

## ProLine PQ EO

### *VALIDATED UV TREATMENT FOR DRINKING WATER*

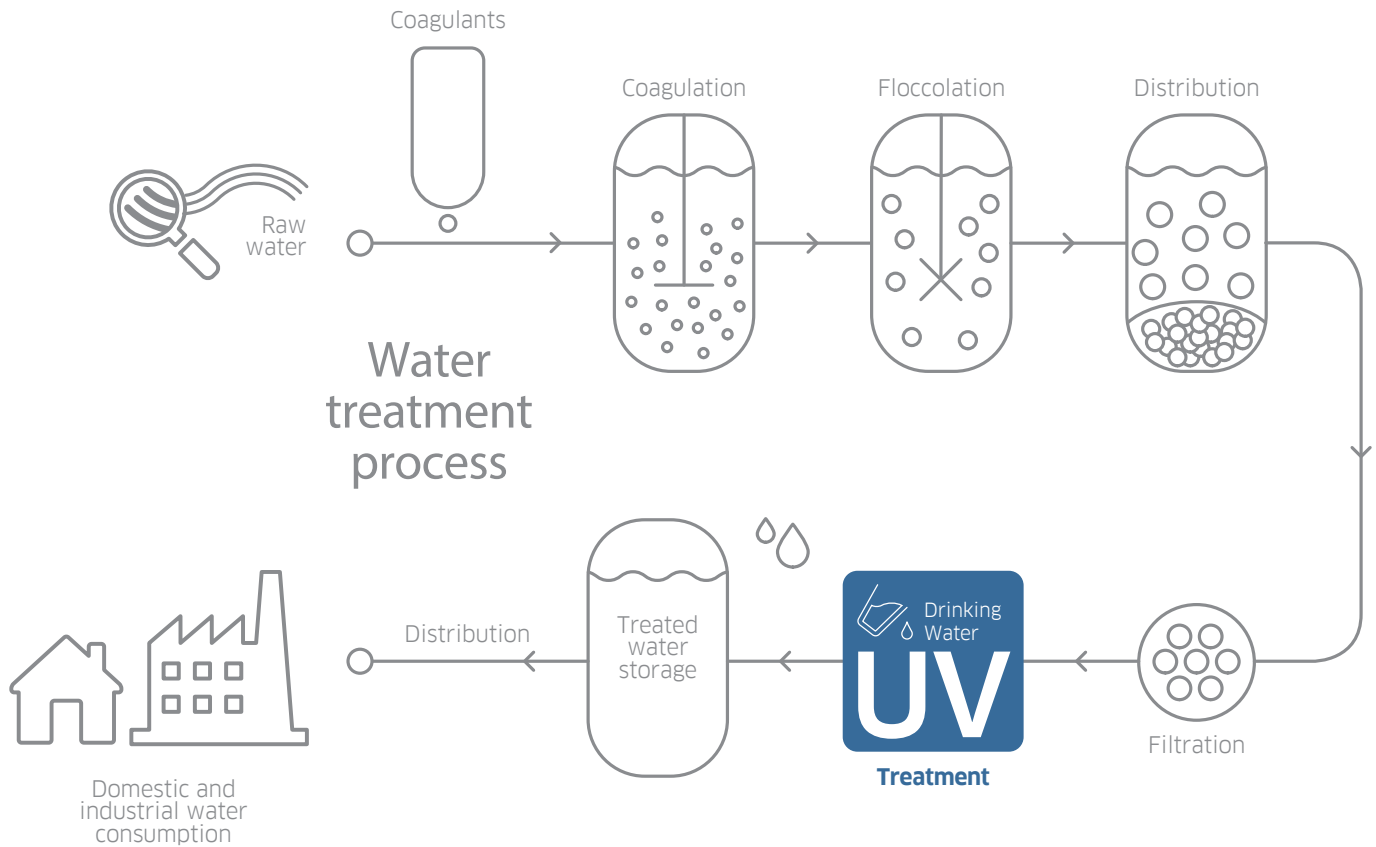
Our **ProLine PQ EO** UV systems are designed to provide third party validated UV treatment for drinking water. At low doses, UV provides protection against chlorine resistant pathogens such as Cryptosporidium and Giardia. At higher doses, UV provides general treatment and virus protection.

Integrating an innovative single medium pressure lamp chamber with sensors and intelligent control, each system comes with a certified dry UV sensor that measures.



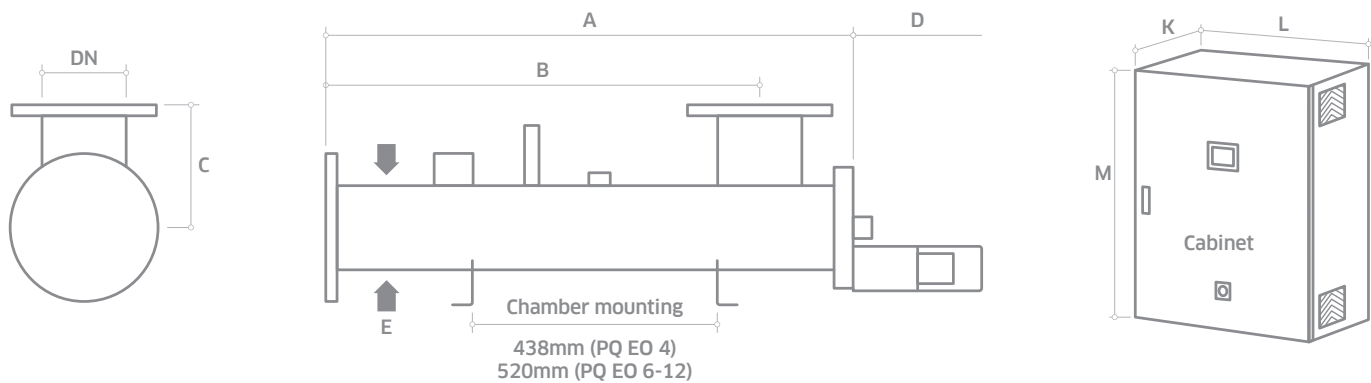
Application  
Optimised UV for  
Drinking Water

# POTENTIAL LOCATION OF THE PROLINE PQ EO™ IN DRINKING WATER TREATMENT PROCESS



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
<b>INTELLIGENCE</b>		
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 operation
Flow and UV transmittance (UVT) meter inputs	Stepless adjustment of lamp power based on real time operating conditions	Optimised use of energy, saving operating costs
<b>OPTIMISATION</b>		
Third party validated 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
Single medium pressure lamp	Provides active wavelengths to treat your drinking water High treatment capacity with a single lamp	Does not affect taste and odour No chemicals Compact footprint and reduced operating cost
Innovative chamber design	Maximises the water's exposure to UV light	Reduces energy costs
Designed for treatment of drinking water	Flanged connections FDA and EC approved seals Automatic wiper	Designed to international standards Industry compliant materials Self cleaning to maintain performance
<b>INTEGRATION</b>		
Designed for your process	*Skid mountable *UVShield™ power cut-out for lamp access *Water leak detection RS 485 Industrial Ethernet	Easy to install Enhanced operator safety when changing a lamp Increased product safety Easy integration to SCADA or plant control systems

\*Option



MODEL NUMBER	MAX POWER (KW)	MIN T10(%)	DIMENSIONS (MM)												APPROX WEIGHT (KG)			
			Chamber							Control Cabinet (fan cooled)			Control Cabinet (with A/C)		Chamber	Control Cabinet		
Starting			Unwiped	Wiped											Chamber	Fan cooled	With A/C	
			A	B	C	D	E	DN	K*	L	M**	K*	L	M**	(Empty)			
ProLine PQ EO 4	4.5	80	1009	1232	823	165	900	114	100	400	800	1200	400	1250	1200	30	96	120
ProLine PQ EO 6	4.5	80	1035	1286	850	245	950	168	150	400	800	1200	400	1250	1200	44	96	120
ProLine PQ EO 8	4.5	80	1110	1361	875	320	1000	210	200	400	800	1200	400	1250	1200	65	96	120
ProLine PQ EO 10	4.5	80	1190	1441	903	430	1100	273	250	400	800	1200	400	1250	1200	96	96	120
ProLine PQ EO 12	6.8	80	1430	1685	1093	475	1325	324	300	400	800	1200	400	1250	1200	145	96	120

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:	BS EN 10088-2 or 10088-3, 1J or 2J and ASTM No. 4
Process (mating) connections:	Flange EN 1092-1 PN16
Drain connection:	BSPT
End plate:	Removable end plate
Degree of protection:	IP65 equivalent to NEMA 4 but not for outside use
Wiper:	Automatic (electrically driven)
Arc tube (lamp):	Medium pressure
Arc tube enclosure:	Doped quartz (F240)
Number of arc tubes (lamps):	1
Expected lamp life:	9000 hours
Temperature sensor:	Yes
UV sensor:	Calibrated DVGW compliant dry sensor with UVGuard™ sensor window
Working fluid temperature:	1°C to 60°C
Hydrostatically pressure tested:	Yes to PED requirements EN 13445
Chamber mounting:	Horizontal only
Operating pressure:	6 bar (positive pressure only)
Seals:	EPDM, ADI free, EC 1935/2004, FDA 21 CFR 177.2600 approved

#### OPTIONS

Document Support Pack	
Cabinet: Stainless steel 304	
Cabinet: Stainless steel 304 with air conditioning (5°-50°C), IP66 (NEMA 4X), relative humidity <95% non-condensing	
Cabinet: Stainless steel 316 with air conditioning with sloping roof (5°-50°C), 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	
Flange options: ANSI 150 (NPT drain), JIS, Table 'E'	
Lead length: 20 and 29 m	
Welder Document Pack for chamber construction	
Skid mounting (not shipboard or earthquake zone)	
Operating pressure: 10 bar or 16 bar	

#### OPTION (CONTINUED)

Vent valve: Manual valve, BSP/NPT (if ANSI flange)	
Aggressive water package: For 400 ppm to 20000 ppm chloride water	
Water leak detection: Detects water leaking from the UV lamp enclosure	
UVShield™: Power cut-out for lamp access	
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:	5°C to 40°C
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:	10 m 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

#### CUSTOMER INPUTS

4-20 mA active or passive inputs:	Flow meter and transmittance meter
VFC inputs:	Remote stop/start, remote reset, reduce power
24 V dc pulsed inputs:	Start and stop

#### CUSTOMER COMMUNICATIONS PORT

RS 485:	Industrial Ethernet
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#### APPROVALS

CE marked, USEPA (UVDGM)



# ProLine PQ EO

Also available in our Drinking Water product range...



**PROLINE  
PQ IL**

Compact medium pressure range with USEPA validation



**PROLINE  
PQ AF**

Small community, low energy amalgam range with USEPA validation



**PROLINE  
PQ AL**

Small-mid sized region, low energy lamp amalgam range with USEPA validation UVT compensation



**PROLINE  
PQ IL DVGW**

Compact medium pressure range with DVGW certification

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# NUVONIC

A Halma company

formerly Aquionics, Berson, Hanovia and Orca GmbH

