

# AERATION

of liquids  
with micro porous ceramic membrane discs

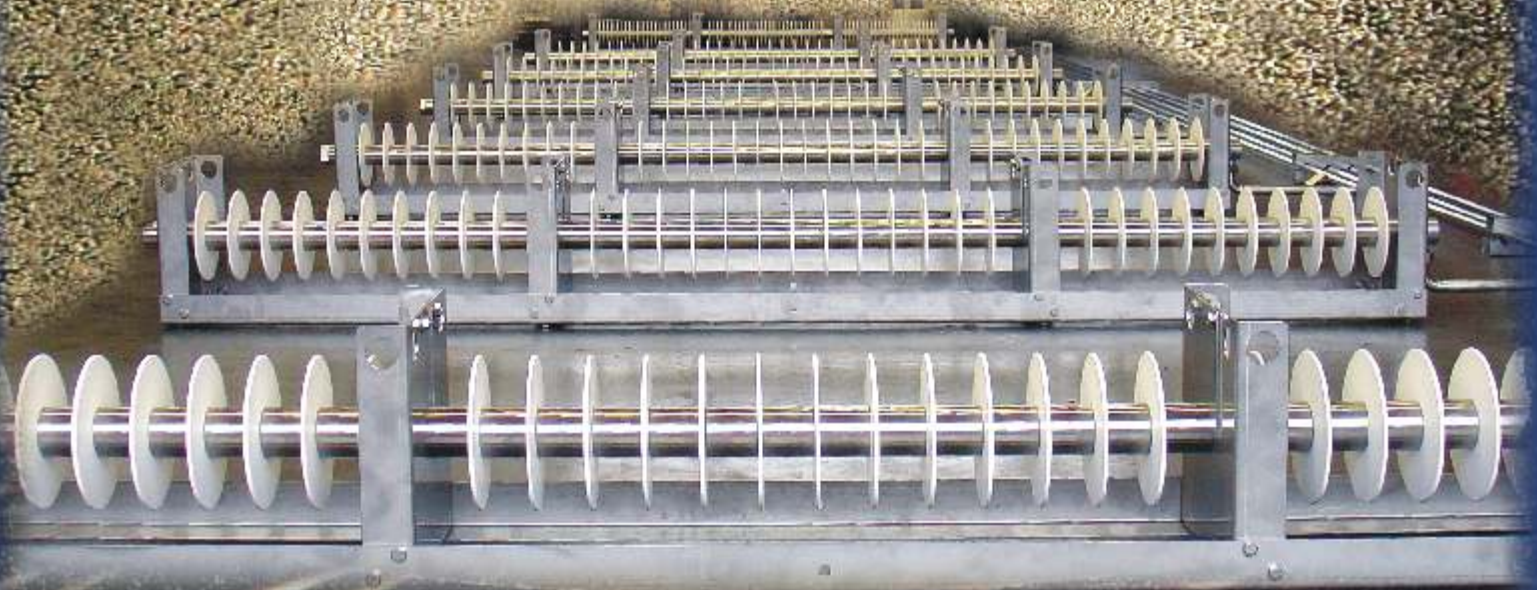
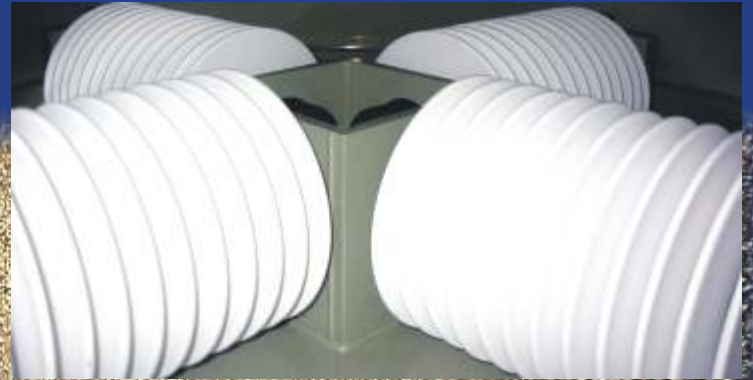
- + superfine distributed gas bubbles
- + chemical and thermal stability

e.g.

**Flotation**

**Ozonation**

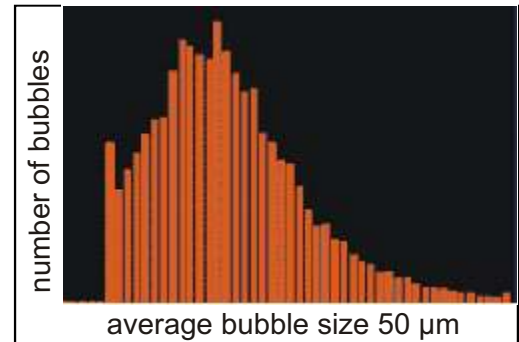
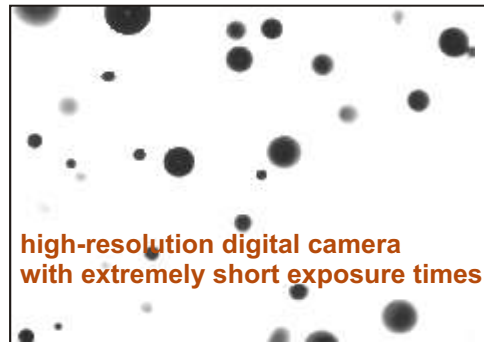
**Oxygenation**



# AERATION of liquids with micro porous ceramic membrane discs

- + superfine distributed gas bubbles
- + chemical and thermal stability

## Characterisation of the gas bubbles:



## Applications:

### FLOTATION

The efficiency of flotation processes is clearly increased by the application of Kerafol discs. The superfine distributed gas bubbles lead to an accelerated aggregate formation of dispersed particles and thus to a more effective separation. The gas bubbles are created directly in the medium at the membrane surface (no dissolved air flotation).

### OZONATION

By the use of micro porous ceramic membranes ozone can be inserted most effectively into liquids. The extremely fine distributed gas bubbles remain in the liquid for a very long time (minimised ozone losses).

### OXYGENATION

In combination with oxygen there are a lot of advantages in applications with fish farming and aquaria.

## Principle:

The inside of the membrane disc is applied with pressure through a channel structure. Gas flows through the micro porous material. Thus superfine distributed gas bubbles are created on the membrane surface. The discs can be arranged vertically, because there is no coagulation of the bubbles.

Insertion of bubbles also in systems under pressure and near the boiling point.

Technical Data:	Membrane disc 152	Membrane disc 312
Øa	152 mm	312 mm
Øi	25.5 mm	91 mm
Thickness d	4.5 mm	6.0 mm
Membrane surface	360 cm <sup>2</sup>	0.13 m <sup>2</sup>
Pore size	2.0 $\mu\text{m}$	2.0 $\mu\text{m}$
Material	Al <sub>2</sub> O <sub>3</sub>	Al <sub>2</sub> O <sub>3</sub>
Bubble point air/H <sub>2</sub> O	1.6 bar	2.2 bar
Maximum operating pressure	3 bar	3 bar
Gases	O <sub>2</sub> / O <sub>3</sub> / CO <sub>2</sub> / N / air ...	



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