

# AQUARAY® 40 HO

## UV systems



**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.**

### 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

### 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 for disinfection and water reuse (Title 22 certified)



### UV TECHNOLOGY : AQUARAY® 40HO

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.

### PRODUCT HIGHLIGHTS

- > Easy maintenance
- > Small footprint
- > Energy conservation
- > No submerged connections
- > Validated performances by third party (USEPA)
- > Title 22 certified



TECHNICAL DATA	Flow Rate per module (m <sup>3</sup> /h)	Number of lamps per module	Electrical Power per lamp (W)
Aquaray® 40 HO	315 to 500	40	165

Based on 30 mJ/cm<sup>2</sup> and 65% UVT

MODEL	Reactor Dimensions (mm)			
Aquaray® 40 HO	A	B	C	D
	762	533	1702	623

## TECHNICAL FEATURES

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

## MATERIALS

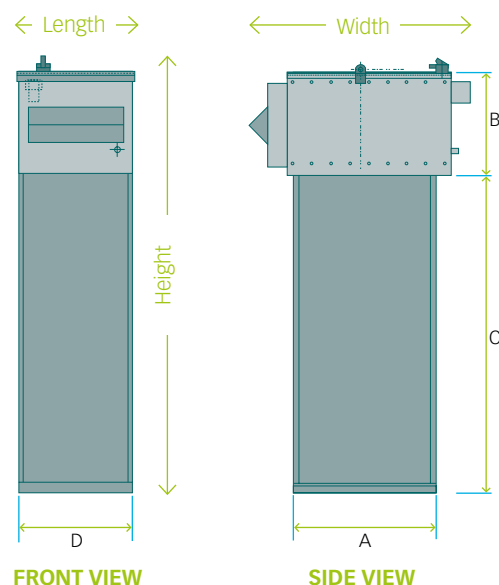
- 316 stainless steel frame and enclosure
- UV resistant materials

## OPTIONS

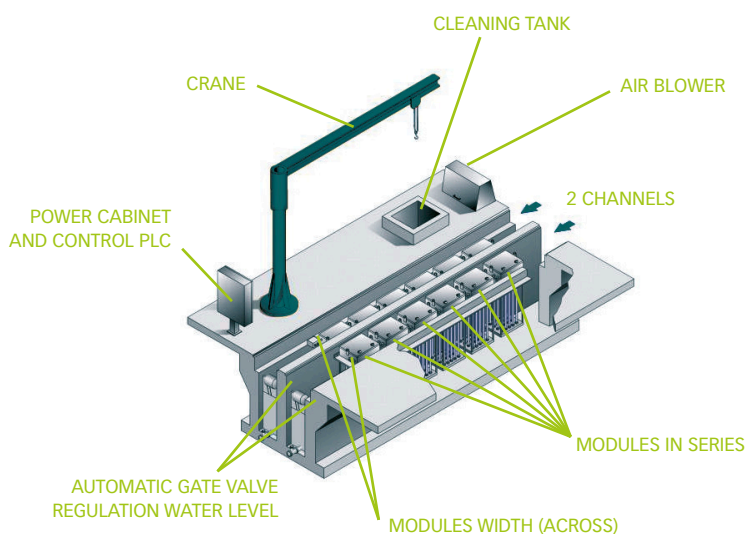
- In-Channel Air Scrub
- UVT Analyzer
- Chemical cleaning system
- Lifting Apparatus

## 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...)



## TYPICAL INSTALLATION



## CONTACTS

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