OZONIA

AQUARAY® 40 HO

UV Systems







UV DISINFECTION | VERTICAL LAMP SYSTEM | LOW PRESSURE HIGH OUTPUT | WASTEWATER

← Applications

- Wastewater Disinfection
- Wastewater Reuse
- CSO (Combined Sewer Overflow)

← Main characteristics

- Low Pressure High Output lamps
- Rated for outdoor/indoor use
- Vertical cross flow design
- Future upgrade flexibility

The Aquaray® 40 HO (High Output) Vertical Lamp System offers powerful UV output within a reduced footprint while providing the degree of disinfection required for even the most stringent of effluent criteria, such as Wastewater Reuse applications.

MAIN FEATURES

→ **Easy maintenance:**
Due to the vertical design, the Aquaray® 40 HO provides easy access to the UV lamps and quartz sleeves (no need to remove the UV module from channel)

→ **Save space:**
To minimize the footprint, the Aquaray® 40 HO utilizes Low Pressure High Output lamps in a vertical design

→ **Energy conservation:**
With a combination of efficient ballasts and row-by-row lamp switching increments, the Aquaray® 40 HO ensures energy conservation by dose pacing based on flow rate signal and UV transmittance

→ **Validated performance:**
The Aquaray® 40 HO has been third party validated and completed strict bioassay testing

UV TECHNOLOGY: Aquaray® 40 HO

The Aquaray® 40 HO Vertical Lamp Ultraviolet Disinfection System has been designed to provide disinfection for wastewater plants within a small footprint. The germicidal effect of the UV light inactivates most micro-organisms such as bacteria, viruses and parasites, while eliminating the need for dangerous chemicals.

The UV dose (UV intensity x contact time) defines the treatment efficiency which is provided by the unit. The effective dose applied depends on the UV transmittance of water to be treated as well as the proper hydraulic design of the UV system.

HOW IT WORKS

The low pressure high output lamps are powered by electronic ballasts to generate germicidal wavelengths of the UV spectrum. The lamps are inserted in quartz sleeves and isolated from the wastewater while delivering the required effluent inactivation.
UV sensors are installed to monitor the UV intensity from the lamps and guarantee that the proper intensity is delivered. The periodic maintenance of the system has been made simple and efficient by allowing the replacement of the lamps without removal of the submerged UV modules from the channel.

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TECHNICAL DATA

Model	Flow Rate per module	Number of lamps per module	Electrical Power per lamp
	m^3/h		W
Aquaray® 40 HO	315 to 500	40	165

Based on 30 mJ/cm^2 and 65% UVT

- **Lamp Type:** low pressure high output
- **Ballast Type:** electronic (on top of the module)
- **Lamp configuration:** vertical cross flow
- **Average lamp life:** 10 000 - 13 000 hours

▸ Standards

- **Power Supply:** 400-480V/3ph + N/50-60Hz
- **Earthing System:** TNS
- **Module Protection Class:** IP 54
- **Control Panel Protection Class:** IP 55

▸ Options

- **UVT Analyzer**
- **In-Channel Air Scrub**
- **Lifting Apparatus**
- **Chemical cleaning system**

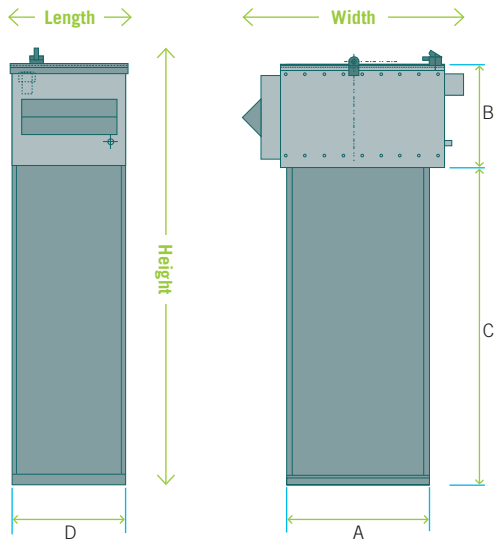
▸ Materials

- **316 stainless steel frame and enclosure**
- **UV resistant materials**

▸ Remote control and alarms

- **SCADA communication capability**
- **Dose pacing via external flow signal and UV transmittance**
- **Various alarms (low UV intensity, failed adjacent lamps, etc…)**

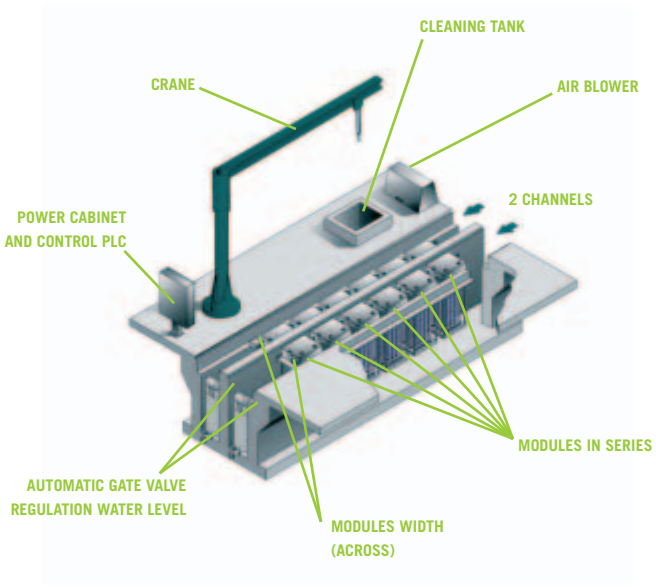
DIMENSIONS



FRONT VIEW SIDE VIEW

Model	Reactor Dimensions (mm)			
	A	B	C	D
Aquaray® 40 HO	762	533	1,702	623

TYPICAL INSTALLATION



Contacts

WWW.DEGREMONT-TECHNOLOGIES.COM

Ozonia International UV	**info-ozoniaFR@degtec.com**	**+ 33 1 58 81 50 00**
Ozonia France	info-ozoniaFR@degtec.com	+ 33 1 58 81 50 00
Ozonia Switzerland	info-ozoniaCH@degtec.com	+ 41 44 801 8511
Ozonia North America	info-ozonia@degtec.com	+ 1 201 676 2525
Ozonia Triogen UK	info-triogen@degtec.com	+ 44 13 55 220 598
Ozonia Russia OOO	info-ozoniaRU@degtec.com	+ 7 831 434 1628
Ozonia Korea	info-ozoniaKR@degtec.com	+ 82 31 701 9036
Ozonia China	info-china@degtec.com	+ 86 10 659 73 860
Ozonia Japan	info-japan@degtec.com	+ 81 3 544 46 361

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