

SAFETY INSTRUCTION

1. Ensure that the power voltage and frequency to be utilized conform to the power requirements specified on the product nameplate before use. Use a standard AC outlet.
2. This pump should be grounded while in use to protect the operator from electric shock.
3. If the pump falls into the water, don't reach for it. First unplug it and then retrieve it. Let qualified technicians check your pump.
4. Carefully examine the appliance after installation. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or similarly qualified person in order to avoid a hazard.
5. Don't carry air pump by the power supply cord. Disconnect the plug of the pump when not in use, before putting on or taking off parts or before cleaning.
6. A periodically maintenance (description seen in this manual) of the appliance is necessary.
7. During operation, if the sound is interrupted or anything abnormal occurs, immediately unplug the power cord from the outlet and contact with our dealer or an Authorized Service Center.

NOTE: Ensure that the electrical cord loops below the electrical outlet to form a "Drip Loop". This will prevent water from running down the cord into the electrical outlet.

DISPOSAL: Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary



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AQUA FORTE

AP Series Airpumps

Thank you for purchasing the AquaForte air pump.

The features of this latest "High & New" technology product is energy saving, low in noise and safe. It's used for seafood, aquarium fish air supply, it's also used for air supply spare parts of air bed, vacuum packaging, medical equipment & industry, etc. For optimum performance and safe use, please read this instruction manual carefully and keep it handy for future reference.

PRODUCT FEATURES

1. Adopts high-grade aluminium alloy to shape the case, double damping system and noise absorbing function, high performance and low in noise.
2. Double air chambers to produce large quantity of air and strong air pressure.
3. Non-oil lubricated design to provide pure compressed air.
4. Unique structure, quick in heat dissipation.
5. Rainwaterproof structure, no water leaks in.

HOW IT WORKS

When the electromagnetic coils facing each other as shown in the figures below are energized by AC power (AC 100-115V /220-240V), a magnetic force is generated. This magnetic force will then act to induce the magnetic poles between the permanent magnets fixed to the rod, and the electromagnets, causing magnetic actions of attraction and repulsion to move the rod in the respective directions. The rod vibrates at the AC power supply frequency, and air is exhausted by a change in volume of the space enclosed by the housing and the diaphragm that is caused by diaphragm movements, and by the repeated cycles of air intake and compression attained by the operation of the intake and exhaust valves.

Model	Volt-Frequency	Watt	Max. Flow	Max. Pressure	dB
AP-35	220-240V 50Hz	20	35 l/m	2,8 m	32
AP-45	220-240V 50Hz	25	45 l/m	3,0 m	33
AP-60	220-240V 50Hz	38	65 l/m	3,5 m	35
AP-80	220-240V 50Hz	55	80 l/m	3,6 m	36
AP-100	220-240V 50Hz	65	100 l/m	3,8 m	36
AP-150	220-240V 50Hz	120	190 l/m	4,5 m	45
AP-200	220-240V 50Hz	180	250 l/m	5,0 m	46

INSTALLATION

PIPE DIVIDER & AIR STONES CONNECTION

One or more air stones can be connected to the pump outlet with a pipe & an air divider. Choose an air pipe that suits your installation equipment, ensure all pipes are secured with clips when installing the air pump. Using larger bore pipe and avoiding sharp bends will improve performance of this air pump when installing.

Use new and sufficiently large air stones with enough discharge capacity. Place them no deeper than 3 m in the pond. Bends in the air pipe, air stones placed too deep, air stones are too small, old or dirty air stones, etc. will reduce its capacity. Thus while operating, never fully close off pump outlet. Ensure that the pump can discharge sufficient air all the time, otherwise the pump will heat up leading to damage. To prevent any water flowing back into the pump when powered off, it is advisable to install the pump above water level. If a non-return valve is used on the outlet pipe, the pump may go beneath the waterline. Please note that never place air pump in water. To guarantee a long service life, it is necessary to install the pump under dry conditions, no moisture or dust. Dirt and moisture can seriously shorten the service life of this pump. Please note that an ambient temperature above +40°C can cause the diaphragm to crack.

DISASSEMBLY & REASSEMBLY THE DIAPHRAGM

Steps of replacing diaphragm:

- A. Loosen off the screws (1)
- B. Take off the air chamber cover (2)
- C. Loosen off the nut (11)
- D. Take off separately the diaphragm depressor (3), Electrostatic membrane (4) & diaphragm (5)
- E. Replace with a new diaphragm. Please note that when fixing, make sure the diaphragms fits exactly to the slot of the air chamber (2)
- F. Install all the parts back by counter steps.

FILTER SPONGE CLEANING & REPLACEMENT

Any dust or foreign matter attached on the pump air inlet may cause abnormal noises or result in a failure of the pump. The following are filter sponge cleaning & replacement instructions :

- (1) Make sure to unplug the pump first before cleaning & replacement work.
- (2) Remove the filter sponge from the air inlet. At this time, remove any dust or foreign matter from the air inlet, the filter cover and the filter sponge mounting surface. If the sponge is heavily soiled, a piece of new sponge is needed or you can use a neutral detergent to wash the old sponge down, remember to rinse it well with water completely and dry it in the sun before reinstalling, detergent is bad for your fish.

