

demEAUmed Technologies

UVOX Technology

Eight categories of innovative technologies together with a monitoring, control and decision support system are integrated and demonstrated in real life situation within the European project demEAUmed "demonstrating integrated innovative technologies for an optimal and safe closed water cycle in Mediterranean tourist facilities." This factsheet presents one of these eight technologies; the **UVOX** Technology.

Description

The UVOX process combines the disinfecting effect of ultraviolet light with the oxidising effect of ozone and hydroxyl radicals in one single system with one single lamp. UV-Disinfection, Ozonation and the advanced oxidation by means of hydroxyl radicals lead to the inactivation of all pathogens and microorganisms in the water (e.g. bacteria, viruses and algae) and to the oxidation of (micro) pollutants (such as nitrite, cyanide, pesticides, chlorinated hydrocarbons, hydrosulphides, odours, humic substances and pharmaceutical products).



Applicability

UVOX Systems provide environmentally friendly, healthy and non-residual water treatment for:

- Public swimming pools,
- Private swimming pools,
- Natural pools & swimming ponds,
- Koi & Fish pond, fish hatcheries,
- Aquariums & zoos,
- Drinking water and
- Process water / grey water.

Design Criteria

Size

1.5 m (w) x 1.0 m (l) x 1.2 m (h)
Indoor/semi-indoor

Location

In the technical water treatment room near the filters and greywater tank.

Flows

20-80 m³/h, max. pressure 1.2 bar.

Operation and Maintenance

The integrated UVOX UV-Compact Measurement and Control Unit guarantees optimum functioning of the UVOX system. Therefore it requires only:

- Limited maintenance, and
- Replacement of the UVOX lamp at the end of its lifetime (16.000 hours).

Advantages of UVOX technology:

- UVOX destroys organic compounds and inactivates pathogens and algae up to 99, 99 %.
- It enables reduction of residual chlorine concentration and thus reduces the formation of disinfection by-products (DBP`s) such as mono-, di- and tri- chlorine and THM.
- Lesser usage of chemicals, water and

energy reduce costs associated with the application of UVOX system.

- Eliminates unpleasant odours and tastes and provides healthy, residual-free water.

Costs issues (or additional value)

- Low capital and running costs.
- Early Return On Investment (ROI) due to cost savings.

Contact:

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Please find further information and updates on demEAUmed project, its technologies and DSS at: www.demeaumed.eu



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