

VXM RANGE - ULTRAVIOLET DISINFECTION SYSTEMS

DESIGNED FOR INDUSTRIAL APPLICATIONS



Evoqua's VXM range from the ATG™ UV family of products is designed for superior disinfection of industrial water in applications requiring performance at low UV transmittance or requiring high doses. The environmentally friendly, chemical-free technology is fully configurable to meet individual system needs whether the application is food & beverage, pharmaceutical manufacture, healthcare, electronics, beverage production or aquaculture disinfection.

HIGHLY EFFICIENT & COST EFFECTIVE

Using energy efficient UV light sources and the latest variable power electronic ballasts, Evoqua's VXM range provides cost-effective and efficient water treatment with flexible options for easy integration. The medium pressure polychromatic lamps, combined with the variable power option allows the operator to minimize OPEX costs while still delivering the required treatment effectiveness.

The range of configurable options, from surface finishes to pipe connections allows the user to configure the product easily to their specific requirements. Where required, the highly efficient automatic wiper system can be added as an option, reducing maintenance downtime even further for applications of poor water quality.

SOPHISTICATED CONTROL SYSTEM

The Spectra 3 control system is a sophisticated microprocessor designed for control flexibility and system integration. A range of user-selectable analogue and digital input and outputs, combined with Modbus® capability, allow simple connection to a SCADA or BMS system. The Spectra 3 also provides a data logging facility.

INCREASE PRODUCTION UPTIME

Operators will benefit from the patent-pending* TwistLok™ lamp configuration, combining a simple lamp connection with a mechanical safety interlock for safe and speedy lamp replacement. In addition, the V Clamp quartz seal system ensures that the seal can be fitted accurately without stressing the quartz sleeve or having a leaking seal. The systems use the latest AT-900 UV intensity system, traceable to NIST standards to provide an effective method of monitoring performance, ensuring confidence in the system operation at all times. Using the feedback from the AT-900 also enables the power to the lamps to be varied depending on the quality of water to be treated, allowing power savings and increased lamp life for larger systems.

SPECIFICATIONS

- Efficient and enhanced power control
- High performance lamps
- Simple, fast, and reliable maintenance
- Enhanced performance monitoring by sophisticated control system
- Suitable for high doses (>1000mJ/cm²) and low UVT's (<45% UVT)
- Built in safety features
- MODBUS or PROFIBUS connectivity

*Patent pending in some countries.

CHAMBER SPECIFICATIONS

| Features | Standard Chamber Specification | Options |
|---------------------------------------|--|--|
| Lamp Life | 9,000 hours | |
| Lamp design | TwistLok™ Quick Release, Enhanced Safety, Medium Pressure Lamp | |
| Lamp and Wiper Access | Single Ended Access (Excl VXM-125-4 + VXM-180-3/4) | |
| Design Pressure | 10 Barg Design (15 Barg Test) | |
| Variable Power | 100% to 30% Power (Automatic Dose Pacing) | |
| Connection Type | EN 1092 PN10 | DIN 32676 EN 1092 PN16, ASME Class 150, DIN 32676, ASME BPE DIN 11851 (VXM-180-3 Only) |
| Material Construction | 316L Stainless Steel | |
| Internal Surface Finish | 0.8 Ra (VXM-25-4/6, VXM-180-3/4 Only) 1.6 Ra (VXM-260-10, VXM-460-10, VXM-660-10, VXM 860-12 Only) | 0.4 Ra (VXM-25-4/6, VXM-73-4 Only) 0.8 Ra (VXM-260-10, VXM-460-10, VXM- 660-10, VXM 860-12 Only) |
| Internal / External Surface Treatment | Machine Polish | Electropolish (VXM-25-4/6, VXM-180-3/4 Only) |
| Quartz Type | High Purity Quartz Sleeves | TiO2 Doped Quartz |
| Installation / Mounting | Adjustable Inlet/Outlet Orientation | Z-type (VXM-180-3/4 Only) |
| Wiper System | Not Included as standard | Automatic Wiper System (Excl VXM-180-3) |
| Sensors | 1 Monitor Package Incl NIST UV Sensor + PT100 Temp Sensor | |
| Vent Port | BSP | NPT, DIN 32676, ASME BPE DIN 11851 |
| Drain Port | BSP | NPT, DIN 32676, ASME BPE DIN 11851 |
| Seals | EPDM | |

CONTROL PANEL SPECIFICATIONS

| Features | Standard Control Panel Specification | Options |
|---------------------------|--------------------------------------|-----------------------|
| Material | Epoxy Coated Mild steel - RAL 7035 | Stainless Steel (304) |
| Control Type | Microprocessor | |
| Power supply | Electronic Ballast | |
| Ingress Protection | IP54 | |
| Ventilation | Forced Air cooled (Fan) | |
| Interface | Spectra Membrane | Spectra Touch |
| Communication | Modbus (RS-422 / RS-485) | Profibus DP |
| Protection | Door Locked Isolator | |
| Operating Temperature | Max Working Ambient +45°C | |
| Digital Inputs / Outputs | 3 selectable | Additional 3 |
| Analogue Inputs / Outputs | 1 selectable | Additional 1 |

Evoqua UV disinfection generator systems undergo third-party validation testing in accordance with the UVDGM (USEPA, 2006). Validated products are tested to confirm a minimum inactivation equivalent of 3 log (99.9%) for microorganisms in accordance with NSF/ANSI 50 and the UVDGM. Performance is not claimed nor implied for any product not yet validated; unvalidated products use single point summation calculations to provide delivered dose recommendations. Performance limitations depend on feed conditions, overall installed system design, and operation and maintenance processes; please refer to Operations Manuals. For more information: Contactus@evoqua.com



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