

**WARNING - To guard against injury, basic safety precautions should be observed, including the following**

**a) READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**

**b) DANGER - To avoid possible electric shock, special care should be taken since water is employed in the use of aquarium equipment. For each of the following situations, do not attempt repairs by yourself; return the appliance to an authorized service facility for service or discard the appliance:**

- 1) If the appliance shows any sign of abnormal water leakage, immediately unplug it from the power source.
- 2) Carefully examine the appliance after installation. It should not be plugged in if there is water on parts not intended to be wet.
- 3) Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or has been dropped or damaged in any manner.
- 4) To avoid the possibility of the appliance plug or receptacle getting wet, position aquarium stand and tank to one side of a wall-mounted receptacle to prevent water from dripping onto the receptacle or plug. A "drip loop," shown in the figure below, should be arranged by the user for each cord connecting an aquarium appliance to a receptacle. The "drip loop" is that part of the cord below the level of the receptacle, or the connector if an extension cord is used, to prevent water traveling along the cord and coming in contact with the receptacle. If the plug or receptacle does get wet, **DON'T** unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then, unplug and examine for presence of water in the receptacle.
- c) Close supervision is necessary when any appliance is used by or near children.
- d) To avoid injury, do not contact moving parts or hot parts such as heaters, reflectors, lamp bulbs, and the like.
- e) Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never yank cord to pull plug from outlet. Grasp the plug and pull to disconnect.
- f) Do not use an appliance for other than intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.
- g) Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing.
- h) Make sure an appliance mounted on a tank is securely installed before operating it.
- i) Read and observe all the important notices on the appliance.
- j) If an extension cord is necessary, a cord with a proper rating should be used. A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.

**k) SAVE THESE INSTRUCTIONS**

**ASSEMBLY**

Insert the bracket (H) firmly into the slot of the swivel support/cam adapter (G) as illustrated in fig. 6. Mount the suction cups (D) in the four smaller holes on the bracket as illustrated in fig. 7.

**When used as a circulating pump,** it is necessary to mount the pre-filter sponge (I) and the strainer (J) (with plug inserted at the bottom of strainer) onto the swivel support/cam adapter (G). Failure to do so may result in clogging of the rotator mechanism. See Fig. 3.

**INSTALLATION**

Use as power head on an undergravel filter as illustrated in fig. 2. The swivel support/cam adapter (G) supplied with the unit enables precise and firm mounting on the exhaust tube of the undergravel filter. Carefully clean the glass surface at the site intended for use. Mount the suction cups (D) supplied to the swivel support/cam adapter (G). Insert the cam adapter into the exhaust tube and firmly press the suction cups against the wall. Rotate the cam until the exhaust tube returns to vertical position.

For best water circulation, the pump can be rotated on its swivel support/cam adapter (G). The flow can be oriented further by means of the supplied flow diverter (E).

To oxygenate the water, connect the air intake tube with its silencer/filter (B) to the Venturi system (A). Place the air tube so that the muffler remains above water level but always within the surface of the aquarium (fig. 2). The Venturi system will work for a submersed depth of the pump not exceeding the length of the air tubing supplied (fig. 2).

**ADJUSTING THE FLOW**

The flow of the pump can be adjusted by turning the flow control knob (F) toward + or - as required. Decreasing the flow of the pump will decrease the rotation speed of the diffuser and the quantity of air.

**MAINTENANCE**

Regular cleaning of the pump, the rotor, the pump chamber and the rotating system with its components, is strongly recommended to remove any debris and lime-scale which could block the unit.

The motor is fully encapsulated and self protected against overheating and needs no particular care. If the pump fails to work, check first the electrical supply, connections, circuit breaker etc. If these are correct, the pump needs to be cleaned.

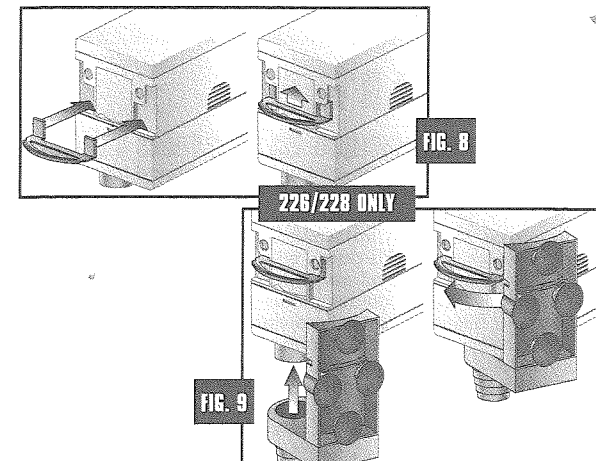
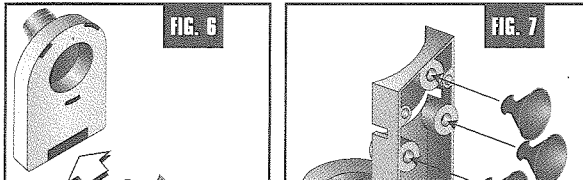
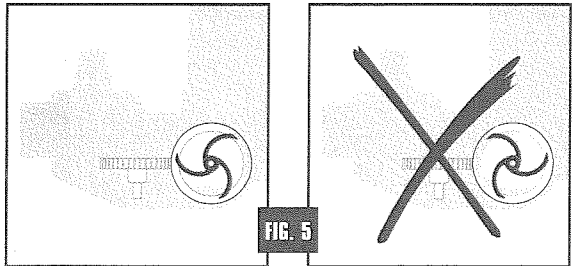
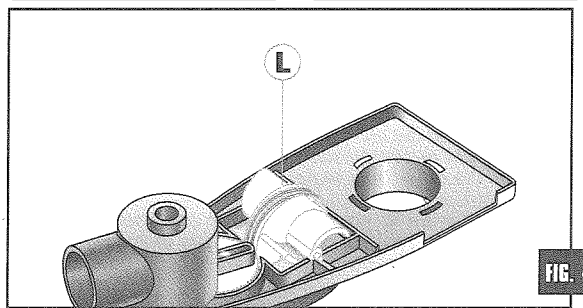
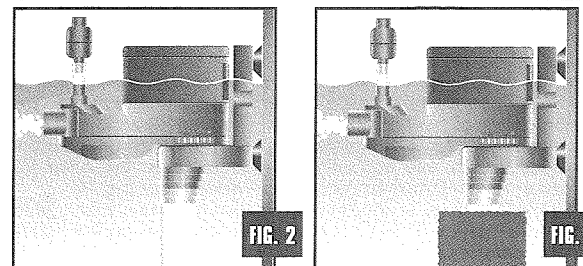
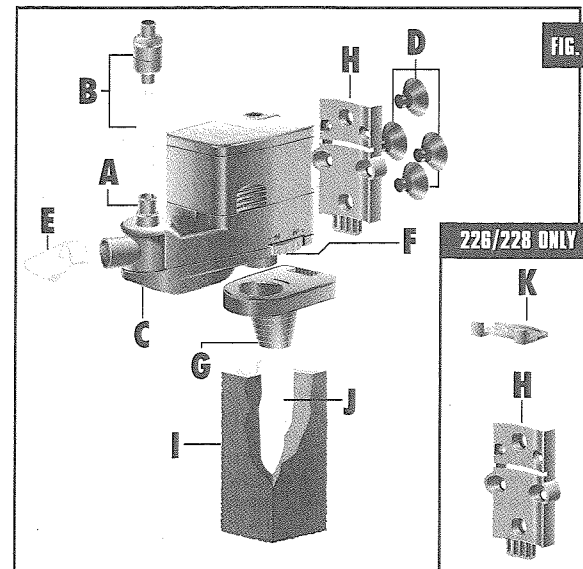
**CLEANING**

Prior to any work, disconnect all immersed electrical equipment from the power supply. Take off the pump from the swivel support/cam adapter (G). Separate the motor from the rotating system (C) and remove the rotor from its location. Open the rotating system (fig. 4) and disassemble its components. Carefully wash all parts under lukewarm water with a non-metallic brush. Do not use cleansing detergents. If necessary remove lime-scale by leaving the components immersed in vinegar or lemon juice for few hours. Carefully reassemble the components and re-install the pump on the cam adapter (fig. 4).

**ATTENTION:** for proper functioning of the system, the rotating turbine (L) **MUST** be re-assembled so that its blades are positioned as per fig. 5.

**WARRANTY**

*This unit has been manufactured according to UL 1018 safety standards, and with the highest quality materials and accuracy. This product is guaranteed against manufactured defect for 12 months from date of purchase. In the unlikely event of a fault, the unit should be returned to ZOO MED within one year of purchase, together with the sales receipt. It is important that the unit should not have been tampered with. Please note, the guarantee is not valid if the defects are caused by tampering, negligence, misuse or not observing the safety warnings. No responsibility is assumed for indirect damage that may result from the use of this appliance.*



**SPARE PARTS  
RECHANGES  
ERSATZTEILE  
RICAMBI  
RECAMBIOS**

	212 Model# PS-10	214 Model# PS-20	226 Model# PS-30	228 Model# PS-40
60 Hz Impeller/Magnet Assembly	PPS-02	PPS-04	PPS-11	PPS-12
Kit 4 pcs Suction Cups (4)	PPS-05	PPS-05	PPS-05	PPS-05
Kit 2 pcs Impeller Bearing (2)	PPS-06	PPS-06	PPS-06	PPS-06
Internal Rotating Gears	PPS-08	PPS-08	PPS-08	PPS-08
Flow Diverter	PPS-09	PPS-09	PPS-10	PPS-10
Rotor	PPS-07	PPS-07	PPS-13	PPS-13

**Customer Service Information:**  
If parts are unavailable from the store where this product was purchased, call Toll Free 888-496-6633, Mon.-Fri. from 8AM-5PM (Pacific Standard Time).

**NORMAS DE SEGURIDAD**

- Verificar que la tensión eléctrica se corresponda a la de la etiqueta.
- Instalar siempre un interruptor diferencial (Salvavidas) con corriente de intervención = 0.03 A.
- Antes de sumergir las manos en el agua, desenchufar todos los aparatos eléctricos.
- El cable de esta bomba no se puede reparar o sustituir; en el