



WEDECO E/ME Series

UV-DISINFECTION „WITHOUT SIDE EFFECTS“ FOR THE PRODUCTION OF
HIGH-PURITY WATER

WEDECO
a xylem brand

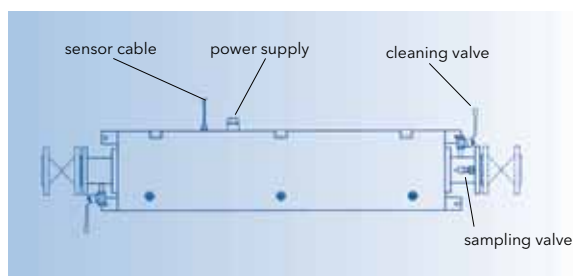
UV disinfection system Type E/ME

Enterprises from the pharmaceutical, cosmetics and semiconductor industry require ultrapure water for the production process (purified water PW, HPW, UPW). The UV system WEDECO E/ME has been specially developed for these high requirements.

The special characteristic is the inline principle: The water flows through a quartz glass reactor and is irradiated from outside. Thus the preparation process is kept completely closed, free from built-in parts in the process medium and virtually without pressure loss. Since this is a purely physical disinfection technique, no additives are put into to the water. As part of the production of ultrapure water, the WEDECO E/ME system is outstandingly suited for disinfection as well as for ozone remnant destruction.

Assembly of the WEDECO E/ME Series

The reactors of the E/ME Series consist of a quartz tube with UV lamps and reflectors arranged externally parallel to the flow. At Type E all components of the system (quartz reactor and electronics) are integrated in a compact stainless steel cabinet. At type ME the electrical components arranged in a separate cabinet.



UV monitoring and control by highly selective, calibrated UV sensor

Advantages

- » Very high disinfection performance thanks to "positive irradiation geometry"
- » Very low pressure loss
- » No built-in parts in the process medium
- » Pharmaceutical/ultrapure water design fulfils the requirements in accordance with GMP and FDA directives
- » Simple installation
- » Resistant against CIP/SIP operations thanks to selected materials and sensor with measuring window tube
- » Adaptable to material specifications
- » Low energy consumption

Type	Flow rate approx.* m ³ /h	Flange connection	Power consumption W / VA	Reactor dimensions W x H x D mm
E 2	2,1	R 1 ¼"	95 / 204	240 x 605 x 225
E 5	5,4	R 2"	150 / 330	240 x 1.120 x 245
E 10	8,1	R 2"	230 / 500	240 x 1.120 x 245
E 15	12,2	R 2"	270 / 580	240 x 1.120 x 245
ME 100	19,0	DN 65	520 / 840	250 x 1.255 x 245
ME 150	32,0	DN 80	660 / 1060	250 x 1.255 x 245
ME 250	50,0	DN 100	840 / 1430	380 x 1.255 x 415
ME 300	63,2	DN 80	1330 / 2050	250 x 2.215 x 320
ME 450	98,1	DN 100	1610 / 2810	380 x 2.215 x 415

* 400 J/m²; UV transmittance = 86 % per 1cm at the end of the lamp lifetime.
All specifications are subject to change without notice.

WEDECO Spektrotherm® technology



Leading the market due to efficiency and safety

The centrepieces of the WEDECO E/ME UV systems are particularly energy-efficient UV lamps. They have a long service life, operate continuously even at varying water temperatures and are far superior to conventional UV lamps thanks to their particularly high efficiency.

The ideal choice for water disinfection

WEDECO Spektrotherm® UV lamps emit UV light mainly in the spectral region of 254 nm (nanometres). This UV light region is particularly effective for the disinfection of drinking water and waste water. The special characteristic of the WEDECO Spektrotherm® UV lamp is its special amalgam/indium doping. Thanks to this, a constantly high UV light yield is achieved with a substantially extended lamp service life at the same time. In addition, liquid mercury can be done without by using this technology inside the lamp.

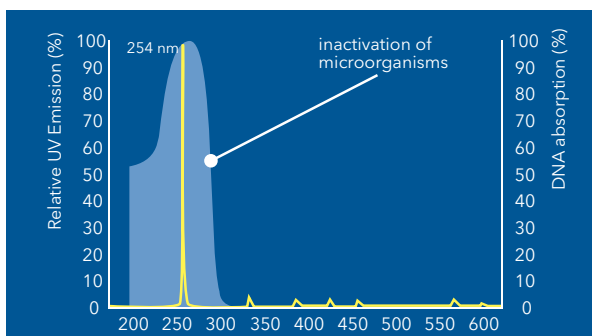
Advantages

- » 5 times higher UV-C output than conventional low pressure lamps
- » 3 times more efficient than medium pressure lamps
- » Improved aging characteristics
- » No undesired by-products (i.e. Bromite)
- » Stable UV-C intensity at water temperatures of 0 - 50 °C
- » Long lamplife

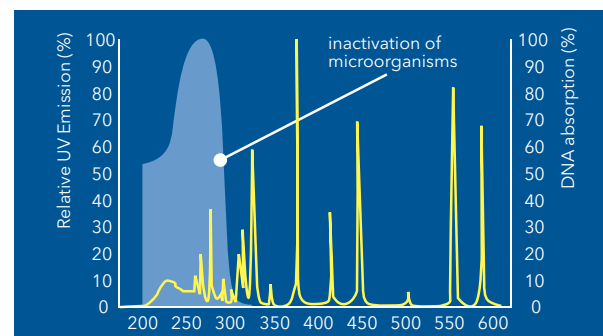
Long-life WEDECO Spektrotherm® UV lamp with the highest energy efficiency

WEDECO Spektrotherm® UV lamp can no longer be beaten with regard to economic efficiency. The light yield in relation to the energy expenditure is 3 times higher in comparison to medium pressure lamps.

Emission spectra [wavelengths in nm]



The monochromatic Spektrotherm® UV lamp emits at a wavelength of 254 nm, which is in the maximum of the effective disinfection range of the spectrum.



Medium pressure lamps emit a wide-band spectrum, most of which is outside the part of the spectrum that is relevant for disinfection. In addition, the formation of by-products cannot be excluded.

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots
- 2) A leading global water technology company

We're 12,000 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, longstanding relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

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