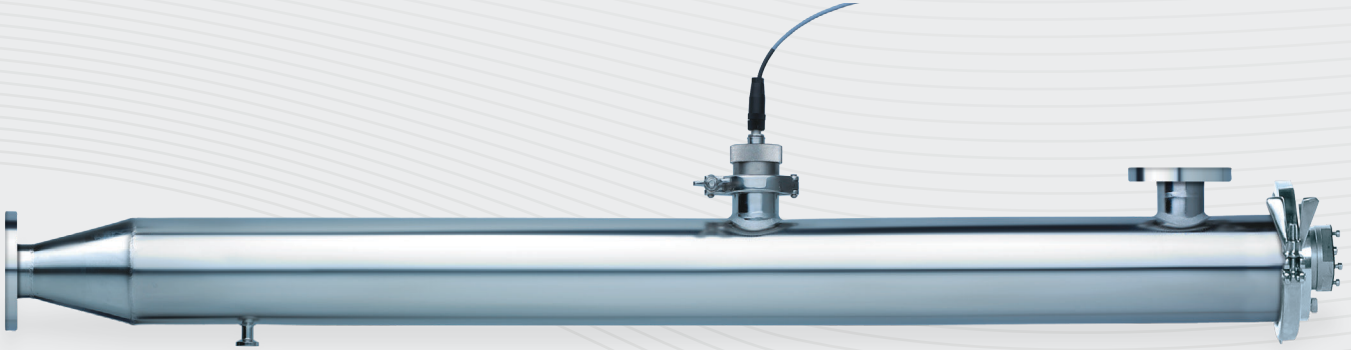




## ProLine PQ AF

### VALIDATED UV TREATMENT FOR DRINKING WATER

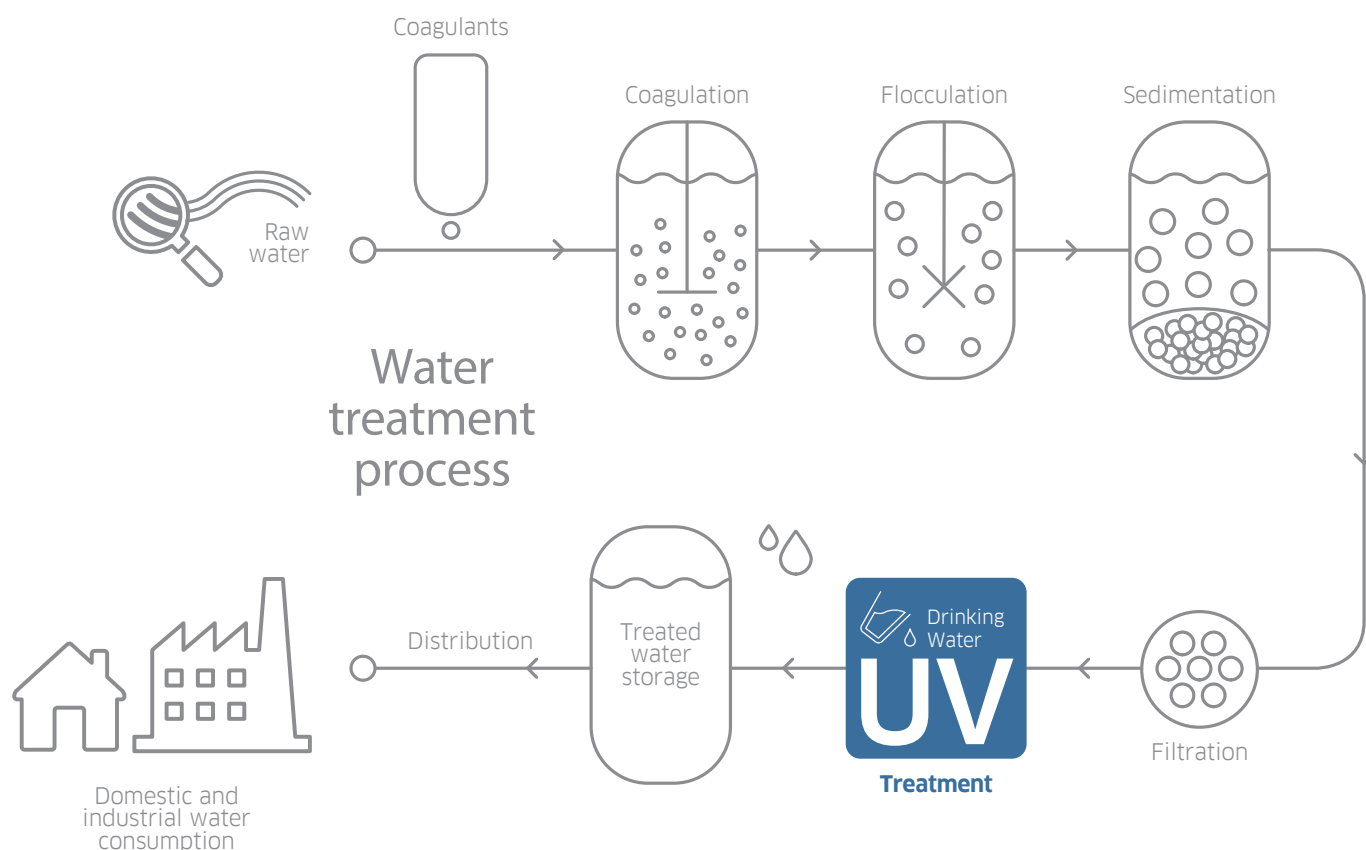
Our **ProLine PQ AF** range of Drinking Water UV solutions protect people from harmful contamination from bacteria and viruses. Even at low doses, UV provides protection against Chlorine resistant pathogens such as Cryptosporidium and Giardia. UV is an additional level of safety and allows lower Chlorine 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.

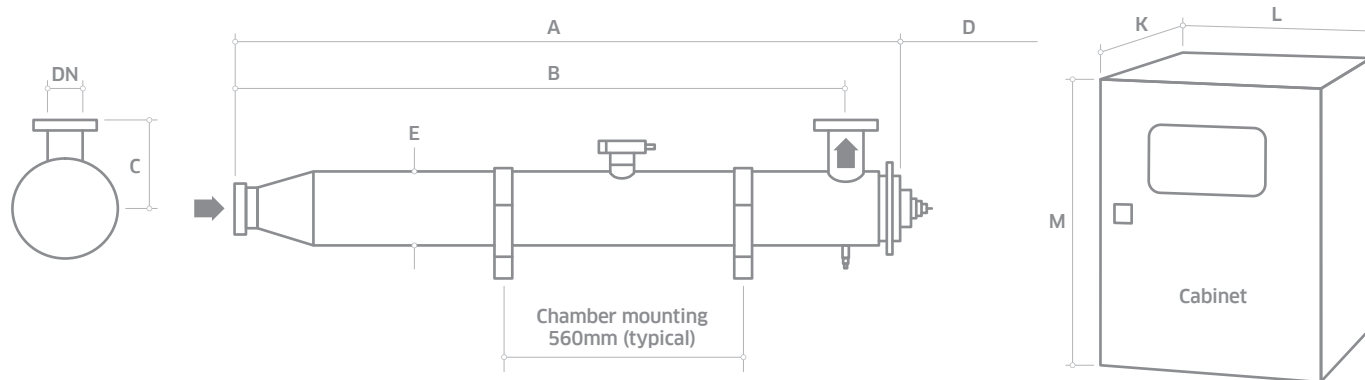


Application  
Optimised UV for  
Drinking Water

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



| KEY FEATURES                                                                                         | WHAT IT GIVES YOU                                                                                                        | BENEFITS FOR YOU                                                             |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| <b>INTELLIGENCE</b>                                                                                  |                                                                                                                          |                                                                              |
| 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 |
| <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                                 |
| UV water treatment                                                                                   | Protects your drinking water from microbiological contamination including chlorine resistant Cryptosporidium and Giardia | Does not affect taste and odour<br>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                                        |
| <b>INTEGRATION</b>                                                                                   |                                                                                                                          |                                                                              |
| Compact design                                                                                       | *Skid mountable                                                                                                          | Easy to install                                                              |
|                                                                                                      | Can be retrofitted to existing process                                                                                   |                                                                              |
| RS 485 interface<br>*Option                                                                          | Single cable connection to customer control system                                                                       | Easy integration to SCADA or plant control systems                           |



| 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:              | 14,000 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'                                                                               |  |
| UV Disconnect™                                                                                                                     |  |
| 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                                                                          |  |

| OPTIONS (CONTINUED)                              |  |
|--------------------------------------------------|--|
| In-field UV reference sensor kit                 |  |
| Welder Document Pack for chamber construction    |  |
| Skid mounting (not shipboard or earthquake zone) |  |

| CABINET (CONTROLLER UV TOUCH - AB850 PLC & TOUCHSCREEN) |                                                                                                       |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 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 COMMUNICATION PORT |        |
|-----------------------------|--------|
| RS 485:                     | Modbus |

| APPROVALS                |  |
|--------------------------|--|
| CE marked, USEPA (UVDGM) |  |



# ProLine PQ AF

Also available in our Drinking Water product range...



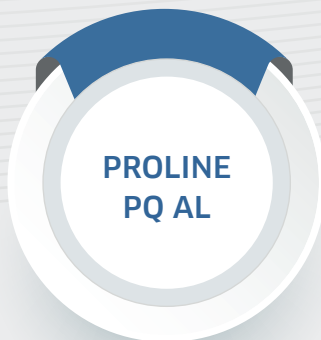
**PROLINE  
PQ IL**

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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