

Laguna Aeration Kit

Installation:

Note: The pump should be placed in a location, which is dry and relatively free from dust. Do not place the air pump on carpet since fibers may collect on the pump and restrict air entering the pump. This will reduce air output and the service life of the pump.

The air pump should be installed by following either of the recommended methods:

Method 1

Place the air pump on a surface lower than the water level of the pond. Important: It is recommended to always use a check valve (sold separately item #411221) in the air line between the air pump and pond. The check valve will help prevent water from siphoning out of the pond through the air hose and into the pump in the event of a power failure or when removing filters and other air-driven accessories from the pond.

Method 2

Place the air pump on a surface higher than the water level. The surface should be at least 12 inches higher than the water level of the pond, but not placed directly above the pond. The surface should have a raised edge to prevent the air pump from sliding off. Use a check valve in the air line between the air pump and the pond to prevent back-siphoning.

Once the air pump has been installed:

1. Attach one end of the air line tubing to the air outlet on the air pump.
2. Run the air line tubing through the Styrofoam float and then attach the air stone to the end of the tubing.
3. Put the air stone in the in the pond and adjust the length of the tubing so that the air stone floats at a depth of 2 feet or at half of the depth of the pond. Make sure that the tubing has no kinks or restrictions.
4. Plug the air pump into the electrical outlet or wall receptacle. Be sure to allow for a drip loop.

Caution: Care must be taken during installation to ensure that water cannot siphon out of the pond through the air hose and damage the air pump.

Air Flow Adjustment

The OPTIMA air pump incorporates a rheostat to control air output. Turning the knob clockwise increases the air flow and counterclockwise reduces the air flow. Proper use of the rheostat reduces harmful back pressure and lengthens the service life of the pump.

In order to achieve correct air flow, a balance between the valve setting and the pump output is necessary. The ideal setting is obtained by minimum backpressure or unrestricted air flow. Never physically restrict the output of the air pump. Restriction causes damage to the diaphragm. Adjust air valve output required.

Back Pressure

Back pressure is the buildup of pressure on the diaphragm due to restricted air flow. This occurs when excess air is produced by the air pump or when the air channels are inadvertently blocked. Over time, backpressure resulting from clogged air diffuser or other air system blockages and restrictions will cause the diaphragm to expand or rupture. Note: An expanded diaphragm leads to a loss of air volume while a rupture will result in the total loss of air.

Maintenance (External Appearance)

Remove dust and grime with a soft, damp cloth. Do not immerse pump in water.

. Air Stone and Air Line

The pump requires no regular internal maintenance during its service life. The rest of the air system should be periodically checked and cleaned

- Air line tubing should be carefully inspected whenever standard pond maintenance is performed. Adjust, or if required, replace all sections that are pinched, kinked, or damaged.
- All attached air-driven pond accessories should be regularly maintained. Moving parts should be kept as clean as possible - remove algae growth and other buildup.
- Air stones should be kept clean and free of debris or algae buildup. Replace every month for optimum performance.

Clogged air stones and air-driven pond accessories will lead to low air pressure and also reduce the life of the diaphragms.

Troubleshooting Tips

If the air pump fails to produce air:

- Make sure the air pump is plugged in.
- Make sure there are no blockage in the air line assembly and that all valves allow air passage. If the air stone produces no air, remove the air line from the pump and check to see if air is being produced.
- If there is no output from the air pump, inspect the diaphragm for tears or rips. A ripped or weakened diaphragm is the most common cause for loss of output. Any opening in the diaphragm will make it impossible for the pump to produce air for aeration purposes. Always inspect the diaphragm first before replacing other parts in the pump.

Removing the Pump

Whenever the air pump must be shut off and removed from the aeration system, always take off the air line before the pump is unplugged. This will prevent water from siphoning back into the pump. If the air line cannot be removed before unplugging the power cord, raise the pump above the water level.