

We UVCare...



PROLINE PQ AL

# Application Optimized UV for Drinking Water

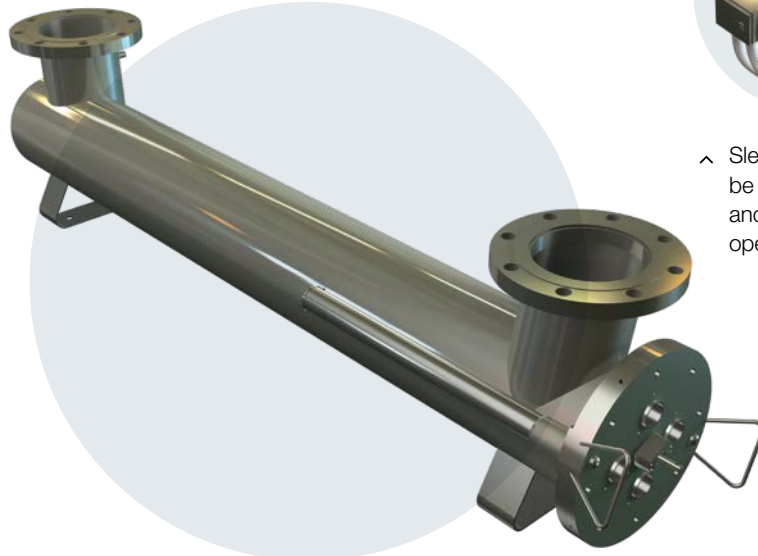
**RODEM**<sup>®</sup>  
SMART SANITARY PROCESSES  
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^ Sleeves and wiper can be changed quickly and easily by a single operator



^ Lamp connector provides user safety and easy servicing

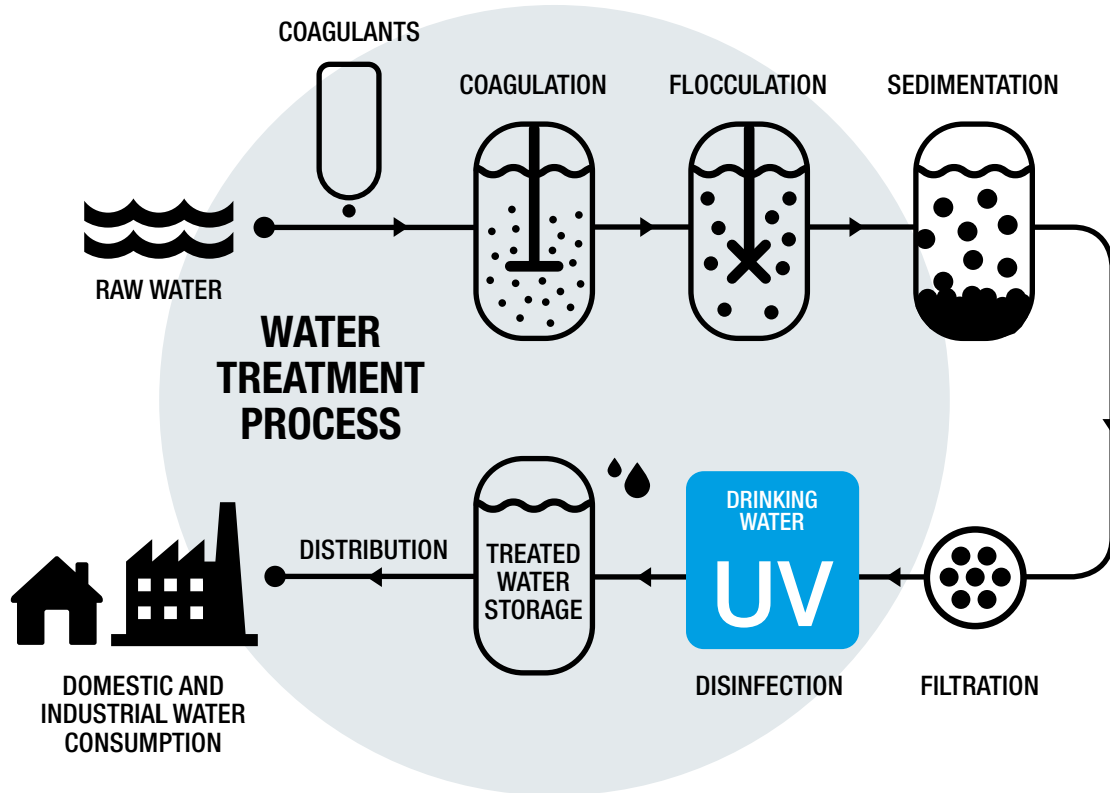


## Validated UV treatment for drinking water

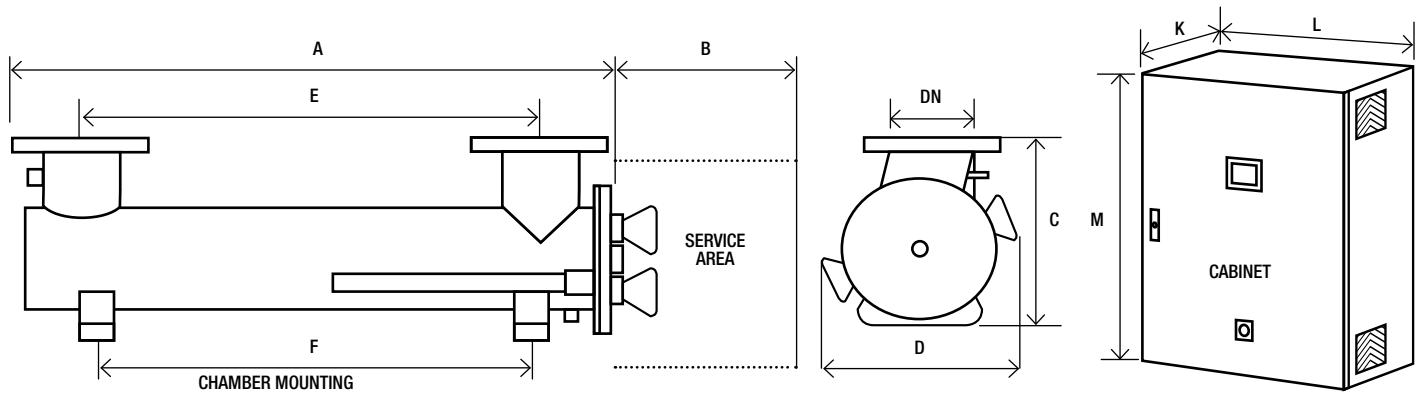
'Our ProLine PQ AL UV systems are third party validated to the USEPA Ultraviolet Disinfection Guidance Manual (UVDGM) and are optimized to deliver effective UV disinfection for drinking water.' The PQ AL integrates an innovative multiple low pressure lamp chamber design with sensors and intelligent control technology to automatically deliver optimum disinfection performance with high operational efficiency. The PQ AL will disinfect the water, eliminate harmful micro-organisms, reduce the bio-burden, protect against bio-fouling 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 location of the ProLine PQ AL™ in drinking water treatment process



KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
<b>INTELLIGENCE</b>		
Easy Maintenance	Simple extending support arms to allow for quartz sleeve and wiper blade replacement	Single operator can quickly and easily carry out the maintenance without requiring external lifting equipment
Improve Operator Safety with Lamp Connector	Lamp orientation is fixed ensuring easy and safe installation and optimum performance	Simple, quick and safe lamp changes that self-align. Allowing for minimum downtime and assurance of optimal system operation. Operator friendly design
	Lamp cannot be removed, while chamber is energized	Protects operator from harm during lamp changes
	Lamp connector cannot be removed from pressurized system in the event of a broken sleeve.	Protects operator from harm during servicing
<b>OPTIMIZATION</b>		
Optimized Design	Efficient chamber design using CFD modelling, optimises lamp(s) positioned in chamber	Ensures peak energy efficiency since the optimum distribution of Intensity throughout the chamber, providing effective treatment
	Low pressure high intensity, amalgam lamp technology with variable output ballasts (50 to 100%) provides low energy UV disinfection	Energy saving optimizing power use, low running temperature and greater lamp life
	U shape chamber design, provides effective treatment of low UVT water and provides easy installation	Provides efficient treatment, and can be integrated easily into existing pipework
<b>INTEGRATION</b>		
Validations	UVDGM [2006]	Meets the latest US EPA drinking water standards
	NWRI [2012] for reuse	High energy efficient reuse water treatment certification



Model	Max Power (kW)	Dimensions (Inches)										Approx weight (lb)		
		Chamber					Control					Chamber (Empty)	Control Cabinet	
	Starting	Running	A	B	C	D	E	F	DN	K*	L	M**		
ProLine PQ AL 100	2.4	1.2-2.4	67.3	59.1	16.5	15.7	55.8	54	6	11.8	31.5	39.4	331	154
ProLine PQ AL 300	7.2	3.6-7.2	70.9	59.1	23.8	22	54	58.1	9.8	15.7	47.2	47.2	661	309

\* 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").

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, <0.8 µm RA, welds ground out, electropolished and passivated
External finish:	Brushed to K280, electropolished and passivated
Process (mating) connections:	ANSI 150#
Drain connection:	BSP socket
End plate:	Self-supporting slide out end plate
Degree of protection:	IP54 equivalent to NEMA 12 but not for outside use
UV lamp:	Low Pressure Amalgam
Quartz sleeve:	Pure quartz (F200)
Number of UV lamps:	4 (PQ AL 100), 12 (PQ AL 300)
Expected lamp life:	12,000 hours
Temperature sensor:	Yes
UV sensor:	Calibrated DVGW compliant dry sensor
Working fluid temperature:	41°F to 104°F
Hydrostatically pressure tested:	Yes
Wiper:	Automatic (electrically driven)
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

Document Support Pack
Cabinet material: Stainless steel 304, IP54 (NEMA 12)
Cabinet material: Stainless steel 304 with air conditioning (41-122°F), IP66 (NEMA 4x), relative humidity <95% non condensing. See sales drawings for sizes
Operation and Maintenance manual and printed Installation and Commissioning manual in Chinese, English, French, German and Spanish
Flange options: ANSI 150, JIS, Table 'E'
Lead length: 65.6 ft and 95.1 ft
Welder Document Pack for chamber construction
Skid mounting (not ship board or earthquake zone)
Air vent connection
In field UV reference sensor kit

#### CABINET (CONTROLLER UVTOUCH™)

Material:	Polyester coated carbon steel
Degree of protection:	IP54 / NEMA 12
Supply voltages:	230 V (+/-10%), 1L+N or 2L, 50/60 Hz
Operating temp range:	41°F to 104°F
Relative humidity:	<95% non-condensing
Cooling fans:	Yes
Variable power:	Variable power (50% reduction from maximum ballast power)
Interconnecting cable lengths:	32.8 ft to chamber
PLC & HMI:	Allen Bradley AB 850 & UV Touch

#### CUSTOMER OUTPUTS

4-20 mA outputs:	UV RED dose, lamp driven output power (%)
VFC outputs:	System ready, system stand by, system running, common warning, common trip, system in remote

#### CUSTOMER INPUTS

4-20 mA active or passive inputs:	Flow meter and transmittance meter
VFC inputs:	Remote stop/start, remote reset/clear message, remote set power high

#### CUSTOMER COMMUNICATIONS PORT

Modbus RS 485 serial RTU for SCADA connection

#### APPROVALS

USEPA (UVDGM), CE marked



## PROLINE PQ AL

Also available in our Drinking Water product range...



### PROLINE PQ EO

Energy Optimized medium pressure range, USEPA validated with built in UVT compensation



### PROLINE PQ AF

Small community, low energy amalgam range with USEPA validation



### 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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