

formerly Aquionics, Berson, Hanovia and Orca GmbH



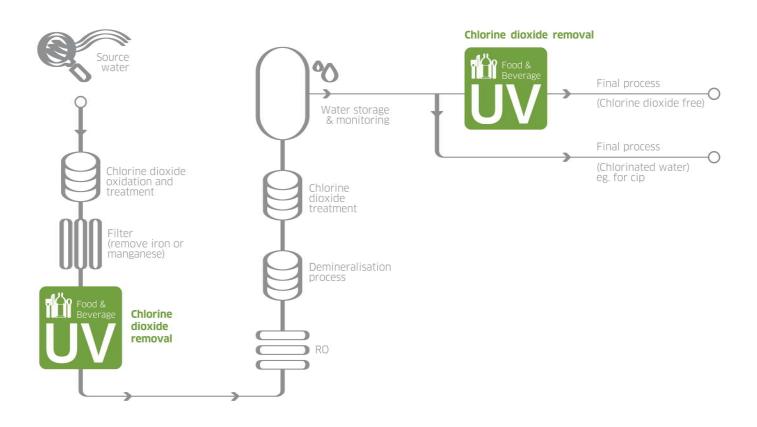
# **PureLine DCD PH**

UV CHLORINE DIOXIDE REMOVAL FOR FOOD AND BEVERAGE Our **PureLine DCD PH** UV systems deliver guaranteed high UV doses for effective chlorine dioxide removal and treatment for the food and beverage industries. By using UV to remove chlorine dioxide we protect RO membranes from both residual chlorine dioxide and biofouling. UV chlorine dioxide removal provides distinct advantages over traditional technologies such as Activated Carbon Filtration (ACF) or Ferrous Salt dosing. These proven chlorine dioxide removal methods are prone to microbial contamination and require signifi antly more operator involvement and plant room space than UV, leading to higher lifetime costs.





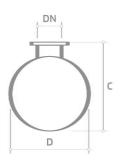
## POTENTIAL LOCATIONS OF THE PURELINE DCD PH™

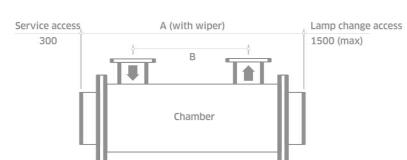


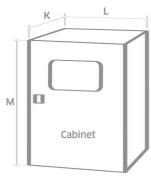
| KEY FEATURES                                | WHAT IT GIVES YOU   | BENEFITS FOR YOU   |  |  |
|---|---|--|--|--|
| INTELLIGENCE                                |   |  |  |  |
| UV intensity monitor                        | Continuous verification of performance with in-built low intensity alarm  | Easy to monitor and log system performance                                   |  |  |
| OPTIMISATION                                |   |  |  |  |
| Medium pressure lamp                        | Provides high intensity UV light at 200 to 400 nm wavelengths ideal for the destruction of chlorine dioxide (ClO2 and OCI-) | Prolongs the life of RO equipment by removing chlorine dioxide               |  |  |
|   | Chemical free reduction of chlorine dioxide   | No risk of contamination or running out of chemical                          |  |  |
|   | Unlike ACF does not require backwashing or media replacement  | Saves on water and maintenance costs   |  |  |
|   | Provides high intensity germicidal wavelengths to treat the water   | Prolongs the life of RO equipment compared to ACF by reducing the bio-burden |  |  |
| Designed for the food and beverage industry | FDA-approved materials used for all wetted parts  | Industry compliant materials   |  |  |
|   | *Chamber with <0.38 µm internal surface finish and tri-clamp connections  | Sanitary design  |  |  |
|   | *Automatic wiper (quartz cleaning)  | Self cleaning to maintain performance  |  |  |
| INTEGRATION                                 |   |  |  |  |
| Compact design                              | Can be fitted to skids  | Easy integration   |  |  |
|   | Can be retrofitted to existing process  |  |  |  |
| Robust design                               | Maximum of 2 service visits annually  | Easy to maintain compared to ACF and Ferrous salt dosing                     |  |  |
| *Option                                     |   |  |  |  |











| MODEL NUMBER       | MAX POWER (W) | MIN T10(%) |         | DIMENSIONS (MM) |      |                     |     |       | APPROX WEIGHT (KG) |         |      |       |            |
|--------------------|---------------|------------|---------|-----------------|------|---------------------|-----|-------|--------------------|---------|------|-------|------------|
|                    |               |            | Chamber |                 | Cab. | Cabinet (fan cooled |     | ooled | Chamber            | Cabinet |      |       |            |
|                    |               |            | Α       | В               | C    | D                   | DN  |       | K*                 | L       | M**  | Empty | Fan cooled |
| PureLine DCD PH 20 | 4.2           | 85         | 1300    | 674             | 319  | 240                 | 100 | 1     | 330                | 750     | 850  | 50    | 85         |
| PureLine DCD PH 30 | 4.2           | 90         | 1300    | 674             | 420  | 290                 | 150 | 1     | 330                | 750     | 850  | 65    | 85         |
| PureLine DCD PH 40 | 5.8           | 85         | 1300    | 674             | 420  | 290                 | 150 | 1     | 330                | 900     | 1100 | 65    | 165        |
| PureLine DCD PH 50 | 16.5          | 65         | 1300    | 674             | 420  | 290                 | 150 | 1     | 330                | 1100    | 1600 | 65    | 282        |
| PureLine DCD PH 60 | 25.2          | 65         | 1300    | 674             | 505  | 410                 | 250 | 1 CC  | 330                | 900     | 1100 | 140   | 165        |
|                    |               |            |         |                 |      |                     |     | 1 PC  | 330                | 1100    | 1600 |       | 282        |

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.

\*\* 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).

| UV CHAMBER                       |  |
|----------------------------------|--|
| Material:                        | Stainless steel 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:                | Tri-clamp  |
| End plate:                       | Removable end plate  |
| Degree of protection:            | IP65 equivalent to NEMA 4 but not for outside use                    |
| Arc tube (lamp):                 | Medium pressure  |
| Arc tube enclosure:              | Pure quartz (F200)   |
| Number of arc tubes (lamps):     | 1 (DCD PH 20-40), 4 (DCD PH 50),<br>6 (DCD PH 60)                    |
| Expected lamp life:              | 8000 hours, 4000 hours DCD PH 40                                     |
| Temperature sensor:              | Yes  |
| UV monitor:                      | Wet UV monitor (if above minimum T10)                                |
| Working fluid temperature:       | 1°C to 60°C (80°C unwiped)   |
| Maximum CIP temperature:         | 95°C with cabinet electrically isolated                              |
| Hydrostatically pressure tested: | Yes to PED requirements EN 13445                                     |
| Chamber mounting:                | Horizontal only  |
| Operating pressure:              | 6 bar (positive pressure only)                                       |
| Seals:                           | EPDM, ADI free, EC 1935/2004, FDA 21 CFR 177.2600 approved           |

### Document Support Pack Cabinet material: Stainless steel 316 Operation and Maintenance manual and printed Installation and Commissioning manual in Chinese, English, French, German and Spanish Wiper: Automatic (electrically driven) Flange options: ANSI 150, JIS, Table 'E' and tri-clamp Chamber internal finish: <0.38 µm welds polished out, electropolished and passivated Lead length: 20 m, 30 m or 50 m cabinet to chamber Maximum CIP temperature: 130°C (panel switched off) Welder Document Pack for chamber construction Bleed valve: Hygienic valve with tri-clamp connection

| OPTIONS (CONTINUED)  |  |  |  |  |
|--|--|--|--|--|
| Skid mounting (not ship board or earthquake zone)  |  |  |  |  |
| Operating pressure: 10 bar   |  |  |  |  |
| Air vent connection: Tri-clamp blanked off   |  |  |  |  |
| Stainless steel cabinet IP upgrade: air to air heat exchangers stainless steel IP 56, NEMA 4X, relative humidity <95% non condensing. If fitted no UL listing. See sales drawings for sizes. |  |  |  |  |
| Aggressive water package: For 400 ppm to 20000 ppm chloride water  |  |  |  |  |
| UVShield™: Power cut-out for lamp access (except DC PH 50 - 60)  |  |  |  |  |
| Water leak detection: Detects water leaks from quartz sleeve (except DC PH 50 - 60)  |  |  |  |  |
| Arc tube enclosure: Doped quartz F240 (reduces performance)  |  |  |  |  |
| CABINET (CONTROLLER PHO  | FON)   |  |  |  |
| Material:  | Polyester coated carbon steel  |  |  |  |
| Degree of protection:  | IP54 NEMA 12   |  |  |  |
| Supply voltages (nominal):   | DCD PH 20-40 190 V to 480 V (+/-10%)<br>DCD PH 50-60 380 V to 480 V (+/-10%) |  |  |  |

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| Material:   | Polyester coated carbon steel   |  |  |
| Degree of protection:                                       | IP54 NEMA 12  |  |  |
| Supply voltages (nominal):                                  | DCD PH 20-40 190 V to 480 V (+/-10%)<br>DCD PH 50-60 380 V to 480 V (+/-10%)<br>50/60 Hz  |  |  |
| Operating temperature range:                                | 5°C to 40°C   |  |  |
| Relative humidity:  | <85% non-condensing   |  |  |
| Cooling fans:   | Yes   |  |  |
| Interconnecting cable lengths:                              | 10 m cabinet to chamber   |  |  |
| CUSTOMER OUTPUTS  |   |  |  |
| 4-20 mA passive or active output:                           | UV intensity %  |  |  |
| VFC outputs:  | System warning, lamp ready, low UV intensity, common trip, remote reset, ELCB or water leak, system available, local or remote mode |  |  |
| CUSTOMER INPUTS   |   |  |  |
| 4-20 mA passive or active input:                            | Flow meter  |  |  |
| VFC inputs:   | Remote stop/start and remote reset  |  |  |
| CUSTOMER COMMUNICATIONS PORT                                |   |  |  |
| None  |   |  |  |
| APPROVALS   |   |  |  |

CE marked, UL listed E149108







### **PureLine DC+DCD**

Also available in our Food & Beverage product range...

**PURELINE** D

Treatment as part of a multi barrier approachl **PURELINE** DO

Ozone removal and treatment

**PURELINE** PO

3rd party bioassayed systems for critical treatment or as a pathogen barrier

**PURELINE** S

Sugar syrup treatment

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