



AquaCare[®]

Aquatic Systems Research

**Systeme für Aquakultur, Meerwasseraquarien,
Labore und zur Wasseraufbereitung**

**Systems for aqua culture, sea water aquaria,
labs, and water desalination and purification**

**Systèmes pour aquacultur, aquariums eau de
mer, laboratoires et traitements d'eau**

AquaCare – Aquatic Systems Research e.K.

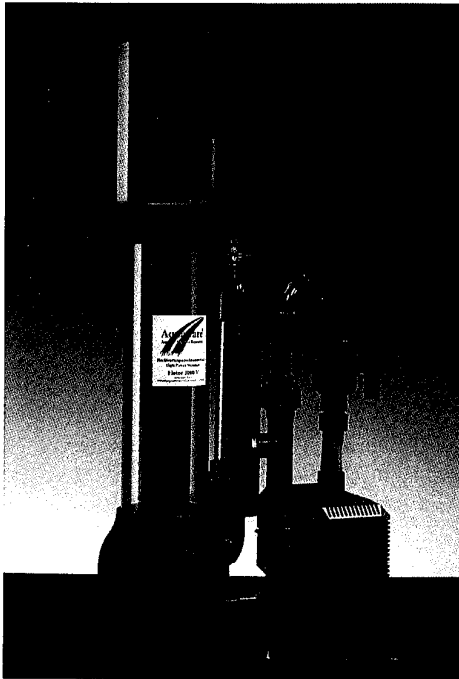
Josefstraße 35–37 · D-45699 Herten · Germany / Allemagne

☎: +49 / 23 66 / 3 25 52

Fax: +49 / 23 66 / 10 43 85

Email: info@aquacare.de

www.aquacare.de



AquaCareFlotor – Abschäumtechnik

Der AquaCare-Flotor ACF basiert auf dem vom Forschungszentrum Jülich GmbH entwickelten und patentierten Aquaflotor®. Dreiwegetechnik ermöglicht maximale Aufenthaltszeit der Luftblasen – dadurch beste Abschäumrate – Adsorption auch der schlecht adsorbierbare Stoffe – niedrige Betriebskosten – geringe und einfach auszuführende Wartungsarbeiten – Modelle mit Ausströmerstein und Injektor – Größen für Kleinaquarien und Großanlagen



AquaCareFlotor – Protein Skimmer

The AquaCareFlotor ACF is basing on the Aquaflotor®, a developed and patented protein skimmer of Research Center Jülich, Germany: 3 tube reaction chamber for maximal contact time between gas bubbles and water – therefore maximum skimmer rate – additional adsorption of substances with low adsorption capacity – maintenance is easy and fast to do – models with air stone and injector – dimensions from small tanks up to very large aquaria

AquaCareFlotor – Technologie d'écumage

AquaCareFlotor ACF est basé sur le principe breveté Aquaflotor® développé par le Centre de recherche de Jülich: technique à triple compartiment de circulation et chambre de rotation pour un contact air/eau optimal – meilleur rendement d'écumage – adsorption de substances difficiles à

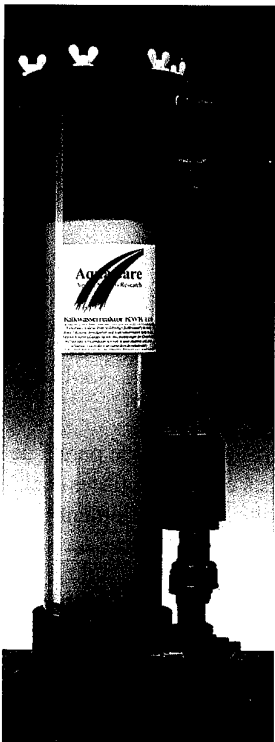
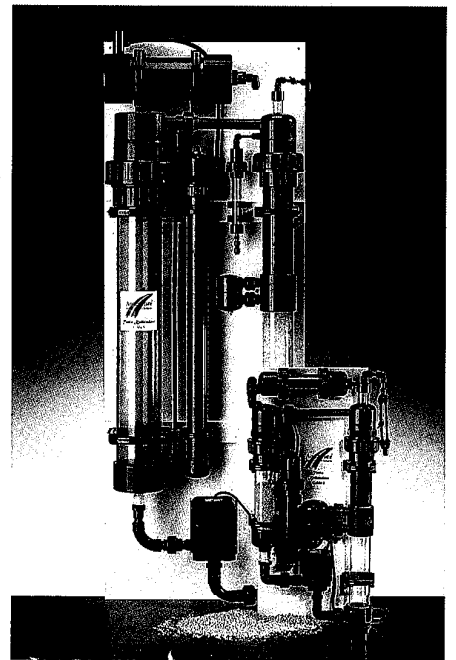
écumer – faibles coûts d'exploitation – surveillance et entretien minimes – modèles à diffuseur ou injecteur – pour petits aquariums (100 litres) ou grosses installations.

Turbo-Kalkreaktor

Patentiertes Verfahren – Calciumcarbonat-Lösung im Schwebebettverfahren – automatische Kohlendioxidzufuhr (ohne pH-Regelung!) – Neutralisationsstufe erhöht den pH-Wert über 7,0–7,3 – erniedrigt den Kohlendioxideintrag um 78–82 % – optische Kontrolle von Zulauf, CO₂-Dosierung und Löseprozess – entfernt Phosphat mittels Chemosorption

Turbo Chalk Reactor

Dissolving of suspended calcium carbonate – automatically CO₂ supply without pH controlling – neutralising reactor to rise the pH to 7,3 – about 80 % less free CO₂ in the outlet – visual controlling of water inlet, CO₂ supply and the dissolving process – eliminates phosphate with chemo-sorption – patented



Turbo-Kalkreaktor

Dissolution de carbonate de calcium par dispositif original de diffusion CO₂ et sans besoin de régulation pH – l'équilibre interne très précis permet une réduction – de consommation CO₂ de 78 à 82 % – contrôle optique du fonctionnement, dosage CO₂ et dissolution calcium – élimine les phosphates par Chemosorption – système breveté

Kalkwasserreaktor KWR

Intensive Durchmischung mittels eingebauter robuster Kreislaufpumpe – kontinuierlicher oder schubweiser Betrieb – einfache Entlüftung – ideal in Kombination mit automatischer Nachfülleinrichtung BasiTech – entfernt Phosphat aus dem Aquariumwasser

„Kalkwasser“ Reactor KWR

Intensive mixing with built in circulation pump – continuous or discontinuous operation – simple deaeration – good combination with AquaCare BasiTech level control – reduces phosphate out of the aquarium water

Réacteur de Calcium KWR

avec pompe externe, pour mélange en continu ou programmé – il est très facile de enlever l'air restant – idéal à faire fonctionner avec un osmolaire – il enlève le phosphat de l'eau

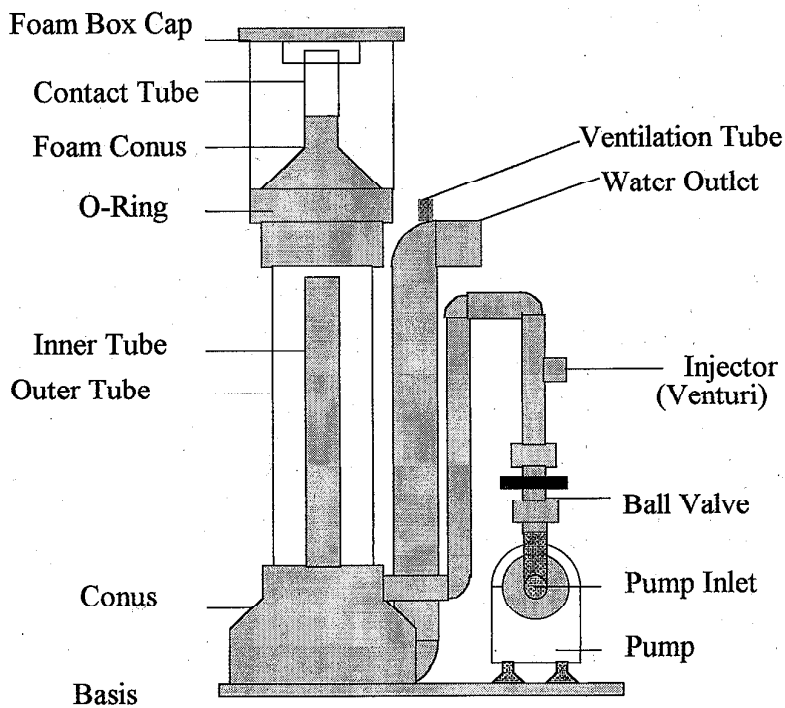
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Instruction Manual for Power Protein Skimmer
AquaCareFlotor, type V



Flotor Model V

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1. Equipment

The AquaCareFlotor Power Protein Skimmer is complete delivered with two tubes (inner tube and outer tube), one foam bin with cap, venturi (injector), and pump. The skimmer can be used as an external skimmer or an skimmer within a filter tank.

Please confirm, if the AquaCareFlotor is completely delivered.

2. Field of application

The AquaCareFlotor is developed at the Research Centre, Jülich, Germany and is patented in many countries. It removes proteins, other organic matter and even particles of all solutions with high salinity especially in sea water.

The AquaCareFlotor has some advantages:

- rigid basis
- very high contact time between water and air; therefore high enrichment with oxygen and ozone; strong formation of the carbon dioxide / hydrogen carbonate / carbonate buffer; more even pH-value; smaller than already available skimmers; low running costs.

- sensitive to protein concentration (BSA) of as low as 3 µg/l (operation with ozone).
- lowers the number of free-swimming bacteria to about 20% (operation with ozone)
- reduces ozone consumption of about 75% compared to other skimmers; therefore reliable and cheap operation
- with ozonization, the protein skimming effect is raised by 30%
- low production of ammonia / ammonium, nitrite and nitrate

3. Mounting the unit

The AquaCareFlotor is ready to use in a filter tank. The pump must be submerged to get water automatically.

If you use the Flotor as an external skimmer you have to look that the inlet and outlet is made in PVC. For testing

the system you can use teflon tape to fix the PVC tubes. Do not use very long tubes. Otherwise the pump cannot give enough water flow. If it is not possible to use a short tubing, please take PVC tubes with a bigger diameter!

4. Putting into operation

1. Start the pump of the Flotor. If the water is running out of the Flotor (outlet), then
2. open the air valve of the injector.
3. The air bubbles have to fill the whole outer tube of the Flotor. If they do not reach the bottom, open the ball valve (or raise the water level in the filter tank).
4. If the air bubbles are very turbulent, close the ball valve or reduce the water level.
5. Regulated the air input, that the skimmer produce a stable foam. More air - the foam gets wet. Less air - the

foam become stable. If you change the air input, wait for minimum 5 minutes to see the result.

6. Only large skimmer with ball valve in the outlet tube: you can regulate the water level inside of the skimmer with the ball valve mounted in the outlet water tube. If you close the valve carefully the water level will raise. If you open it the level will fall.

The water level should be as constant as possible to guarantee best skimming effect.

5. Maintenance

5.1. Daily maintenance: controlling the foam bin and air supply

The *AquaCareFlotor* should be maintained daily to get best results. The foam bin must be cleaned and the air flow and skimmer effect has to be controlled. In the bin should only be dark foam / floatate - the *AquaCareFlotor* works correct. Is only white foam / floatate in the bin, reduce the air input. The bin should be cleaned daily. Therefore shut the air in let and unscrew the bin.

If the air bubble are not o.k., you can dis-assemble the injector. Clean it with a weak acid (e.g. vinegar).

5.2. Monthly maintenance: cleaning the *AquaCareFlotor*

The tube of the Flotor must be very clean. Dirty, biofilmed tubes reduces the effectivity of the skimming.

For cleaning, unscrew the foam box. The inner tube can be pushed out of the outer tube. Only use soft foams and fresh water for cleaning. If there are many chalk worms you can use weak acids to remove them.

If all parts are cleaned assemble the Flotor in the opposite way.

6. Some tips

Cleaning the air:

The *AquaCareFlotor* realises a very long contact time. Therefore substances in the air may come into the water. If there are strong smokers in the same room or are there chemicals in the air (colour, fuel, etc.) an activated carbon filter should be installed before the injector.

Trace elements:

If trace elements are skimmed with a skimmer is not observed with the *AquaCareFlotor*. The best way to have no problems with low trace elements in the aquarium, please use a good trace elements solution (e.g. AquaCare Trace Elements Solution V4)

7. Warranty

You have 6 months warranty on all AquaCare units excepts spare parts like air stones. You have no warranty if

parts are broken by violent. If you send a warranty unit to AquaCare please send the dated receipt, too.

8. Technical data

1000 V 60 ↓

Technical data for AquaCareFlotor - external skimmer				
AquaCareFlotor Model	1,000 V	2,000 V	3,000 V-060	3,000 V-170
order number	0961-010	0961-020	0961-029	0961-030
max. aquarium volume, liters	1,000	2,000	3,000	3,000
max. height, m	61	60	60	max. 170
height outlet, m	35	30	32	max. 125
outer diameter, mm	90	110	110	140
footprint size, mm	170×330	370 × 300	370 × 300	370 × 300
volume foam box, liters	0.8	1.6	2.3	5
air input, l/h	220	400	700	700
water input, l/h	660	1,300	2,000	2000
ozone input (reef tank), mg/h	20	40	60	60
materials	PVC, NBR rubber			
mass with pump, kg	4	11	13	20
recommended pump: type	Eheim 1060	2×Eheim 1060	DB6000	MD-55R-5
voltage; consumption (50 Hz)	50 Watt	50 Watt		70 Watt
volume, l/h / height, m	2.3 / 3.1	2.3 / 3.1		4.2 / 8.2
inlet / outlet (PVC fittings)	¾" / d32	¾" / d40	d32 / d40	d32 / d50
Special sizes and -options are possible. Other voltage or frequency on request. Technical data may change to optimize the function.				