We UVCare...

PURELINE PQ AL
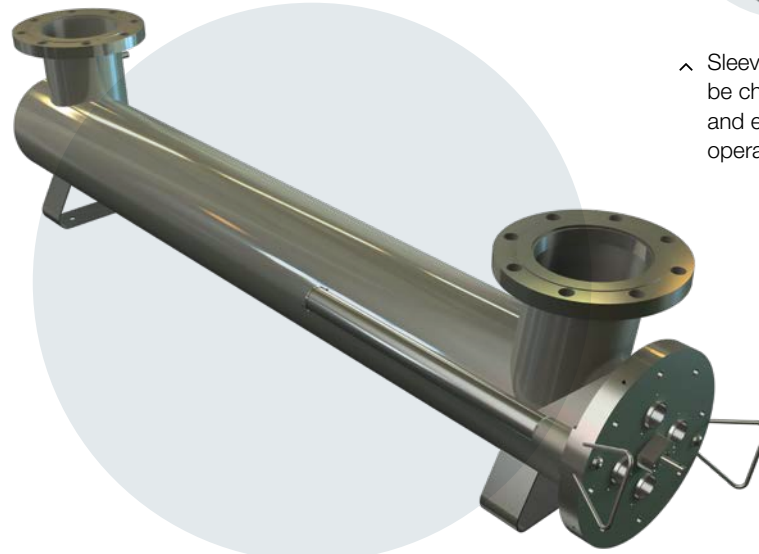
RODEM®
SMART SANITARY PROCESSES

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^ Sleeves and wiper can be changed quickly and easily by a single operator
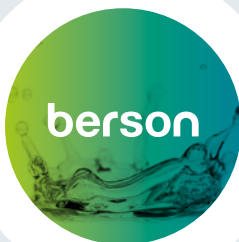
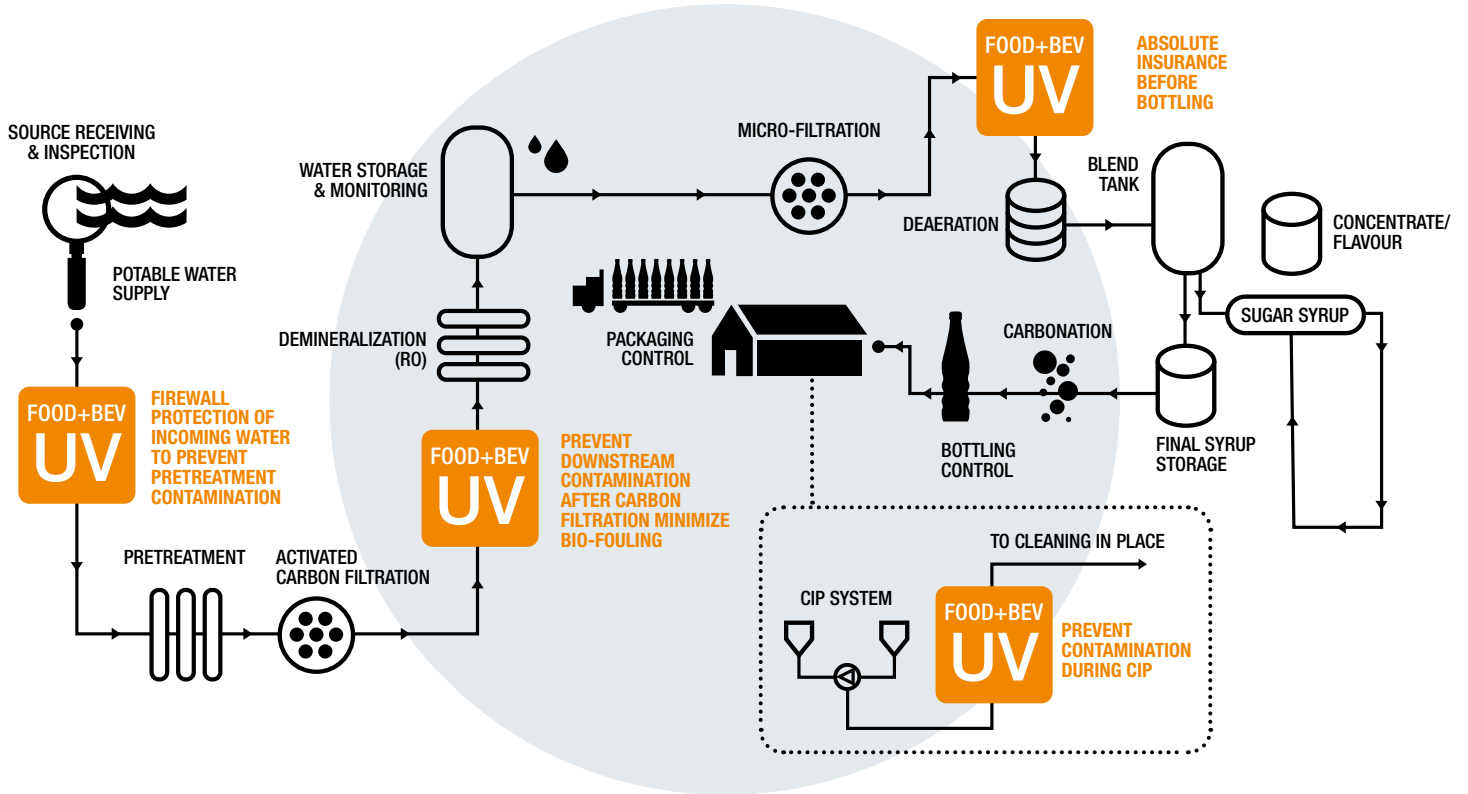^ Patented lamp connector provides user safety and easy servicing

Optimized UV Treatment for food and beverage

Our PureLine PQ AL UV are low energy amalgan lamp systems optimized to deliver effective UV disinfection 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 disinfection performance with high operational efficiency. The PQ AL will eliminate harmful micro-organisms, reduce the bio-burden, protect against bio-fouling, lead to fewer CIP / SIP cycles 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.

berson

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Potential Locations of the PureLine PQ AL™ in carbonated beverage processing line

SOURCE RECEIVING & INSPECTION

POTABLE WATER SUPPLY

FOOD+BEV UV — FIREWALL PROTECTION OF INCOMING WATER TO PREVENT PRETREATMENT CONTAMINATION

PRETREATMENT

ACTIVATED CARBON FILTRATION

DEMINERALIZATION (RO)

WATER STORAGE & MONITORING

FOOD+BEV UV — PREVENT DOWNSTREAM CONTAMINATION AFTER CARBON FILTRATION MINIMIZE BIO-FOULING

PACKAGING CONTROL

MICRO-FILTRATION

FOOD+BEV UV — ABSOLUTE INSURANCE BEFORE BOTTLING

DEAERATION

BLEND TANK

CONCENTRATE/ FLAVOUR

SUGAR SYRUP

CARBONATION

BOTTLING CONTROL

FINAL SYRUP STORAGE

TO CLEANING IN PLACE

CIP SYSTEM

FOOD+BEV UV — PREVENT CONTAMINATION DURING CIP

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	Optimized use of energy, saving operating costs
OPTIMIZATION		
Multiple low pressure lamps	Provides optimum wavelength to disinfect 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

SERVICE AREA

CHAMBER MOUNTING
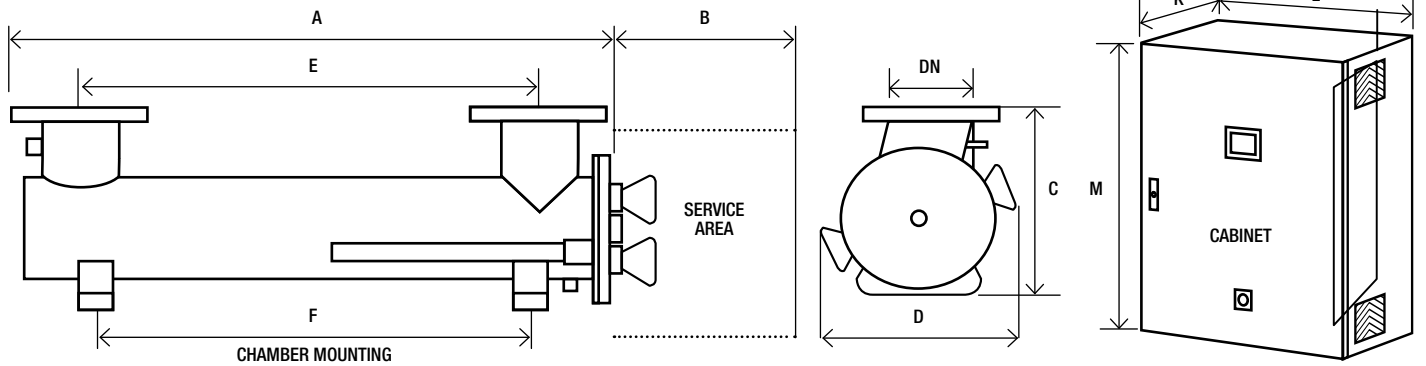
CABINET

Model	Max Power (kW)		Dimensions (inches)										Approx weight (lbs)	
			Chamber							Control				
			A	B	C	D	E	F	DN	K*	L	M**	Chamber (Empty)	Control Cabinet
	Starting	Running												
PureLine PQ AL 100	2.4	1.2-2.4	67.3	59.1	16.5	15.7	55.8	54	6	11.8	31.5	39.4	331	154
PureLine PQ AL 300	7.2	3.6-7.2	70.9	59.1	23.8	22	54	58.1	9.8	15.7	47.2	47.2	661	309

* 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 9.8").
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, <0.8 µm Ra, welds ground out, electropolished and passivated
External finish:	Brushed to K280, electropolished and passivated
Process (mating) connections:	ANSI 150#
Drain connection:	Tri-clamp blanked off ISO 2552
End plate:	Removable end plate
Degree of protection:	IP54 equivalent to NEMA 12, but not for outside use
UV lamp:	Low pressure
Quartz sleeve:	Pure quartz (F200)
Number of UV 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:	41°F to 104°F
Maximum CIP temperature:	203°F 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 material: Stainless steel 304, IP54 (NEMA 12)

Cabinet material: Stainless steel 304 with air conditioning (41-122°F), IP66 (NEMA 4x), relative humidity <95% non condensing. See sales drawings for sizes

Cabinet material: Stainless steel 316 with air conditioning slooping roof (41-122°F), IP66 (NEMA 4x), relative humidity <95% non condensing. See sales drawings for sizes

Operation and Maintenance manual and printed Installation and Commissioning manual

Flange options: ANSI 150, JIS, Table 'E', Tri-clamp (PQ AL 100 only)

Lead length: 65.6 and 95.1 ft

Max CIP temp: 266°F lamp turned off

Welder Document Pack for chamber construction

Skid mounting

Vent valve: Manual valve hygienic design

In field UV reference sensor kit

UL 508A labeled for cabinet

Wiper: automatic (electrically driven)

CABINET (CONTROLLER UVTOUCH™)

Material:	Polyester coated carbon steel
Degree of protection:	IP54 / NEMA12
Supply voltages:	230 V (+/-10%),1L+N or 2L, 50/60Hz
Operating temp range:	41°F to 104°F
Relative humidity:	<85% non-condensing
Cooling fans:	Yes
Variable power:	Variable power (50% reduction from maximum ballast power)
Interconnecting cable lengths:	32.8 ft 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 disinfection

PURELINE D
Disinfection as part of a multi barrier approach

PURELINE S
Sugar syrup disinfection

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