

Fresh Water Protein Skimmer Fresh-Skim 300

Skimming System in connection with air pump and water pump

Range of application/ Mode of operation:

The Fresh Skim 300 is suitable for garden ponds or breeding basins up to 50 m³.

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.

The skimmer must be installed in such a way that it can be fed constantly with approx. 8 m³/h water.

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

The water flow is created by a feed pump installed by the customer.

The foam beaker can take up a great amount of foam; for a continuous outflow connect the foam with a drain. To prevent residual ozone from escaping a siphon has to be installed.

If you use ozone we recommend to control the redox potential (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. 8 m³/h) to the water inlet of the skimmer. We recommend using a flow meter (1000 - 10000 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. 3,5 m³/h) with a flexible tube to the air cock of the skimmer. Again, we recommend the use of an air flow meter (ca. 1000 - 10000 l/h).
- f) The foam beaker can take up a great amount of foam; for a continuous outflow connect the foam with a drain. To prevent residual ozone from escaping a siphon has to be installed.
- g) The use of ozone increases the foam production.
When using an ozoniser connect it with the "bypass" of the air leading tube. The ozone leading pipe coming from the ozoniser has to be connected with the upper connection of the "bypass".
An amount of 10mg ozone/100l water is recommended. Connect the ozoniser with the upper inlet of the bypass system.
If the system is operated without the use of an ozoniser, the bypass system has to be „bypassed“ with the help of a tube.
- h) 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 carefully. The producer cannot be held responsible for any water damage.

Start-up and adjustments

Before start-up all connections (water, air, ozone, mains supply) must be installed in accordance with the usual guideline.

- 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) Open slowly the inlet valve
- 6) Turn on air pump.
- 7) Adjust amount of air to 3400 l/h.
- 8) If you use ozone, adjust the air flow with the help of the bypass valve.
- 9) Turn on ozoniser.
- 10) Adjust water level with the help of inlet and outlet valve, so that the desired amount of foam can be drained off continuously.
- 11) 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.
- 12) Re-adjust the air flow if necessary.

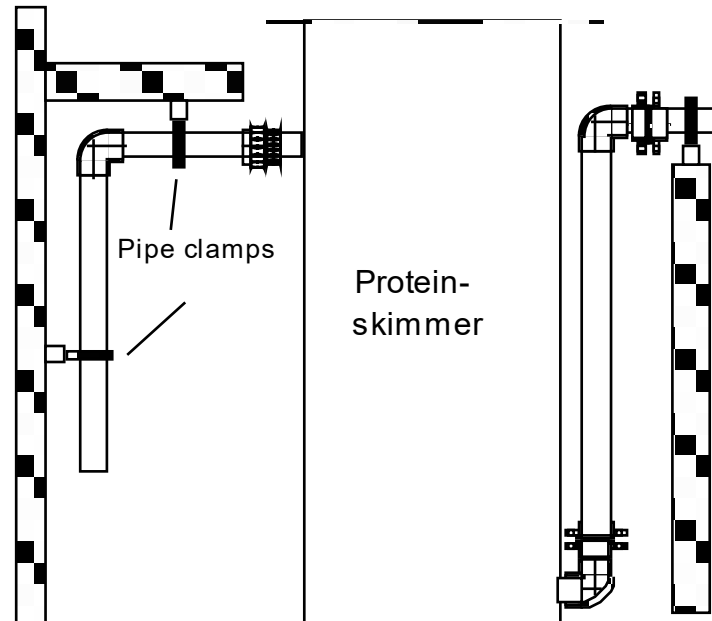
Maintenance

- 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 ozoniser 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 !

Important: Pipe connections must be free of tension

Example

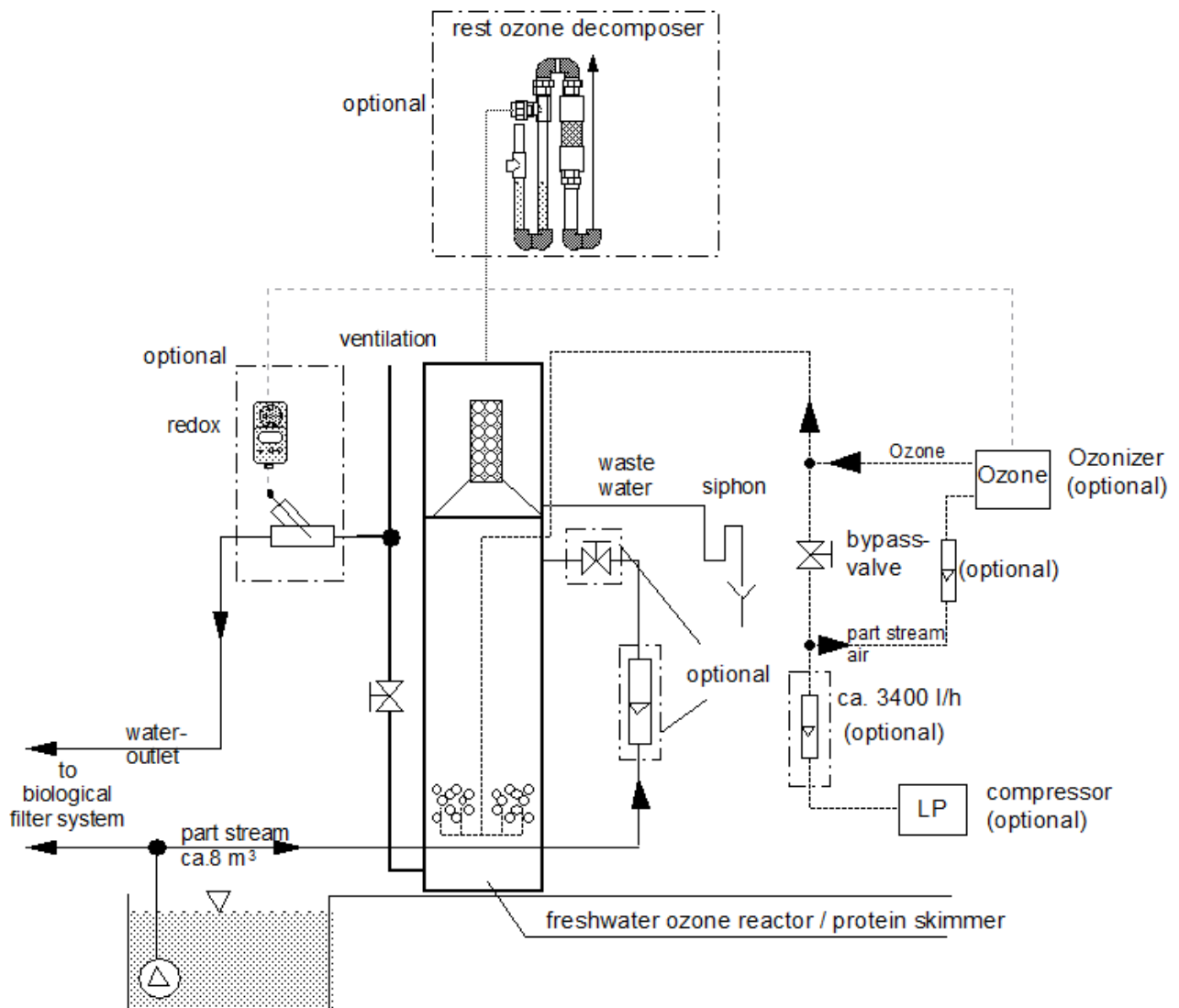


Skimmer Fresh-Skim 300

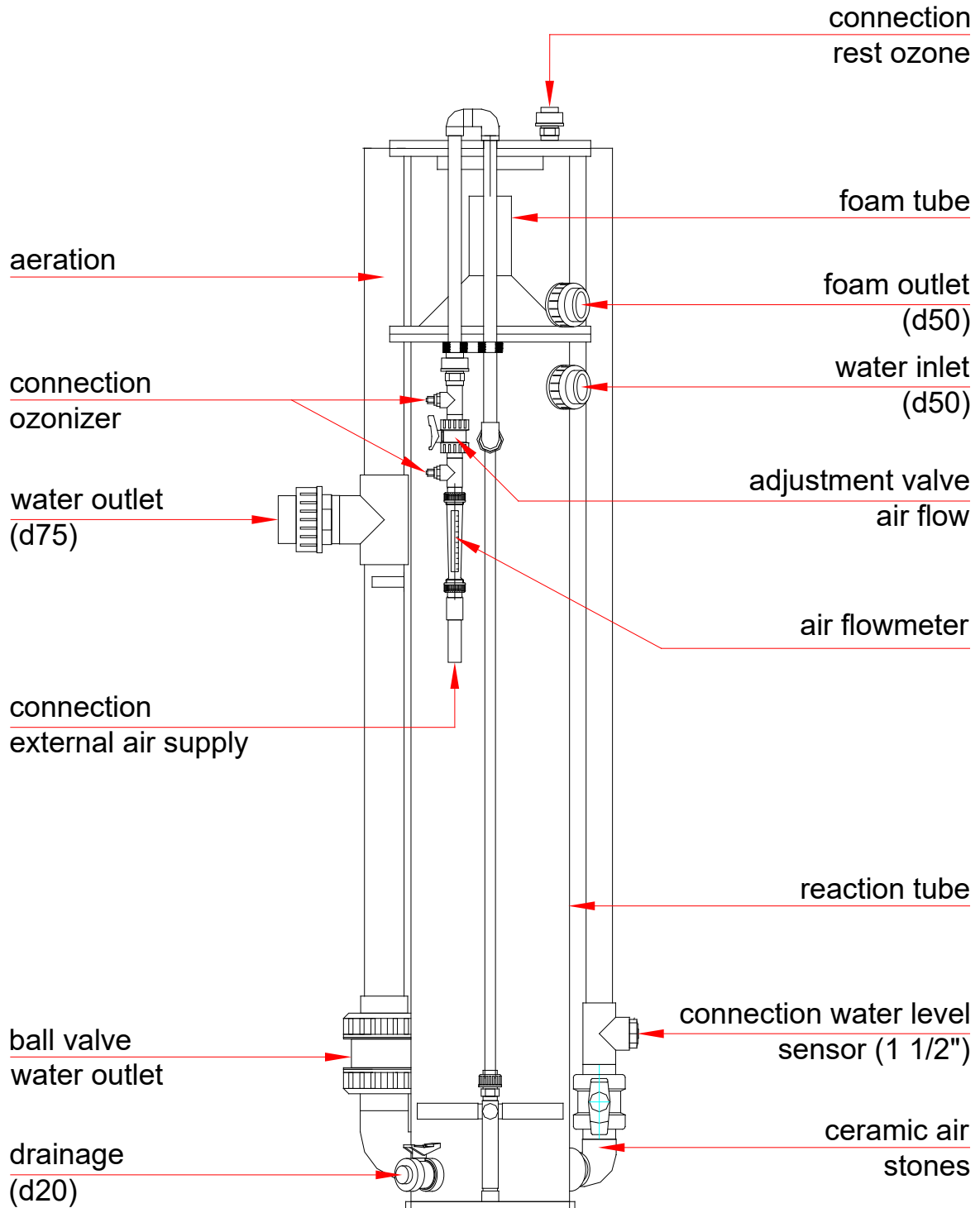
Modell	Fresh-Skim	300x2100
Unit no.:		
Volume	m ³	0.1
Flow rate	m ³ /h	3.2
Retention time	min	2
Flow rate	m ³ /h	8
Retention time	min	0.8
Flow rate	m ³ /h	6.4
Retention time	min	1
Diameter of Inlet	d	50
Height of Inlet	mm	1550
Diameter of outlet	d	75
Height of outlet	mm	1300
Height of water column	mm	1700
Air suction capacity	m ³ /h	3.4
Total height	mm	2100
Basal area	mmxmm	750x825
Max. pressure	bar	Hydrostat. press. + 0.2

All measures and data approximately. Changes reserved

Flowchart Fresh Water Protein Skimmer



Fresh-Skim 300 x2100



Spare Parts

	article		Order no.	
5 x	O-ring coupling d20	d 25	0824	12
3 x	O-ring coupling d50	d 40	0824	13
1 x	O-ring coupling d75	d 40	0824	13
1 x	Flow meter 0,9 – 9,5 Nm ³ /h		1907	47
1 x	air stone bracket for Fresh-Skim 300		1908	1805
2 x	O-ring EPDM 70	310x6 mm	1930	11
1 x	ball valve d20		2304	769
1 x	ball valve d 75		2304	798
4 x	air stone for Fresh Skim		7777	629