge that each of our Airmaster Aerator Turbo products will meet the following specifications:

PERFORMANCE

Each aerator is capable of producing 3.0 lbs. of oxygen per nameplate horsepower per hour under normal conditions. Each aerator is capable of pumping and mixing approximately 1,908,000 to 12,500,000 gallons per day (depending on horsepower) under normal conditions and continuous operation.

The aerator produces two or four (depending on horsepower) distinct mixing zones within the lagoon cell for complete mixing of the biomass.

The aerator has one-third of the liquid being pumped, directed into a high-pressure spray. This spray is used for aeration, stripping gases from the liquid, and as a de-foaming spray.

The aerator has a synchronous belt-drive system and is shaft driven to allow the owner to vary the speed and performance of the aerator in the field. No gear box or gear reducer is used.

DESIGN

Motor:

1. Motor complies with EPACT '92 efficiency standards.
2. Service factor of 1.15 to 1.25 (depending on motor type), over the motor nameplate at 60 HZ.
3. Class F insulation.
4. Double-shielded bearings with re-greasing provisions on the shaft end.
5. Motor is designed for 230-volt 1-phase or 208-, 230- or 460-volt, 3-phase operation.
6. Motor is IEEE series 841 or Severe-duty motor.
7. Motor has 3- or 5-year warranty, depending on motor type.

Frame and Components are fabricated of 316-L and 304-L stainless steel. A 304-L electrical conduit tray is provided for securing the electrical conduit. Stainless-steel lifting lugs are provided for equipment lifting.

Floatation:

1. Floats have an expanded polystyrene core with a hybrid urethane coating.
2. Coating is impervious to diluted acids, alkalis, and petroleum products.
3. Floats are covered with 304-L stainless-steel expanded metal and designed to support the weight of two 240-lb. service technicians.

Impeller is 316-L stainless-steel construction capable of pumping approximately 1,908,000 to 12,500,000 gallons per day (depending on horsepower) under normal conditions and continuous operation. The impeller is capable of pumping 1.5"-diameter solids.

Impeller shaft is of 1.5"- or 2.44"-diameter, 17-4 PH 1150 stainless-steel construction.

Turbo Blower is of 6-blade, 316-L stainless-steel construction, capable of injecting air into the wastewater stream without requiring a separate motor.

Bearings:

1. Top bearings are "Double Tapered Roller" pillow-block bearings with Temkin® lubricator.
2. Bottom bearings are maintenance-free, Poly-Round Solution® or ALL-ROUND Solution® pillow-block bearings.

Drive system is "Poly-Chain GT2®." The toothed, synchronous belt is constructed of non-stretch material to prevent re-tensioning.

Inlet intake cage is of 304-L stainless-steel construction and hinged for ease of cleaning. A 1/4" stainless-steel lifting chain is provided.

Motor hood is of 304-L stainless-steel construction. It covers the motor, drive belt, and the "Double Roller" pillow-block bearings. The motor hood is hinged for ease of access to the above-mentioned parts with a safety-locking device installed to eliminate accidental closure of the motor hood. It is constructed to prevent direct exposure to rain, sleet, snow, sun, and water spray.

Options include:

- A NEMA-4 stainless-steel electrical junction box with power block, grounding lugs, and pre-wired to the motor. The junction box allows the electrical contractor to terminate their power cable from the motor starter.
- A 304-L stainless-steel standoff assembly for anchoring the aerator. The stand-off assembly secures to the lagoon bank through two 304-L stainless-steel spud legs. The other end of the stand-off assembly connects to the aerator through 304-L stainless-steel receptacles fixed to the end of the frame assembly. The stand-off assembly allows the aerator to be positioned the desired distance from the lagoon bank and is designed to allow the operator to move the aerator to the bank for routine maintenance and inspection. No mooring cables or anchors are required to secure the aerator in position.

WARRANTY

The aerator will be warranted for defects in materials and workmanship for the period of one year from date of start-up.

1. We excel in extreme conditions.
2. Don't waste your money on expensive or high-maintenance equipment when the Airmaster Aerator Turbo can get the same job done at less cost and more reliably.
3. If you qualify, units are available on 30-day trial basis, at your location.
4. Want to learn more? Call us at 888-813-3680.



CONTACT INFORMATION

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