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## **THANK YOU FOR CHOOSING AIRMAX®!**

You have purchased the most efficient and cost-effective aeration system available on the market today.

## **BENEFITS OF AERATION**

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The Airmax® Aeration System will provide many vital benefits to the overall health of a water body:

- Improve Water Clarity
- Prevent Fish Kills
- Reduce Weed & Algae Nutrient Availability
- Keeps Ice Open To Reduce Harmful Gas Buildup
- Eliminates Odors
- Maintain Larger and Healthier Fish Populations
- Greatly Reduces Pathogenic Bacteria
- Reduces Mosquito Population
- Increase Beneficial Aerobic Bacteria, Which Are Needed To Breakdown Organics
- Reduce Organic Sediment & Muck
- Thermal Stratification of Water Column Eliminated

## PLEASE READ BEFORE INSTALLING

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Please read the following instructions carefully before operating your aeration system. Failure to follow the recommendations in this section may result in personal injury or rescinding of the machine warranty agreement.

The purpose of the aeration system is to circulate the pond's entire water column. This circulation will increase and maintain oxygen levels and eliminate thermal stratification.

The efficiency of the system can initially create problems if start-up procedures are not followed properly



### WARNING:

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The circulation of poor quality, low oxygen deep water to the pond's surface can introduce harmful gases and by-products into the previously healthy upper regions of the water column. These by-products can make the upper regions unfit for aquatic life and could result in a fish-kill.

### To Prevent An Initial Fish-Kill

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- Turn system on and operate for 30 minutes
- Turn system off for the rest of the day
- Restart the system the next day and operate for 1 hour
- Turn system off for the rest of the day
- Each day, double the operating time from the previous day until system is running non-stop. This should take 7 days.

If you have any questions regarding these general guidelines, contact your local Airmax<sup>®</sup> dealer for technical assistance.



## **WARNING:**

Please read the following instructions carefully before operating your aeration system. Failure to follow the recommendations in this section may result in personal injury or rescinding of the machine warranty agreement.

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## **DO's**

- Follow all warnings and instructions that are marked on or supplied with the aeration system
- Always locate the cabinet on a solid support with adequate strength for the weight of the unit
- Locate the cabinet away from irrigation sprinklers
- Always connect the cabinet to a properly grounded outlet. If in doubt, have the outlet checked by a qualified electrician. This system is supplied with a ground fault outlet. If a GFCI breaker is used with this making two (2) ground fault outlets, nuisance tripping may occur. To eliminate nuisance tripping, one of the ground fault circuits **MUST** be removed.
- Always wear a Coast Guard approved life jacket and follow all water safety guidelines.

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## **DON'T's**

- Never use an extension cord between the cabinet power cord and an electrical outlet
- Do not allow anything to rest on the power cord
- Do not place the cabinet where people may step on the power cord
- Never override or “cheat” electrical or mechanical interlock devices
- Never push objects of any kind into the slots in the covers, as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electrical shock.
- Never attempt any maintenance function that is not specified in the user manual
- Never operate the system if unusual noises or odors are detected. Disconnect the power cord from the outlet and call Airmax to correct any problems

## MAINTENANCE SAFETY

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- Always use parts that are supplied or approved by Airmax® Eco-Systems, Inc.. Use of other parts may result in poor performance and could create a hazardous situation.
- Always unplug the system from the outlet and refer servicing to a qualified electrician under the following conditions:
  - When the power cord is damaged or frayed
  - Compressor fan, outlet or other electrical components need service
  - If the cabinet is producing unusual noises or odors

## INSTALLATION TOOLS & MATERIALS

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For quick, easy and professional installations, it is suggested that the following materials be on site.

- Placement rope
- Utility razor knife
- Level
- Boat/Raft/Swim Suit
- Pea gravel or small stone
- Shovel (if trench is needed)
- Rake (if trench is needed)
- Flathead Screw Driver

# GETTING TO KNOW YOUR AIRMAX® SYSTEM

## The Airmax® Cabinet

- Composite construction, making it light weight, durable and corrosion resistant.
- Class A GFCI protection
- Forced Ventilation Design for cool and quiet operation
- Integrated cooling fan, extending the life the compressor
- Removable top for easy access to components
- Warranty: Lifetime on Cabinet, 5-year on components, 1-year on compressor



## The Airmax® Compressor

- Designed for continuous operation “24/7”
- Built with the highest quality components assuring years of trouble-free service
- Integrated cooling fan to increase performance and longevity
- Rubber mounted to ensure quiet operation
- 1-year warranty



AM20  
• 1/8 HP  
• 0.8 CFM



AM60/AM70  
• 1/3 HP  
• 4.0 CFM



AM30  
• 1/4 HP  
• 1.5 CFM

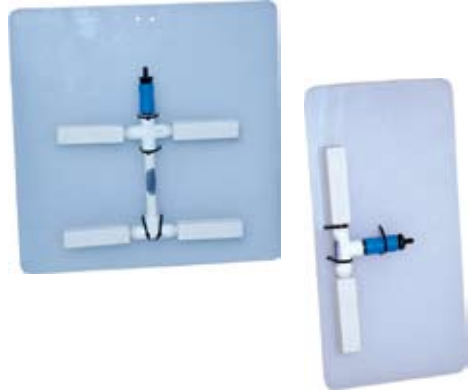


AM80  
• 3/4 HP  
• 10.0 CFM

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## The Airmax® Diffuser

- The synergistic diffuser design is an industry leader at lifting volumes of water to the surface maximizing total circulation and oxygen transfer
- Integrated check valve provides lower back pressure, extending compressor life
- Self-weighted, with an extra large base to prevent the diffuser from settling in bottom sediment
- Virtually maintenance free, allowing for years of trouble-free operation.



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## Airmax® Self-Weighted Airline

- Self-weighted: no bricks, weights or ties needed
- Extremely flexible even in cool temperatures
- Lead free, made of a durable PVC composite
- Thick walled making it kink free, fish hook resistant and trouble-free
- 5-year warranty



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## Airmax® Direct-Burial Airline (optional)

- Kink resistant
- Best used when placing your compressor away from shore



# INSTALLING THE AIRMAX® AERATION SYSTEM

## 1. Decide Location & Prep Ground



A. Locate area to place cabinet and mark off a 2' x 3' section using red spray paint/chalk.



B. Excavate 6" deep using a shovel



C. Compact base, smooth out and level



D. Pour pea gravel into now excavated area.



E. Compact base, smooth out and level



F. Place Cabinet



## INSTALLING THE AIRMAX<sup>®</sup> AERATION SYSTEM

(Steps 2 - 3)

Trenching (Steps 2 & 3) are only if the cabinet is placed away from the shoreline. You may skip Steps 2 & 3 if the cabinet is next to shore.

### 2. Excavate Trench

Mark the location for the trench between cabinet and shoreline. Then excavate trench 6-8" deep.



### 3. Place & Backfill

Place direct burial airline(s) into the trench and backfill with the dirt you just excavated.



# INSTALLING THE AIRMAX® AERATION SYSTEM

(Step 4)

## 4. Assemble Diffuser



A. Screw all airstones into manifold. **DO NOT OVER TIGHTEN!** Over tightening could damage airstone threads.



B. Place manifold and stones flat on the diffuser plate. Line up holes as shown.



C. Use two (2) zip ties to hold the back of the manifold into place



D. Use two (2) zip ties to hold the front of the manifold into place.



E. Cut off the remaining pieces of zip tie.



F. Get hose clamp and one (1) zip tie ready to attach airline. (Repeat Steps A through F for all diffuser plates.)

This step may be skipped if diffuser has already been assembled.

## INSTALLING THE AIRMAX<sup>®</sup> AERATION SYSTEM (Steps 5-6)

### 5. Connect Airline

Uncoil self-weighted airline along shoreline. It is important to make sure the airline does not get twisted or tangled for proper installation. Connect direct burial airline to self-weighted airline using the connector kit (included).



### 6. Extend Airline

Place diffuser plate(s) in boat, grab the opposite end of the airline and heads towards your drop point in reverse (to prevent damage to your boat propeller). Extend the self-weighted airline out to where the diffuser should be placed.



**Note:** Because there is tension on the extended airline the diffuser will want to move back towards the shore. It is best to over compensate for this by releasing the diffuser several feet farther than the desired placement area.

## INSTALLING THE AIRMAX® AERATION SYSTEM

(Steps 7-9)

### 7. Connect Diffuser & Airline

Connect self-weighted airline to diffuser plate using hose clamp. Fasten last zip tie to hold tubing in place. This will prevent airline from slipping off of the insert fitting. (Refer to Step 4F for recap on diffuser assembly.)



### 8. Place Airmax® Diffuser

Slide nylon rope between the manifold and diffuser plate. While traveling in reverse, slowly lower the diffuser plate using the nylon rope. (Repeat Steps 5 through 8 until all diffusers are in place.)



### 9. Connect Airline To Flex Lines

Connect airline(s) to flex line(s) from the cabinet.



# INSTALLING THE AIRMAX<sup>®</sup> AERATION SYSTEM

(Steps 10-11)

## 10. Testing

Plug in compressor and confirm “boiling action” from diffuser placements. It may take several minutes for all diffusers to produce boiling action.



## 11. Final Adjustments

Mark valves for easy valve to diffuser reference. If bubble action is not consistent adjust valve in 1/4” increments waiting 3-5 minutes between adjustments to allow for an accurate judgement of airflow.

**Pressure Gauge:** Mark initial installation pressure. This should stay fairly consistent. If your ratio influxes in pressure this may be the result of damaged airline, plugged diffusers or other damage and/or wear to the system. The pressure gauge is a great tool to troubleshooting problems. (see pg 14)

## MAINTENANCE & TROUBLESHOOTING

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Airmax® aeration systems are designed for low-maintenance and require minimal scheduled maintenance.

Cabinet air inlets and outlets should be kept free of debris and weed growth allowing normal ventilation.

\*Unplug system before performing any maintenance and/or when troubleshooting.

If size and appearance of diffuser bubbles decreases from initial installation, perform one or more of the following:

### AIR FILTER REPLACEMENT

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- Air filter cleaning or replacement: Remove air intake filter and replace. Under normal conditions, this should be done every 6 to 12 months.

### AIR STONE CLEANING / REPLACEMENT

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- Air stones must be cleaned every 1 to 2 years using muriatic acid. Place stones in muriatic acid for 5 minutes. Please Note: Do not expose plastic threaded fittings to muriatic acid. If you do, you must replace the air stone completely. Air stones must be replaced every three years.

### CHECK PRESSURE GAUGE

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- If the pressure gauge shows a reading significantly above the initial installation pressure, then it may be advised to clean the air stones.
- If the pressure gauge shows a reading below the initial installation pressure, then this may be caused by damage in the airline.

### PRESSURE RELIEF VALVE

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- If enough back pressure is created, this valve will open to suppress the pressure to protect the compressor.

## WINTER OPERATIONS

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### DROWNING DANGER

Operating in freezing conditions on an ice-covered pond will cause large open water areas to remain at the diffuser sites. Also, the ice thickness around these open areas will be much thinner than the ice over the remainder of the pond. Injury or fatality may result from people, snowmobilers, etc. falling through the ice.

Airmax® strongly recommends that this danger of thin ice around the diffuser

site be clearly posted at frequent intervals. Owner assumes all responsibility for operating Airmax® Aeration Systems during winter months



If you choose to turn off your system for the winter do the following:

- Unplug the system and if heavy snows are common, move the cabinet and compressor inside to keep dry. This is the only equipment removal you will have to do.
- When the system is turned back on in the spring, airlines may still contain ice inside. If so, use one cup of denatured alcohol to melt the ice to allow the compressor to push air through the line. Do this for each airline. The heat generated by the compressor will melt the remaining ice. The procedures on Page 3 should be followed every spring.



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