

## Fresh Water Protein Skimmer Fresh-Skim 200

### Skimming System in connection with air pump and water pump

The Fresh Skim 200 is suitable for garden ponds of 10 to 20 m<sup>3</sup>, breeding basins up to 5 m<sup>3</sup> or bigger sized fresh water aquaria.

This highly efficient skimmer is operated in a bypass mode, e.g. not the whole content of the pond (basin) will be let through the skimmer in one run. It should be placed so that it will be fed directly from the relevant reservoir.

By pumping water through ceramic air stones, bubbles are produced, creating a foam which will finally carry out protein and dirt particles into the foam beaker.

The beaker can be taken off for cleaning. It can take up a great amount of foam; for a continuous outflow a foam outlet can be installed.

If you use ozone we recommend to control the redoxpotential (between 300-400mV) at the water outlet of the skimmer.

## Installation

**Note: the skimmer is not frost prove.**

- a) Place the fresh Skim beside the biological filtration unit on even and level ground to guarantee the stability of the system.
- b) Make sure there is no tension or weight on the piping.
- c) Connect the water pump (delivery ca. 2,5 m<sup>3</sup>/h) to the water inlet of the skimmer. We recommend using a flow meter (2000 - 2500 l/h). Please do not install an extra filter as it changes the water passage and so might cause deviations of the water level. In this case the skimming process gets unstable.
- d) The water outflow operates pressure less, the ventilation pipe mounted to the water outlet prevents the skimmer from heaving empty.
- e) Connect the air pump (delivery ca. 3 m<sup>3</sup>/h) with a flexible tube to the air inlet of the skimmer. Again, we recommend the use of an air flow meter (ca. 1500 - 2000 l/h).
- f) The use of ozone increases the foam production.  
When using an ozonizer connect it with the "bypass" of the air leading tube (12). The ozone leading tube coming from the ozonizer has to be connected with the ozone connection (10) of the "bypass". Adjust the ball valve (11) to allow the air supply of the ozonizer.  
An amount of 10mg ozone/200l water is recommended.  
If the system is operated without the use of an ozonizer, the bypass system has to be „bypassed“ with the help of a tube.
- g) For the extinction of residual ozone elements a rest ozone decomposer should be installed. Attach the decomposer with a flexible tube (Teflon or PVC) to the lid of the foam beaker.
- i) Please follow these instructions fully. The producer cannot be held responsible for any water damage.

## Adjustments

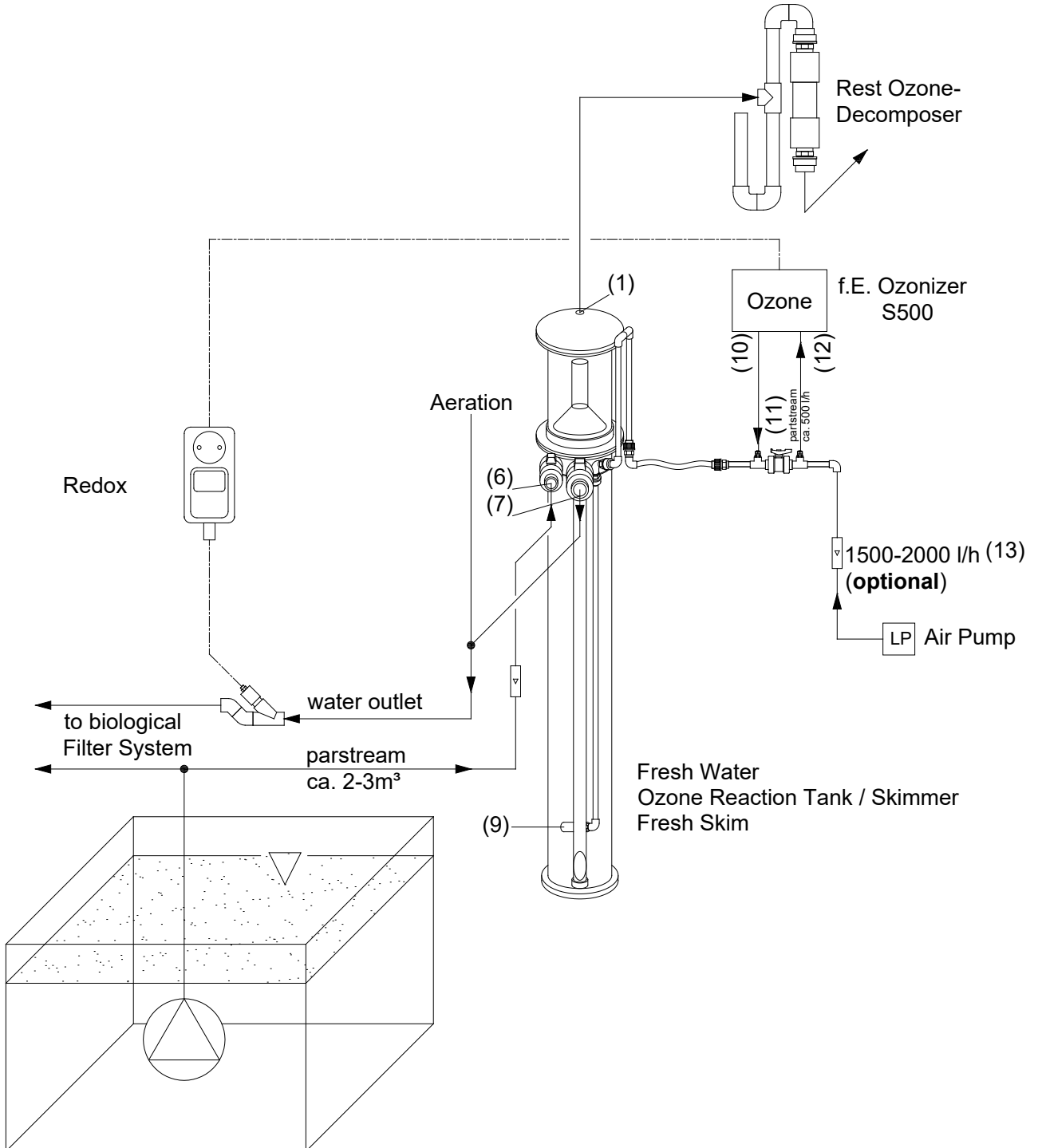
- 1) Make sure the u-tube of the rest ozone decomposer is filled with water.
- 2) Close the water inlet valve. For filling and operation open slowly.
- 3) Open water outlet completely.
- 4) Turn on water pump
- 5) Turn on air pump.
- 6) Adjust amount of air to 1500 - 2000 l/h.
- 7) If you use ozone, adjust the air flow with the help of the bypass valve.
- 8) Turn on ozonizer.
- 9) Adjust water level with the help of inlet and outlet valve, so that the desired amount of foam can be extruded continuously.
- 10) Depending on the degree of pollution, there will be either a thick foam or big bubbles. Adjust the skimmer to a degree where the bubbles will burst at the rim of the foam tube and so throw out the protein/dirt particles.
- 11) Re-adjust the air flow if necessary.

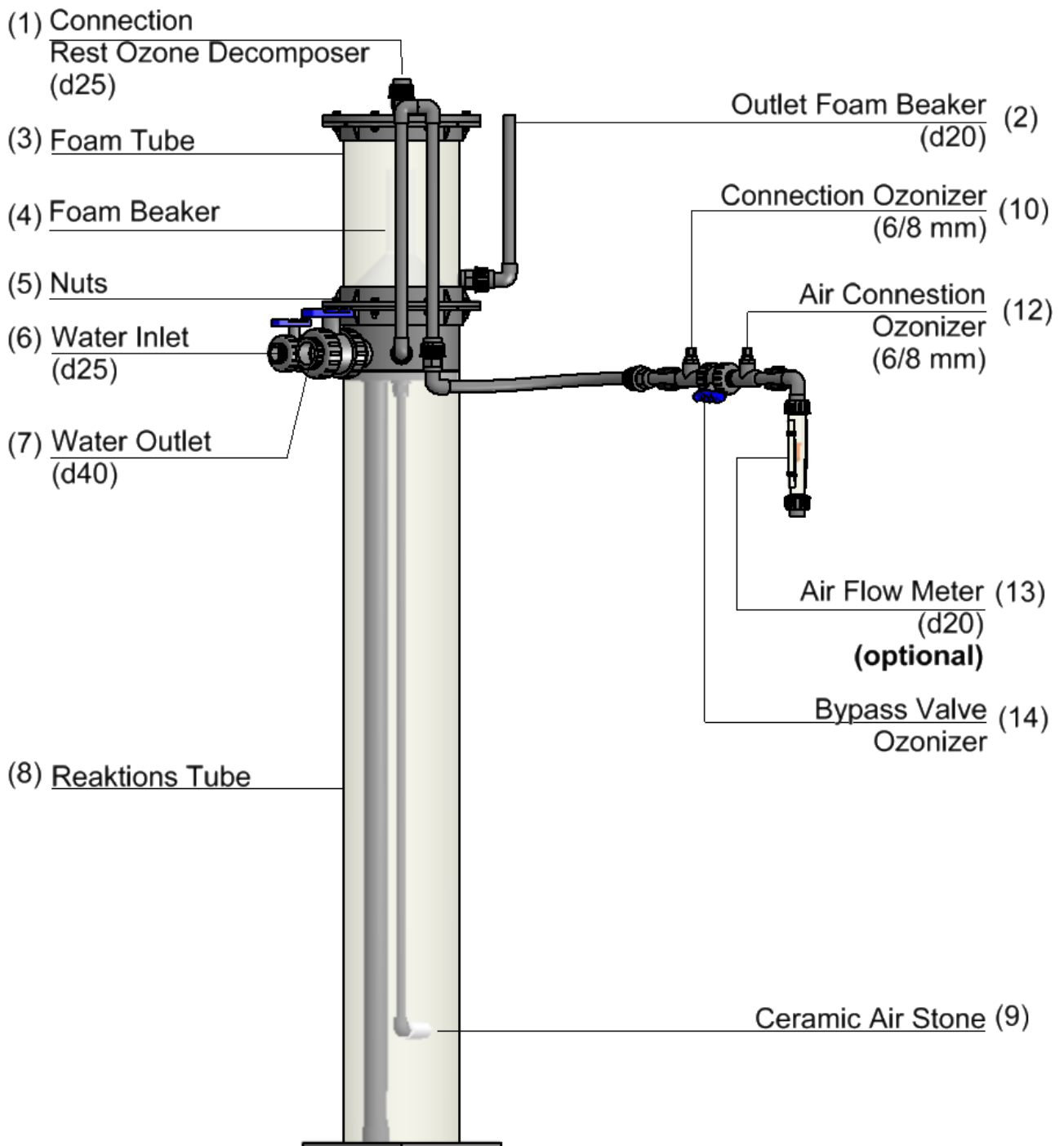
## Maintenance

- 1) Empty the foam beaker daily.
- 2) Clean the foam tube regularly.
- 3) Replace the air stones once a year. Wooden air stones are not to be used because of the high amount of ozone necessary for this operation.  
Before changing the ceramic air stones, turn off the ozonizer and operate the skimmer for a few minutes with air only. This is to make sure that no ozone is left in the air stones. To change the air stones loosen the nuts of the skimmer head and take off the foam beaker. Now the inner unit complete with tube and air stones can be taken out.

**Caution:** never touch the ceramic air stones with bare hands !

## Fresh-Skim 200 connection scheme





## Spare Parts:

	<b>Article</b>		<b>Order no.</b>	
2 x	O-ring coupling d16	d 16	<b>0824</b>	20
3 x	O-ring coupling d20	d 20	<b>0824</b>	12
1 x	Flow meter 0,4 bis 2,8 Nm <sup>3</sup> /h		<b>1907</b>	45
1 x	Air stone bracket for Fresh-Skim 200		<b>7778</b>	148
2 x	O-ring EPDM 60	212x6 mm	<b>2304</b>	976
1 x	Ball valve d20		<b>2304</b>	769
1 x	Ball valve d25		<b>2304</b>	770
1 x	Ball valve d40		<b>2304</b>	764
4 x	Air stone for Fresh-Skim 200		<b>7777</b>	629