

PureLine PQ EO

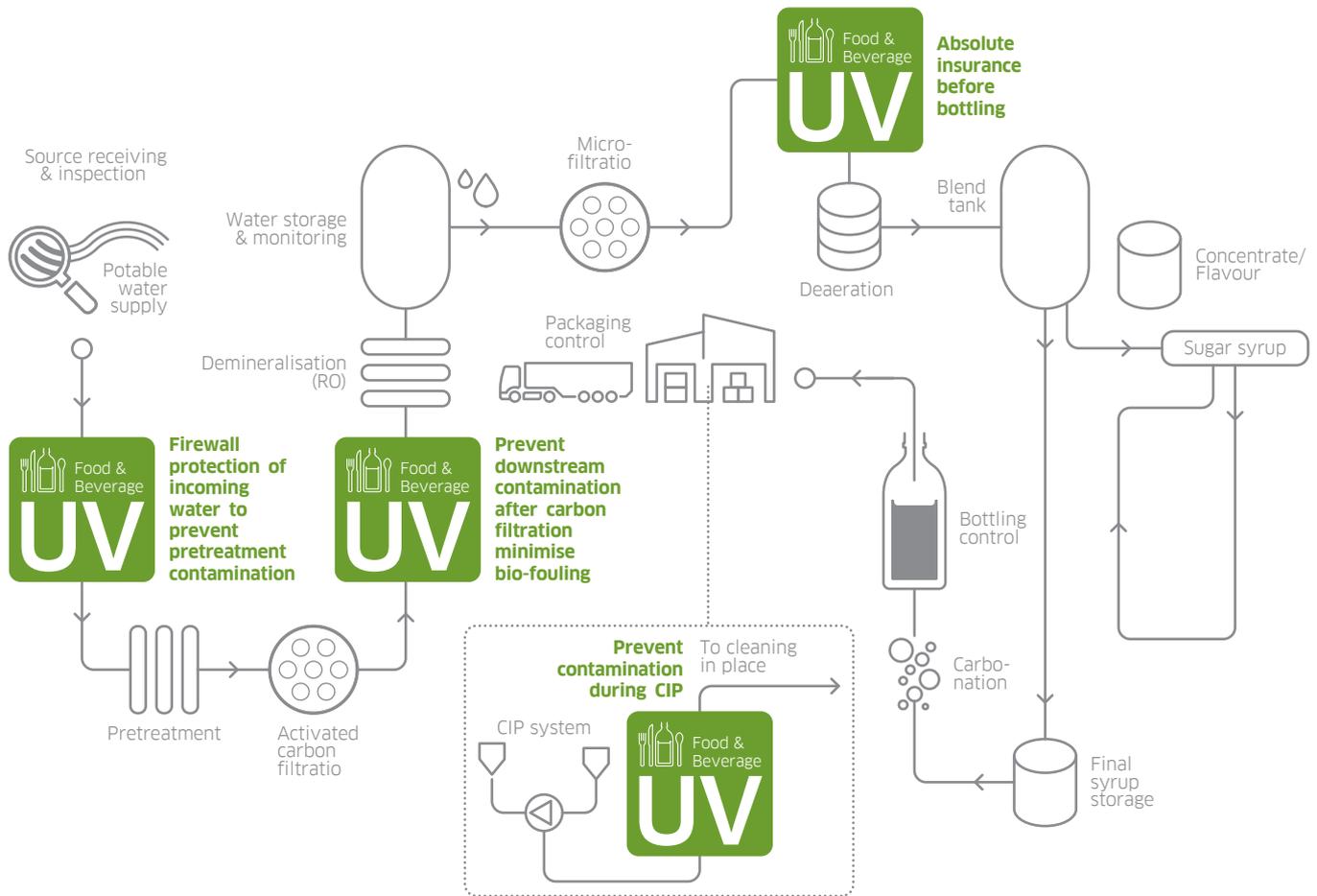
BIOASSAYED UV TREATMENT FOR FOOD & BEVERAGE

Our **PureLine PQ EO** UV systems are aimed specifically at providing third party bioassayed UV treatment for product and process waters used in the food and beverage industry. Integrating innovative single medium pressure lamp chamber design with sensors and intelligent control technology to automatically deliver optimum treatment performance with high operational efficiency. Eliminating harmful micro-organisms, reduce the bioburden, protect against bio-fouling, and lead to fewer CIP / SIP cycles. 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. The control system can take flow and transmittance meter inputs and calculate the UV dose based on real time operating conditions.



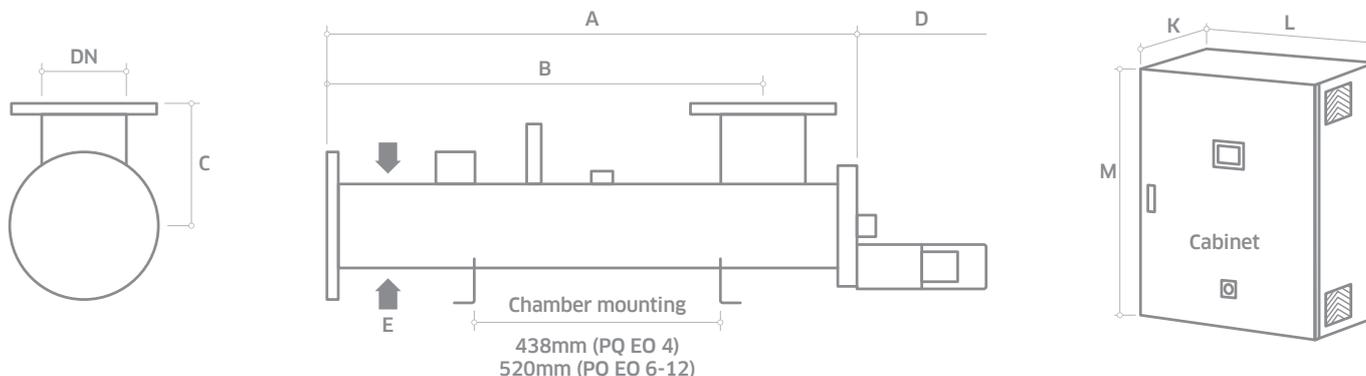
Application
Optimised UV for
Food & Beverage

POTENTIAL LOCATIONS OF THE PURELINE PQ EO™



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 germicidal wavelengths to treat your product or process water	Does not affect taste and colour of final product No chemicals
	High treatment capacity with a single lamp	Protects pre-treatment equipment and RO filters from bio-fouling reducing CIP frequency and downtime
Innovative chamber design	Maximises the water's exposure to UV light	Compact footprint and reduced operating cost
Designed specifically for the food and beverage industry	Flanged connections, standard internal finish	Reduces energy costs
	FDA and EC approved seals	Reduced system cost where sanitary design is not critical
	*Automatic wiper	Industry compliant materials
		Self cleaning to maintain performance
INTEGRATION		
Designed for your process	*Skid mountable	Easy to install
	*UVShield™ 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 T10(%)	DIMENSIONS (MM)											APPROX WEIGHT (KG)					
			Starting		Chamber						Control Cabinet (fan cooled)			Control Cabinet (with A/C)			Chamber		Control Cabinet
			Unwiped Wiped		A	B	C	D	E	DN	K*	L	M**	K*	L	M**	(Empty)	Fan cooled	With A/C
PureLine PQ EO 4	4.5	80	1009	1232															
PureLine PQ EO 6	4.5	80	1035	1286	850	245	950	168	150	400	800	1200	400	1250	1200	44	96	120	
PureLine PQ EO 8	4.5	80	1110	1361	875	320	1000	210	200	400	800	1200	400	1250	1200	65	96	120	
PureLine PQ EO 10	4.5	80	1190	1441	903	430	1100	273	250	400	800	1200	400	1250	1200	96	96	120	
PureLine PQ EO 12	6.8	80	1430	1685	1093	475	1325	324	300	400	800	1200	400	1250	1200	145	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:	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:	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:	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:	with UVGuard™ sensor window
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:	6 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 slooping 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, JIS, Table 'E' and tri-clamp	
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	
Operating pressure: 10 bar or 16 bar	
Vent valve: Manual valve hygienic design	

OPTIONS (CONTINUED)

Aggressive water package: For 400 ppm to 20000 ppm chloride water	
UVShield™: Power cut-out for lamp access	
Bleed valve: Hygienic valve with tri-clamp connection	
Skid mounting (not ship board or earthquake zone)	
Welder Document Pack for chamber construction	
Water leak detection: Detects water leaking from the UV lamp enclosure	
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 lengths:	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
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APPROVALS

CE marked



PureLine PQ

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



**PURELINE
DC+DCD**

Dechlorination and
Chlorine Dioxide removal



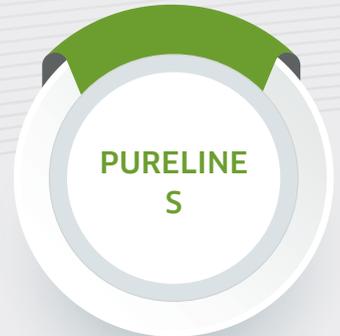
**PURELINE
DO**

Ozone removal and
treatment



**PURELINE
D**

Treatment as part of a
multi barrier approach



**PURELINE
S**

Sugar syrup treatment

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