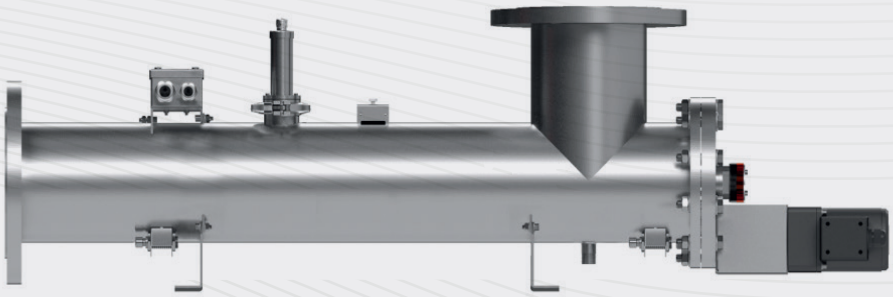
NUVONIC

formerly Aquionics, Berson, Hanovia and Orca GmbH



RASLINE D EO

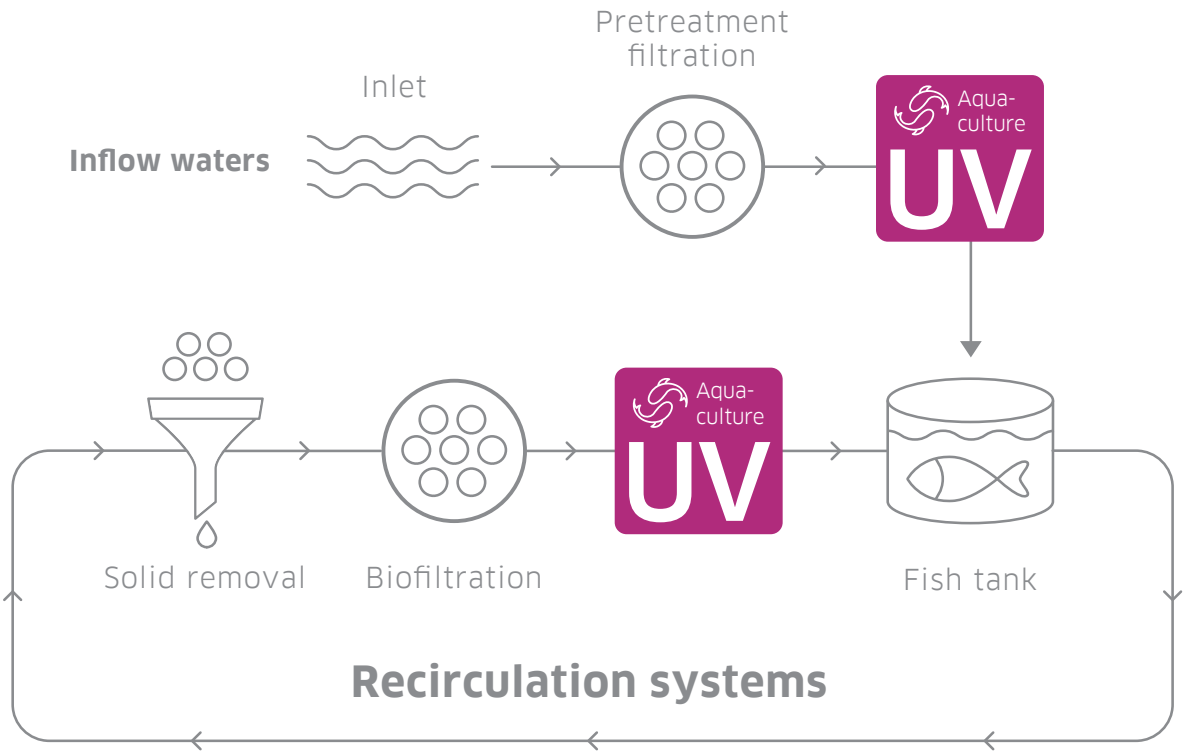
OPTIMISED UV TREATMENT FOR AQUACULTURE

Our **RASLine D EO UV** systems are optimised to deliver effective UV treatment for recirculating aquaculture systems. The D EO integrates an innovative single medium pressure lamp chamber design with sensors and intelligent control technology to automatically deliver optimum treatment performance with high operational efficiency.

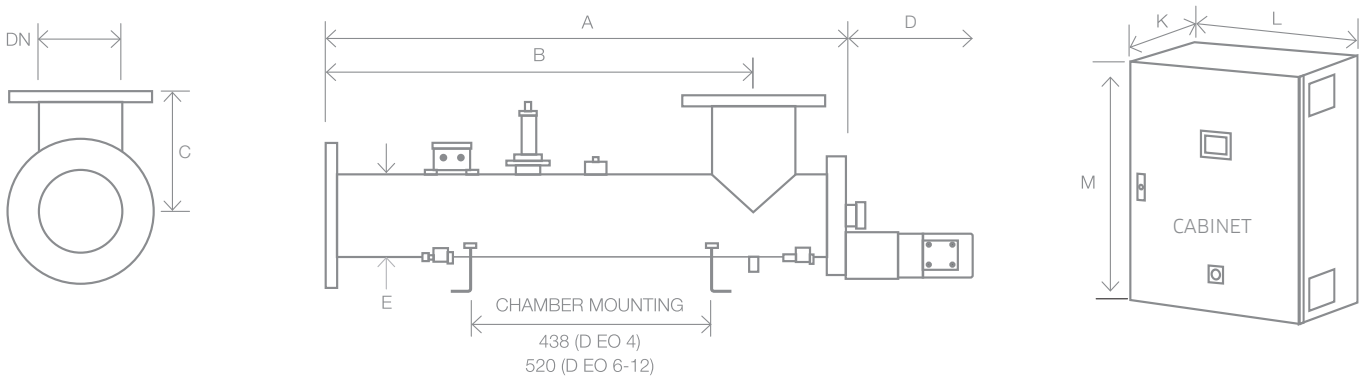
The D EO will eliminate harmful microorganisms, reduce the bio-burden, protect against bio- fouling and lower operating costs. Each system comes with a certified dry UV sensor that measures the germicidal output of the UV system and a UV dose read out makes it easy to monitor and log performance.

Application
Optimised UV for
Aquaculture

POTENTIAL LOCATIONS OF THE RASLINE D EO™ IN BOTTLED WATER PROCESSING LINE



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
INTELLIGENCE		
UV sensor	Continuous verification of performance with in-built low intensity alarm	Easy to monitor and log system performance
UVGuard™ on UV sensor window	Protects against UV exposure when checking a UV duty sensor with a reference sensor while the system is operating	Ability to safely audit the UV performance without interrupting production
Flow and UV transmittance (UVT) meter inputs	Stepless adjustment of lamp power based on real time operating conditions	Optimised use of energy, saving operating costs
OPTIMISATION		
Single medium pressure lamp	Provides active wavelengths to disinfect the water	Protect your fish, your processes and the environment from harmful contamination without resorting to chemicals
	Lower maintainance cost compared to multi-lamp system	Reduced operating costs
Automatic wiper (quartz cleaning)	Self cleaning	
INTEGRATION		
Designed for the treatment of aquaculture water	UVShield™ power cut-out for lamp access (option)	Enhanced operator safety when changing a lamp
	Can be retrofitted to existing process	Easy integration
	RS 485 Industrial Ethernet	Easy integration to building management systems



			Dimensions (mm)													Approx weight (Kg)		
			Chamber						Control Cabinet (fan cooled)			Control Cabinet (with A/C)			Chamber	Control cabinet	
Model Number	Max Power (kW)	Min T_{10} (%)	A	B	C	D	E	DN	K*	L	M**	K*	L	M**	Empty	Fan	With A/C
	Starting																
RASLine D EO 4	4.5	80	1009/1232 with motor	823	165	900	114	100	400	800	1200	400	1250	1200	30	96	120
RASLine D EO 6	4.5	80	1035/1286 with motor	850	245	950	168	150	400	800	1200	400	1250	1200	44	96	120
RASLine D EO 8	4.5	80	1110/1361 with motor	875	320	1000	210	200	400	800	1200	400	1250	1200	65	96	120
RASLine D EO 10	4.5	80	1190/1441 with motor	903	430	1100	273	250	400	800	1200	400	1250	1200	96	96	120
RASLine D EO 12	6.8	80	1430/1685 with motor	1093	475	1325	324	300	400	800	1200	400	1250	1200	145	96	120

* Allow dimension L in front of cabinet for door opening and panel access.
** M dimension includes the space for the cabinet mounting brackets but you need to allow space below the cabinet for cable entry and access (minimum of 250 mm).
All dimensions are approximate 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.

UV CHAMBER	
Material:	StSt 316L / 1.4404
Internal finish:	As made pipe and tube, welds as laid, electropolished and passivated
External finish:	BS EN 10088-2 or 10088-3, 1J or 2J and ASTM No. 4
Process (mating) connections:	Flange EN 1092-1 PN16
Drain connection:	BSPT
End plate:	Removable end plate
Degree of protection:	IP65 equivalent to NEMA 4 but not for outside use
Wiper:	Automatic (electrically driven)
Arc tube (lamp):	Medium pressure
Arc tube enclosure:	Doped quartz (F240)
Number of arc tubes (lamps):	1
Expected lamp life:	9000 hours
Temperature sensor:	Yes
UV sensor:	Calibrated DVGW compliant dry sensor with UVGuard™ sensor window
Working fluid temperature:	1°C to 60°C
Hydrostatically pressure tested:	Yes to PED requirements EN 13445
Chamber mounting:	Horizontal only
Operating pressure:	6 bar (positive pressure only)
Seals:	EPDM, DVGW-W270 D1 and D2, NSF 51 and 61 approved

OPTIONS
Cabinet: Stainless steel 304 with fans (5°-40°C), IP55 (NEMA 4X)
Cabinet: Stainless steel 304 with air conditioning (5°-50°C), IP66 (NEMA 4X), relative humidity <95% non condensing
Operation and Maintenance manual and printed Installation and Commissioning manual in Chinese, English, French, German and Spanish
Flange options: ANSI 150 (NPT drain), JIS and Table 'E'
Lead length: 20 and 29 m
Bleed valve: valve supplied
Vent valve: manual valve
Welder Pack
Operating pressure: 10 bar and 16 bar
Aggressive water package: For 400 ppm to 20000 ppm chloride water

OPTIONS (CONTINUED)
Skid mounting (not shipboard or earthquake zone)
Document Support Pack
UVShield™: Power cut-out for lamp access
UL 508A
Halogen-free cables
Water leak detection
In field UV reference sensor kit

CABINET (CONTROLLER UV TOUCH TM)	
Material:	Polyester coated carbon steel
Degree of protection:	IP55 / NEMA 12
Supply voltages (nominal):	380 V to 480 V (-5% to +10%), 50/60 Hz
Operating temperature range:	5°C to 40°C
Relative humidity:	<85% non-condensing
Cooling fans:	Yes

CABINET (GENERAL)	
Ballast power adjustment:	Stepless variable power (30 to 100% of maximum ballast rating)
Interconnecting cable:	10 m cabinet to chamber

CUSTOMER INPUTS	
4-20 mA passive inputs:	Flow meter and transmittance meter
VFC inputs:	Remote stop/start, Remote reset, Reduce power
24 V dc pulsed inputs:	Start and stop

CUSTOMER OUTPUTS	
4-20 mA passive outputs:	UV intensity, UV dose and chamber temperature
VFC outputs:	Lamp ready (enable flow), System running, Common warning, Common trip, Low UV warning, Water leak detected, System in remote

CUSTOMER COMMUNICATIONS PORT	
RS 485:	Modbus

APPROVALS
CE marked

RASLINE D EO

Also available in our Aquaculture product range...

RASLINE D PH

Suitable for a wide range of general disinfection applications across a range of UVTs and flows

RASLINE PQ IL

3rd party NVI validated systems for critical disinfection requiring approvals and a wide range of UVT applications.

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