nuvonic

formerly Aquionics, Berson, Hanovia and Orca GmbH

ProLine PQ AF
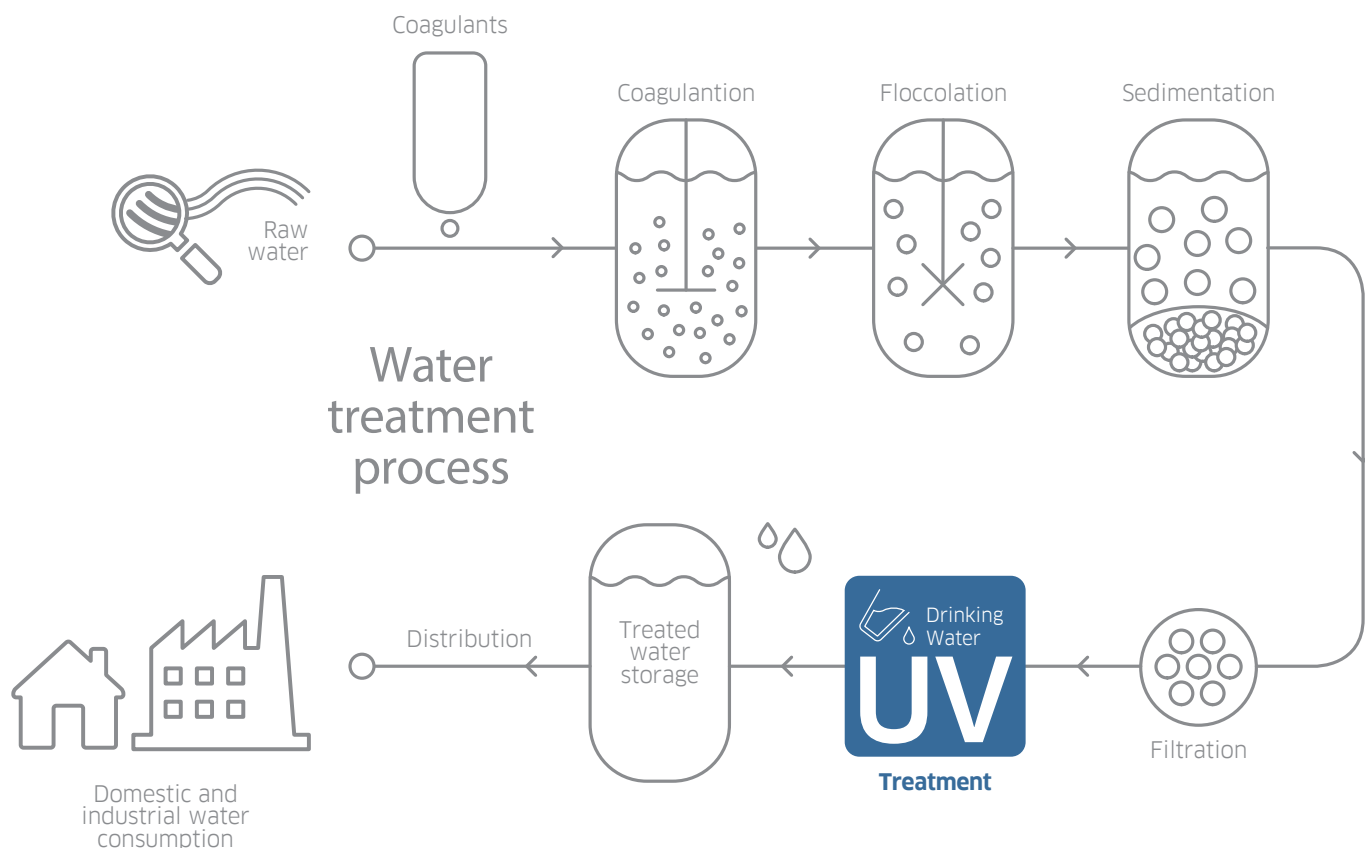
VALIDATED UV TREATMENT FOR DRINKING WATER

Our **ProLine PQ AF** range of Drinking Water UV solutions protect people from harmful contamination from bacteria and viruses. Even at low doses, UV provides protection against Chlorine resistant pathogens such as Cryptosporidium and Giardia. UV is 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 treatment and can provide Virus protection. PQ AF integrates a low pressure lamp chamber with sensors and control technology to automatically deliver optimum performance. A certified dry UV sensor measures the germicidal output of the UV system and a UV dose read out makes it easy to monitor and log performance.
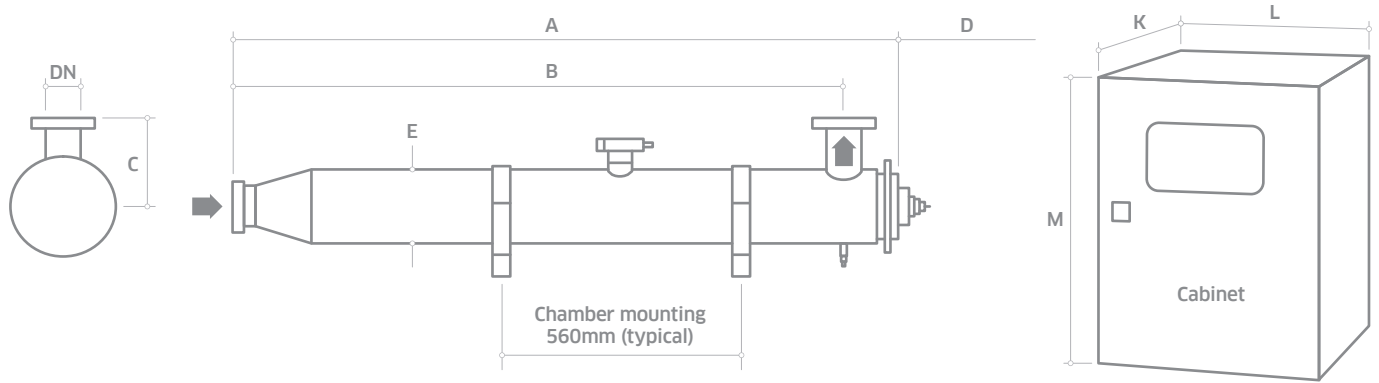
Application Optimised UV for Drinking Water

POTENTIAL LOCATIONS OF THE PROLINE PQ AF™ IN DRINKING WATER TREATMENT PROCESS

Coagulants

Coagulantion

Floccolation

Sedimentation

Raw water

Water treatment process

Distribution

Treated water storage

Drinking Water
UV
Treatment

Filtration

Domestic and industrial water consumption

KEY FEATURES	WHAT IT GIVES YOU	BENEFITS FOR YOU
INTELLIGENCE		
Dry DVGW approved UV sensor measuring active 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
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
UV water treatment	Protects your drinking water from microbiological contamination including chlorine resistant Cryptosporidium and Giardia	Does not affect taste and odour
		No chemicals
Designed for treatment of drinking water	FDA-approved materials used for all wetted parts	Industry compliant materials
	Flanged connections, high standard internal finish	Designed to international standards
	Automatic wiper (quartz cleaning)	Self cleaning to maintain performance
INTEGRATION		
Compact Design	*Skid mountable	Easy to install
	Can be retrofitted to existing process	
RS 485 interface *Option	Single cable connection to customer control system	Easy integration to SCADA or plant control systems

Chamber mounting 560mm (typical)

Cabinet

MODEL NUMBER	MAX POWER (W)	MIN T10(%)	DIMENSIONS (MM)									APPROX WEIGHT (KG)	
			A	B	C	D	E	DN	K*	L	M**	Chamber (Empty)	Control Cabinet
ProLine PQ AF 0008	200	60	1388	1273	82	1300	102	50	224	600	890	9	36
ProLine PQ AF 0016	350	60	1388	1273	82	1300	102	50	224	600	890	9	36
ProLine PQ AF 0090	750	60	1980	1825	200	1900	206	150	224	600	890	46	36

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.
** 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:	Sateen polish (120 grit) electropolished and passivated
Process (mating) connections:	Flange EN 1092-1 PN16
Drain connection:	BSPT
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
Arc tube (lamp):	Low pressure amalgam
Wiper:	Automatic (pneumatically driven)
Arc tube enclosure:	Pure quartz (F200)
Number of arc tubes (lamps):	1
Expected lamp life:	12000 hours
Temperature sensor:	Yes
UV sensor:	Dry DVGW compliant UV sensor with UVGuard™ window
Working fluid temperature:	5°C to 40°C
Hydrostatically pressure tested:	Yes to PED requirements EN 13445
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

Transmittance compensating dose equation

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'

UVShield™

Water leak detection

UL listing

UL 508A panel shop

Bleed: BSPT connection and valve

Lead length: 20 & 29 m PQ AF 0008, 14 m PQ AF 0016 - 0090

OPTION (CONTINUED)

In-field UV reference sensor kit

Welder Document Pack for chamber construction

Skid mounting (not shipboard 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:	5°C to 40°C
Relative humidity:	<95% non-condensing
Cooling fans:	No
Interconnecting cable:	10 m
Variable power:	Stepless 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 COMMINICATION PORT

RS 485:	Modbus

APPROVALS

CE marked, USEPA (UVDGM)

ProLine PQ AF

Also available in our Drinking Water product range...

PROLINE PQ IL

Compact medium pressure range with USEPA validation

PROLINE PQ EO

Energy Optimised medium pressure range, USEPA validated UVT compensation

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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