

## 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 m<sup>3</sup>.

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 m<sup>3</sup>/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 redoxpotential (between 300-400mV) at the water outlet of the skimmer.

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# Instruction for Use

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## 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 m<sup>3</sup>/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 pressureless, the ventilation pipe mounted to the water outlet prevents the skimmer from heaving empty.
- e) Connect the air pump (delivery ca. 5,5 m<sup>3</sup>/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 ozonizer connect it with the "bypass" of the air leading tube. The ozone leading pipe coming from the ozonizer has to be connected with the upper connection of the "bypass".  
An amount of 10mg ozone/100l water is recommended. Connect the ozonizer with the upper inlet of the bypass system.  
If the system is operated without the use of an ozonizer, 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.

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# Instruction for Use

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## 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 5000 l/h.
- 8) If you use ozone, adjust the air flow with the help of the bypass valve.
- 9) Turn on ozonizer.
- 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.

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# Instruction for Use

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## 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 !

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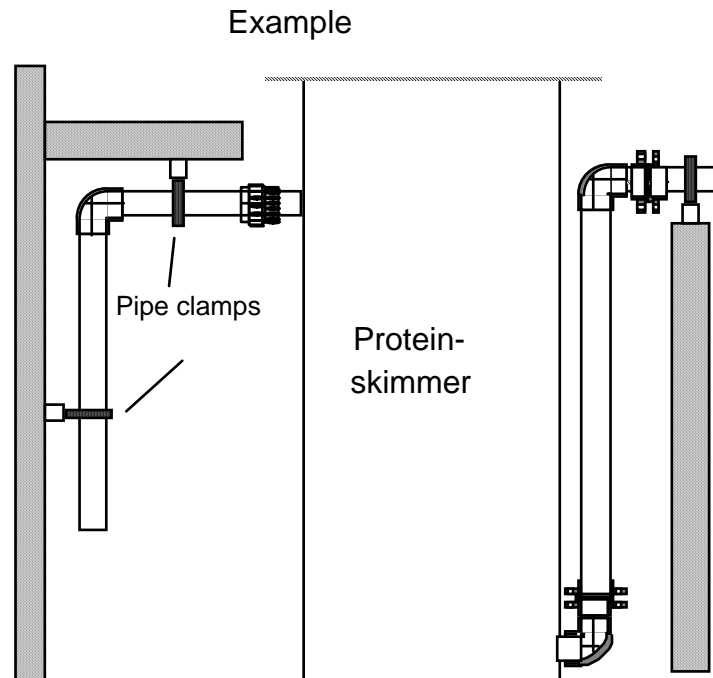
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**Important:** Pipe connections must be free of tension



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## Skimmer Fresh-Skim 300

<b>Modell</b>	<b>Fresh-Skim</b>	<b>300x2100</b>
Anlagen Nr. Unit no.:		
Volumen Volume	m <sup>3</sup>	0,11
Wasserdurchsatz Flowrate	m <sup>3</sup> /h	3,2
Verweilzeit Retentiontime	min	2
Wasserdurchsatz Flowrate	m <sup>3</sup> /h	4,2
Verweilzeit Retentiontime	min	1,5
Wasserdurchsatz Flowrate	m <sup>3</sup> /h	<b>6,4</b>
Verweilzeit Retentiontime	min	<b>1</b>
Einlass Durchmesser Diameter of Inlet	d	50
Einlass Höhe Height of Inlet	mm	1550
Auslass Durchmesser Diameter of outlet	d	75
Auslass Höhe Height of outlet	mm	1300
Höhe der Wassersäule Height of water column	mm	1700
Luftansaugmenge Air suction capacity	m <sup>3</sup> /h	3,4
Bauhöhe .ca. Total height	mm	2100
Grundfläche Basal area	mmxmm	750x825
Max. Druck Max. pressure	bar	Hydrost. Druck + 0,2 Hydrost. press. + 0,2

All measures and data approximatly. Changes reserved

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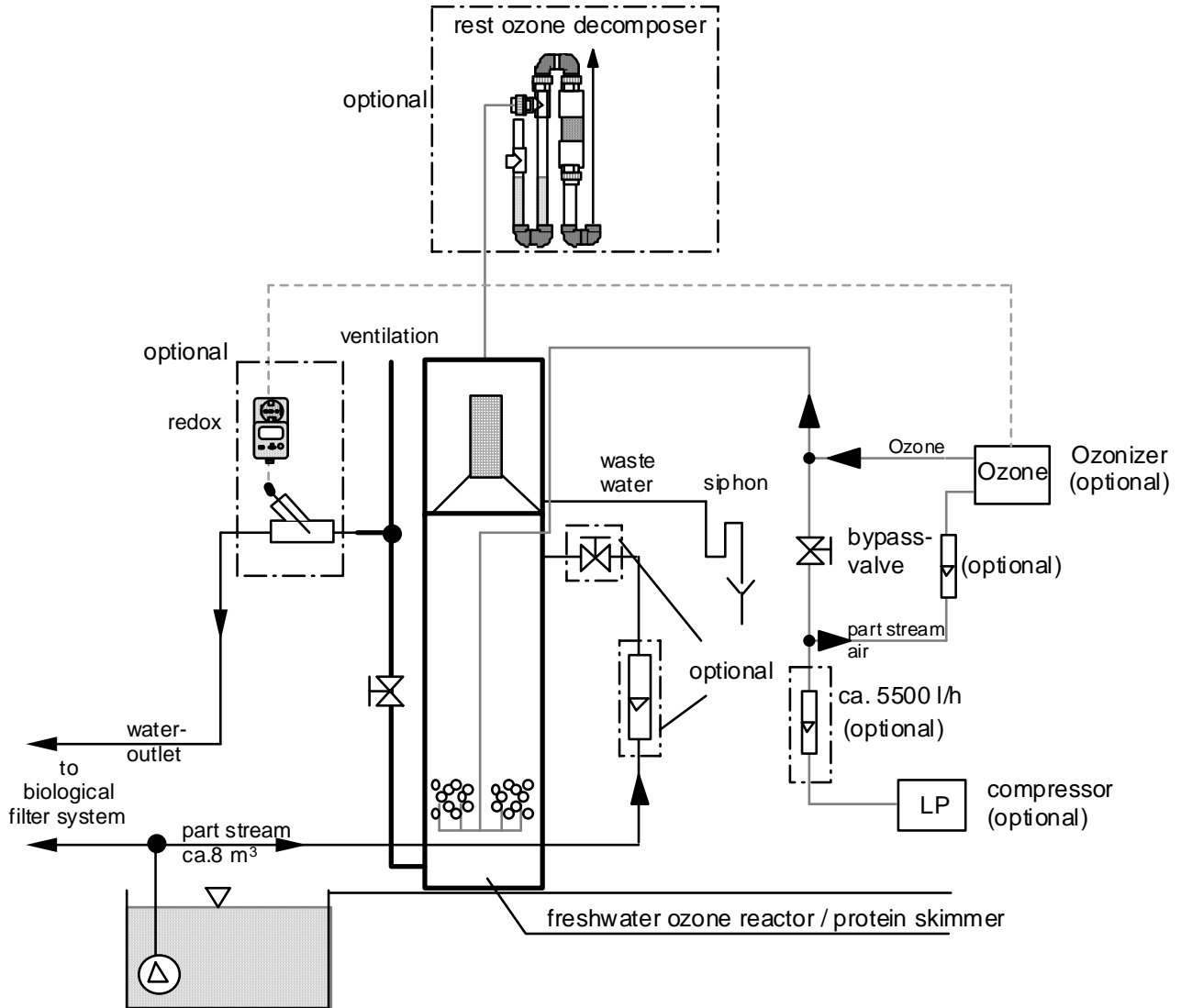
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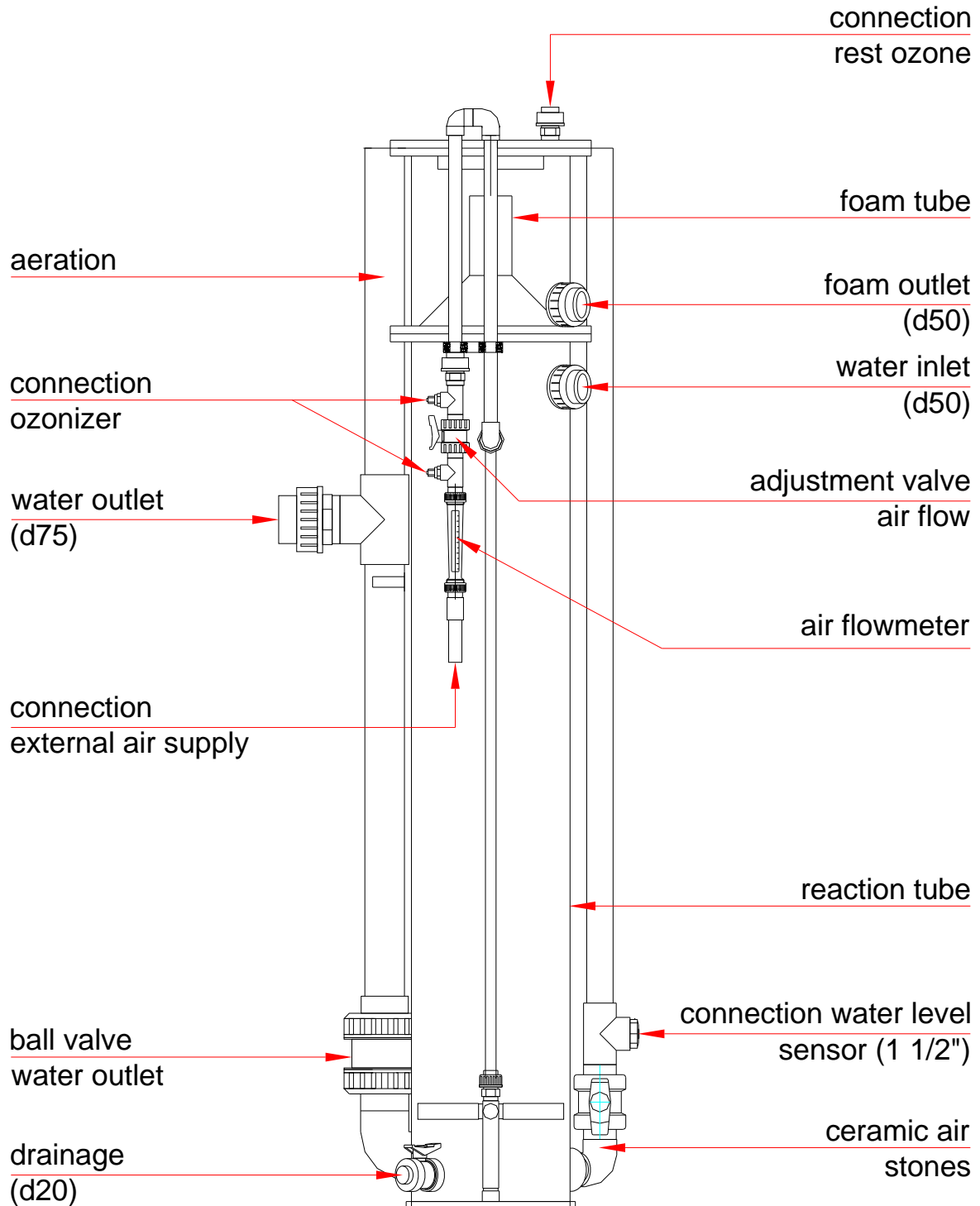
## Flowchart Fresh Water Protein Skimmer



# Instruction for Use



## Fresh-Skim 300 x2100



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# Instruction for Use

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## Spare Parts:

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

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