

# AQUARAY® 3X

## UV systems



**The Aquaray® 3X Vertical Lamp System offers a proven disinfection performance in a reduced footprint for even the most stringent of effluent criteria, such as Reuse applications.**

### APPLICATIONS

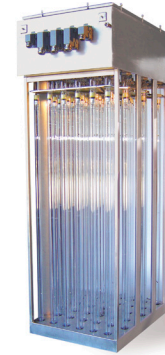
- Wastewater Disinfection
- Wastewater Reuse
- CSO (Combined Sewer Overflow)

### MAIN CHARACTERISTICS

- Low Pressure High Output amalgam lamps
- Rated for outdoor/indoor use
- Vertical cross flow design
- Flexibility for future upgrades

### MAIN FEATURES

- **Energy conservation:** With a combination of variable-output electronic ballasts, highly efficient amalgam lamps and row-by-row lamp switching increments, the Aquaray® 3X ensures energy conservation by dose pacing.
- **Validated performance:** The Aquaray® 3X has been third party validated and completed strict bioassay testing for disinfection and waste water reuse (Title 22 certified)
- **Easy maintenance:** Due to the vertical design, the Aquaray® 3X allows easy access to UV lamps and quartz sleeves (no need to remove the UV module from channel).
- **Save space:** To minimize the footprint, the Aquaray® 3X utilizes Low Pressure High Output Amalgam lamps in a vertical design.



### UV TECHNOLOGY : AQUARAY® 3X

The Aquaray® 3X High Output Vertical Lamp Ultraviolet Disinfection System has been designed to provide disinfection for medium to large wastewater plants.

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 as well as the hydraulic design of the UV system.

### HOW IT WORKS

The low pressure high output amalgam lamps are powered by electronic ballasts. 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 dose is delivered.

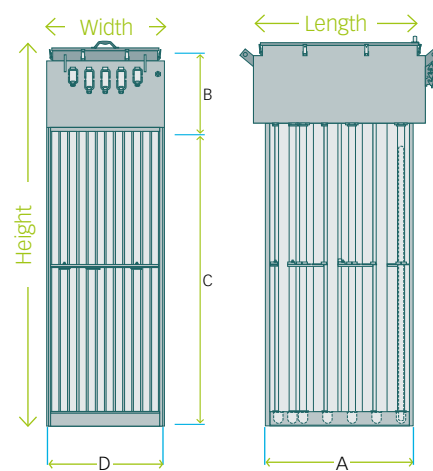
The periodic maintenance of the system has been made simple and efficient by allowing the replacement of the lamps without removal of the submerged UV modules from the channel.

### PRODUCT HIGHLIGHTS

- > High output amalgam vertical lamp
- > Easy maintenance
- > Small footprint
- > Energy efficient
- > No submerged connections
- > Validated bioassay by third party (USEPA)
- > Title 22 certified

TECHNICAL DATA	AQUARAY® 3X
Flow rate per module MGD (Based on 30 mJ/cm <sup>2</sup> and 65% UVT )	5
Number of Lamps per module	36
Lamp technology	Low pressure, high output amalgam
Power Consumption per lamp	400 W
Ballast type	Electronic variable output
Lamp configuration	vertical cross flow
Average lamp life	12 000 hours
Power supply	230V/3ph + N/50-60Hz
Module Protection Class	IP 54
Control Panel Protection Class	IP 55

MODEL	Reactor Dimensions (in.)			
Aquaray® 3X	A	B	C	D
	36	20	74	29



FRONT VIEW

SIDE VIEW

## MATERIALS

- 316 stainless steel
- UV resistant materials

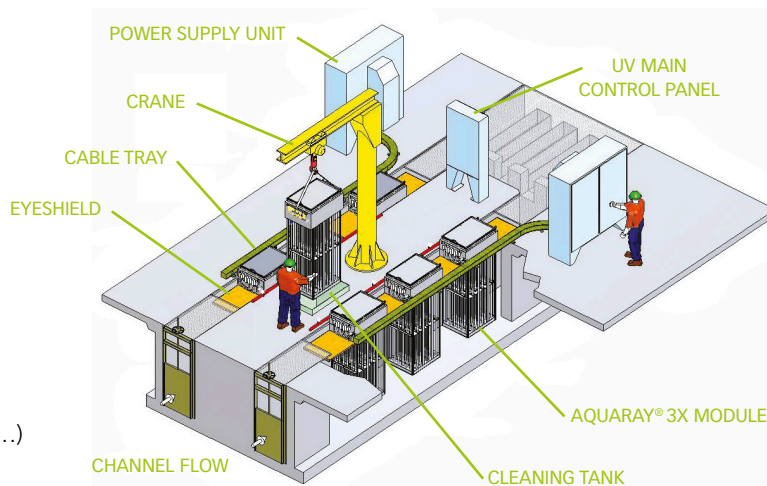
## OPTIONS

- 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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