We UVCare...

PURELINE PQ EO H+

Application Optimized
UV for Food & Beverage
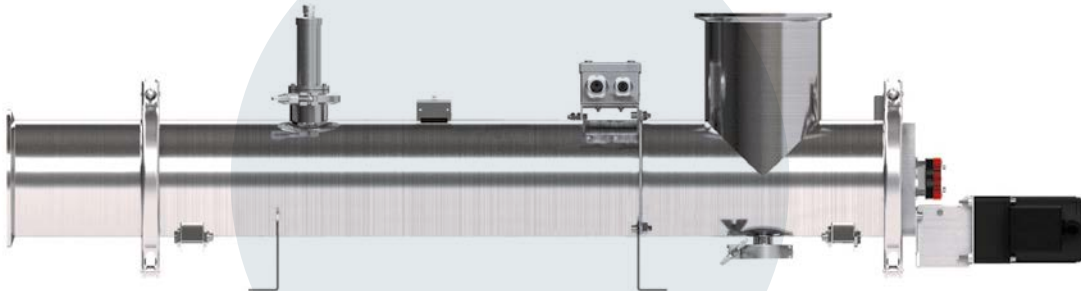
Bioassayed
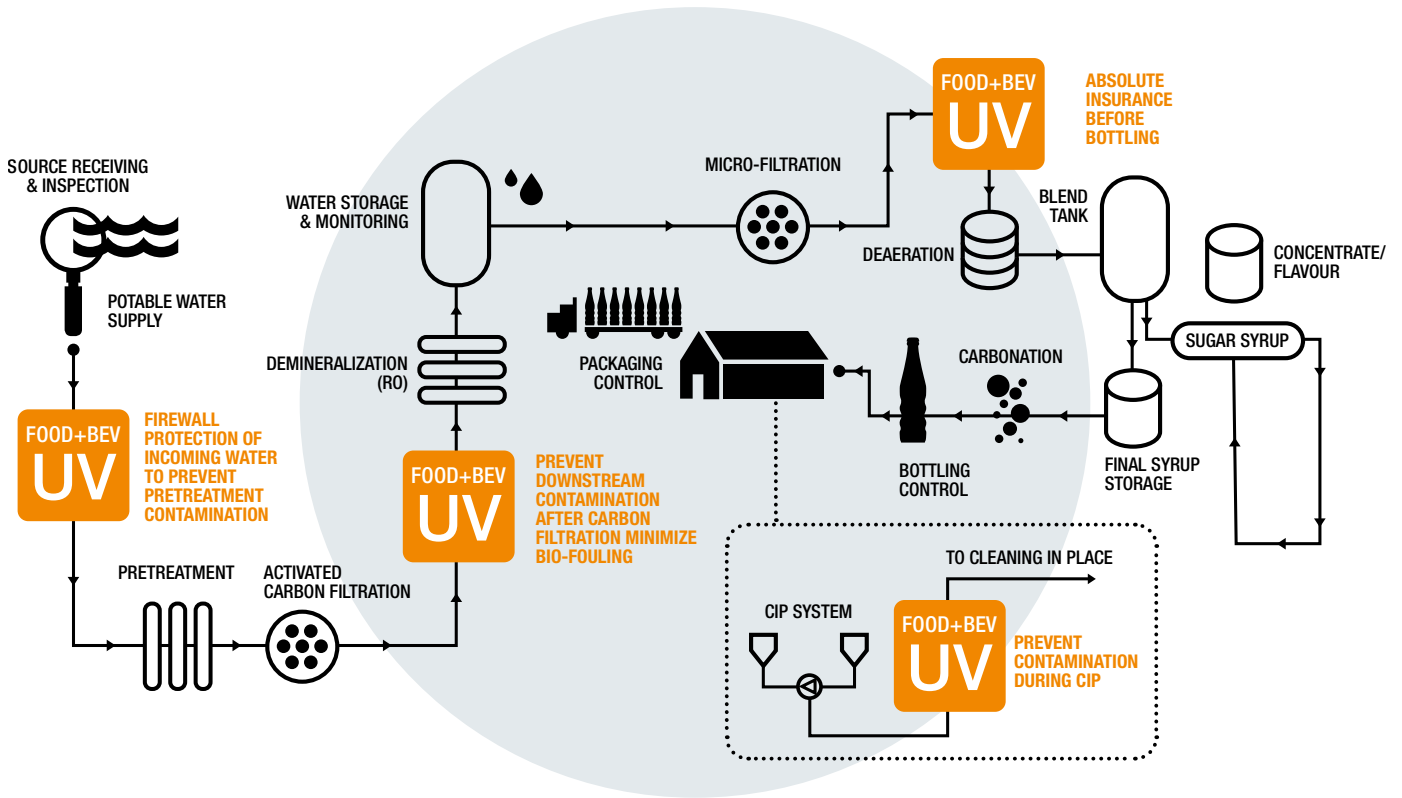## UV Treatment for
Food & Beverage

Our PureLine PQ EO H+ UV systems are aimed specifically at providing third party bioassayed UV disinfection for product and process waters used in the food and beverage industry. The PQ EO H+ integrates an innovative single medium pressure lamp chamber design with sensors and intelligent control technology to automatically deliver optimum disinfection performance with high operational efficiency. The PQ EO H+ will eliminate harmful micro-organisms, reduce the bioburden, 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. The control system also has the ability to take flow and transmittance meter inputs and calculate the UV dose based on real time operating conditions. In addition to all the PQ features our PureLine PQ EO H+ models are Hygienic units designed with Triclamp fittings and have a 0.8 micron electro polished internal finish.
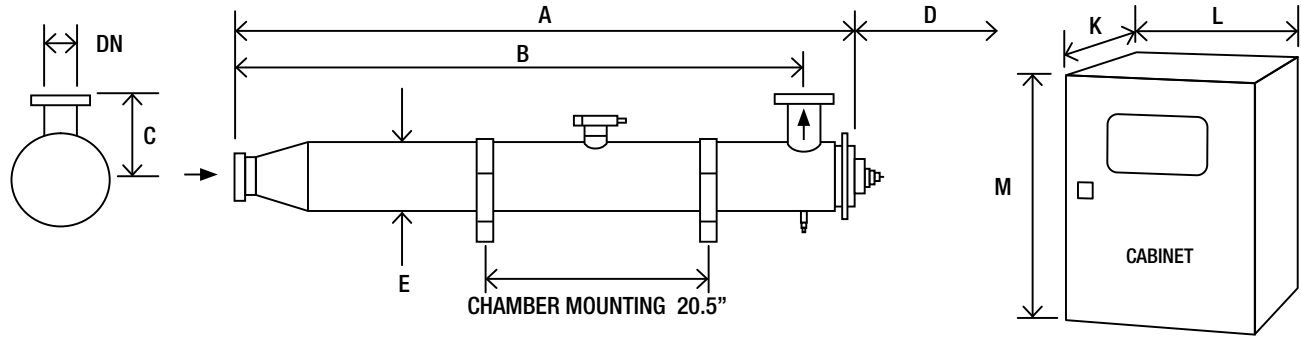
berson

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Potential Locations of the PureLine PQ EO H+™

SOURCE RECEIVING & INSPECTION

POTABLE WATER SUPPLY

WATER STORAGE & MONITORING

MICRO-FILTRATION

FOOD+BEV UV — ABSOLUTE INSURANCE BEFORE BOTTLING

BLEND TANK

DEAERATION

CONCENTRATE/ FLAVOUR

SUGAR SYRUP

DEMINERALIZATION (RO)

PACKAGING CONTROL

CARBONATION

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

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

BOTTLING CONTROL

FINAL SYRUP STORAGE

PRETREATMENT

ACTIVATED CARBON FILTRATION

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 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	Optimized use of energy, saving operating costs
OPTIMZATION		
Single medium pressure lamp	Provides germicidal wavelengths 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 with a single lamp	Compact footprint and reduced operating cost
Innovative chamber design	Maximizes 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 Triclamp connections, <0.8 μm internal finish, electropolished and passivated	Industry compliance, reduced risk of microbiological contamination
	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
	*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

DN · A · B · C · D · K · L · M · E · CHAMBER MOUNTING 20.5" · CABINET

Model	Max Power (kW) Starting	UVT (%)	Chamber A Unwiped	Chamber A Wiped	B	C	D	E	DN	Control Cabinet (fan cooled) K*	L	M**	Control Cabinet (with A/C) K*	L	M**	Chamber Empty	Control Cabinet Fan cooled	Control Cabinet with A/C
PureLine PQ EO H+ 6	9	80	54.2	63	46.2	8.7	48.4	5.9	6	15.7	31.5	47.2	15.7	49.2	47.2	97	212	265

*   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:	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
End plate:	Removable end plate
Degree of protection:	IP65 equivalent to NEMA 4 but not for outside use
UV lamp	Medium pressure
Quartz sleeve:	Doped quartz (F240)
Number of UV lamps:	1
Expected lamp life:	9000 hours
Temperature sensor:	Yes
UV sensor:	Calibrated DVGW compliant dry sensor with UVGuard™ sensor window
Working fluid temperature:	33.8°F to 140°F (176°F unwiped)
Maximum CIP temperature:	203°F lamp off and CIP request acknowledged
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

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

Cabinet material: Stainless steel 316 with air conditioning slooping roof (41-122°F), 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 PN16

Chamber internal finish: <0.6 µm Ra or <0.38 µm Ra, welds polished out, electropolished and passivated

Lead length: 65.6 ft and 95.1 ft

Max CIP temp: 266°F lamp turned off and CIP request acknowledged

Welder Document Pack for chamber construction

Vent valve: Manual valve hygienic design

OPTIONS (CONTINUED)

UVShield™: Power cut-out for lamp access

Water leak detection: Detects water leaking from the UV lamp enclosure

Bleed valve: Hygienic valve with tri-clamp connection

Skid mounting (not ship board or earthquake zone)

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:	41°F to 104°F
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:	32.8 ft 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 PQ

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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