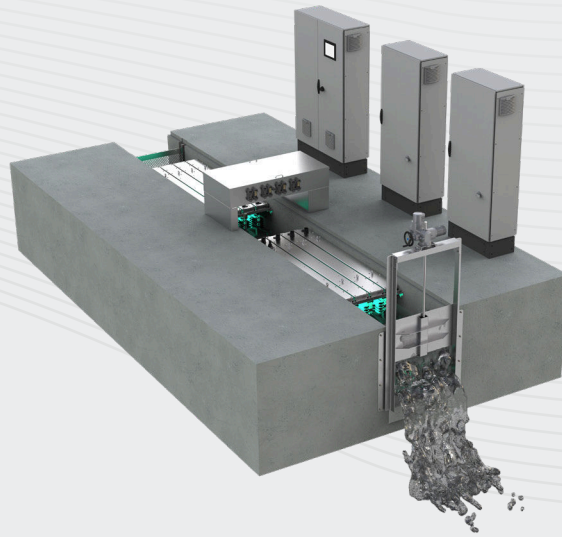




# NUVONIC

formerly Aquionics, Berson, Hanovia and Orca GmbH



## OPENLINE OLP

### *OPEN CHANNEL UV TREATMENT FOR WASTEWATER, REUSE AND INDUSTRIAL APPLICATIONS*

OpenLine systems with automatic level control provide an economical and efficient solution for the treatment of wastewater effluent. Using low pressure, high-output amalgam lamps, the OpenLine delivers a sustainable design while not compromising on quality or performance.

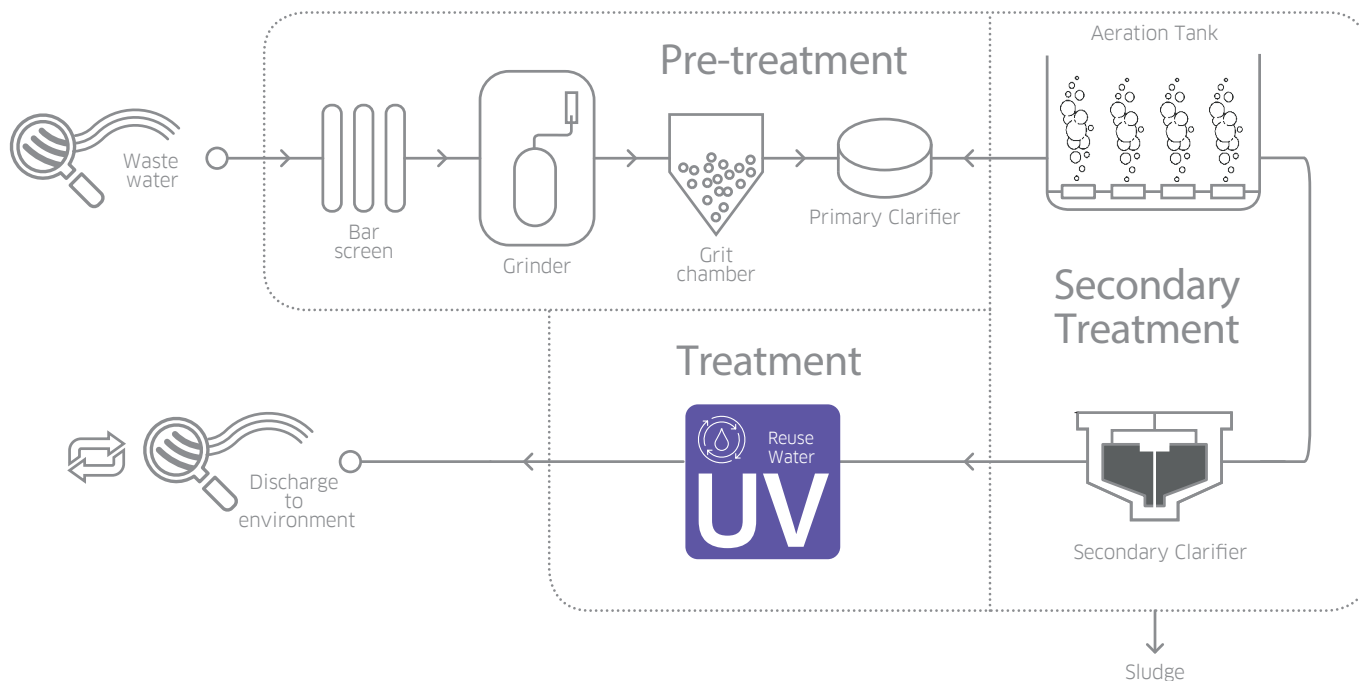
The OpenLine advanced control system monitors lamp output, water quality and flow, thus only consuming the necessary power to achieve the required performance.

The OpenLine is ideal for small to medium sized treatment plants that are looking for a low maintenance and easy to operate system.

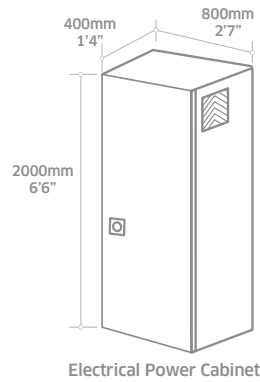


Application  
Optimized UV for  
Open Channel

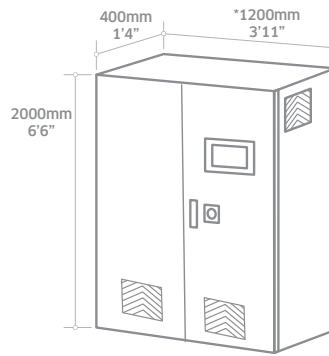
# POTENTIAL LOCATIONS OF THE OPENLINE IN MUNICIPAL WATER TREATMENT PROCESS



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
<b>INTELLIGENCE</b>		
Calibrated UV sensor measuring active wavelengths	Continuous verification of performance with real time UV intensity reading and in-built low UV dose alarm	Easy to monitor and log system performance
Flow and UV transmittance (UVT) meter inputs	Dose reading based on actual process conditions when meters are connected	Accurate UV dose reading guaranteed under wide range of operating conditions
<b>OPTIMIZATION</b>		
Advanced control system with lamp/ballast turn down capability	Reduced power consumption	Confidence in a sustainable solution with minimal carbon footprint
UV dose for wastewater treatment	Treatment for wastewater from microbiological contamination	No chemical storage or delivery
Robust Design	Parts have been selected for the rigors of wastewater effluent	Reduced downtime due to maintenance
	Standard flange hole patterns	Easily connect standard flanges
Automatic wiper (quartz cleaning)	Automatically cleans to maintain performance	Provides uninterrupted system performance
<b>INTEGRATION</b>		
Compact Design	Can be retrofitted to existing process and chlorine contact channels	Easy to install
RS 485 interface	Cable connection to customer control system	Easy integration to SCADA or plant control systems



Electrical Power Cabinet



Electrical Control Cabinet

MODEL NUMBER	HYDRAULIC LIMIT (m³/h)	NO. OF LAMPS	NO. OF MODULES PER BANK	NO. OF BANKS	NO. OF CABINETS	MAX ELECTRICAL POWER DRAW PER CABINET (kW) <small>*ENQUIRE WITH SALES FOR MORE INFORMATION</small>	
						Fan ventilated	Air conditioned
OPL-05081	913	40	4	1	2	7.1	7.9
OPL-06081	1100	48	4	1	2	8.4	9.2
OPL-07081	1286	56	4	1	2	9.8	10.6
OPL-08081	1473	64	4	1	2	11.1	12
OPL-08101	1846	80	5	1	3	11.1	12
OPL-08121	2220	96	6	1	3	11.1	12
OPL-05082	913	80	4	2	4	7.1	7.9
OPL-06082	1100	96	4	2	4	8.4	9.2
OPL-07082	1286	112	4	2	4	9.8	10.6
OPL-08082	1473	128	4	2	4	11.1	12
OPL-08102	1846	160	5	2	5	11.1	12
OPL-08122	2220	192	6	2	6	11.1	12

All dimensions are available on request for clearance purposes only. We have a policy of continuous product development, exact drawings are available on request. All specifications are subject to change without notification. Your distributor or our account manager can advise on correct sizing and specification requirements. \*For Cabinet size with air conditioning, W becomes 1'3" [356mm] wider, all other sizes remains the same.

#### UV SYSTEM

Lamp Type:	Amalgam
Input Power per lamp:	330 W
Lamp Configuration:	Horizontal, parallel to flow
Level Control Device Options:	Penstock Weir
Sleeve Cleaning Method:	Automatic Pneumatic Drive Wiping System
UV Module Connection:	NEMA 4X / IP66 (Downward Opening Gate)
Maximum Particle Size:	< 30 microns
Lamp Operating Lifetime:	14,000 hours
Submerged components Material:	Stainless Steel 316(EN 1.4404)
Non-submerged components Material:	Stainless Steel 304 (EN 1.4401)
Safety:	Snap Action Limit Switch (System shut down when module is removed)

#### OPTIONS

Outdoor cabinet: Stainless Steel (SS304), NEMA 4X / IP65, with AC cooling Compressor for pneumatic wiping system
Uninterruptible Power Supply (30 minutes UPS for PLC only)
A-Frame module lifting device
UVT meter
Spare Module
Module Storage/Maintenance Rack

#### HMI / CONTROL

Display:	Allen Bradley Panelview 5310 10.4" operator Interface Touch Screen
Fault Finding:	Alarm Notifications, Lamp Status
PLC:	Allen Bradley Compact Logix

#### POWER AND CONTROL CABINET

Power Supply/V:	380V (3L+N wye) 50/60 Hz 400V (3L+N wye) 50/60 Hz 415V (3L+N wye) 50/60 Hz 480V (3L+N wye) 50/60 Hz
Lamp Driver Type:	Electronic, variable output
Cabinet Enclosure Rating:	NEMA 12 / IP54
Ballast Cooling Method:	Forced fan ventilation
Ambient Operating Temperature:	5-40°C (41-104°F)
Maximum Ambient Relative Humidity:	85% non-condensing
Typical Outputs Provided:	Lamp status, common alarms, warnings, & UV intensity (dose)
Cabinet Material:	Painted Carbon Steel Cabinet (Indoor)

#### CUSTOMER OUTPUTS

4-20 mA outputs:	UV dose bank A, UV dose bank B
VFC outputs:	Bank A running, any warning, any trip Bank B running, any warning, any trip Channel low-UV

#### CUSTOMER INPUTS

4-20 mA active or passive inputs:	Optimal Flow Signal, Optional UV Transmittance Signal
24VDC inputs:	Remote stop/start, remote reset

#### CUSTOMER COMMUNICATIONS PORT

Ethernet IP, Modbus TCP/IP (SCADA connection)
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#### APPROVALS

CE marked, UL508A
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# OPENLINE

Also available in our Waste Water product range...



**PROLINE  
PQ WW IL**

Range of medium pressure products with NWRI validation for waste water reuse



**PROLINE  
WW IL**

Range of compact medium pressure products for waste water treatment

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