Ozone reactor OZR for big ponds and aquacuture systems

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OZR 315

3 stage Ozone Reactor

For fresh water fish ponds and pools AquaCare has developed an ozone reactor that puts ozone fast and efficient into the water. The dissolved ozone cracks biological persistent substances like “Gelbstoffe” and humic acids to realize their biological degradation – the water gets crystal-clear. Nitrite is oxidized and is consequently not harmful for flora and fauna, especially in the start-up phase of a pond. The oxygen concentration is rising.

The function of the AquaCare OZR

1. stage: in the upper section the feed water is mixed turbulently with ozone containing air. A small air should pump air through the ozone generator into the OZR.
2. stage: within the trickling section the water flows over trickling filter material that realizes a good transit of the ozone into the water.
3. stage: in the water filled section of the OZR the smallest bubbles will stay for a long time in the tube and dissolves more ozone.

The outlet water may flow over an activated carbon filter to eliminate surplus ozone or may flow directly into the pool. With the second version the ORP should be controlled to avoid over concentrations that can harm organisms.

Connection of the OZR at the water system

The OZR has to be connected with a feed water with enough pressure / flow. A small air pump (option) presses the air through an ozone generator (option) into the OZR. To prevent back-flowing water into the ozone generation a check valve is connected.

To prevent an overdosing of ozone it is possible to connect the ozone generator with an ORP-control. Another way to prevent overdosing is an activated carbon filter that is connected after the OZR. The diameter of the activated carbon filter must be minimum as large as the main tube of the OZR.

Technical Data of the AquaCare OZR

	OZR315	**OZR400**	**OZR500**	**OZR600**	**OZR800**	**OZR950**	**OZR1500**
Order number	381-030	381-040	381-050	381-060	381-080	381-095	381-150
System	3-stage reactor						
Maximum* size of pond / pool in m^3 at 10 / 50 / 100 kg fish/m^3	250 50 25	400 80 40	600 120 60	900 180 90	1500 300 150	2400 480 240	6000 1200 600
Diameter tube in mm	315	400	500	600	800	950	1500
Height in cm	200	250	250	250	250	250	250
max. ozone needs in g/h	4	6,5	10	15	25	40	100
Footprint size in mm	450 × 450	500 × 500	700× 700	700 × 700	900 × 900	1000 × 1000	1600 × 1600
Water inlet in m^3/h	8...16	13...26	20...40	30...60	53...106	75...150	185...370
Air inlet in m^3/h	0,08...0,2	0,1...0,3	0,3...0,4	0,3...0,6	0,5...1,0	0,8...1,5	1,9...3,7
Materials	PVC-U, PE, PA screws						
Connector water	d63	d63	d75	d90	d125	d140	d225
Connector ozone	d20	d20	d20	d32	d32	d40	d40

* you can read out the maximum size of ponds, ornamental fish tanks and bathing ponds at 10 kg/m^3; aquaculture systems should be calculated with their fish load; this information is supplied without liability.

Attention! Ozone is a harmful substance and is to use in accordance with the manual of the ozone generator and local regulations only.