

Operation manual
for the



Niveaumat



The Niveaumat is a complete refill unit. for. It is designed to replace the evaporated water into the aquarium directly from a storage vessel. It has been specifically developed for aquarium use, has been designed and manufactured to the highest standards and has been extensively tested.

1. Features

In every aquarium water evaporates and has to be refilled regularly. Especially in salt water aquariums, it is important to automate the refilling to avoid oscillations of the salt concentration.

The Niveumat is a peristaltic pump with a connected level sensor. Liquid is transported by repeatedly kneading the pump hose. It can be used wherever small amounts of liquid have to be pumped.

The dosing pump is supplied with a long lasting synchronous motor and the pump hose is made of Santoprene®, a specially developed material resistant to many chemicals and with a very long life – typically in excess of 3 million compressions.

The synchronous motor operates with a fixed speed and cannot be regulated.

IMPORTANT NOTE:

- The pump must be operated on the correct voltage (see type label)

2. Delivery

The Niveumat comprises the following parts (fig 1)

- peristaltic pump (2), with level sensor (4)
- Holding plate for level sensor(4)
- power supply for pump (12V~, 10 watts)(7)
- 2.5 m transparent pvc hose (airline hose, 6/4 mm, ¼")
- suction fitting (5) with non return valve (6)
- water inlet piece with drip counter and holding plate (8)
- spare hose for the pump

3. Technical Data

Model	Dosing pump SP 3000
Power supply	230 V / 50 Hz
Safety voltage of the pump	12 V ~
Power consumption	4.5 watts
Maximum flow	3 litres/hour - 50 ml/min – 0.8 gph
Connections	6/4 mm hose (¼")
Motor	synchronous
Speed	20 rpm
Motor life	>10,000hrs
Pump hose life	>3 Million turns
Continuous running possible	Yes

4. Installation

- The pump may only be operated in the dry, it is not designed for submersed use. It should be securely mounted using the keyhole slots provided in a dry place.
- The pump is self priming and should be mounted above the water level of the liquid storage tank (see fig 1).
- The outlet should always be positioned above the aquarium or sump. If the pump stops with the drive axle in the horizontal position then the pump will not act as a non return valve. The air gap between the outlet hose and water prevents aquarium water being syphoned back into the liquid storage tank (see fig 1).
- The non return valve (6) must be placed in the inlet fitting (5) of the pump. This prevents the pressure tube emptying and ensures that the same volume is dosed during each operating cycle (see fig 1).

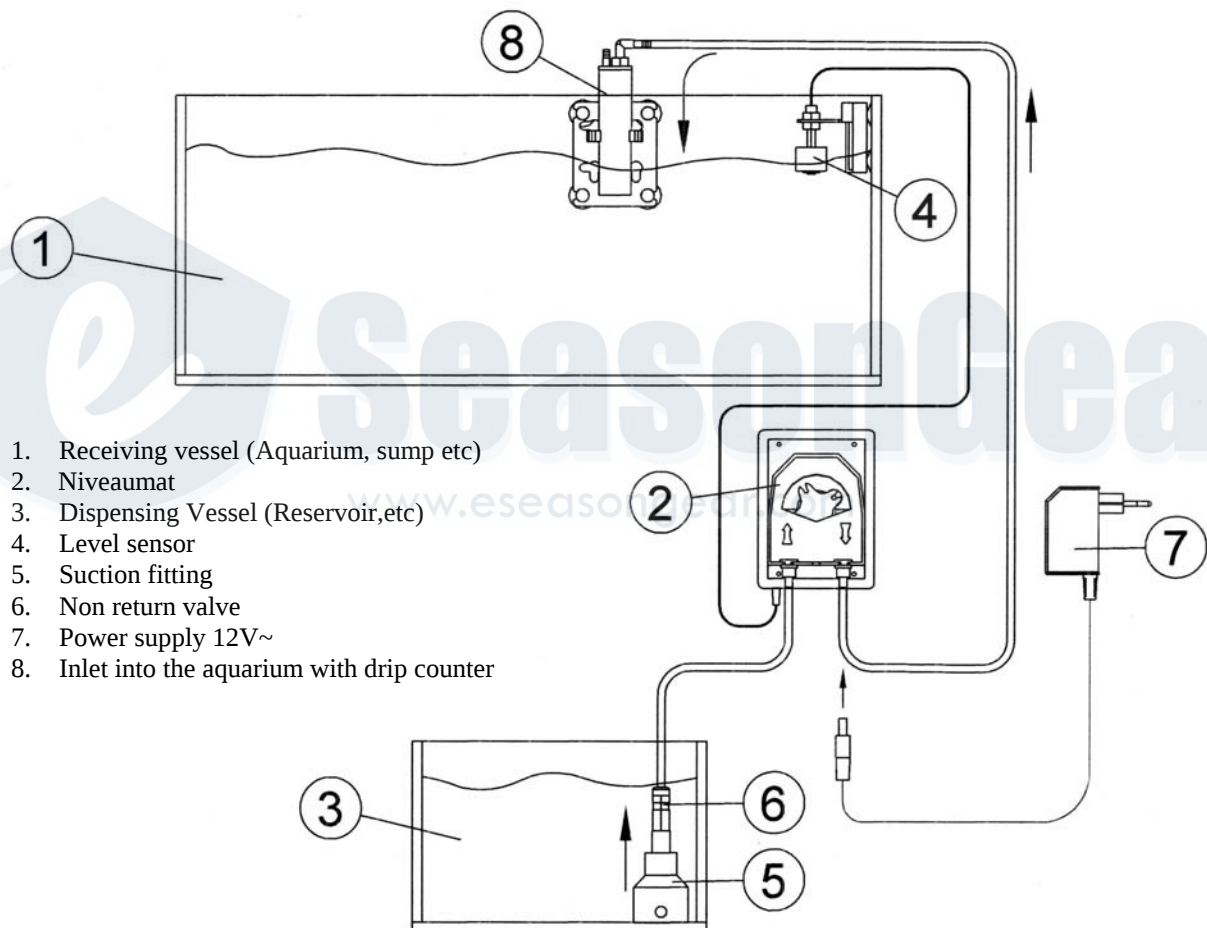


fig 1: Installation method for dosing from a dispensing vessel,

4. Connection to the aquarium

- level probe .
At aquariums with an internal filter or a closed filter system (canister filter), the level sensor is placed directly in the aquarium. The swimmer has to be placed exactly at the height of the desired water level. To fix the probe, it is mounted on the holding plate and fixed with rubber suckers at the aquarium glass. Take care to fix it safely. To be sure, we recommend to glue each rubber sucker with a drip of aquarium silicone on the glass plate. At aquariums with open filter systems under the tank (e.g Aqua Medic Reef 500), the level probe is fixed in the filter tank in the height of the desired water level. (fig 2)
- suction fitting
The suction side of the pump (left connection) is connected to the suction hose (4/5 mm) and to the storage vessel and connected to the suction fitting(5). Glass or plastic tanks and canisters with the right volume can be used as storage vessel. The suction fitting is placed at the bottom of the storage vessel. The non return valve will prevent water flowing back down the pressure hose. In any case the outlet should always be positioned above the surface level of the receiving vessel. This prevents the storage tank syphoning out should the pump stop with the drive axle in the horizontal position.
- pressure fitting
The pressure side of the pump is connected with a 6/4 aquarium hose to the drip counter. The drip counter is fixed at the aquarium or filter tank in a way, that the water can freely drop in.
- The pump should be mounted above the aquarium or sump to prevent any problems that may arise should the pump hose leak. The outlet should always be positioned above the surface level of the aquarium
- Combination with Kalkwasserstirre KS 1000
The Niveamat can be perfectly combined with the Aqua Medic Kalkwasserstirrers (e.g. KS 1000) The refill water is sucked from the storage vessel and pressed through the Kalkwasserstirrer into the aquarium or the filter tank.

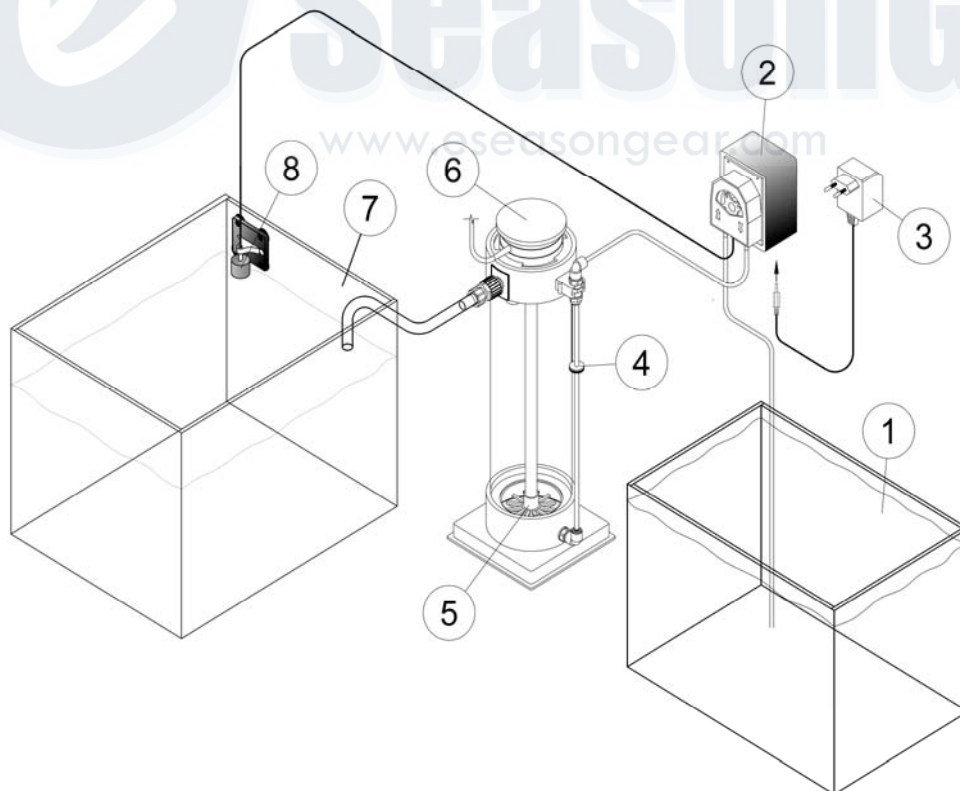


fig. 2

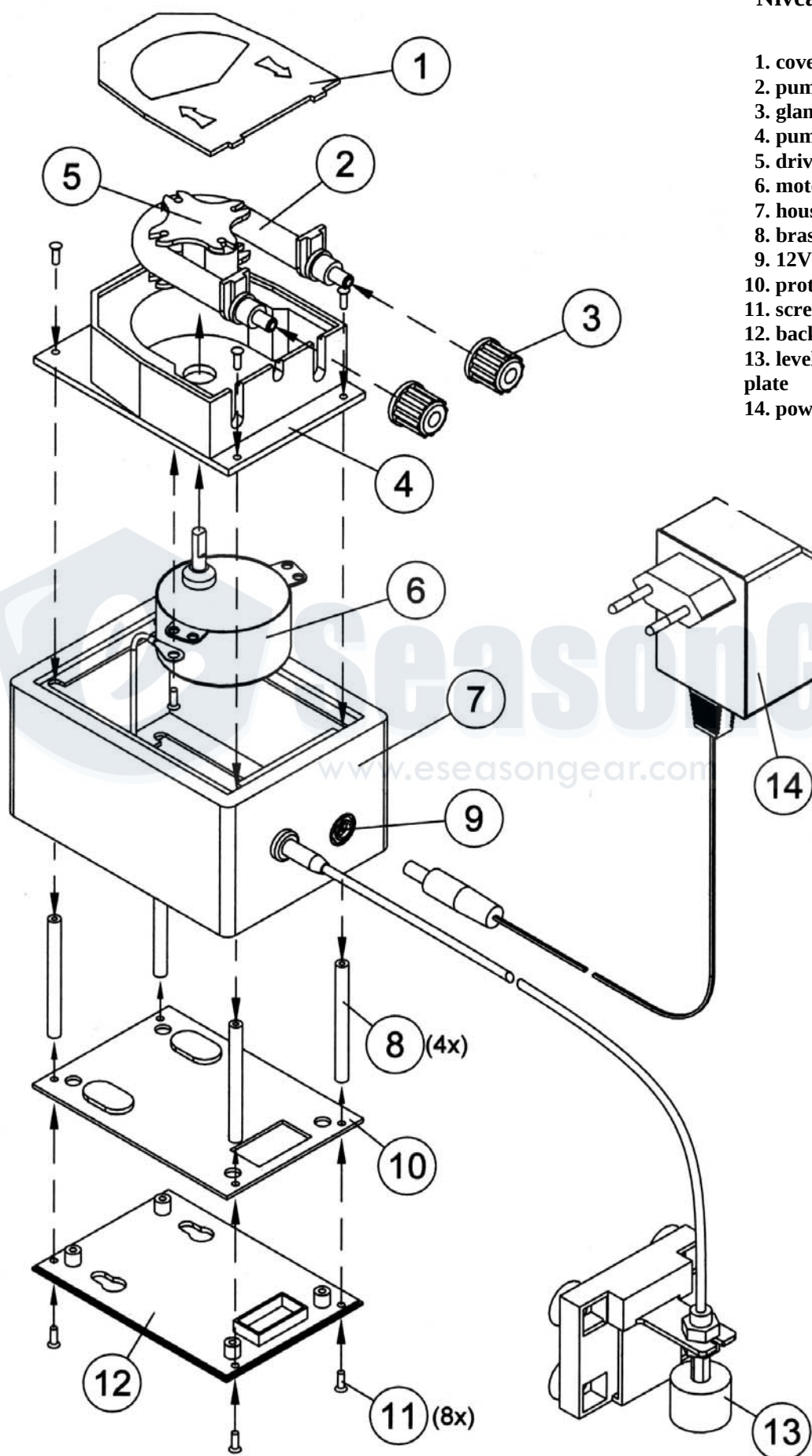
Combination of the Niveamat with the Kalkwasserstirrer KS 1000

- | | | |
|-----------------------------|----------------------|----------------------------|
| 1. reservoir for freshwater | 4. non return valve | 7. aquarium or filter sump |
| 2. Niveamat | 5. Kalkwasserstirrer | 8. level sensor |
| 3. Power supply | 6. Motor | |

6. Parts List

Niveaumatt

1. cover
2. pump hose with fittings
3. gland nut
4. pump housing
5. drive wheel with rollers
6. motor
7. housing
8. brass pillar (4)
9. 12V~ connection socket
10. protection plate
11. screw (8)
12. back plate
13. level sensor with holding plate
14. power supply (12V~)



7. Maintenance

The pump hose and the motor are consumable and have to be maintained and changed regularly.

Pump hose: The pump hose has a lifetime of approx. 3 million compressions and after this useage must be replaced. If the pump is operated continuously the hose should be changed every 3 – 4 months. We recommend using only an original Aqua Medic spare pump hose assembly which is supplied complete with fittings.

Grease: Before the hose is installed it has to be greased. The pump will only operate properly if the hose is effectively greased.

Heat: During continous operation the motor may heat up as high as 70°C. This is normal and has no effect on performance or the life. However too little grease on the pump hose may cause malfunction of the motor and overheating.

Drive wheel with rollers: The plastic driving wheel and the rollers are designed for a long life. Nevertheless it may become necessary to change the assembly which should be undertaken using the following procedure:

Remove the pump hose by pushing the fittings out of the housing. The drive wheel can now be pulled off the shaft as it is a pressed fitting.

Motor: The motor has a lifetime of >10,000 hours. To replace the motor remove the drive wheel assembly. Undo the 4 screws in the backplate. Now remove the backplate and protection plate. Undo the power cable connection from the connector block and remove the 2 screws securing the motor to the housing.

To fit the new motor reverse the above process.

Non return valve: The non return valve in the suction fitting has to be controlled and cleaned from time to time, and to be changed if necessary

Safety instructions

The pump may only be used indoors. Before undertaking any work on the pump, disconnect the power plug from the mains.

8. Warranty

Should any defect in material or workmanship be found within twenty four months of the date of purchase **AQUA MEDIC** undertakes to repair or, at our option, replace the defective part free of charge – always provided the product has been installed correctly, is used for the purpose that was intended by us, is used in accordance with the operating instructions and is returned to us carriage paid. The warranty term is not applicable on the all consumable products.

Proof of Purchase is required by presentation of an original invoice or receipt indicating the dealer's name, the model number and date of purchase, or a Guarantee Card if appropriate. This warranty may not apply if any model or production number has been altered, deleted or removed, unauthorised persons or organisations have executed repairs, modifications or alterations, or damage is caused by accident, misuse or neglect.

We regret we are unable to accept any liability for any consequential loss.

Please note that the product is not defective under the terms of this Warranty where the product, or any of its component parts, was not originally designed and / or manufactured for the market in which it is used.

These statements do not affect your statutory rights as a customer.

If your **AQUA MEDIC** product does not appear to be working correctly or appears to be defective please contact your dealer in the first instance.

Before calling your dealer please ensure you have read and understood the operating instructions. If you have any questions your dealer cannot answer please contact us

Our policy is one of continual technical improvement and we reserve the right to modify and adjust the specification of our products without prior notification **AQUA MEDIC** - Bissendorf 05/05