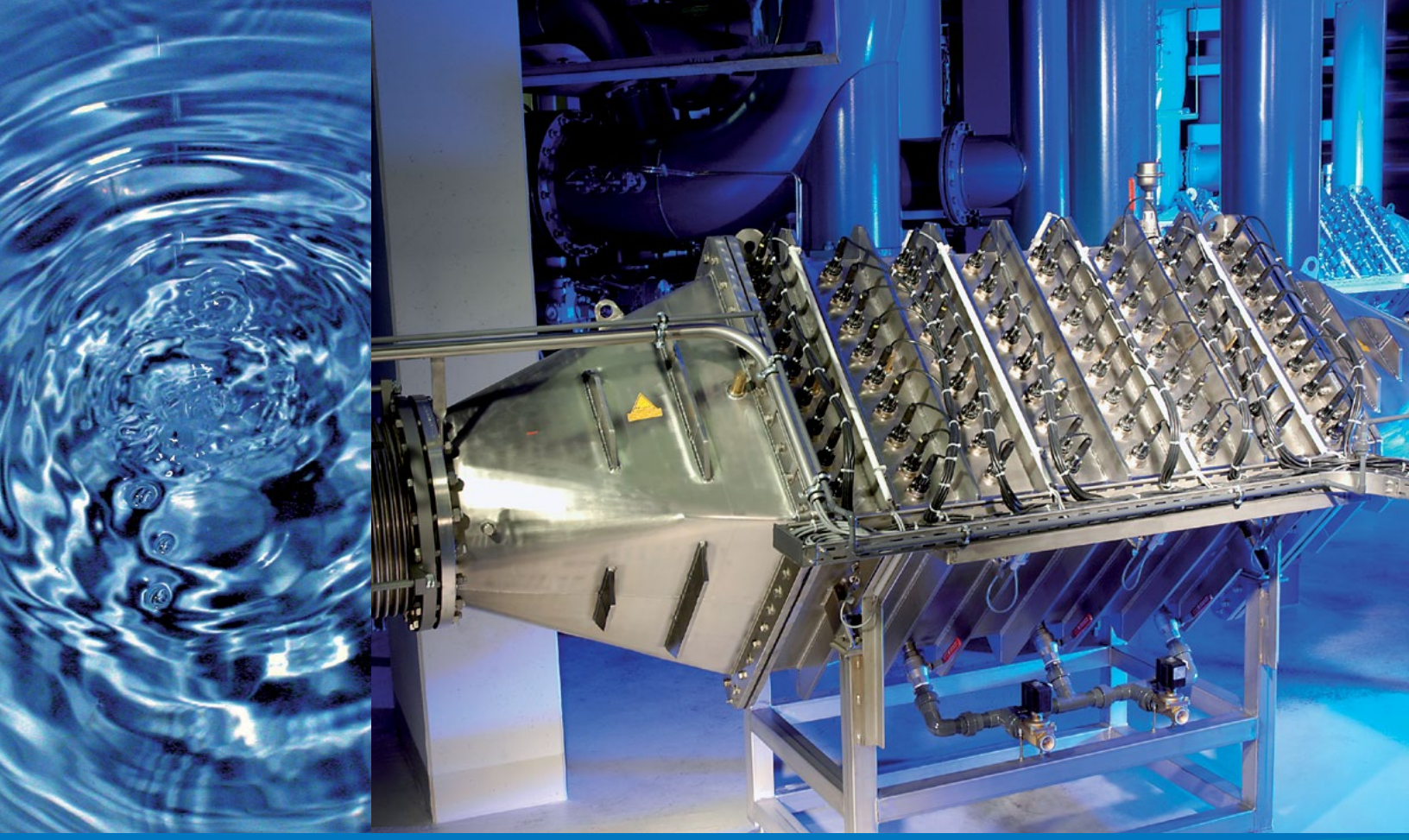


WEDECO K Series

EFFICIENT UV DISINFECTION FOR URBAN DRINKING WATER SUPPLY

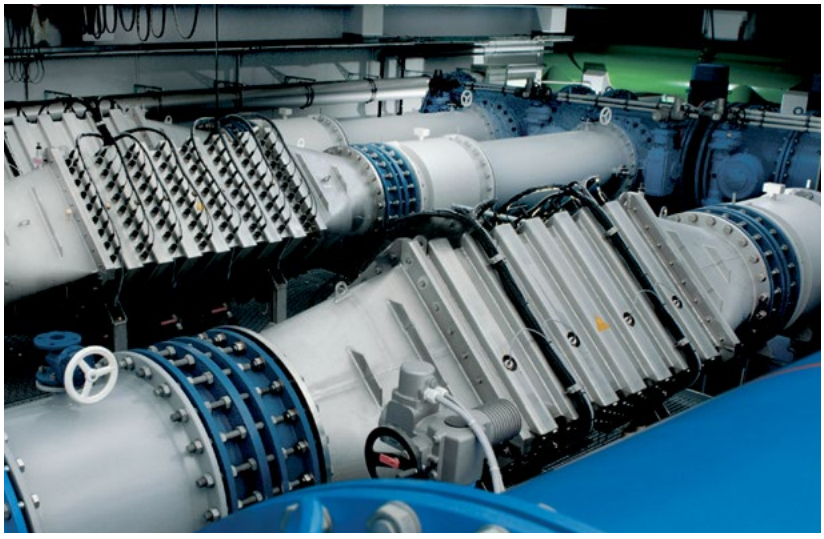
WEDECO
a xylem brand

Disinfect reliably - think sustainably

The potable water supply of large cities and metropolitan areas is a particular challenge for utilities. Enormous quantities of water have to be obtained, treated and distributed in urban areas every day. The WEDECO K reactor is a proven solution for the efficient treatment of large quantities of drinking water with UV light. With hundreds of installed K reactors worldwide, you can be confident that you have the right technology in place to meet the present and future water demands of your treatment plant.

The UV disinfection requirement in the treatment process is primarily the chemical-free inactivation of viruses, bacteria and parasites such as Cryptosporidium and Guardia - without creating unwanted smells or precarious by-products.

Other aspects that play an important role for water utility operators are sustainability, environmental compatibility and last but not least energy consumption. These factors must be taken into account when choosing the right technology in times of decreasing resources. When these three factors are considered, the WEDECO K reactor stands out due to its unique strengths.



WEDECO K Series

The strength of the WEDECO K Series lies in the combination of its Inline installation and the use of energy-efficient high intensity low pressure UV lamps. In this way, it is possible to disinfect large amounts of drinking water of up to 70 MGD per system, while minimizing the energy requirements of the system.

Depending on local conditions, different sizes and flow rates per system can be realized. Most importantly, every WEDECO UV K series reactor can be designed taking future drinking water requirements into consideration, Additional lamp rows can be integrated into the system for future use, in the event that the drinking water demand increases.

Advantages at a glance

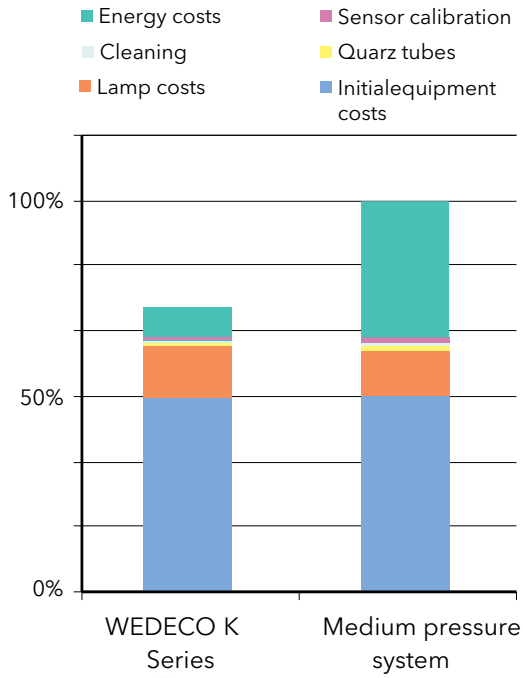
- Disinfection of up to 70 MGD drinking water per unit
- Certified acc. to US EPA
- Very low energy consumption thanks to efficient ECORAY® UV lamps
- Outstanding temperature stability of the UV lamps
- Long lamp life
- Very low headloss (InLine-Installation)

Energy-efficiency: The decisive advantage

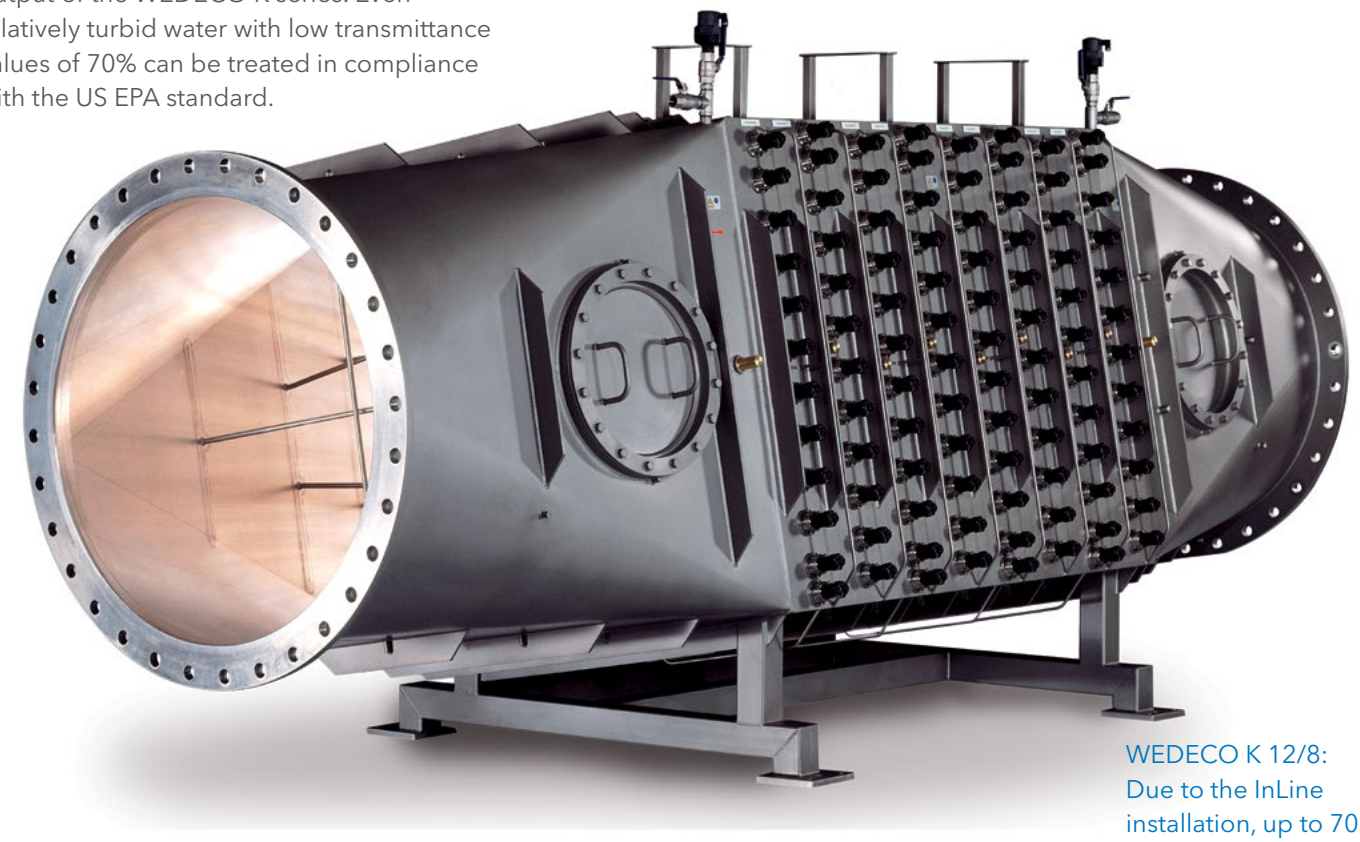
The WEDECO K series is the solution with the lowest energy and service life costs. The WEDECO K series sets benchmarks in terms of economic efficiency with a very low current consumption, long lamp service lives, a variable control and moderate investment costs. Coating formation on the quartz sleeves is also more manageable due to the low lamp temperature, so quartz sleeves rarely need to be cleaned.

Validated acc. to US EPA

All the standard types of the WEDECO K series are certified according to the internationally recognized USEPA standard for drinking water disinfection using UV light. This objective performance assessment supports the highly effective disinfection output of the WEDECO K series. Even relatively turbid water with low transmittance values of 70% can be treated in compliance with the US EPA standard.



Lifetime costs analysis based on 20 years, verified UV dose with typical figures from public invitations to tender.

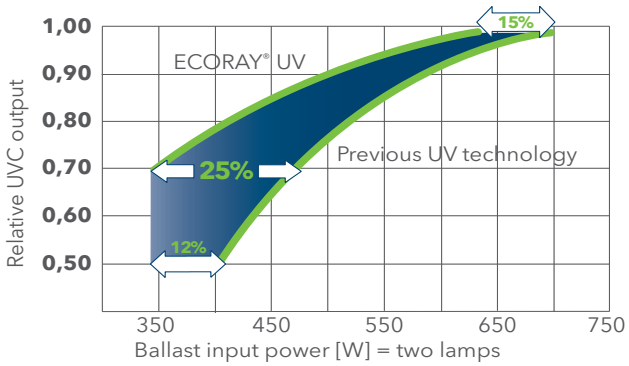


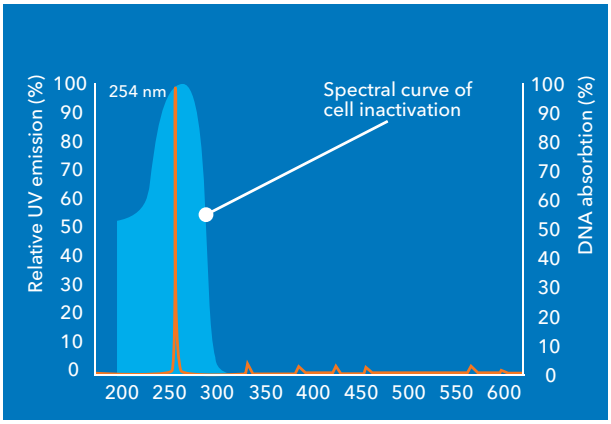
WEDECO K 12/8: Due to the InLine installation, up to 70 MGD drinking water can be disinfected per unit.

Greener. More efficient. Simply better.

The K units are equipped with the latest ECORAY UV lamp and ballast technology. In combination with the option of variable power output control, they feature excellent energy efficiency under all operating conditions. In dim mode, the ECORAY lamps realize average energy savings of up to 20 percent. ECORAY lamps also use up to 80 percent less mercury than the previous lamp generation, making them a sound choice.for the environment. With respect to sustainability, the UV lamp's associated power savings translate to carbon footprint reduction of up to 1,100 lbs of CO_2 per lamp over the lamp's life cycle.

In addition, ECORAY UV lamps provide long-lasting, trouble free operation due to excellent, validated aging properties and improved overall robustness.





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

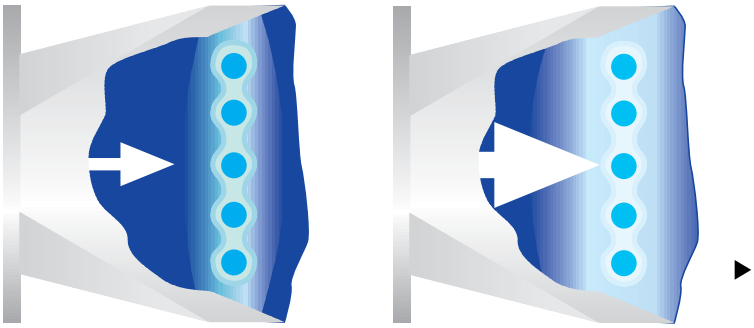
Long-life WEDECO ECORAY UV lamp with highest energy efficiency.

Variable power, fixed performance

The effectiveness of the WEDECO ECORAY lamps is increased thanks to the electronic ballasts with intelligent components which are specially fine-tuned to the lamps. Thanks to the dose pacing control, the output of the UV lamps is infinitely adjustable and thus allows optimal adjustment based on varying flow rates and water quality. Only the exact amount of energy needed for safe disinfection is emitted, giving considerable energy savings. This also reduces the aging of the lamps and minimizes the formation of deposits on the quartz sleeves. Additionally, rows of lamps can be switched on or off as necessary, e.g. during periods of low consumption giving additional advantages in terms of energy consumption.

Advantages at a glance

- Constant UV dose irrespective of changes in water quality or flow thanks to continuous output regulation of the UV lamps
- Fully automatic PLC control and visualization with bus or SCADA connection
- Maximum disinfection reliability
- Optimization of energy costs
- Easy operation and monitoring
- No overdosage

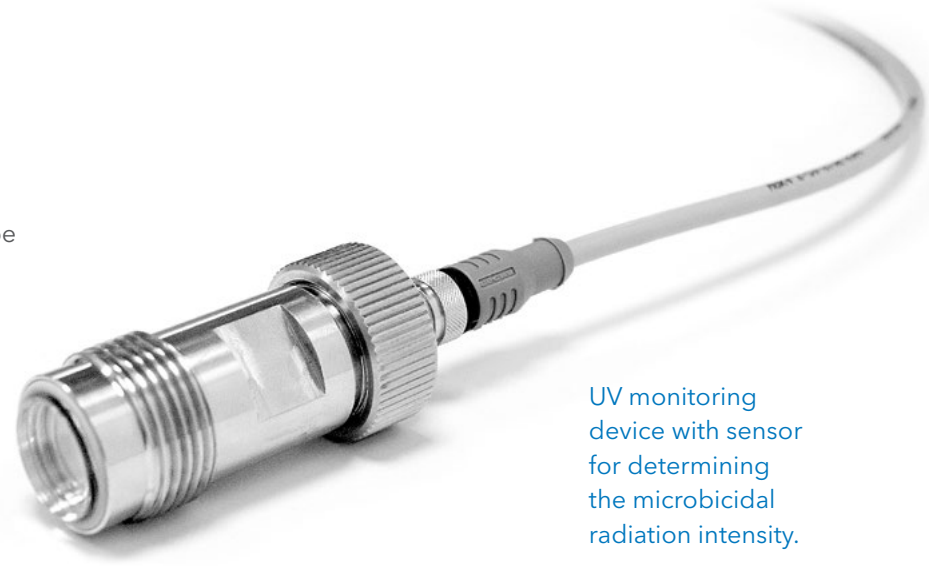


With the dose pacing control the UV radiation can be adjusted according to water quality and flow.

Leading sensor technology

The UV intensity in the water is influenced by the age of the lamp, the cleanliness of the quartz tube and the UV transmission in the water. This is why in the WEDECO K system the actual UV radiation emitted is constantly monitored and measured using integrated sensors.

This calibrated sensor stands out with its high UV selectivity, highly stable operating performance and a long service life.



UV monitoring device with sensor for determining the microbicidal radiation intensity.

Know-how in treatment technology.

You can rely on the know-how of our engineers and technicians to help you choose the right system for your needs. All recommendations for the design of your system are based on many years of experience, complex calculation methods, and take account of local validation and certification standards.

Our broad knowledge and unrivalled expertise in the field of disinfection along with our full range of highly developed WEDECO UV systems make Xylem a reliable partner for the application of UV technology in the treatment of drinking water.

TotalCare Service

Our global network of local service centers and partners offer comprehensive service to support secure, efficient and reliable operation. Our first priority is to support you and to maintain your systems for the duration of their service life. This is reflected in our solutions, which include proactive maintenance activities, thereby increasing the reliability of your system and optimizing its energy consumption.

24 WEDECO K 143 UV disinfection systems at Vancouver's Seymour-Capilano Filtration Plant treat up to 475 million gallons per day, making it one of the largest UV disinfection facility for drinking water in the world.

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, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

For more information on how Xylem can help you, go to **www.xyleminc.com**

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Let's Solve Water

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