



Wedeco ME Series UV disinfection systems



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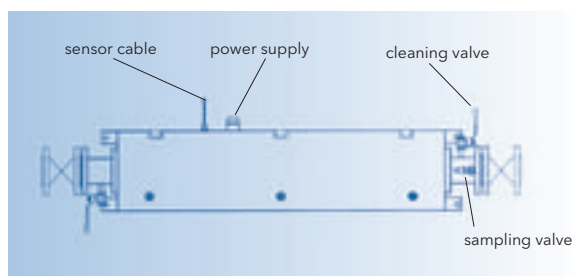
ME Series UV disinfection systems

Enterprises from the pharmaceutical, cosmetics and semiconductor industries require ultrapure water for the production process (purified water PW, HPW, UPW). Wedeco ME Series UV systems have 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 ME system is outstandingly suited for disinfection as well as for ozone remnant destruction.

Assembly of the Wedeco ME Series

The reactors of the ME Series consist of a quartz tube with UV lamps and reflectors arranged externally parallel to the flow, and all electrical components are 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
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 1 cm 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 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, there is no need to use liquid mercury when using this technology.

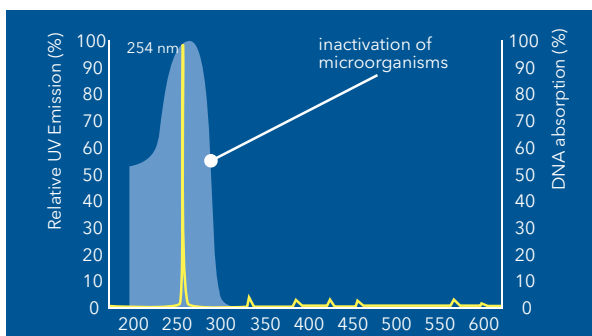
Advantages

- » Five times higher UV-C output than conventional low pressure lamps
- » Three 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

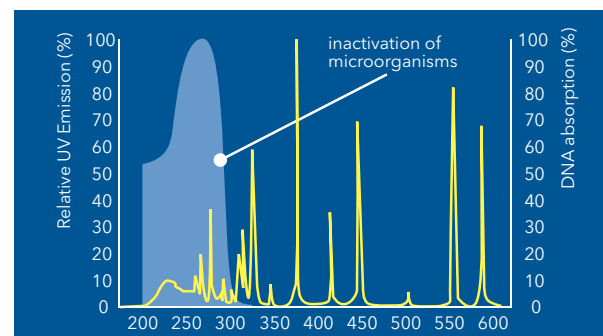
Long-life Wedeco Spektrotherm UV lamp with the highest energy efficiency

The light yield for Wedeco Spektrotherm lamps in relation to the energy in relation to the energy expenditure is three 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.

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