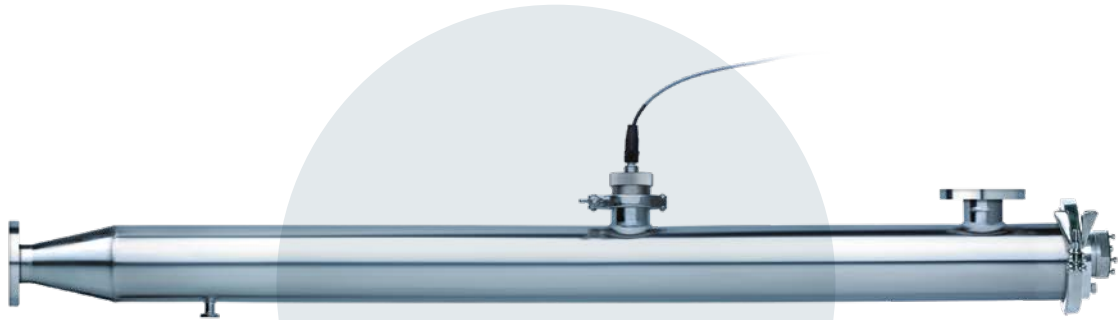


We UVCare...

# Application Optimised UV for Food & Beverage



**PURELINE PQ AF**



## 3rd party bioassayed UV treatment for food and beverage

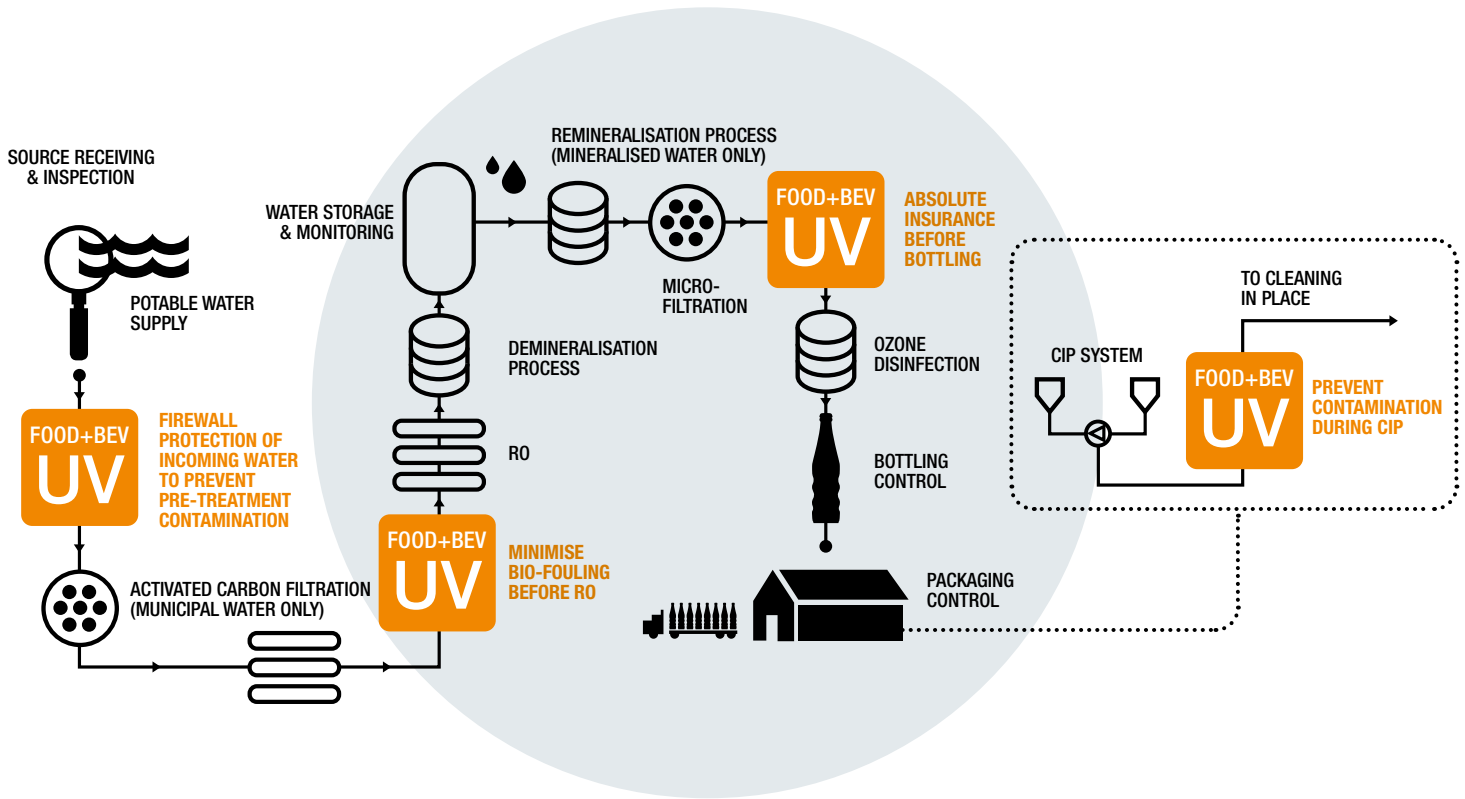
Our PureLine PQ AF systems are aimed specifically at providing third party bioassayed UV disinfection for product and process waters used in the food and beverage industry. By using a third party bioassayed UV system you can be certain that the UV dose being produced will disinfect the water, eliminate 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 allowing checking of UV performance. The UV sensor 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.

**berson**

**hanovia**

**aquionics**

# Potential locations of the PureLine PQ AF™ in bottled water processing line



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
--------------	-------------------	------------------

### INTELLIGENCE

Dry DVGW approved UV sensor measuring germicidal wavelengths	Continuous verification of performance with real time RED dose reading and in-built low dose warning	Easy to monitor and log system performance
Flow and UV transmittance (UVT) meter inputs	Dose reading based on actual process conditions when meters are connected	Accurate UV dose reading guaranteed under wide range of operating conditions

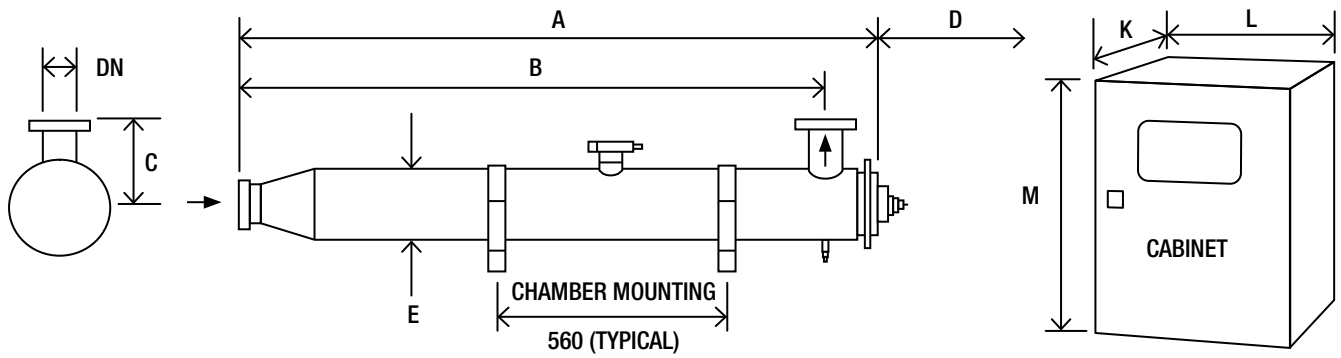
### OPTIMISATION

Third party bioassayed UV systems tested in accordance with the USEPA UV Disinfection Guidance Manual	UV system dose equations and sizing have been independently derived	Confidence the system will perform as stated
UV water disinfection	Protect your product and processes from microbiological contamination including chlorine resistant <i>Cryptosporidium</i> and <i>Giardia</i>	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
Designed for the food and beverage industry	FDA-approved materials used for all wetted parts	Industry compliant materials
	*Chamber with tri-clamp connections and < 0.8 µm internal finish	Sanitary design
	*Automatic wiper (quartz cleaning)	Self cleaning to maintain performance

### INTEGRATION

Compact design	Can be fitted to skids Can be retrofitted to existing process	Easy integration
RS 485 Modbus	Single cable connection to customer control system	

\* Option



Model Number	Maximum Power (W)	Min $T_{10\%}$ (%)	Dimensions (mm)								Approx weight (Kg)		
			A	B	C	D	E	DN	K*	L	M**	Chamber (Empty)	Control Cabinet
PureLine PQ AF 0005	125	60	1388	1273	82	1300	102	40	224	600	890	9	36
PureLine PQ AF 0008	200	60	1388	1273	82	1300	102	50	224	600	890	9	36
PureLine PQ AF 0016	350	60	1388	1273	82	1300	102	50	224	600	890	9	36
PureLine PQ AF 0030	350	60	1437	1300	150	1300	168	80	224	600	890	24	36
PureLine PQ AF 0090	750	60	1980	1825	200	1900	206	150	224	600	890	46	36

\* 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).

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, welds as laid, electropolished and passivated
External finish:	Sateen polish (120 grit) electropolished and passivated
Process (mating) connections:	Flange EN 1092-1 PN16
Drain connection:	Tri-clamp to ISO 2852
End plate:	Removable tri-clamp except PQ AF 0090 which is flanged
Degree of protection:	IP65 equivalent to NEMA 4 but not for outside use
Arc tube (lamp):	Low pressure amalgam
Arc tube enclosure:	Pure quartz (F200)
Number of arc tubes (lamps):	1
Expected lamp life:	12000 hours
Temperature sensor:	Yes
UV sensor:	Dry DVGW compliant UV sensor with UVGuard™ window
Working fluid temperature:	5°C to 40°C
Maximum CIP temperature:	130°C (PQ AF 0005 – PQ AF 0016) 95°C (PQ AF 0030 – PQ AF 0090) with cabinet electrically isolated
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	
Transmittance compensating dose equation	
Document Support Pack	
Cabinet material: Stainless steel 304	
Operation and Maintenance manual and printed Installation and Commissioning manual in Chinese, English, French, German and Spanish	
Wiper: Automatic (pneumatically driven)	
Flange options: ANSI 150, JIS, Table 'E' and tri-clamp with 0.38 µm internal finish	
Chamber internal finish: Tri-clamp chamber only <0.38 µm, welds left as laid, electropolished and passivated	
Lead length: 20 & 29 m PQ AF 0005 - 0008, 14 m PQ AF 0016 - 0090	
UVShield™	
Water leak detection	
UL Listing	
UL 508A Panel shop	

OPTIONS (CONTINUED)	
In-field UV reference sensor kit	
Max. CIP temperature: 130°C (PQ AF 0030 – 0090, panel switched off)	
Welder Document Pack for chamber construction	
Bleed: Hygienic valve with tri-clamp connection	
Skid mounting (not ship board or earthquake zone)	

CABINET (CONTROLLER UVTRONIC)	
Material:	Polyester coated carbon steel
Degree of protection:	IP66 / NEMA 4
Supply voltages (nominal):	230 V (+/- 10%) 50/60 Hz
Operating temperature range:	5°C to 40°C
Relative humidity:	<95% non-condensing
Cooling fans:	No
Interconnecting cable lengths:	10 m
Variable power:	Stepless variable power on PQ AF 0090 only (40% reduction from max ballast power, 20% dose reduction)

HMI / CONTROL	
Display:	4 line LCD, indicating system status including alarms
Operating menu:	3 levels with password protection
Fault finding:	Event log

CUSTOMER OUTPUTS	
4-20 mA active outputs:	UV dose and UV intensity
24 V dc 10 mA max outputs:	Lamp ON, any trip, any warning, system ready, system in remote, bleed valve

CUSTOMER INPUTS	
4-20 mA active or passive inputs:	Flow meter and transmittance meter inputs
VFC inputs:	Remote stop/start and remote reset

CUSTOMER COMMUNICATIONS PORT	
RS 485:	Modbus

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



**www.weuvcare.com**

BERSON, HANOVIA & AQUIONICS WORKING TOGETHER AS PART OF THE HALMA GROUP.

**Netherlands**

t: +31 40 2907777  
e: sales@bersonuv.com

**China**

t: +86 21 61679599  
e: china@hanovia.com

**USA**

t: +1 980 256 5700  
e: sales@aquionics.com

**Germany**

t: +49 800 5892779  
e: verkauf@hanovia.com

**Malaysia**

t: +60 16 440 8834  
e: asia@hanovia.com

**Canada**

t: +1 980.256.5700  
e: sales@aquionics.com

**United Kingdom**

t: +44 1753 515300  
e: sales@hanovia.com

**Mexico**

t: +1 980.256.5700  
e: sales@aquionics.com



FM 29365

©2019 Berson Hanovia Aquionics - 910433-0400-02-EN