

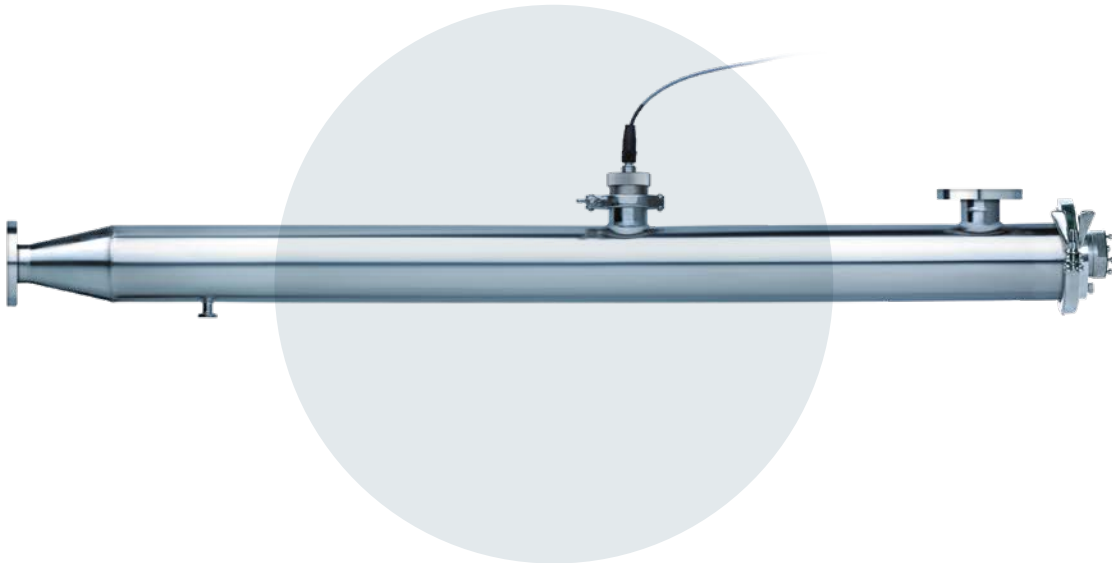
We UVCare...



PURELINE PQ AF

# Application Optimized UV for Food & Beverage

**RODEM**<sup>®</sup>  
SMART SANITARY PROCESSES  
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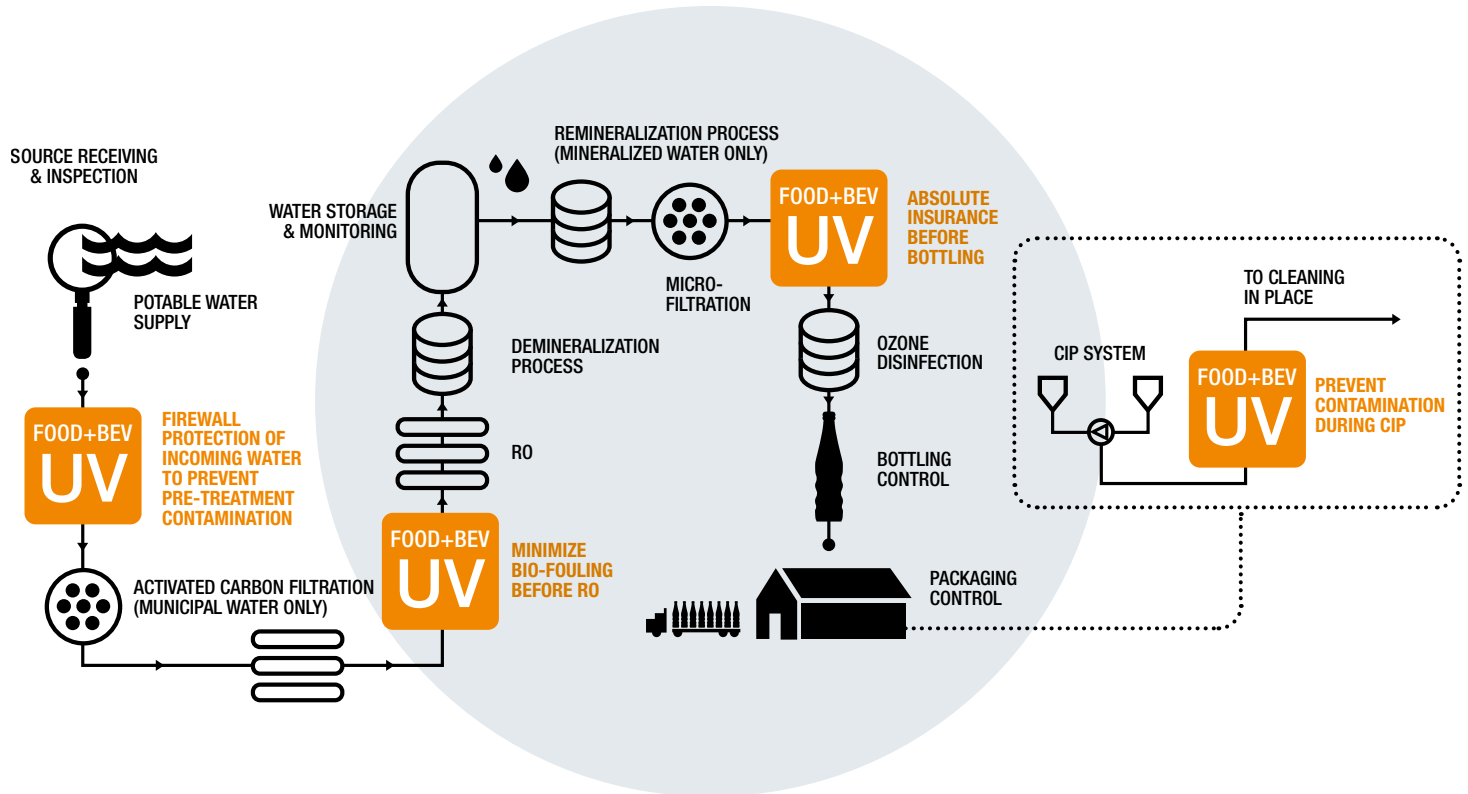


3rd party bioassayed  
UV treatment for food  
and beverage

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.

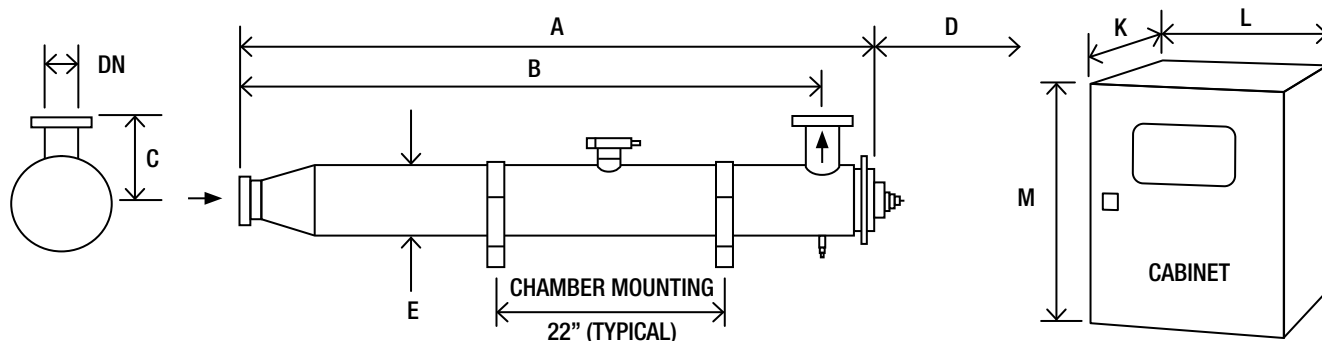


# Potential locations of the PureLine PQ AF™ in bottled water processing line



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
<b>INTELLIGENCE</b>		
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
<b>OPTIMIZATION</b>		
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  *Chamber with tri-clamp connections and < 0.8 µm internal finish  *Automatic wiper (quartz cleaning)	Industry compliant materials  Sanitary design  Self cleaning to maintain performance
<b>INTEGRATION</b>		
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)	UVT (%)	Dimensions (inches)								Approx weight ((lbs)		
			A	B	C	D	E	DN	K*	L	M**	Chamber (Empty)	Control Cabinet
PureLine PQ AF 0005	125	60	54.6	50.1	3.2	51.2	4	1.5	8.8	23.6	35	20	79
PureLine PQ AF 0008	200	60	54.6	50.1	3.2	51.2	4	2	8.8	23.6	35	20	79
PureLine PQ AF 0016	350	60	54.6	50.1	3.2	51.2	4	2	8.8	23.6	35	20	79
PureLine PQ AF 0030	350	60	56.6	51.2	5.9	51.2	6.6	3	8.8	23.6	35	53	79
PureLine PQ AF 0090	750	60	78	71.9	7.9	74.8	8.1	6	8.8	23.6	35	101	79

\* 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") (mounting brackets sold separately).

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:	ANSI 150#
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
UV sump:	Low pressure amalgam
Quartz sleeve:	Pure quartz (F200)
Number of UV lamps:	1
Expected lamp life:	12000 hours
Temperature sensor:	Yes
UV sensor:	Dry DVGW compliant UV sensor with UVGuard™ window
Working fluid temperature:	41°F to 104°F
Maximum CIP temperature:	266°F (PQ AF 0005 – PQ AF 0016) 203°F (PQ AF 0030 – PQ AF 0090) with cabinet electrically isolated
Hydrostatically pressure tested:	Yes
Chamber mounting:	Horizontal only
Operating pressure:	10 bar
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: PN16, 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
UVShield™
Water leak detection
UL Listing
UL 508A Panel shop
Lead length: 65.6 & 95.1ft PQ AF 0005 - 0008, 45.9 ft PQ AF 0016 - 0090

#### OPTIONS (CONTINUED)

Maximum CIP temperature: 266°F (PQ AF 0030 – 0090, panel switched off)
In-field UV reference sensor kit
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:	41°F to 40°C
Relative humidity:	<95% non-condensing
Cooling fans:	No
Interconnecting cable lengths:	16.4 ft
Variable power:	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
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#### 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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