

UV

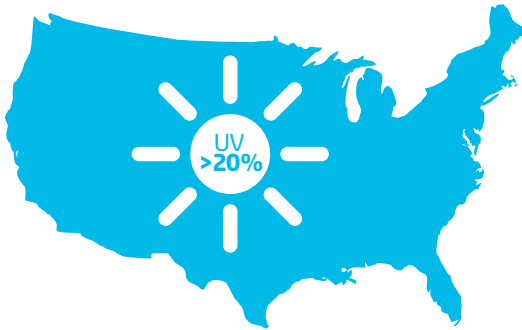
**OZONIA**

**AQUARAY<sup>®</sup> HiCAP<sup>™</sup>**

Wastewater Ultraviolet  
Disinfection Systems



# ULTRAVIOLET (UV) DISINFECTION



**Over 20% of the wastewater treatment plants in North America use UV disinfection technology. The use of UV is growing due to its inherent safety as a non-chemical process, its ability to inactivate a wide range of harmful microorganisms, and its cost and maintenance advantages.**

UV has been proven for decades as an effective disinfection method in municipal wastewater applications and has many advantages over traditional disinfection technologies.

- Easy to operate and maintain
- Safe and environmentally friendly
- Effective on a wide range of microorganisms including chlorine resistant species
- Low capital and operating costs

## THERE'S MORE TO **OZONIA** THAN EXPERTISE



 OZONIA UV installations

**As the leading vertical UV system manufacturer, OZONIA's UV technology has proven its quality and reliability for over 25 years.**

**OZONIA utilizes its three R&D centers to develop next generation products for the municipal drinking water, municipal wastewater, industrial process water, and leisure markets.**

With local offices in the **USA, Switzerland, Scotland, France, Russia, China, Japan and Korea** - OZONIA can provide the local knowledge and expert advice to solve any water treatment challenge.

*OZONIA - A Degremont Technologies Company* – draws upon the vast resources of the Degremont and Suez Environment groups by partnering with distributors and representatives around the world for sales, service and customer care support.

No matter where your business takes you, OZONIA's network of offices and local representatives can provide the support you need to achieve your goals.



# AQUARAY® HiCAP™ ULTRAVIOLET DISINFECTION SYSTEMS

The *Aquaray® HiCAP™* has been designed for **High Capacity** municipal wastewater applications so even the world's largest treatment facilities can benefit from *Ozonias* vertical lamp systems performance and reliability.

## INTEGRATED AUTOMATIC BANK LIFTING SYSTEM

- The Automatic Bank Lifting System (ABLS) enables plants to reduce capital costs by eliminating the need for a crane
- Modules can be lifted automatically for maintenance or winter storage

## POWER SUPPLY UNIT (PSU)

- Air Conditioned - Self Contained
- External Power Supply Unit (PSU) allows easy access to ballast and electrical components

## ADVANCED PLC CONTROL SYSTEM

- Intuitive touch screen Human Machine Interface (HMI) allows easy lamp and power tracking
- Ethernet connections allow remote monitoring and troubleshooting

## MODULAR VERTICAL LAMP SYSTEM (VLS)

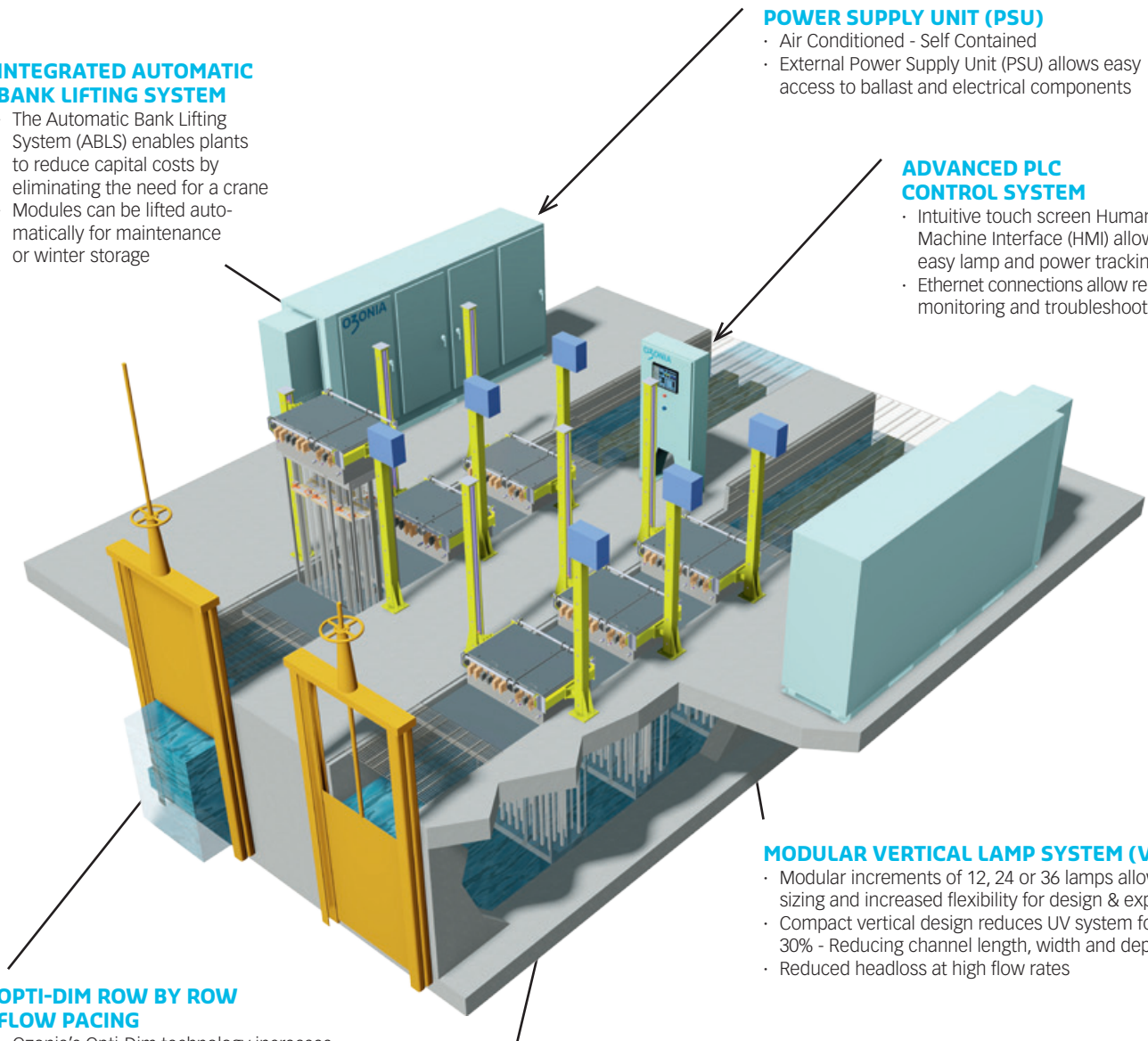
- Modular increments of 12, 24 or 36 lamps allow accurate sizing and increased flexibility for design & expansion
- Compact vertical design reduces UV system footprint by 30% - Reducing channel length, width and depth
- Reduced headloss at high flow rates

## OPTI-DIM ROW BY ROW FLOW PACING

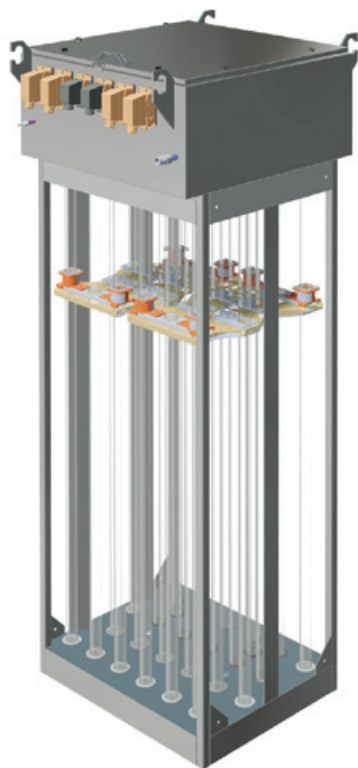
- Ozonia's Opti-Dim technology increases system efficiency by reducing the total number of lamps in operation to reduce energy consumption
- Lamp and ballast efficiency is further optimized by dimming lamps
- 360° UV intensity sensor readings taken to confirm water quality conditions

## OZONIA (1000 W) LOW PRESSURE HIGH OUTPUT AMALGAM LAMPS

- Ozonia's high efficiency amalgam lamp and ballast combination has been designed to meet the requirements of the largest plants in the world
- Up to 50% reduction in number of lamps
- 12,000 hour lamp lifetime



# AQUARAY® HiCAP™ VERTICAL LAMP SYSTEMS (VLS)



## VERTICALLY ORIENTED - STAGGERED LAMP ARRAYS ELIMINATE SHORT CIRCUITING AND LOW UV INTENSITY “DEAD ZONES”

- Patented *Ozonía* flow deflectors optimize hydraulics by directing water toward the center of the UV lamp array
- Automatic quartz sleeve wiping system
- Opti-Dim row by row flow pacing

## OZONIA'S MODULAR DESIGN PROVIDES THE ABILITY TO ADD SMALLER INCREMENTS OF LAMPS TO BETTER FIT ACTUAL PLANT FLOW CONDITIONS

Other benefits include:

- Increases flexibility for plant design and expansion
- Multiple banks in series optimizes hydraulics
- Multi-bank channel design reduces channel count
- Ensures redundancy requirements are met

## OZONIA AUTOMATIC UV BANK LIFTING SYSTEM (optional)

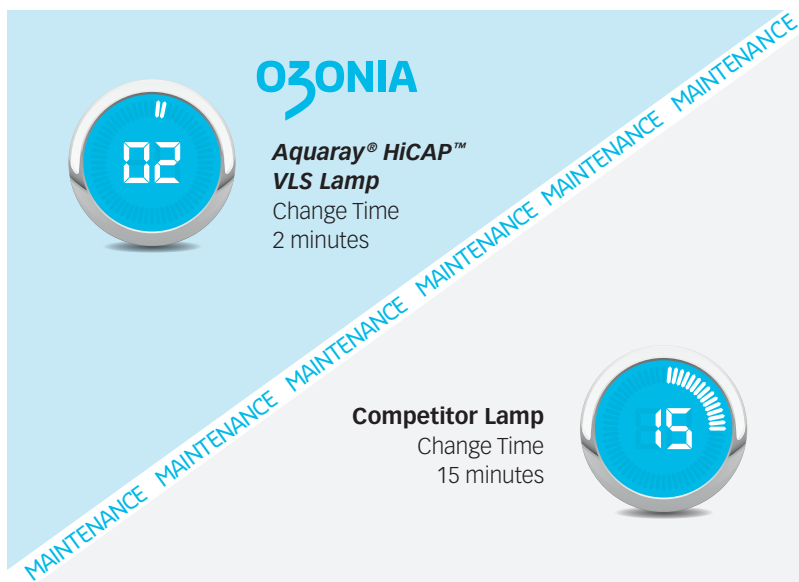
- Easy maintenance and winter storage

## BIOASSAY VALIDATED PERFORMANCE

- The Aquaray® HiCAP™ has undergone extensive bioassay validation testing to confirm disinfection performance.
- Designed for a wide range of effluents including low UV transmittance applications and combined sewer overflows (CSOs)
- Complies with NWRI and California Department of Public Health wastewater reuse title 22 requirements.

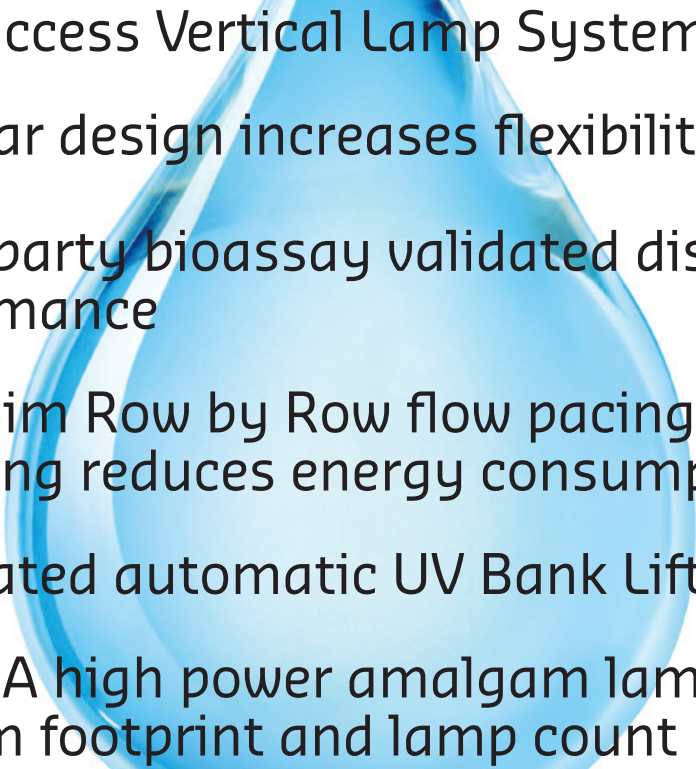
## EASY ACCESS WITH OZONIA'S VERTICAL DESIGN

- No submerged electrical connections
- No need lift UV modules out of the channel for maintenance

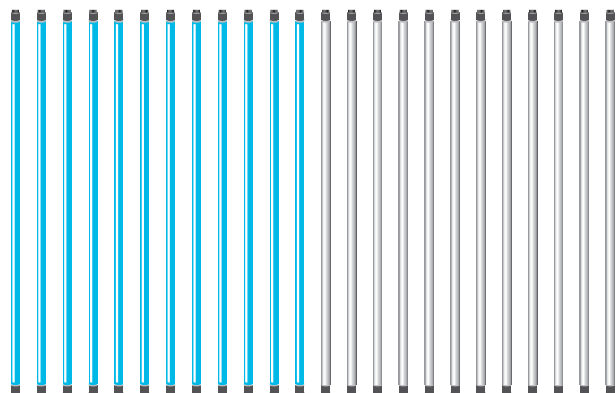


# AQUARAY® HiCAP™ UV DISINFECTION SYSTEMS

## KEY BENEFITS

- 
- Easy access Vertical Lamp System (VLS)
  - Modular design increases flexibility
  - Third-party bioassay validated disinfection performance
  - Opti-Dim Row by Row flow pacing and lamp dimming reduces energy consumption
  - Integrated automatic UV Bank Lifting System
  - OZONIA high power amalgam lamp reduces system footprint and lamp count

**OVER  
50%  
FEWER LAMPS**



# GLOBAL PRESENCE



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