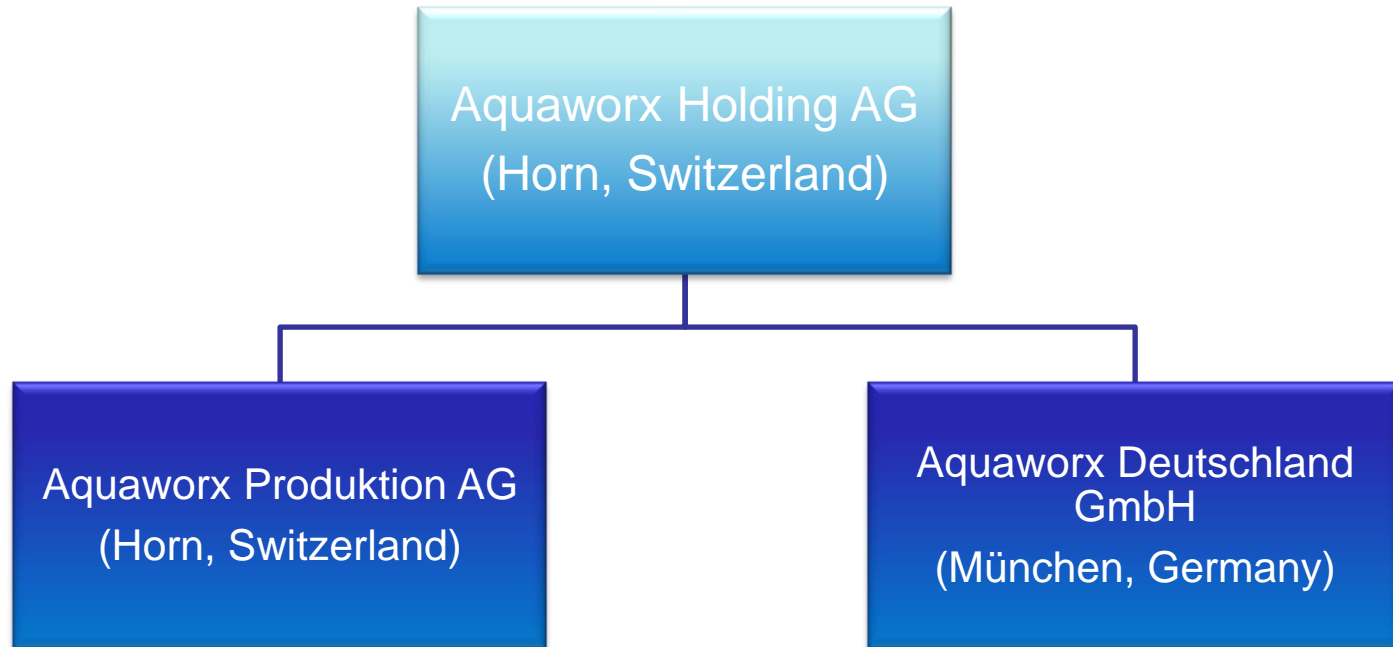


Aquaworx



clear solution

Aquaworx Presentation



Research, Development, Production, Service

Sales, Administration, Marketing

- Our Technology is offering new solutions for the treatment of:
 - Drinking Water
 - Process water
 - Waste Water
 - Ballast water
 - And other liquids

- The innovation within the Aquaworx products is the combination of:
 - Filtration with metallic sintermembrane filters
 - Disinfection with UV-radiation
 - Support of the cleaning process and deagglomeration of particles with Ultrasonics

- Your Advantage:
 - Advanced performance and longtime economical rentability



The Technologies

- UV-Radiation
- Filtration
- Ultrasonics



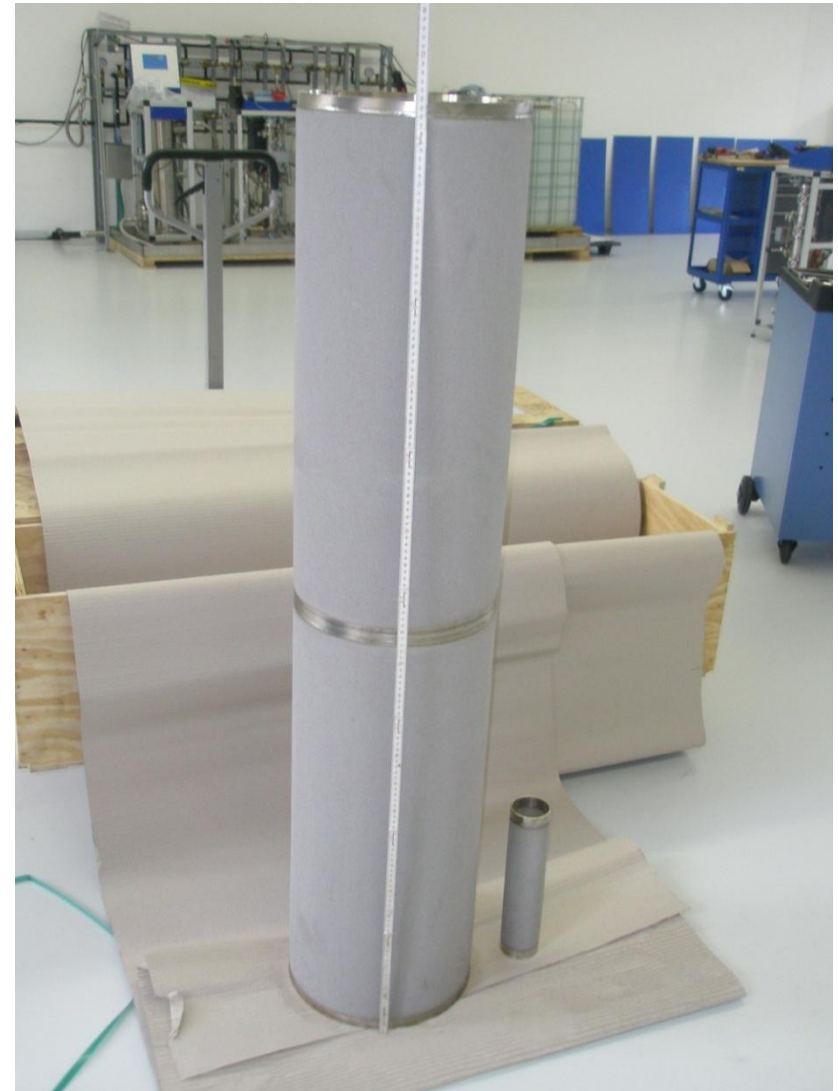
Characteristics:

- UV Radiation is deactivating the DNA of viruses and microorganisms like yeasts, bacteria and spores.
- UV has advantages compared to other disinfection processes as chlorine and ozone because it does not need any chemicals
- No properties of the water like quality, taste, color and odor are being changed.
- No byproducts which could be cancerous or poisonous can be produced with UV radiation.
- The pathogens can not become resistant against UV radiation.
- UV equipment is simple in handling and service



Characteristics:

- Shape stability, which means self carrying construction elements
- Good characteristics under continuous stress, punch- and oscillating usage or fast pressure differences
- Good thermal stability up to 950°C
- High flow rate with a low pressure loss
- Defined separation pattern through homogene pore size distribution (+/- 10%)
- Chemical consistency against acids and alkalic substances in a wide pH-range
- Easy backflush behavior and possibility for cleaning with hot vapour, solvents, thermal processes or ultrasonics
- The materials used for the filters can be welded, soldered or mechanically treated



Characteristics:

- Ultrasound is generating cavitation which is used for the cleaning of solid parts. We are cleaning the UV-tubes and the surface of the sintermembrane filters with ultrasonics
- The constant cleaning effect on the UV-tube is preventing the contamination with biofilm or scale
- The cavitation is separating the agglomerated particles and cells and improves the availability for the UV-disinfection process
- The cavitation has also a disinfecting effect on organic cells by disintegrating the cell structure
- With the ultrasonics, very intense shear forces can be created which are reducing the surface tension between the liquid and the surface of the filter. This helps to improve the flowrate through the filtration unit

The Aquaworx product family involves 5 application areas:

1. AquaTriLight

Drinking water treatment
Wastewater treatment

2. MicroSintFilter

Filtration of liquids

3. AquaTriComb

Ballast water treatment

4. AquaHomeCare

Treatment of water cycles in small
residencies, hotels, holiday villas

5. AquaLegioCon

Legionella-Management-System



AquaTriLight.



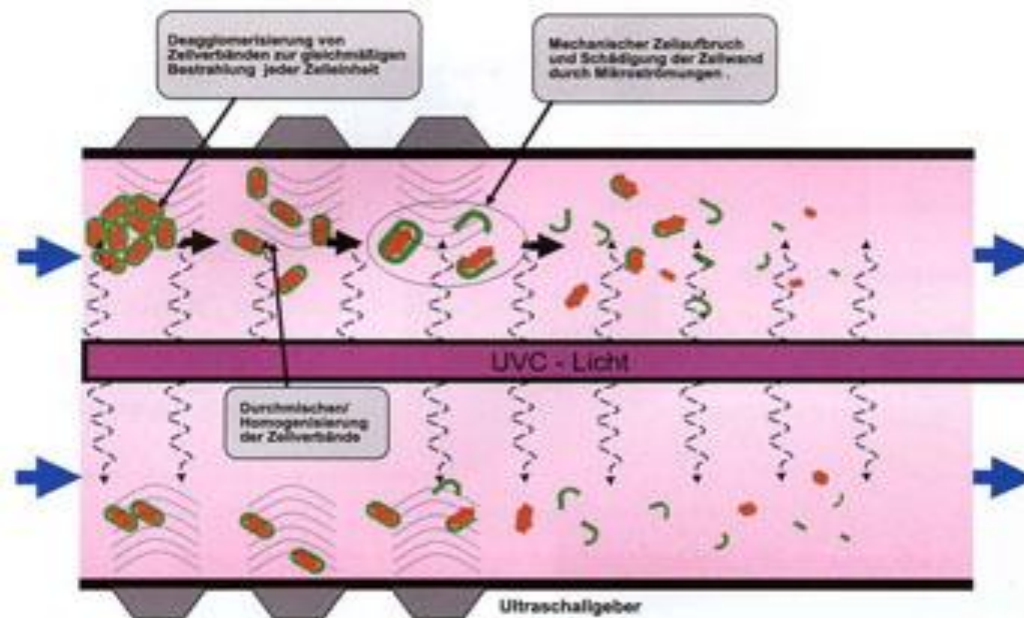
The AquaTriLight combines the UV-low-pressure technology with ultrasonic elements. This has the following advantages:

- Bacteria, viruses and other particles will be deagglomerated and pretreated by the cavitation. With that, the disinfection process with UV-radiation can be improved
- The continuous cleaning of the UV-tube prevents the formation of a biofilm or a contamination with scale. Due to this effect, the efficiency of the UV-radiation is remaining constant during the whole lifetime of 16'000h
- The energy consumption is kept constantly low. The power usage for 10 m³/h is approx. 850W/h
- No chemicals are needed for the disinfection
- The volumes range from 10 m³/h to 8.000 m³/h
- Certified according to Ö-Norm und DVGW



Soundfield:

The modulated soundfield is separating the organic cells mechanically. To some degree, the cells will also be disintegrated with cavitation and therefore pre-damaged for the following UV-treatment.





Applications

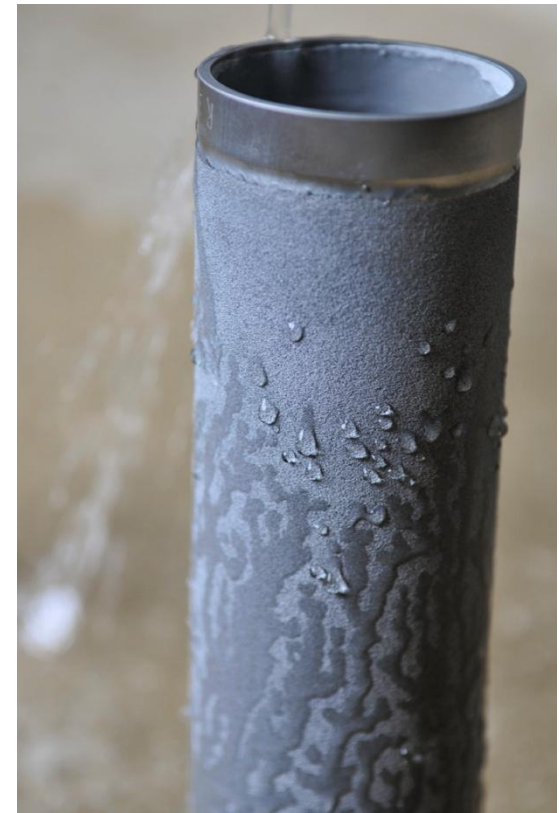
- Waste Water Treatment Plants, public water projects
- Aid organizations
- Aquariums
- Hospitals
- Industries (Electronics-, Food-, Pharma- etc.)
- Hotels and Holidayresorts
- Private estates

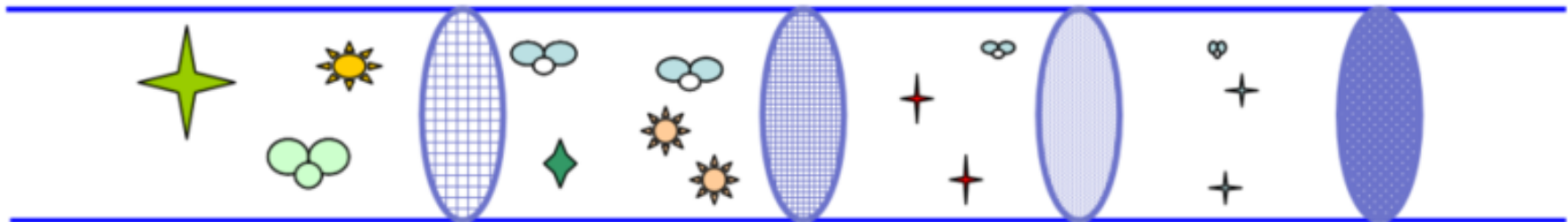


MicroSintFilter.

The MicroSintFilter is combining the ultrasonic technology with metallic sintermembranes which are new for water based applications. This results in the following advantages:

- Thorough ultrasonic cleaning during the backflush is ensuring a very long lifetime of the filtermodule
- High filtration throughputs with a Cross-Flow simulation and a reduction of surface tensions
- Possible usage with high temperatures and within different liquids
- Micro- and particle filtration from 0,1 μm to 200 μm
- Active filtersurface from 600 cm^2 to 1,8 m^2
- Individual flowrates from 10 m^3/h to 8.000 m^3/h





Verfahren	Mikrofiltration	Ultrafiltration	Nanofiltration	Umkehrosmose
Größe der abtrennbaren Stoffe	> 0,1 µm	> 0,01 µm	> 0,001 µm	> 0,0001 µm
Erforderliche Druckdifferenz	0,1 - 2 bar	0,1 – 5 bar	3 – 20 bar	10 – 100 bar



Applications

Filtration of liquids for ...

- Waste Water Treatment Plants (tertiary)
- Food-, Electronics-, Color-, Pharma- and Petrochemical Industries
- Prefiltration of Reverse Osmosis applications, cooling towers
- Carwash applications, Pool technologies



AquaTriComb.

The product AquaTriComb is meant for the operation on board of ships treating the ballastwater.

- AquaTriComb is a combination of the MicroSintFilter and the AquaTriLight
- The materials are consistent against the corrosion due to saltwater
- Different volumes can be treated within a range from 250 m³/h to 8.000 m³/h
- The equipment is achieving the requested targets for cleaning and disinfection without any chemical additives. This makes the product unique on the market!
- Low energy consumption
- Small space requirements





Applications

Treatment of...

- Ballast water (Shipping industries)



AquaHomeCare

AquaHomeCare

- Cleaning and disinfection of drinking and process water (without any chemical additives)
- Treatment of poolwater and irrigation systems
- Disinfection of water reservoirs
- Very compact unit with user friendly controls
- AquaHomeCare consists of an AquaTriLight module for 10 m³/h which can be supported by a MicroSintFilter module, a sand filtration module, a decalcification unit or a dechlorification unit, depending on the application



A dynamic background image showing a splash of water with numerous bubbles of various sizes against a blue gradient. The water is captured in motion, creating a sense of freshness and purity.

Applications

Water treatment for...

- Holiday homes and residencies
- Small appartementblocks
- Hotels & Resorts



AquaLegioCon.

AquaLegioCon

- Integrated Legionella Management System which is certified by TÜV Süd (Germany) and which can provide the best possible warranty for a legionella free operation of a water system
- The goal is a substantial sterility of the water circulation system without any chemical additives and with a low energy consumption
- An AquaTriLight reactor will be used and can be combined with other additional elements like a MicroSintFilter module, a decalcification unit and more. The need for additional equipment depends on the circumstances where the equipment will be installed.
- To attain and to keep the certification from TÜV Süd, regular test series through Aquaworx and TÜV Süd are required

Applications

Legionella prophylaxis for ...

- Hospitals
- Elderly Homes
- Hotels
- Swimming Pools and Wellness Installations

The advantages of the Aquaworx products at one glance:

- High efficiency
- Low operation costs
- Low energy consumption
- No chemical additives
- Small space requirements
- Simple handling
- Individual and integrated solutions
- USP through combination of different technologies
- Ecologically sustainable

Aquaworx



clear solution

We would like to thank you for your interest!