formerly Aquionics, Berson, Hanovia and Orca GmbH

PureLine D EO H

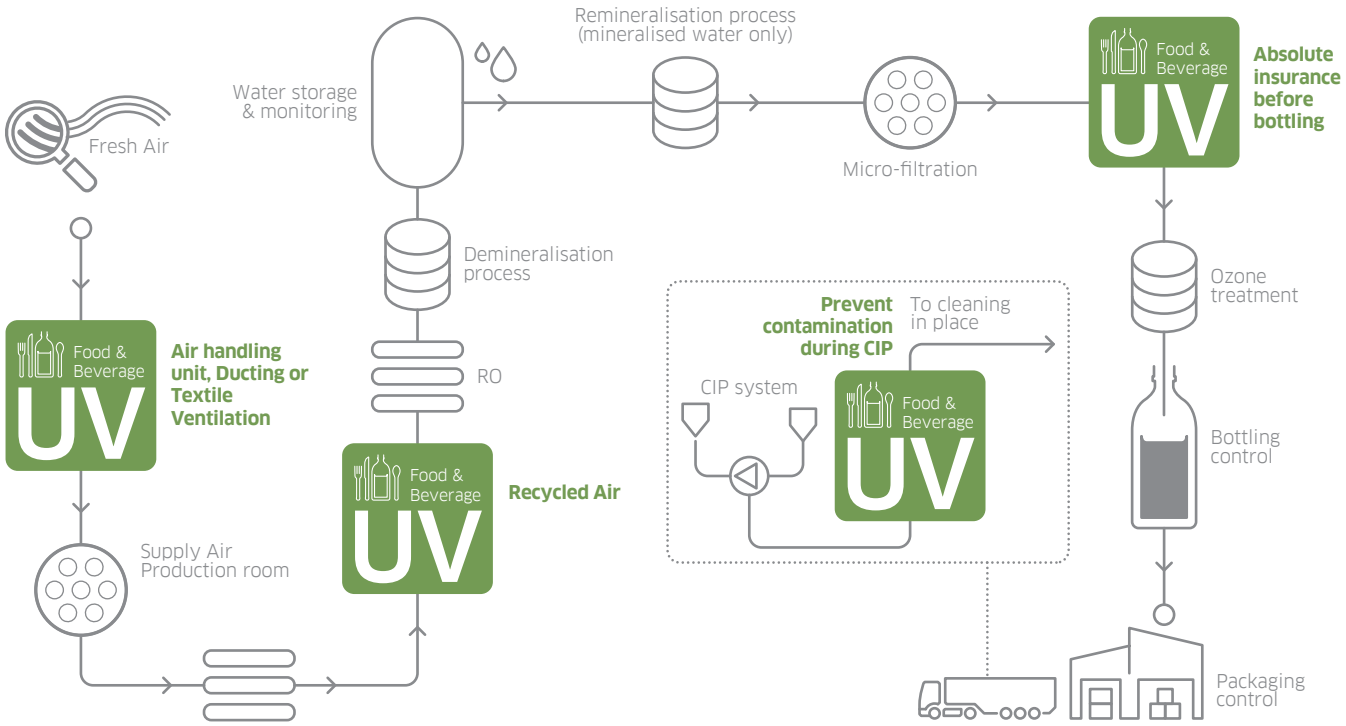
OPTIMISED UV TREATMENT FOR FOOD AND BEVERAGE

Our **PureLine D EO H** UV systems are designed to deliver effective UV treatment for product and process waters used in the food and beverage industry. They integrate an innovative single medium pressure lamp chamber with sensors and intelligent control technology to automatically deliver optimum treatment performance with high operational efficiency.

They deactivate harmful micro-organisms, reduce microbial load, and support bio-fouling control within water systems. They are hygienic units designed with Tri-clamp fittings and have a 0.8 micron electropolished internal finish.

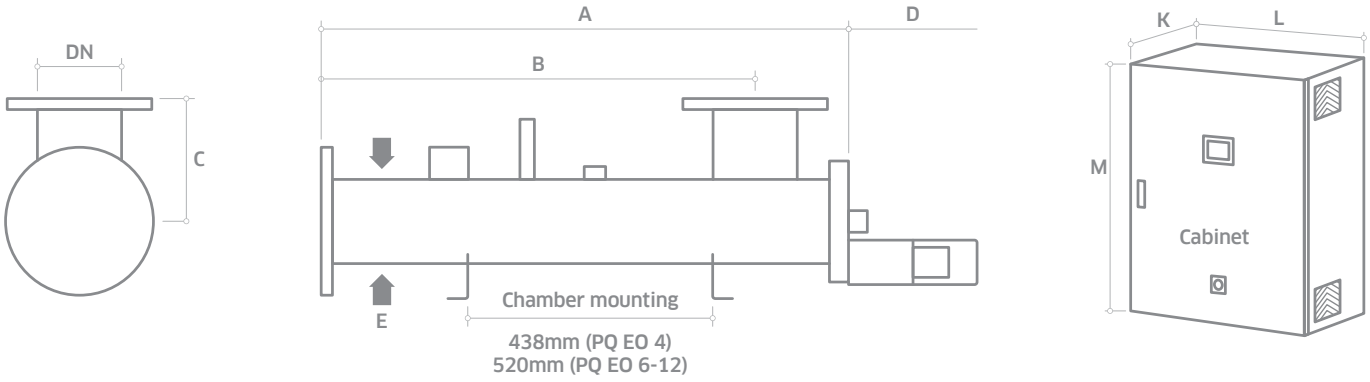
Application
Optimised UV for
Food & Beverage

POTENTIAL LOCATIONS OF THE PURELINE D EO H™



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
INTELLIGENCE		
UV sensor	Continuous verification of performance with in-built low UV dose 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 treat your product or process water	Does not affect taste and colour of final product
		No chemicals used
		Protects pre-treatment equipment and RO filters from bio-fouling reducing CIP frequency and downtime
	High treatment capacity with a single lamp	Compact footprint and reduced operating cost
Innovative chamber design	Maximises the water's exposure to UV light	Reduces energy costs
Designed specifically for the food and beverage industry where hygienic design is required	Chamber has tri-clamp connections, <0.8 µm internal finish electropolished and pasivated	Industry compliance
	FDA and EC approved seals	
	*Automatic wiper	Self cleaning to maintain performance
INTEGRATION		
Designed for your process	*Skid mountable	Easy to install
	*UV Disconnect power cut-out for lamp access	Enhanced operator safety when changing a lamp
	*Water leak detection	Increased product safety
	RS 485 Industrial Ethernet	Easy integration to SCADA or plant control systems

*Option



MODEL NUMBER	MAX POWER (kW)	MIN T_{10}(%)	DIMENSIONS (mm)														APPROX WEIGHT (kg)		
	Starting		Chamber							Control Cabinet (fan cooled)			Control Cabinet (with A/C)			Chamber	Control Cabinet	
			Unwiped A	Wiped A	B	C	D	E	DN	K*	L	M**	K*	L	M**	Empty	Fan cooled	with A/C
PureLine D EO H 4	4.5	80	1009	1232	830	335	870	130	100	400	800	1200	400	1250	1200	30	96	120
PureLine D EO H 6	6.8	80	1212	1436	1008	220	1065	153	150	400	800	1200	400	1250	1200	44	96	120
PureLine D EO H 8	6.8	80	1287	1539	1035	300	1150	205	200	400	800	1200	400	1250	1200	65	96	120

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.
* 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).

UV CHAMBER

Material:	StSt 316L / 1.4404
Internal finish:	Tube, welds as laid, <0.8 µm Ra electropolished and passivated
External finish:	BS EN 10088-2 or 10088-3, 1J or 2J and ASTM No. 4
Process (mating) connections:	Tri-clamp DIN 32676 SER A
Drain connection:	Tri-clamp blanked off
End plate:	Removable end plate
Degree of protection:	IP65 equivalent to NEMA 4 but not for outside use
Arc tube (lamp):	Medium pressure
Arc tube enclosure:	Pure quartz (F200)
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 (80°C unwiped)
Maximum CIP temperature:	95°C lamp off and CIP request acknowledged
Hydrostatically pressure tested:	Yes to PED requirements EN 13445
Chamber mounting:	Horizontal only
Operating pressure:	10 bar (positive pressure only)
Seals:	EPDM, ADI free, EC 1935/2004, FDA 21 CFR 177.2600 approved

OPTIONS

Document Support Pack
Cabinet: Stainless steel 304
Cabinet: Stainless steel 304 with air conditioning (5°-50°C), IP66 (NEMA 4X), relative humidity <95% non-condensing
Cabinet: Stainless steel 316 with air conditioning with sloping roof (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
Wiper: Automatic (electrically driven)
Flange options: ANSI 150, EN 1092-1 PN16, JIS, Table 'E'
Chamber internal finish: <0.6 µm Ra or <0.38 µm Ra, welds polished out, electropolished and passivated
Lead length: 20 and 29 m
Max CIP temp: 130°C lamp turned off and CIP request acknowledged
Vent valve: Manual valve hygienic design

OPTIONS (CONTINUED)

UV Disconnect: Power cut-out for lamp access
Water leak detection: Detects water leaking from the UV lamp enclosure
Arc tube enclosure: Doped quartz (F240)
Skid mounting (not shipboard or earthquake zone)
Welder Document Pack for chamber construction
Bleed valve: hygienic valve with tri-clamp connection
UL 508A
In field UV reference sensor kit

CABINET (CONTROLLER UVTOUCH™)

Material:	Polyester coated carbon steel
Degree of protection:	IP55 / NEMA 12
Supply voltages:	380 V to 480 V (-5% to +10%), 50/60 Hz
Operating temp 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 OUTPUTS

4-20 mA passive outputs:	UV RED dose, UV intensity and chamber temperature
VFC outputs:	Lamp ready (enable flow), system running, common warning, common trip, low dose warning, water leak detected, system in remote, OK to CIP

CUSTOMER INPUTS

4-20 mA active or passive inputs:	Flow meter and transmittance meter
VFC inputs:	Remote stop/start, remote reset, remote CIP request, reduce power
24 V dc pulsed inputs:	Start and stop

CUSTOMER COMMUNICATIONS PORT

RS 485:	Industrial Ethernet

APPROVALS

CE marked

PureLine D

Also available in our Food & Beverage product range...

PURELINE DC+DCD

Dechlorination and Chlorine Dioxide removal

PURELINE DO

Ozone removal and treatment

PURELINE PQ

3rd party bioassayed systems for critical treatment

PURELINE S

Sugar syrup treatment

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