### **ETS-UV WAFER™ UV DISINFECTION GENERATOR**

#### **NEW PRODUCT RANGE DESIGNED SPECIFICALLY FOR THE AQUATICS INDUSTRY**

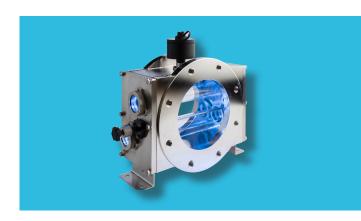
The Wafer™ generator differs from any other UV generator currently on the market, with a unique UV chamber that offers the most compact UV disinfection generator available today. At about one third of the size of comparative UV offerings, and with a significantly reduced maintenance envelope, the Wafer generator delivers an easy to install and retrofit solution that will fit the tightest of mechanical rooms.

Not only does the Wafer UV generator represent the most compact UV solution available on the market, it features a hydraulically optimized generator design and leading polychromatic lamp technology, making it one of the most efficient and highest performing generators as well. The Wafer generator is designed to provide 99.9% inactivation of chlorineresistant microorganisms such as Cryptosporidium and Giardia.

Operators will also benefit from the inclusion of the Spectra control system as standard, which includes a wide range of features such as a data stream monitoring, process interlocks and programmable set points. A key Spectra control feature includes variable power stepping from 100% to 35% at no extra cost, allowing operators to optimize the operational power of their system to match bather loads and pool operating schedules.

In addition, the Spectra controller features a reactive boost function that automatically operates the lamps at maximum power from a combined chlorine alarm signal, when teamed with a suitable chlorine controller. This is a feature specifically designed for swimming pool applications to break down problematic chloramines as soon as they are detected, significantly improving water quality and eliminating the cause of strong chemical smells, red burning eyes, itchy skin and natatorium corrosion.

THE WAFER UV DISINFECTION GENERATOR OFFERS A COMPACT UV TREATMENT SOLUTION FOR CAPABILITIES OF 50 M<sup>3</sup>/HR - 700 M<sup>3</sup>/HR IN A SINGLE HIGH OUTPUT UV GENERATOR



#### PERFORMANCE AND INSTALLATION

- Smaller installation footprint
- Horizontal or vertical installation
- More efficient and enhanced power control
- Higher performance
- Simpler & faster to maintain
- Increased safety
- Ethernet, Modbus® and Profibus®



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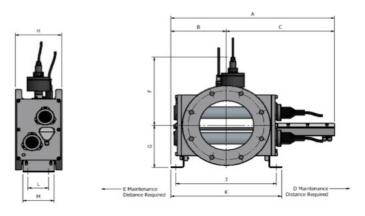
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**Neptune-Benson EVOQUA** 

| UV GENERATOR  | WF-115-3   | WF-115-4     | WF-125-6        | WF-215-6  | WF-215-8  | WF-225-8                                | WF-230-10       | WF-430-   |  |  |  |  |
|---|--|--------------|-----------------|---|---|---|-----------------|-----------|--|--|--|--|
| Certification   | CE Marked, NSF-50  |              |                 |   |   |   |                 |           |  |  |  |  |
| Approvals   |  |              |                 |   |   |   |                 |           |  |  |  |  |
| CHAMBER SPECIFICATION  Lamp Power Range (kW)  | 0.45 - 1.5   | 0.45 - 1.5   | 0.75 - 2.5      | 0.45 - 1.5  | 0.45 - 1.5  | 0.75 - 2.5                              | 0.90 - 3.0      | 0.9 - 3.0 |  |  |  |  |
| Lamp Number   | 0.43 - 1.3   | 0.43 - 1.3   | 0.73 - 2.3      | 2   | 2   | 2                                       | 0.90 - 3.0      | 4         |  |  |  |  |
|   | ' '  | '            | '               |   |   | 2                                       | 2               | 4         |  |  |  |  |
| Lamp Life   |  |              |                 | 9,000   |   |   |                 |           |  |  |  |  |
| Lamp Design   | TWISTLOK' Quick Release, Enhanced Safety - Medium Pressure  200V   |              |                 |   |   |   |                 |           |  |  |  |  |
| Lamp Nom. V   | 200  | υv           | 330V 200V 330V  |   |   | 330V                                    | 400             | ) V       |  |  |  |  |
| Lamp Nom. I   |  |              |                 | 7.5   |   |   |                 |           |  |  |  |  |
| UV Monitoring   | AT-900 - ONorm Validated Probe   |              |                 |   |   |   |                 |           |  |  |  |  |
| Number of Sensors   | 1  |              |                 |   |   |   |                 |           |  |  |  |  |
| Variable Power  | 100% to 30% Power (Automatic Dose Pacing)  |              |                 |   |   |   |                 |           |  |  |  |  |
| Connection Size (mm/inch)   | DN 80/3"   | DN 100/4"    | DN 150/6"       | DN 150/6"   | DN 200/8"   | DN 200/8"                               | DN 250/10"      | DN 300/1  |  |  |  |  |
| Connection Type   |  |              | USA (           | ANSI 150) / RoV                                   | V (EN1092-1-BS  | 34504)                                  |                 |           |  |  |  |  |
| Design Pressure   | 10 Barg Design (15 Barge Test)   |              |                 |   |   |   |                 |           |  |  |  |  |
| Material Construction   | 316L Stainless Steel   |              |                 |   |   |   |                 |           |  |  |  |  |
| Internal / External Finish  |  |              |                 | Electrop  | olished   |   |                 |           |  |  |  |  |
| Internal Surface Finish   |  |              |                 | 3.2   | Ra  |   |                 |           |  |  |  |  |
| Lamp and Wiper Access   |  |              |                 | Single End  | ed Access   |   |                 |           |  |  |  |  |
| Mounting  |  |              |                 | Fixed B   | rackets   |   |                 |           |  |  |  |  |
| Wiper System  | Automatic Wiper System   |              |                 |   |   |   |                 |           |  |  |  |  |
| Temperature Probe   | AT-487 (PT-100)  |              |                 |   |   |   |                 |           |  |  |  |  |
| Vent Port   |  | USA (1/2" N  | IPT) / RoW (1/: | 2") Air Release \                                 | /alve Supplied  | for Horizontal                          | Installations   |           |  |  |  |  |
| Drain Port  |  |              | U               | SA (1/4" NPT) /                                   | RoW (1/4" BSI   | P)                                      |                 |           |  |  |  |  |
| Sacrificial Anode   | USA (1/2" NPT Included) / RoW (None)   |              |                 |   |   |   |                 |           |  |  |  |  |
| Ingress Protection  | IP 55  |              |                 |   |   |   |                 |           |  |  |  |  |
| Installation  |  |              | Horizonta       | l or Vertical (La                                 | mne Muet ha H   | lorizontal)                             |                 |           |  |  |  |  |
| PANEL SPECIFICATION   |  |              | Horizonia       | ror vertical (20                                  | mps ridse be r  | ion zontal)                             |                 |           |  |  |  |  |
| Design  |  |              | Epo             | xy Coated Mile                                    | Steel - RAL   | 7035                                    |                 |           |  |  |  |  |
| Control Type  |  |              |                 | Micropr   | ocessor   |   |                 |           |  |  |  |  |
| Ingress Protection  |  |              |                 | IP:   | 54  |   |                 |           |  |  |  |  |
| Ventilation   |  |              |                 | Forced Air C                                      | Cooled (Fan)  |   |                 |           |  |  |  |  |
| Interface   |  |              |                 | Spectra N   |   |   |                 |           |  |  |  |  |
| Communication   |  |              |                 |   |   |   |                 |           |  |  |  |  |
| Lamp Power Supply   | Modbus (RS-422 / RS-485)           3.5kW MP Ballast         3.5kW MP Ballast Heat Sink         4kW MP Ball |              |                 |   |   |   | Pallact         |           |  |  |  |  |
|   | 3.3KW M  | IP Dallast   | 1               | 3.5kW MP Ballast Heat Sink 4kW MP Ballast         |   |   |                 |           |  |  |  |  |
| Number of Ballasts  | 1050   | 1050         | 1               |   | 00  | 5500                                    | 2               | 4         |  |  |  |  |
| Power Consumption   | 1650   | 1650         | 2750            |   | 00<br>  | 5500                                    | 6600            | 13200     |  |  |  |  |
| 1Ph 208V  | X  | X            | X               | X   | ×   | X                                       |                 |           |  |  |  |  |
| 1Ph 220V  | Х  | Х            | Х               | Х   | Х   | Х                                       |                 |           |  |  |  |  |
| 1Ph 230V  | X  | X            | X               | X   | ×   | X                                       |                 |           |  |  |  |  |
| 1Ph 240V  | Х  | Х            | Х               | Х   | X   | Х                                       |                 |           |  |  |  |  |
| 3Ph 380V  |  |              |                 |   |   |   | ×               | Х         |  |  |  |  |
|   |  |              |                 |   |   |   | ×               | х         |  |  |  |  |
| 3Ph 400V  |  |              |                 |   |   |   | ×               | X         |  |  |  |  |
| 3Ph 400V<br>3Ph 415V  |  |              |                 |   |   |   |                 |           |  |  |  |  |
|   |  |              |                 |   |   |   | ×               | ×         |  |  |  |  |
| 3Ph 415V<br>3Ph 480V  |  |              |                 | 50 Hz /   | ′ 60Hz  |   | ×               | x         |  |  |  |  |
| 3Ph 415V<br>3Ph 480V<br>Frequency   |  |              |                 | 50 Hz /   |   |   | ×               | x         |  |  |  |  |
| 3Ph 415V<br>3Ph 480V<br>Frequency<br>Protection   |  |              |                 |   | MCCB Isolator   |   | x               | ×         |  |  |  |  |
| 3Ph 415V 3Ph 480V Frequency Protection Operation Temperature                                |  | Remote Start |                 | Door Locked                                       | MCCB Isolator   | С                                       |                 | ×         |  |  |  |  |
| 3Ph 415V 3Ph 480V Frequency Protection Operation Temperature Digital Inputs                 | 2 × Selectab   |              | /Step +2 x Se   | Door Locked I<br>Max Working A<br>lectable Inputs | MCCB Isolator<br>Ambient +45°0<br>(Boost / Low  | C<br>/ Power / Prod                     |                 |           |  |  |  |  |
| 3Ph 415V 3Ph 480V Frequency Protection Operation Temperature Digital Inputs Digital Outputs | 2 x SelectaŁ   |              | :/Step +2 x Se  | Door Locked I<br>Max Working A<br>lectable Inputs | MCCB Isolator<br>Ambient +45°(<br>G (Boost / Low<br>Dose Healty/System                | C<br>/ Power / Prod<br>em Running/Syste | cess Interlock) |           |  |  |  |  |
| 3Ph 415V  | 2 x Selectab   |              | :/Step +2 x Se  | Door Locked  <br>Max Working A<br>lectable Inputs | MCCB Isolator<br>Ambient +45°(<br>(Boost / Low<br>(Dose Healty/Syst<br>(Flow Rate / U | C<br>/ Power / Prod<br>em Running/Syste | cess Interlock) |           |  |  |  |  |

# ETS-UV™ DISINFECTION GENERATOR TECHNICAL DATA SHEET

## WF WAFER 1- 4 LAMP MEDIUM PRESSURE UV SYSTEMS KEY FOOTPRINT DIMENSIONS



| UV GENERATOR                 | WF-115-3   | WF115-4 | WF-125-6 | WF-215-6 | WF-215-8 | WF-225-8 | WF-230-10 | WF-430-12 |  |  |  |  |
|------------------------------|--|---------|----------|----------|----------|----------|-----------|-----------|--|--|--|--|
| Chamber Dimensions           |  |         |          |          |          |          |           |           |  |  |  |  |
| A (inches)                   | 20.3   | 20.3    | 24.8     | 24.8     | 24.8     | 24.8     | 31.0      | 31.0      |  |  |  |  |
| B (inches)                   | 6.2  | 6.2     | 8.4      | 8.4      | 8.4      | 8.4      | 11.9      | 11.9      |  |  |  |  |
| C (inches)                   | 14.1   | 14.1    | 16.4     | 16.4     | 16.4     | 16.4     | 19.1      | 19.1      |  |  |  |  |
| D (inches)                   | 14.4   | 14.4    | 18.9     | 18.9     | 18.9     | 18.9     | 24.4      | 24.4      |  |  |  |  |
| E (inches)                   | 9.8  | 9.8     | 9.8      | 9.8      | 9.8      | 9.8      | 9.8       | 9.8       |  |  |  |  |
| F (inches)                   | 9.0  | 9.0     | 11.4     | 11.4     | 11.4     | 11.4     | 12.5      | 13.5      |  |  |  |  |
| G (inches)                   | 4.8  | 4.8     | 7.0      | 7.0      | 7.0      | 7.0      | 9.1       | 10.1      |  |  |  |  |
| H (inches)                   | 6.2  | 6.2     | 7.0      | 7.0      | 7.0      | 7.0      | 7.4       | 7.4       |  |  |  |  |
| J (inches)                   | 10.7   | 10.7    | 15.2     | 15.2     | 15.2     | 15.2     | 21.8      | 21.8      |  |  |  |  |
| K (inches)                   | 12.3   | 12.3    | 16.8     | 16.8     | 16.8     | 16.8     | 23.8      | 23.8      |  |  |  |  |
| L (inches)                   | 3.1  | 3.1     | 3.1      | 3.1      | 3.1      | 3.1      | 5.5       | 5.5       |  |  |  |  |
| M (inches)                   | 4.7  | 4.7     | 4.7      | 4.7      | 4.7      | 4.7      | 7.0       | 7.0       |  |  |  |  |
| Dry Weight (lbs)             | 60   | 57      | 126      | 128      | 117      | 117      | 172       | 194       |  |  |  |  |
| Wet Weight (Lbs)             | 66   | 62      | 148      | 150      | 141      | 141      | 218       | 247       |  |  |  |  |
| CONTROL PANEL                |  |         |          |          |          |          |           |           |  |  |  |  |
| Width (inches)               | 20   | 20      | 23       | 23       | 23       | 23       | 23        | 31        |  |  |  |  |
| Height (inches)              | 20   | 20      | 23       | 23       | 23       | 23       | 31        | 39        |  |  |  |  |
| Depth (inches)               | 10   | 10      | 12       | 12       | 12       | 12       | 12        | 12        |  |  |  |  |
| Weight (lbs)                 | 66   | 66      | 77       | 77       | 77       | 88       | <165      | <165      |  |  |  |  |
| Standard Cable (feet)        |  |         |          | 1        | 6        |          |           |           |  |  |  |  |
| Max Cable Length* (feet)     | 92   | 92      | 92       | 46       | 46       | 92       | 92        | 92        |  |  |  |  |
| *It may be possible to exter | t may be possible to extend the cable length beyond the figures given, if this is required please contact us for details |         |          |          |          |          |           |           |  |  |  |  |