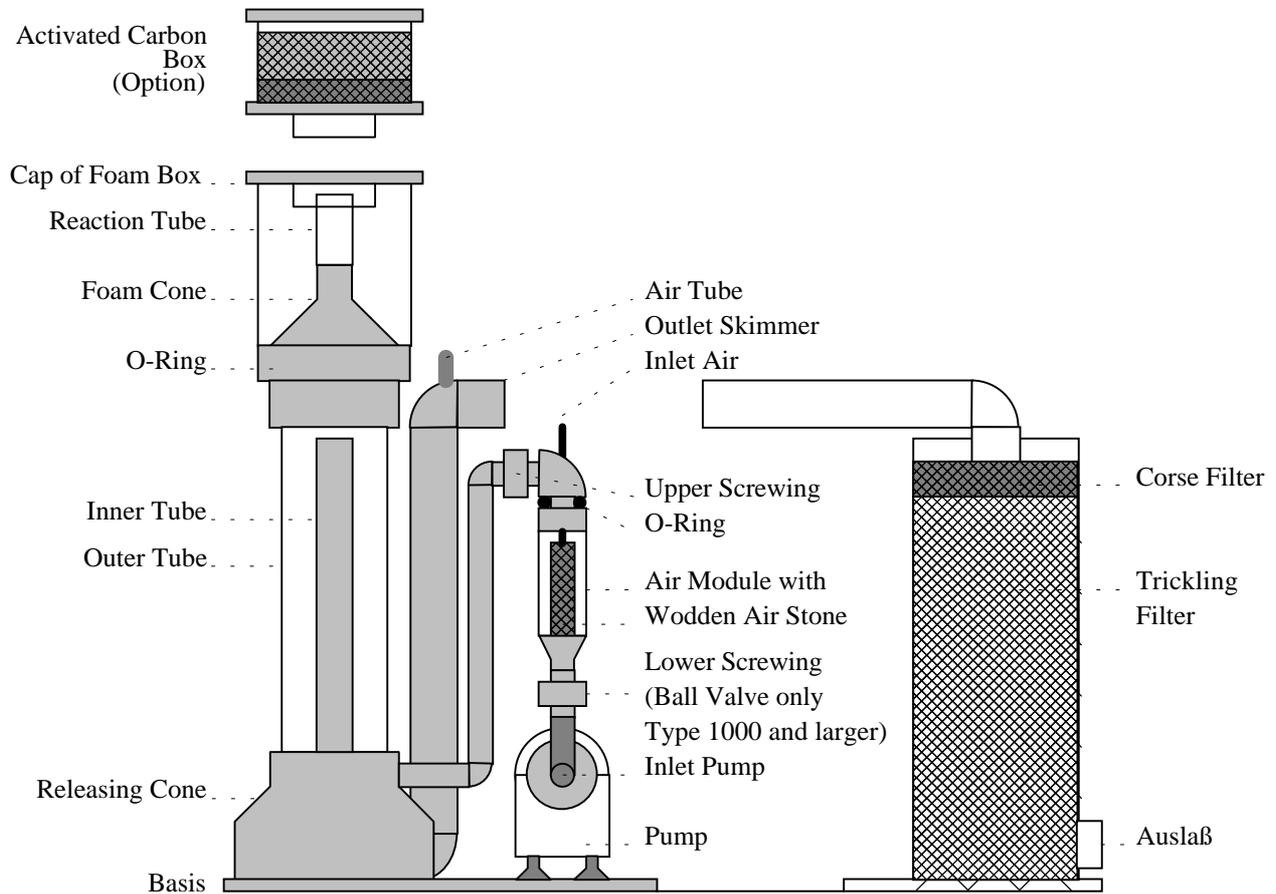


Systems for Aqua Culture,
Aquarists, Laboratories and
for Water Treatment



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Instruction Manual for Power Protein Skimmer
AquaCareFlotor, type A



Flotor Type A

Type A+
(Extension De-Airation Unit)

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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-140).

Please confirm, if the AquaCareFlotor is completely delivered.

2. Field of application

The AquaCareFlotoris developed at the Research Centre, 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.

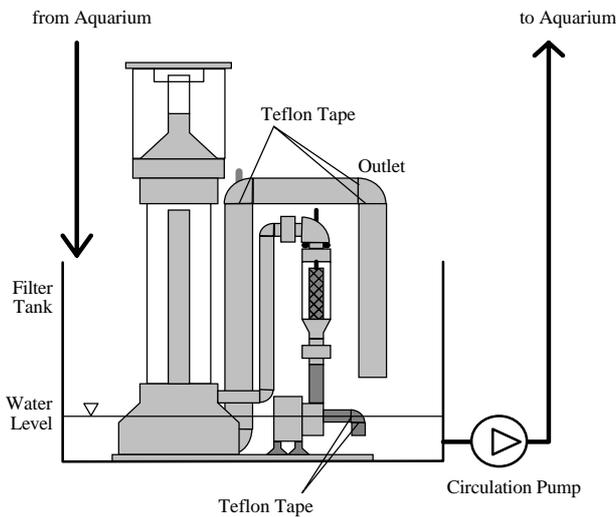
- sensitive to protein concentration (BSA) of as low as 3 µg/l (operation with ozone).
- lowers the number of free-swimming bacteria to about 20% (operation with ozone)
- reduces ozone consumption of about 75% compared to other skimmers; therefore reliable and cheap operation
- with ozonization, the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

3. Mounting the unit

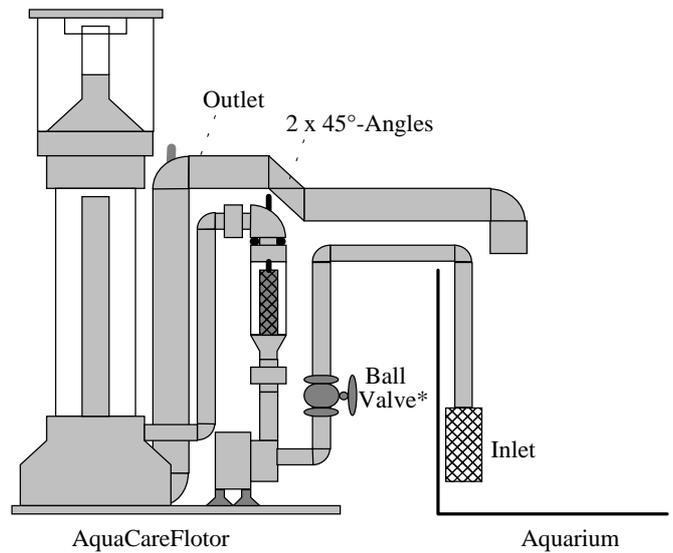
The *AquaCareFlotor* is ready to use in a filter tank (1.). The pompe must be submersed to get water automatically.

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

If you use the Flotor as a 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. Is 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).
4. If the air bubbles are very turbulent, close the ball valve (types 1000 and higher), reduce the water level (type 300

and higher), or use the white resistance in the upper screwing (only typ 700A)

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.

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 / 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.

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 both screwings and disassemble the air module.

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 effect.

For cleaning, unscrew the foam box. The inner tube can be 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* 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 in the 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 too 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

Technical data for AquaCareFlotor - external skimmer/filter system				
AquaCareFlotor 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	60	61	61
height needed, mm	57	63	64	64
height outlet, mm	28	34	39	33
minimum water level, cm	10	10	5	5
outer diameter, mm	63	75	90	110
footprint size, cm	140×200	140×260	170×330	170×330
volume foam box, liters	0,55	0,60	0,8	0,8
air input l/h at air pressure in mbar	80 100	170 100	220 150	400 150
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. 3	1×No. 3	1×No. 3
mass with pump, kg	2,2	3,2	5,3	6,0
Pump: type voltage; consumption (50 Hz) volume, l/h / height, m	UP300 230 V;4 W 300 / 0,6	UP1000 230 V; 10 W 1000 / 1,3	UP2000 230 V; 18 W 2000 / 1,6	UP3000 230 V; 45 W 3000 / 2,4
outlet (PVC fittings)	16 / 25	20 / 32	25 / 32	25 / 40

Technical data for AquaCareFlotor - external skimmer				
AquaCareFlotor 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 air pressure in mbar	400 230	400 230	650 300	2.300 350
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
Pump: type voltage; consumption (50 Hz) volume, l/h / height, m	Eheim 1060 230 V;50 W 2,2 / 3,1	MD-30R 230 V;60 W 1,9 / 3,8	MD-40RX 230 V;85 W 4,5 / 3,3	MD100R 230 V; 265 W 7,2 / 8,6
inlet / outlet (PVC fittings)	3/4" / 40	32 / 40	32 / 40	50 / 63