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WEDECO® PureTube™ system

Clear and effective UV solution for ultra clean water

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WEDECO's PureTube is designed to meet highest standards of production in the cosmetic, pharmaceutical, semiconductor and other industries.

It has proven to eliminate even resistant pathogens, such as Adenovirus, to destroy residual ozone and to efficiently deliver ultra clean water.

The WEDECO PureTube brings a range of benefits especially in demanding environments under the strictest hygienic requirements.



Validated disinfection capabilities

WEDECO brand Puretube™ UV disinfection systems have undergone third-party validation testing in accordance with the UVDGM (USEPA, 2006). Validated products are tested to confirm a minimum inactivation equivalent of 3 log (99.9%) for target microorganisms in accordance with the UVDGM. Performance is not claimed nor implied for any product not yet validated; unvalidated products use single point summation calculations to provide delivered dose recommendations. Performance limitations depend on feed conditions, overall installed system design, and operation and maintenance processes; please refer to Operations Manuals. For more information contact treatment@xylem.com.



Sanitary features

The pure inline design with glass reactor:

- eliminates obstacles or dead zones to avoid stagnation while permitting excellent drainage.
- provides for lamps and sensors to be thermally isolated from water or steam, permitting sanitization at up to 144°C.



Easy installation or retrofitting

The inline design assures a compact installation. With available adapters, PureTube™ systems can be used to easily upgrade existing systems without plumbing changes and without the need for additional pumping.



Operational simplicity

UV system management is made easy through several integrated and optional controls. The Xylem sensor-controlled OptiDose™ system monitors operating conditions in real time, including flow, UV transmittance, and UV intensity. Process data can be readily accessed using the WEDECO EcoTouch™ controller with HMI and integrated configurable alarm outputs. Optional SCADA connectivity is also offered to enable overall process control.



Data-driven insights

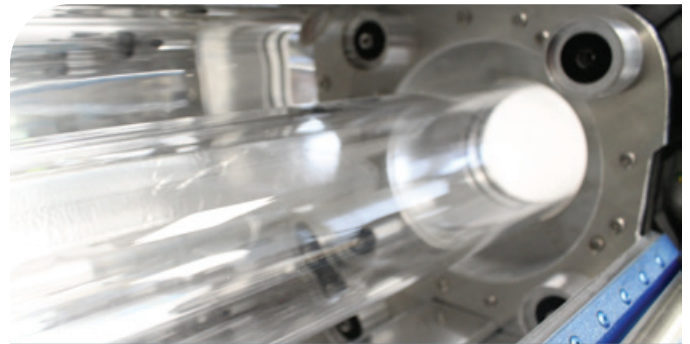
For smarter management of UV systems and other plant assets, Xylem Avensor® digital service platform is available to enable real-time and remote 24/7 monitoring and support in order to maintain system availability and optimal runtime. The Avensor platform sends alerts and data-driven insights to any device connected to your system, offers product documentation, and uses a private cellular network to safeguard data integrity and security.



Uniquely designed for efficient performance

The inline principle permits arrangements of the UVC lamps around a central quartz sleeve, resulting in:

- low head loss using linear flow without any reactor inserts.
- even distribution of UVC irradiation throughout the complete reactor chamber without shadowing or dark spots.
- high-efficiency reflectors.
- leading edge lamp technology.
- computer-based optimization delivers high UVC dose even at dimmed levels.



Ozone destruct capability

High irradiation dose design also makes the system ideal for by-product-free elimination of residual ozone.



Reduce operational cost

The EcoRay® lamp and ballast components combined with Xylem's OptiDose™ control system enables longer lamp life and lower energy consumption compared to conventional low- or medium pressure UV lamps¹. Sensors monitor operating conditions in real time and irradiation dose level is optimized even in dimmed mode, resulting in longer lamp life and reduced energy consumption.

PureTube

	60	80	100
UV transmittance, flowrate			
Max flow (m ³ /h)	25	49	106
UVT range @ 1 cm	85–99%	85–99%	85–99%
UV lamps and monitoring systems			
Lamp technology	EcoRay® LPHO	EcoRay LPHO	EcoRay LPHO
Power per lamp (W)	220	220	350
Nominal lamp life (hours)	14,000	14,000	14,000
Sensors	1 or 2	1 or 4	1 or 4
Sensor Type	SO20206 (DIN 19294)	SO20206 (DIN 19294)	SO20206 (DIN 19294)
Dimmable	Yes	Yes	Yes
No of lamps	2	4	4
Reactor			
weight [kg]	33	34	38
Overall reactor length (mm) ²	837	837	1,107
Process connection size (DN)	125	125	125
Process connection type (standard)	11864-2	11864-2	11864-2
Process connection type (optional)	Tri Clamp®	Tri Clamp	Tri Clamp
Pipe extensions to match WEDECO® ME units	optional	optional	optional
Pressure rating (bar)	PN 10	PN 10	PN 10
Materials in contact with water	Quartz glass, ASTM 316 L/1.4404	Quartz glass, ASTM 316 L/1.4404	Quartz glass, ASTM 316 L/1.4404
Protection class	IP54	IP54	IP54
Electrical cabinets			
Electrical standards	CE	CE	CE
Ballast type	electronic, high efficiency, variable output	electronic, high efficiency, variable output	electronic, high efficiency, variable output
Common outputs	System status, lamp status, alarm messages, process values	System status, lamp status, alarm messages, process values	System status, lamp status, alarm messages, process values
SMART integration	SCADA Avensor® connectivity option	SCADA Avensor connectivity option	SCADA Avensor connectivity option
Signal interfaces	Profibus, Profinet, Modbus®, Ethernet IP	Profibus, Profinet, Modbus, Ethernet IP	Profibus, Profinet, Modbus, Ethernet IP
Operator interface	EcoTouch™	EcoTouch	EcoTouch
Max ambient air temperature (°C)	35°C	35°C	35°C
Supply voltage	1 L/N/PE, 230 V +/-10%, 50–60Hz (TNS, TN-C net)	1 L/N/PE, 230 V +/-10%, 50–60Hz (TNS, TN-C net)	1 L/N/PE, 230 V +/-10%, 50–60Hz (TNS, TN-C net)
Standard cable length (m)	15	15	15
Power consumption (kW)	0.55	1.01	1.40
Cabinet rating/protection class	IP54	IP54	IP54

1 Lamp life is affected by a number of factors. For details on life calculations, contact treatment@xylem.com.

2 Various adapters available.

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Let's Solve Water