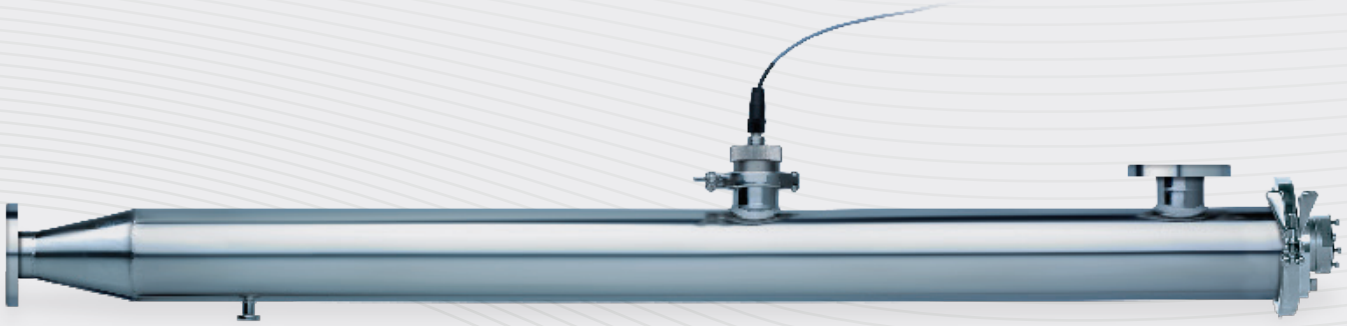
formerly Aquionics, Berson, Hanovia and Orca GmbH



PURELINE PQ AF

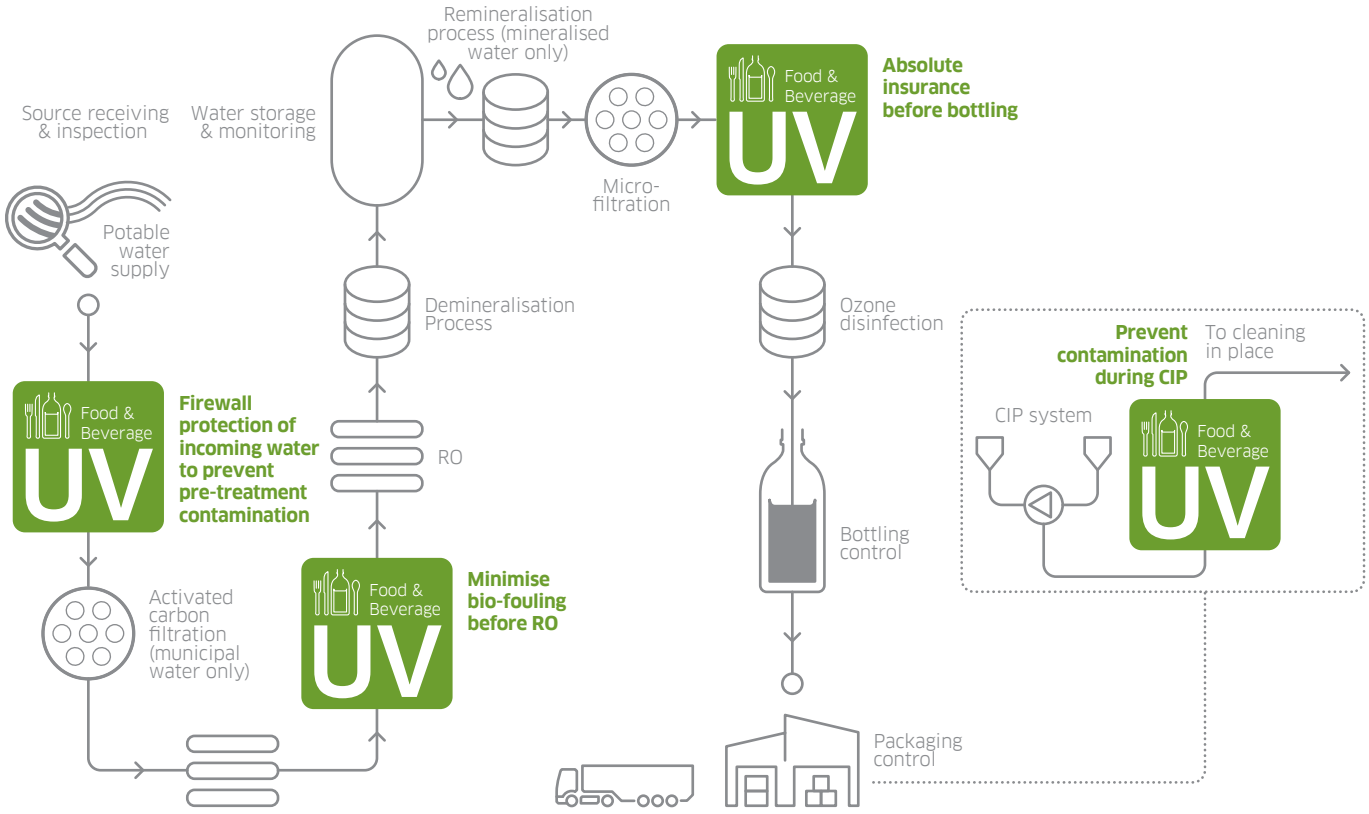
THIRD-PARTY BIOASSAYED UV TREATMENT FOR FOOD & BEVERAGE

Our **PureLine PQ AF** UV systems are designed to provide third-party bioassayed UV treatment for product and process waters used in the food and beverage industry.

Each system comes with a certified dry UV sensor to measure the germicidal output of the UV system and a UV dose read out 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.

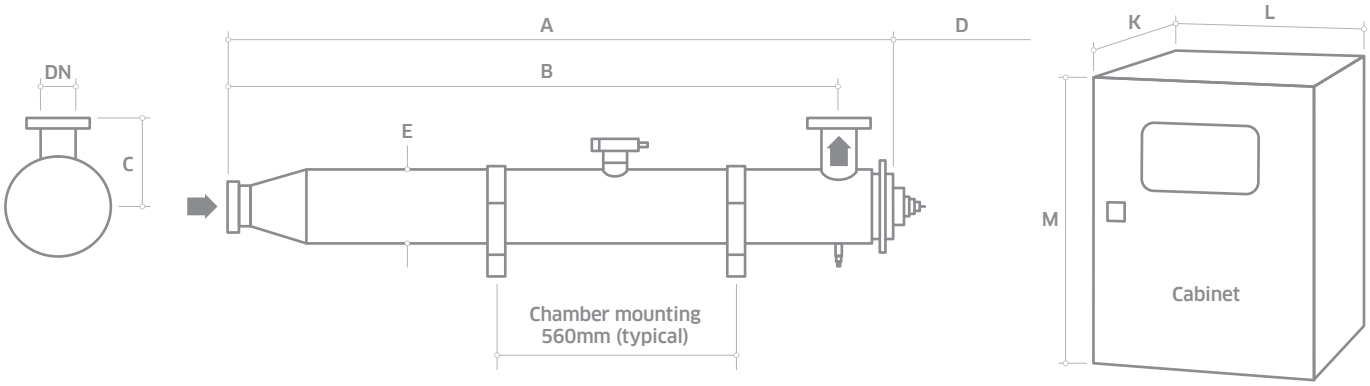
Application Optimised UV for Food & Beverage

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 active 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 treatment Guidance Manual	UV system dose equations and sizing have been independently derived	Confidence the system will perform as stated
UV water treatment	Protect your product and processes from microbiological contamination such as chlorine resistant *Cryptosporidium* and *Giardia*	Does not affect taste and colour of final product
		No chemicals used
		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	Easy integration
	Can be retrofitted to existing process	
RS 485 Modbus	Single cable connection to customer control system	

* Option



MODEL NUMBER	MAX POWER (W)	MIN T10(%)	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

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:	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
UV Disconnect
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 shipboard 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
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 treatment

PURELINE D

Treatment as part of a multi-barrier approach

PURELINE S

Sugar syrup treatment

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