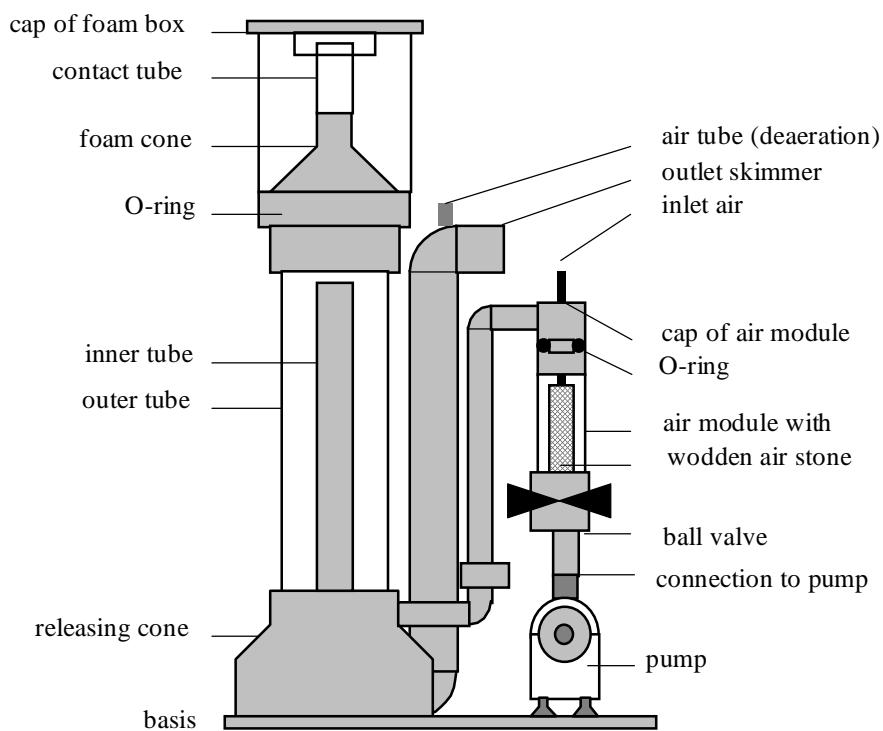


Systems for Aqua Culture,
Aquarists, Laboratories and
for Water Treatment



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Instruction Manual for Power Protein Skimmer
AquaCareFlotor, type A



Flotor Type A

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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, air stone, and pump. The skimmer can be used as and external

skimmer or an skimmer within a filter tank (type 300A up to 2000A-130).

Please confirm, if the AquaCareFlotor is completely delivered.

2. Field of application

The AquaCareFlotor is developed at the Research Center, Jülich, Germany and is patented in many countries. It removes proteins, other organic matter and even particle 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.

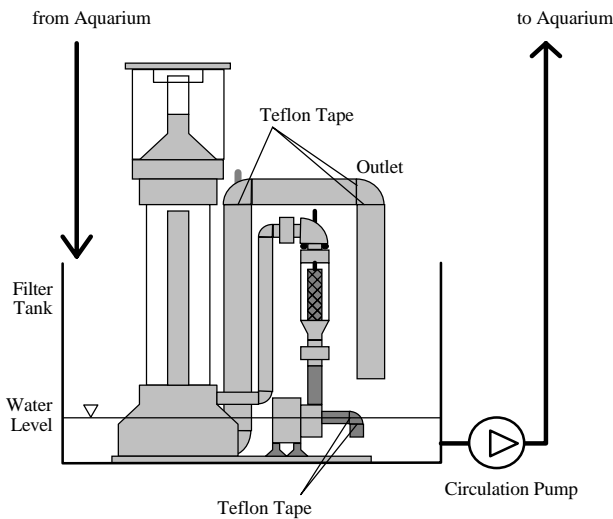
- sensitive to protein concentration (BSA) of as low as 3 µg/l (operation with ozone).
- lowers the number of free-swimming bacteria to about 20% (operation with ozone)
- reduces ozone consumption of about 75% compared to other skimmers; therefore reliable and cheap operation
- with ozonization, the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

3. Mounting the unit

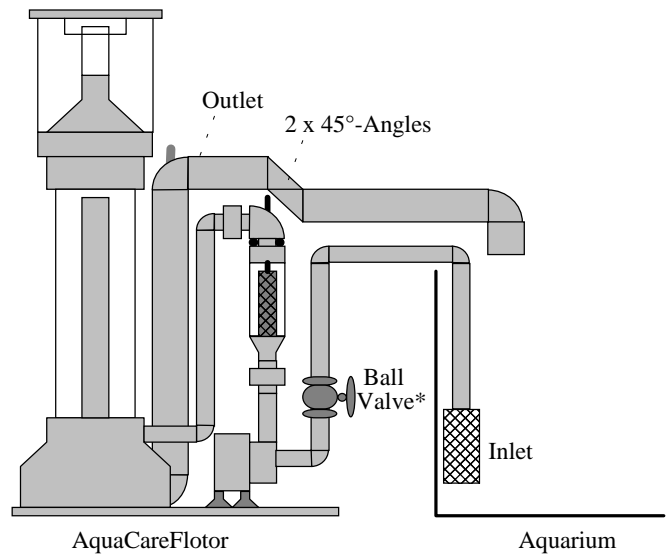
The *AquaCareFlotor* is ready to use in a filter tank (1.). The pump must be submersed to get water automatically.

Connect the air supply with the air inlet of the Flotor.

If you use the Flotor as an external skimmer (2.) 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. It is not possible to use a short tubing, please take PVC tubes with a bigger diameter!



1. Operation in a filter tank.



* close or reduce it only for maintenance
2. Operation as external skimmer

4. Putting into operation

1. Start the pump of the Flotor. If the water is running out of the Flotor (outlet), then
2. start the air pump.
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) or take a more powerful pump.
4. If the air bubbles are very turbulent, close the ball valve, reduce the water level.

5. Regulate 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. If foam is too thick, take a more powerful air pump.

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. 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 / flotata - the *AquaCareFlotor* works correct. Is only white foam / flotata in the bin, reduce the air input. The bin should be cleaned daily. Therefore shut the air in let and unscrew the foam cup.

The air bubbles must be controlled every day. If the bubble are to big (> 1mm) exchange the wooden air stone. To change the stone, shut off the water and air input; unscrew the cap of the air module. Change the air stone, assemble the parts in the opposite direction and start the system again.

5.2. annual maintenance: cleaning the AquaCareFlotor

The tube of the Flotor must be very clean. Dirty, bio filmed tubes reduces the affectivity of the skimming effect.

For cleaning, unscrew the foam cup. The inner tube can pushed out of the outer tube (type 2000 unscrew the three plastic screws at the top of the inner 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* realizes 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 (color, fuel, etc.) an activated carbon filter should be installed in the incoming air tube.

Trace elements:

If trace elements are skimmed with a skimmer is not observed with the *AquaCareFlotor*. The best way to have

no problems with to low trace elements in the aquarium, please use a good trace elements solution (e.g. AquaCare Trace Elements Solution V3)

Food:

Some food contains high amounts of vitamin E. This substance can kill the foam for several hours. Some other food contains highly foaming substances. If you feed these products reduce the air input to the skimmer drastically.

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

Technical data for AquaCareFlotor - external skimmer/filter system				
<i>AquaCareFlotor</i> model	300 A	700 A	1.000 A	2000 A
order number	0960-003	0960-007	0960-011	0960-020
max. aquarium volume, liters	300	700	1000	2000
max. height, mm	54	52	60	60
height needed, mm	57	54	63	63
height outlet, mm	28	27	34	34
minimum water level, cm	10	10	10	10
outer diameter, mm	63	75	90	110
footprint size, cm	140×200	150×240	170×330	170×330
volume foam box, liters	0.55	0.7	0.8	1.6
air input l/h at	80	170	220	400
air pressure in mbar	100	100	150	150
water input, l/h	240	500	660	1300
ozone input (reef tank), mg/l	20	50	50	100
materials	PVC, NBR			
number and size of air stones	1×No. 2	1×No. 2	1×No. 3	1×No. 3
mass with pump, kg	1.8	2.1	3.7	4.1
Suitable pump	Eheim 1046 UP300	Eheim 1048 UP1000	Eheim 1250 UP2000	Eheim 1060 UP3000
Inlet: Eheim connector or inner thread	12/16 3/8"	12/16 3/8"	12/16 ½"	16/22 ½"
or PVC tube in mm	16, 20	16, 20	20	20
Outlet: PVC tube in mm	25	32	32	40

Technical data for AquaCareFlotor - external skimmer				
<i>AquaCareFlotor</i> Model	2,000A-140	2,000A-170	3,000A-190	11.000 A
order number	0960-022	0960-021	0960-030	0960-100
max. aquarium volume, liters	2,000	2,000	3,000	11,000
max. height, m	1.4	1.7	1.9	2.0 to 2.5
height outlet, m	0.9	1.2	1.5	1.3-1.5
outer diameter, mm	110	110	140	250
footprint size, mm	170×330	370×330	370×330	600×400
volume foam box, liters	1.3	1.3	1.3	10-15
volume sump, liters	-	-	-	7
air input l/h at	400	400	650	2.300
air pressure in mbar	230	230	300	350
water input, l/h	1.300	1.300	2.000	7.000
ozone input (reef tank), mg/l	100	100	150	600
materials	PVC, NBR-rubber			
number and size of air stones	1×Gr. 3	2×Gr. 3	2×Gr. 3	12×Gr. 3
mass with pump, kg	7	12	18	60
Suitable pump	Eheim 1060	Iwaki MD-30R	Iwaki MD-40RX	Iwaki MD100R
Inlet: PVC tube in mm	3/4" or 20	32	32	40
Outlet: PVC tube in mm	40	40	50	90