



**PROLINE PQ EO**

Also available in our Drinking Water product range...



**PROLINE PQ AF**

Small community, low energy amalgam range with USEPA validation



**PROLINE PQ AL**

Small to mid-sized community, low energy multi-lamp amalgam range with USEPA validation and built in UVT compensation



**PROLINE PQ IL**

Compact medium pressure range with USEPA validation, for use where space is tight in small to mid-sized communities



**PROLINE PQ IL DVGW**

Compact medium pressure range with DVGW certification, for use where space is tight in small to mid-sized communities



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A Halma company



FM 29365

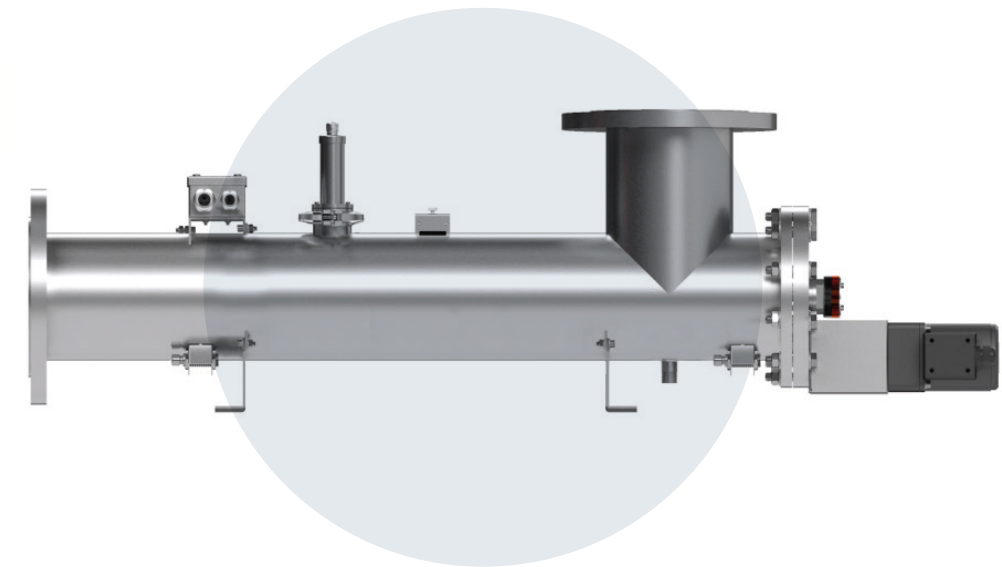
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We UVCare...



**PROLINE PQ EO**

Application Optimised  
UV for Drinking Water

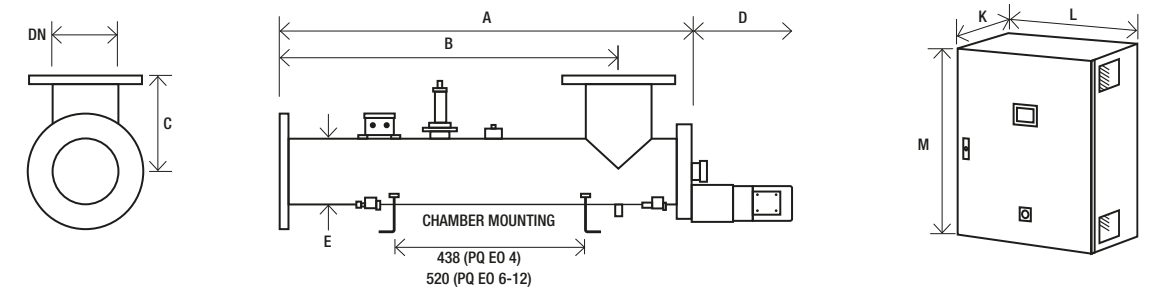
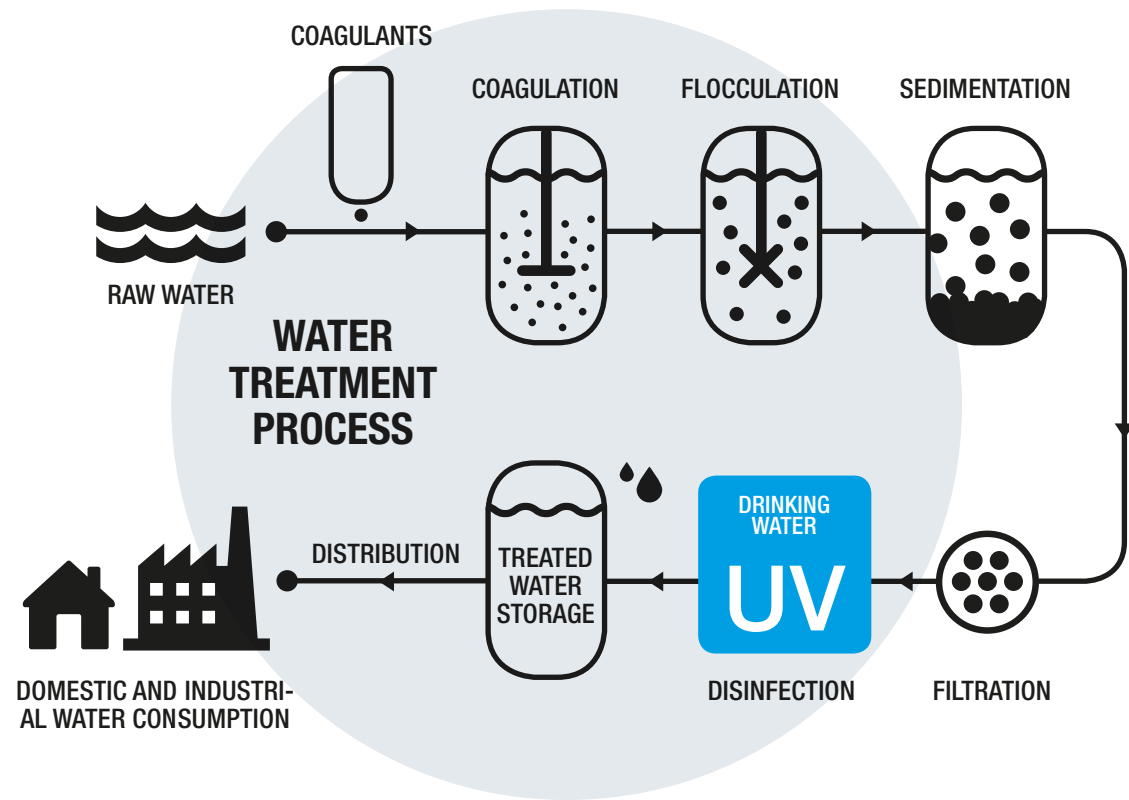


Validated UV treatment  
for drinking water

Our ProLine PQ EO range of Drinking Water UV solutions have been protecting people from harmful contamination from bacteria and viruses for decades. Even at low doses UV provides protection against Chlorine resistant pathogens such as Cryptosporidium and Giardia. UV is therefore used for Drinking Water worldwide as a Cryptosporidium barrier. Often used in conjunction with Chlorine UV provides an additional level of safety and allows lower Chlorine consumption at much lower costs than Ozone or membrane filtration. At higher doses UV provides general disinfection and at higher doses still it can provide Virus protection, depending on your design philosophy. The PQ EO 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. 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.



# ProLine PQ EO™ drinking water treatment process



Model	Max Power (kW)	Min T <sub>10</sub> (%)	Dimensions (mm)										Approx weight (Kg)					
			Chamber		Control Cabinet (fan cooled)		Control Cabinet (with A/C)		Chamber	Control Cabinet								
			A	B	C	D	E	DN	K*	L	M**	K*	L	M**	Empty	Fan cooled	With A/C	
			Starting	Unwiped	Wiped													
ProLine PQ EO 4	4.5	80	1009	1232	823	165	900	114	100	400	800	1290	400	1051	1290	30	96	120
ProLine PQ EO 6	4.5	80	1035	1286	850	245	950	168	150	400	800	1290	400	1051	1290	44	96	120
ProLine PQ EO 8	4.5	80	1110	1361	875	320	1000	210	200	400	800	1290	400	1051	1290	65	96	120
ProLine PQ EO 10	4.5	80	1190	1441	903	430	1100	273	250	400	800	1290	400	1051	1290	96	96	120
ProLine PQ EO 12	6.8	80	1430	1685	1093	475	1325	324	300	400	800	1290	400	1051	1290	145	96	120

\* 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:	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:	Pure quartz
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:	0°C to 60°C (80°C unwiped)
Hydrostatically pressure tested:	Yes to PED requirements EN 13445
Chamber mounting:	Horizontal only
Operating pressure:	6 bar
Seals:	EPDM, ADI free, EC 1935/2004, FDA 21 CFR 177.2600 approved

OPTIONS (CONTINUED)	
Arc tube enclosure:	Doped quartz
In field UV reference sensor kit	
CABINET (FAN COOLED)	
Material:	Polyester coated carbon steel
Degree of protection:	IP55 / NEMA 12
Supply voltages:	400 V to 480 V, 50/60 Hz
Operating temp range:	5°C to 40°C
Relative humidity:	<85% non-condensing
Cooling fans:	Yes
CABINET (WITH A/C)	
Material:	Stainless steel 304
Degree of protection:	IP66 / NEMA 4X
Supply voltages:	400 V to 480 V, 50/60 Hz
Operating temp range:	5°C to 50°C (UL 40°C)
Relative humidity:	<95% non-condensing
Cooling fans:	No
CABINET (GENERAL)	
Ballast power adjustment:	Stepless variable power (30 to 100% of maximum ballast rating)
Interconnecting cable:	10 m cabinet to chamber

OPTIONS	
Document Support Pack	
Cabinet material:	Stainless steel 304 or 316 with sloping roof
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'
Chamber internal finish:	<0.6 µm Ra or <0.38 µm Ra, welds polished out, electropolished and passivated
Lead length:	20 and 29 m
Welder Document Pack for chamber construction	
Skid mounting	
Operating pressure:	10 bar or 16 bar
Vent valve:	Manual valve hygienic design
Aggressive water package:	For 400 ppm to 20000 ppm chloride water
UVShield™:	Power cut-out for lamp access
Water leak detection:	Detects water leaking from the UV lamp enclosure

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
APPROVALS	
CE marked	

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 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
OPTIMISATION		
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 germicidal wavelengths to disinfect your drinking water	Does not affect taste and odour No chemicals
Innovative chamber design	Maximises the water's exposure to UV light	High treatment capacity with a single lamp Compact footprint and reduced operating cost
Designed for treatment of drinking water	Flanged connections, high standard internal finish	Reduces energy costs Designed to international standards
	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 interface	Easy integration to SCADA or plant control systems

\* Option