

We UVCare...



# Application Optimized UV for Waste Water Reuse

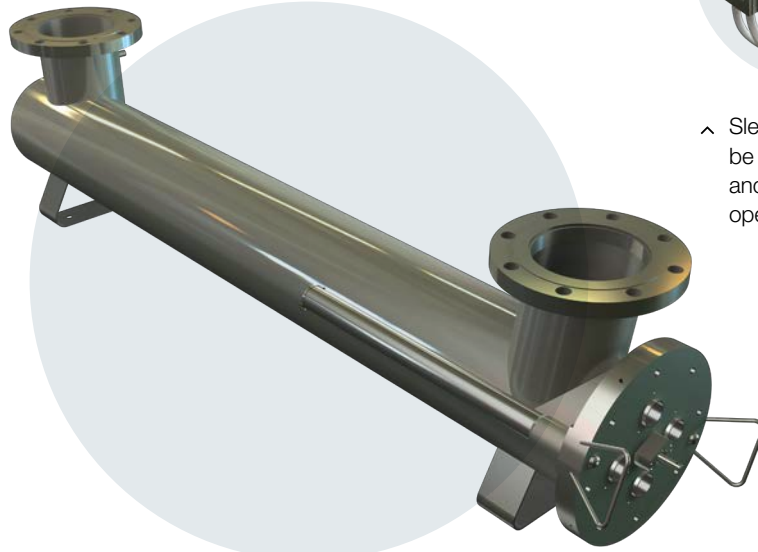
PROLINE PQ WW AL



^ Sleeves and wiper can be changed quickly and easily by a single operator



^ Lamp connector provides user safety and easy servicing

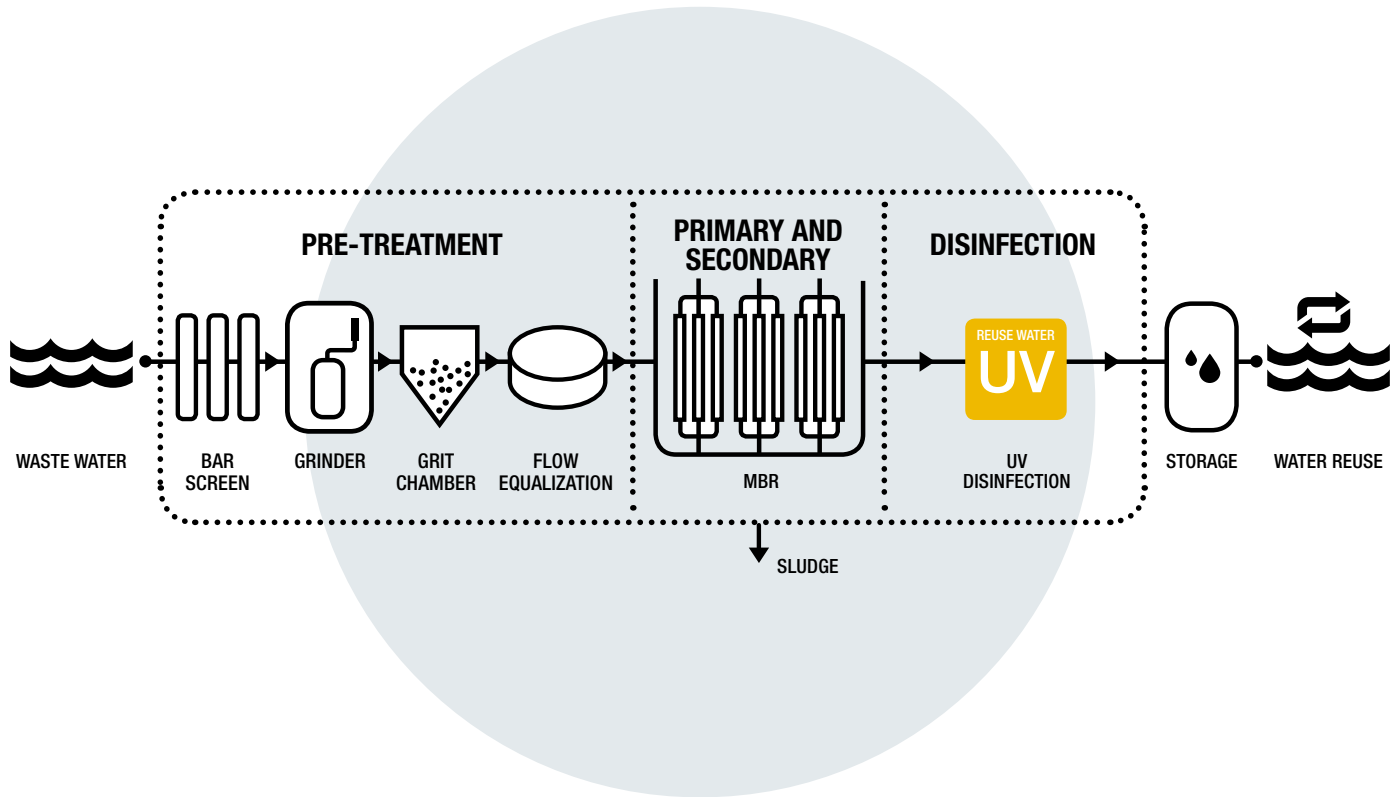


## NWRI validated UV Treatment for Waste Water Reuse

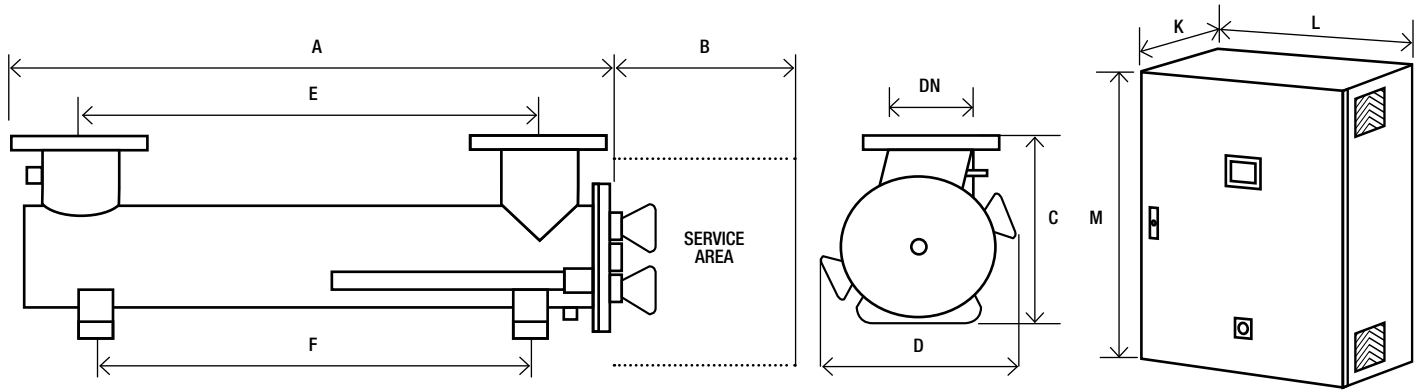
Our ProLine PQ WW AL UV systems are low energy, amalgam lamp systems optimized to deliver effective UV disinfection for waste water reuse. The PQ WW AL is third party validated to NWRI and integrates an innovative multiple low pressure lamp chamber design with sensors and intelligent control technology to automatically deliver optimum disinfection performance with high operational efficiency. The PQ WW AL will 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 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 WW AL™ decentralized treatment system



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	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



		Dimensions (Inches)										Approx weight (lb)		
		Chamber								Control				
Model	Max Power (kW)	A	B	C	D	E	F	DN	K*	L	M**	Chamber (Empty)	Control Cabinet	
		Starting	Running											
ProLine PQ WW AL 100	2.4	1.2-2.4	67.3	59	16.5	15.7	55.8	54	6	11.8	31.5	39.4	330.7	154.3
ProLine PQ WW AL 300	7.2	3.6-7.2	71	59	23.8	22	54	58	9.8	15.7	47.2	47.2	661.4	308.6

\* 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 as laid, 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 4 but not for outside use
UV Lamp:	Low Pressure Amalgam
Quartz Sleeve:	Pure quartz
Number of 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
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) or IP56 (NEMA 4x)
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
Aggressive water package: For 400 ppm to 20000 ppm chloride water
Welder Document Pack for chamber construction
Skid mounting
Vent valve: Manual valve hygienic design
In field UV reference sensor kit

#### CABINET

Material:	Polyester coated carbon steel, RAL 7035
Degree of protection:	IP54 / NEMA 12
Supply voltages:	208 V to 277 V 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

UL 508A , CE marked, NWRI validated



## PROLINE PQ WW AL

Also available in our Waste Water product range...



### PROLINE PQ WW IL

Range of medium pressure products with NWRI validation for waste water reuse



### PROLINE WW IL

Range of compact medium pressure products for waste water disinfection



**berson**



**hanovia**



**aquionics**

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