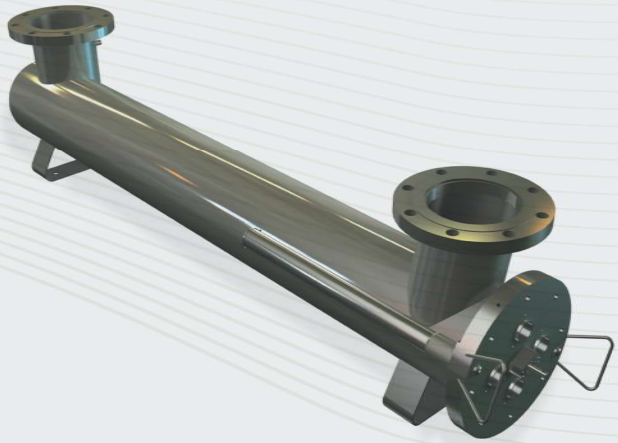
NUVONIC

formerly Aquionics, Berson, Hanovia and Orca GmbH

Patented lamp connector provides user safety and easy servicing



Sleeves and wiper can be changed quickly and easily by a single operator

PureLine PQ AL

OPTIMISED UV TREATMENT FOR FOOD AND BEVERAGE

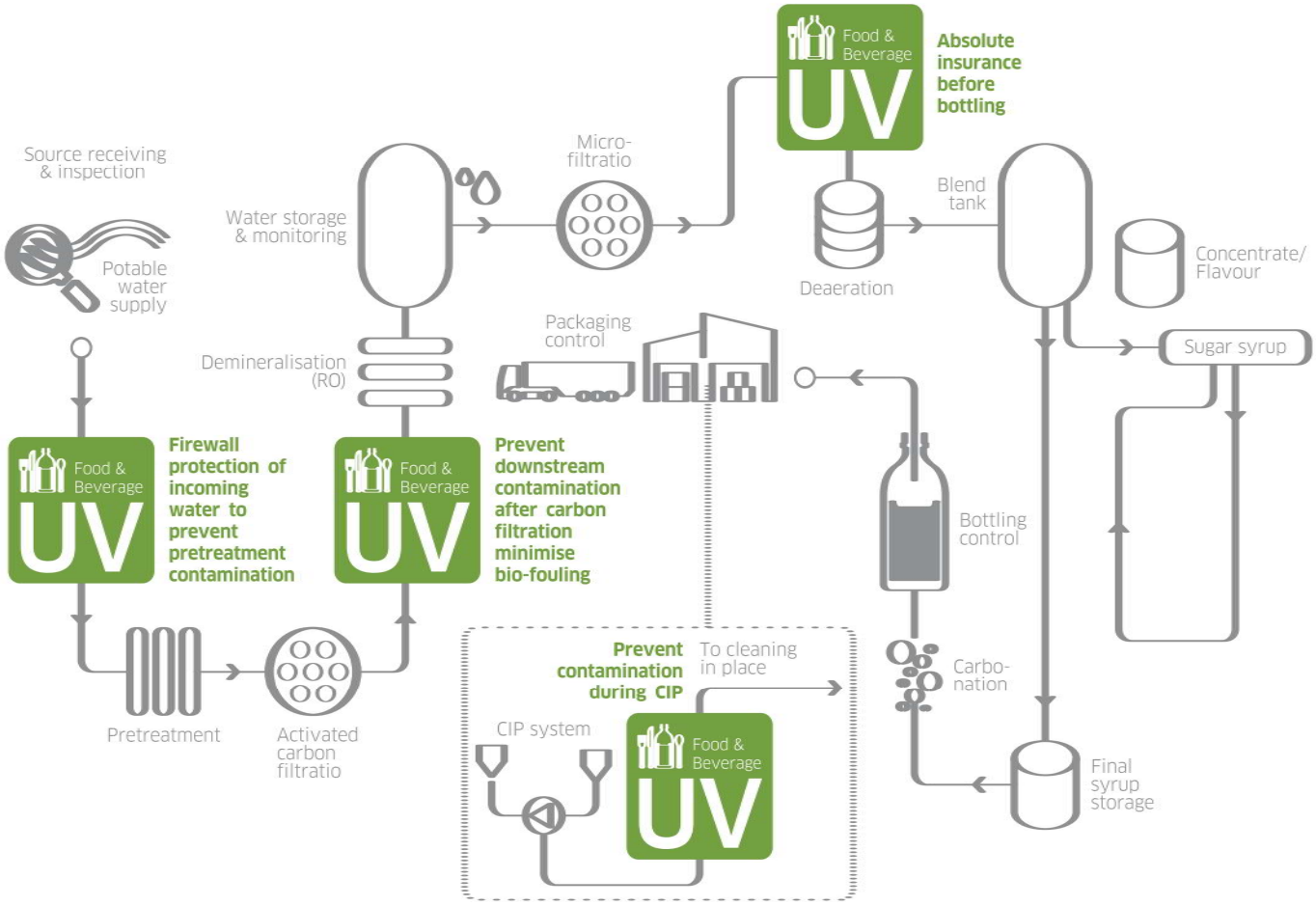
Our **PureLine PQ AL** UV are low energy amalgam lamp systems optimised to deliver effective UV treatment for product and process water used in the food and beverage industry. The PQ AL is third party bioassayed for proven performance and integrates an innovative multiple low pressure lamp chamber design with sensors and intelligent control technology to automatically deliver optimum performance with high operational efficienc . Eliminating harmful micro-organisms, reduce the bio-burden, protect against bio-fouling, and lead to fewer CIP / SIP cycle. With 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.

UVCELL™

WYŁĄCZNY DYSTRYBUTOR NA RYNKU POLSKIM

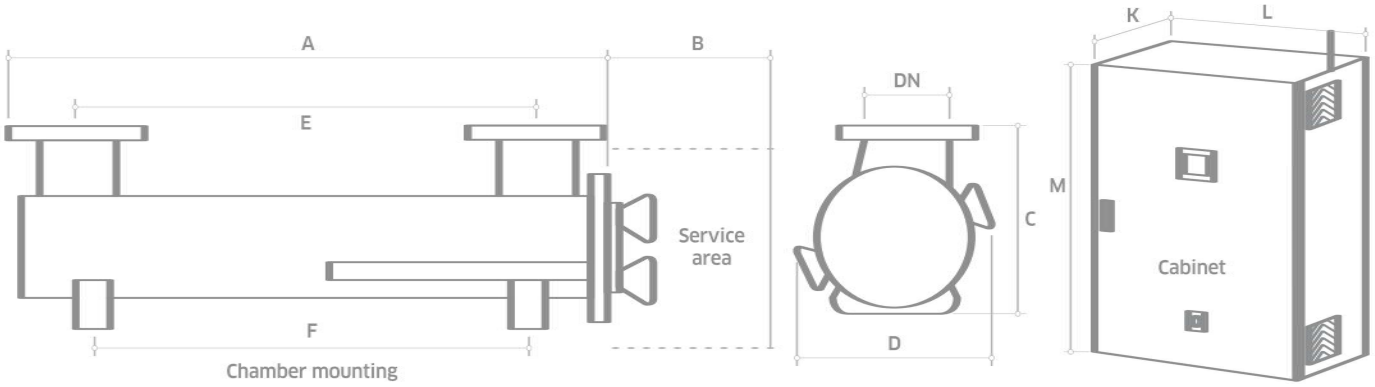
Application
Optimised UV for
Food & Beverage

POTENTIAL LOCATIONS OF PURELINE PQ AL™ IN CARBONATED BEVERAGE PROCESSING LINE



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
INTELLIGENCE		
UV sensor	Continuous verification of performance with real time red UV dose reading and in-built low UV dose alarm	Easy to monitor and log system performance
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		
Multiple low pressure lamps	Provides optimum wavelength to treat your product or process water	Does not affect taste and colour of final product
		No chemicals
		Protects pre-treatment equipment and RO filters from bio-fouling reducing CIP frequency and downtime
	High treatment capacity	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	Flanged connections, standard internal finish	Reduced system cost where sanitary design is not critical
	FDA and EC approved seals	Industry compliant materials
	*Automatic wiper	Self cleaning to maintain performance
INTEGRATION		
Designed for your process	*Skid mountable	Easy to install
	Compact design	Easy integration

*Option



MODEL NUMBER	MAX POWER (KW)		DIMENSIONS (MM)										APPROX WEIGHT (KG)	
	Starting	Running	Chamber							Control				
			A	B	C	D	E	F	DN	K*	L	M**	Chamber (Empty)	Control Cabinet
PureLine PQ AL 100	2.4	1.2-2.4	1710	1500	420	400	1417	1372	150	300	800	1000	150	70
PureLine PQ AL 300	7.2	3.6-7.2	1800	1500	605	560	1372	1475	250	400	1200	1200	300	140

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, <0.8 µm Ra, welds ground out, electropolished and passivated
External finish:	Brushed to K280, electropolished and passivated
Process (mating) connections:	Flange EN 1092-1 PN16
Drain connection:	Tri-clamp blanked off ISO 2852
End plate:	Removable end plate
Degree of protection:	IP54 equivalent to NEMA 12, but not for outside use
Arc tube (lamp):	Low pressure
Arc tube enclosure:	Pure quartz (F200)
Number of arc tubes (lamps):	4 (PQ AL 100), 12 (PQ AL 300)
Expected lamp life:	9000 hours
Temperature sensor:	Yes
UV sensor:	Calibrated DVGW compliant dry sensor
Working fluid temperature:	5°C to 40°C
Maximum CIP temperature:	95°C lamp off
Hydrostatically pressure tested:	Yes
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, IP54 (NEMA 12)
Cabinet: Stainless steel 304 with air conditioning (5-50°C), IP56 (NEMA 4X), relative humidity <95%, non-condensing. See sales drawings for sizes
Cabinet: Stainless steel 316 with air conditioning, sloping roof, (5-50°C), IP56 (NEMA 4X), relative humidity <95%, on-condensing. See sales drawings for sizes
Operation and Maintenance manual and printed Installation and Commissioning manual in Chinese, English, French, German and Spanish
Flange options: ANSI 150, JIS, Table 'E', Tri-clamp (PQ AL 100 only)
Lead length: 20 and 29 m
Max CIP temp: 130°C lamp turned off
Wiper: automatic (electrically driven)

OPTIONS (CONTINUED)
Welder Document Pack for chamber construction
Skid mounting (not ship board or earthquake zone)
Air vent connection
In field UV reference sensor kit
UL 508A labeled for cabinet

CABINET (CONTROLLER UVTOUCH)	
Material:	Polyester coated carbon steel
Degree of protection:	IP54 / NEMA12
Supply voltages:	PQ AL 100: 200-277V (-5/+10) 1L+N, 2L 50/60Hz 345-480V (-5/+10) 3L+N, 50/60Hz PQ AL 300: 345-480V (-5/+10) 3L+N, 50/60Hz
Operating temp range:	5°C to 40°C
Relative humidity:	<85% non-condensing
Cooling fans:	Yes
Variable power:	Stepless variable power (50% reduction from maximum ballast power)
Interconnecting cable lengths:	10 m to chamber

CUSTOMER OUTPUTS	
4-20 mA outputs:	UV RED dose, lamp driven output power (%)
VFC outputs:	System ready, system stand by, system running, common warning, common trip, system in remote

CUSTOMER INPUTS	
4-20 mA active or passive inputs:	Flow meter and transmittance meter
VFC inputs:	Remote stop/start, remote reset, remote clear message, remote set power high

CUSTOMER COMMUNICATIONS PORT
Modbus RS 485 serial RTU for SCADA connection

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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NUVONIC

A Halma company

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