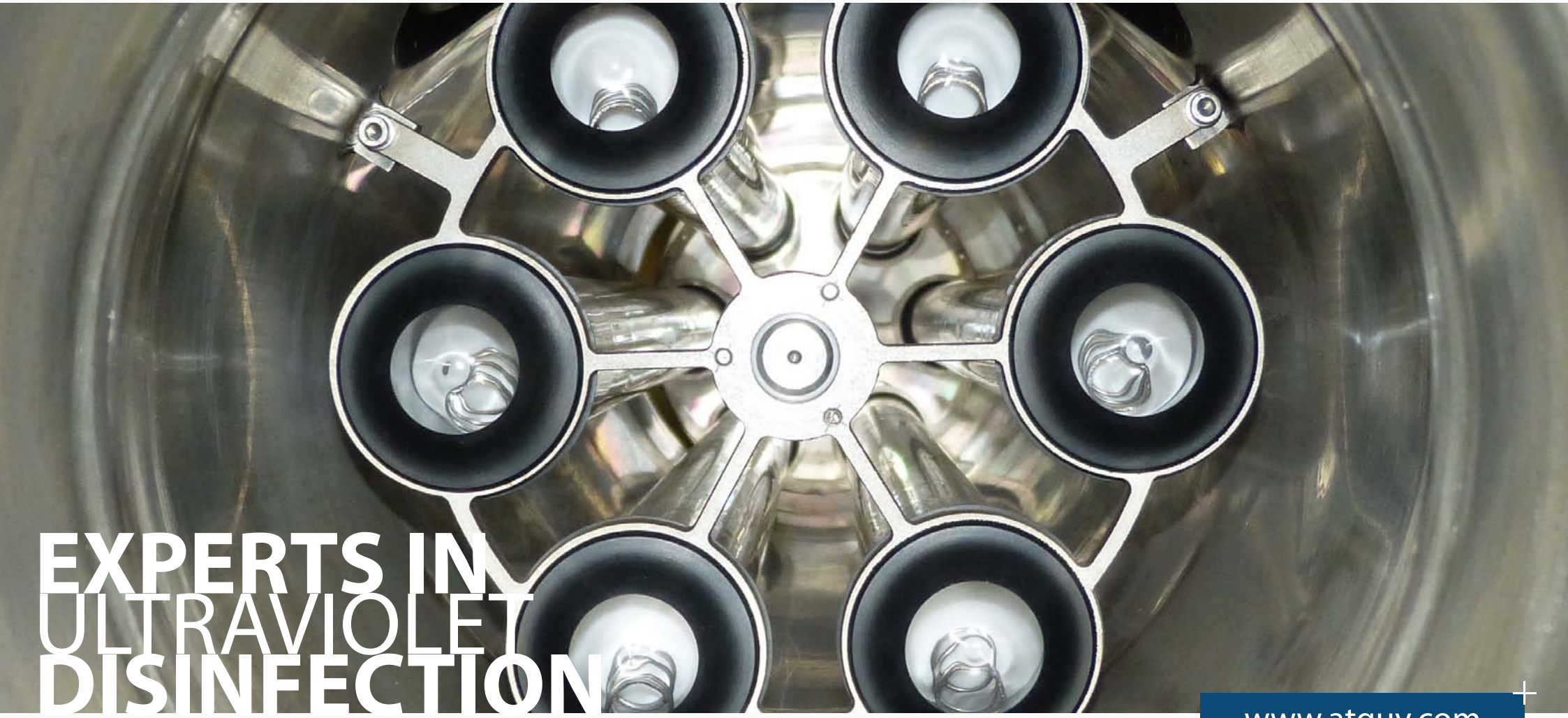

# EXPERTS IN ULTRAVIOLET DISINFECTION

www.atguv.com

atg UV Technology

## UVLW RANGE

### 800 WATT LOW PRESSURE AMALGAM

# UVLW RANGE - 800 WATT AMALGAM

NWRI VALIDATION FOR DRINKING WATER & WATER REUSE PROVIDES GUARANTEED PERFORMANCE FROM AS LOW AS 50% UVT

# HIGH OUTPUT LOW PRESSURE 800 WATT AMALGAM

DEFINING THE UV INDUSTRY WITH MARKET LEADING TECHNOLOGY SINCE 1981

## THE STATE-OF-THE-ART UVLW RANGE PROVIDES THE HIGHEST UV OUTPUT WITH THE FEWEST NUMBER OF LAMPS, IN THE SMALLEST FOOTPRINT FOR AMALGAM UV SYSTEMS

The UVLW series offers the very latest in amalgam UV lamp technology and end feed UV chamber design. Providing increased treatment capacity and flexibility for the environmentally friendly process of using UV disinfection, the UVLW series provides solutions for a range of municipal and industrial applications, including drinking water, process water, water reuse and wastewater treatment.

Featuring high output, ultra efficient 800 Watt amalgam UV lamps, asymmetric lamp positioning and specially designed end feed UV reactors for optimum flow distribution, the UVLW series offers a state-of-the-art solution for a wide range of water treatment applications. Treating capacities from 50 m3/hr to more than 5,000 m3/hr ( 120 MLD) in a single, high output closed vessel UV system.

The UVLW range is certified according to the NWRI UV disinfection validation protocols for drinking water and water reuse. The guidelines closely follow the requirements of DVGW and the US EPA UVDGM, offering validated performance from as little as 50% UV transmittence (UVT).

EXTENDED 16,000 HOUR LAMP LIFE & 100% - 30% VARIABLE POWER STEPPING SIGNIFICANTLY REDUCES OPERATIONAL EXPENDITURE COSTS

EQUIPPED WITH A ROBUST, CHEMICAL FREE WIPER SYSTEM, THE UVLW RANGE IS HIGHLY EFFECTIVE AT WATER QUALITIES AS LOW AS 20% UVT

## MARKET LEADING DESIGN WITH STATE-OF-THE-ART UV TECHNOLOGY

### Performance Advantages

- ✓ Independent 3rd party validated performance
- ✓ Effective at water qualities as low as 20% UVT
- ✓ Validated performance from 50% UVT+
- ✓ High capacity treatment upto 5,000 $m^3$/hr
- ✓ Extended lamp life of 16,000 hours
- ✓ Automatic power stepping 100% - 30% power
- ✓ Automatic self cleaning for quartz thimbles
- ✓ Hydraulically optimised low headloss design
- ✓ High disinfection efficiency - 1 to 5 log

### Operational Benefits

- ✓ Simple to install and easy to operate
- ✓ Significantly reduced maintenance requirements
- ✓ Access hatches for easy and quick access
- ✓ Single sided maintenance / access
- ✓ Quick release enhanced safety 'Twistlok' Lamps
- ✓ Robust, chemical free automatic wiper system
- ✓ Lamp changes without removing wiper motor
- ✓ Wiper rings can be replaced without removing wiping carriage from chamber

### Installation Advantages

- ✓ Smaller, quicker and easier installation
- ✓ Closed system design installs directly into pipe work
- ✓ Asymmetric lamp design removes need for baffles
- ✓ Horizontal and vertical installation options
- ✓ Multiple flange size, type and mounting options
- ✓ Significantly reduced footprint requirements
- ✓ No requirement for complex civil structures
- ✓ No requirement for concrete trenches, pen stocks, level control and flow modifiers.

| UV System | UVLW 6800-10 | UVLW 6800-14 | UVLW 8800-14 | UVLW 16800-20 | UVLW 20800-20 | UVLW 22800-24 | UVLW 30800-24 | UVLW 30800-30 | UVLW 45800-30 |
|---|---|---|---|---|---|---|---|---|---|
| **Performance** | | | | | | | | | |
| 3rd Party Validation | NWRI (National Water Research Institute) Drinking Water & Water Re-use 3rd Edition (2012) | | | | | | | | |
| Certification | CE Marked / UL Approved | | | | | | | | |
| UV dose range | 10 mJ/cm2 to 120 mJ/cm2 RED (Reduction Equivalent Dose) | | | | | | | | |
| **UV lamps and monitoring** | | | | | | | | | |
| Lamp power | 800 W | 800 W | 800 W | 800 W | 800 W | 800 W | 800 W | 800 W | 800 W |
| Lamp number | 6 | 6 | 8 | 16 | 20 | 22 | 30 | 30 | 45 |
| Lamp life | 16,000 hours | | | | | | | | |
| Lamp design | TWISTLOK™ quick release, enhanced safety - 800 Watt high output amalgam low pressure | | | | | | | | |
| Validated UV monitoring | Validated ÖNORM UV monitor - AT-900 (calibrated) - IP66 | | | | | | | | |
| Standard UV monitoring | AT-463 - 4-20 mA - IP66 | | | | | | | | |
| Variable power | 100% power to 30% power (variable automatic dose pacing) | | | | | | | | |
| **UV Chamber** | | | | | | | | | |
| Connection size (mm) | DN200 | DN250 | DN250 | DN400 | DN400 | DN500 | DN500 | DN600 | DN600 |
| Connection type | BS4504 PN10 RF Flange / BS4504 PN16 RF Flange | | | | | | | | |
| Design pressure | 10 Barg design (15 Barg test) / 16 Barg design (21 Barg test) | | | | | | | | |
| Material construction | 316L stainless steel | | | | | | | | |
| Internal / external finish | 0.8 µm Ra internal / 1.6 µm Ra external | | | | | | | | |
| Lamp and wiper access | Single ended access | | | | | | | | |
| Quartz type | High purity quartz thimble | | | | | | | | |
| Mounting | Legs | | | | | | | | |
| Wiper system | Automatic wiper system (optional) | | | | | | | | |
| Temperature probe | AT-487 (PT-100) - IP66 | | | | | | | | |
| Vent & drain ports | Yes | | | | | | | | |
| Access hatch | Yes | | | | | | | | |
| Ingress protection | IP66 | | | | | | | | |
| Installation | Vertical or horizontal | | | | | | | | |
| **Technical** | | | | | | | | | |
| Communication options | Ethernet / Modbus / Data Stream / ICSS Integration (other fieldbus options available) | | | | | | | | |
| Lamp power supply | 800 Watt electronic ballast | | | | | | | | |
| Power consumption | 5,200 W | 5,200 W | 7,040 W | 14,080 W | 17,600 W | 19,360 W | 26,400 W | 26,400 W | 39,600 W |
| Mains power | 230 V (210 V to 240 V options) | | | 400 V (380 V to 480 V options) | | | | | |
| Power phase + neutral | 1 Phase + Neutral | | | 3 Phase + Neutral | | | | | |
| Frequency | 50 Hz or 60 Hz | | | | | | | | |

# CLOSED VESSEL V.S OPEN CHANNEL

## CAPEX Advantages of Closed Vessel UV Treatment

The reduced number of lamps, quartz and reduced footprint of the closed vessel design, will considerably reduce the CAPEX (capital expenditure) costs of a project. The 'end-feed' closed vessel chamber removes the requirement for large civil structures, whilst the 800 Watt amalgam UV lamps provide significantly increased UV output and treatment capacity.

- ✓ UV chambers install directly into the pipe
- ✓ No requirement for concrete trenches
- ✓ No requirement for large civil structures
- ✓ No requirement for penstocks
- ✓ No requirement for level control
- ✓ Improved hydraulic performance reduces pumping requirements
- ✓ Simple to install indoors or outdoors
- ✓ 100% Duty & 100% standby operation easily achieved
- ✓ Design for retrofitting into redundant open channels
- ✓ Significantly reduced installation footprint

## OPEX Advantages of Closed Vessel UV Treatment

The 800 Watt amalgam design offers the highest UV output with the fewest number of lamps, in the smallest footprint available for low pressure UV systems. Typically, operational costs including power, lamps, quartz, ballasts and ongoing maintenance can be 15% - 20% less when compared to traditional open channel systems.

- ✓ Reduced power consumption
- ✓ Increased disinfection efficiency
- ✓ Extended lamp life of 16,000 hours
- ✓ Significantly fewer lamps and quartz & ballasts
- ✓ Increased electronic ballast life (new modern ballast design)
- ✓ Significantly reduced maintenance time
- ✓ Automatic self cleaning reduces required cleaning cycles e.g. acid baths
- ✓ Data stream service reduces required number of site visits
- ✓ Improved health & safety - no open water sources, or risk of UV exposure
- ✓ Significant reduction in corrosion and structural damage

ASYMMETRIC LAMP SPACING IS UNIQUE TO THE UVLW RANGE & OFFERS INCREASED TREATMENT CAPACITY WITH LESS POWER & FEWER LAMPS

THE UNIQUE DATA STREAM SERVICE TRANSMITTS REAL TIME PERFORMANCE DATA TO ANY WEB ENABLED DEVICE, SUCH AS SMART PHONES & LAPTOPS

## MARKET LEADING DESIGN WITH STATE-OF-THE-ART UV TECHNOLOGY

### Asymmetric Lamp Positioning

Through extensive CFD analysis and field testing, the UVLW UV chamber design matches hydraulic flow profiles with UV lamp intensity fields inside the UV reactor, eliminating the requirement for baffle plates and flow modifiers. This unique concept has allowed for significant improvements in disinfection efficiency, increasing treatment capacities by up to 30%, whilst using significantly less power and reducing head loss.

### Data-Stream Service

The atg UV technology Data-Stream service is the first of its kind in the UV industry, allowing operators to monitor the performance of their UV system anywhere in the world, at any time. Using a simple Wi-fi connection, the Data-Stream service transmits operational performance data in real time (updating every 30 seconds) directly from the plant room to any web enabled device. (Includes: smart phones, I-Pads, laptop's & PC's).

### 5 Year Warranty

atg UV Technology are passionate about providing a first class after sales service and customer care experience. As the market leader for UV systems, atg UV Technology were the first UV manufacturer in the world to offer an exclusive 5 year warranty for standard UV systems. The 5 year warranty is a demonstration of our commitment to our customers, and an indication of the high level of quality and reliability in all of our products.

# LISTENING TO & WORKING WITH OUR CUSTOMERS FOR OVER 30 YEARS

CONTACT US TODAY

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