



# EXPERTS IN ULTRAVIOLET DISINFECTION

[www.atguv.com](http://www.atguv.com)



**UV DISINFECTION & TREATMENT**  
CLEAN & SAFE ENVIRONMENTS



# Why choose atg UV?

## EXPERTS IN UV DISINFECTION & WATER TREATMENT

DEFINING THE UV INDUSTRY WITH MARKET LEADING TECHNOLOGY SINCE 1981

**ATG UV TECHNOLOGY IS A LEADING MANUFACTURER OF UV DISINFECTION SYSTEMS & PACKAGES FOR A RANGE OF INDUSTRIES, INCLUDING MUNICIPAL, INDUSTRIAL, PETROCHEMICAL & AQUATICS.**

atg UV Technology are a leading manufacturer of UV disinfection systems and integrated technology packages. Established in 1981, we have served both the UK and international markets for over 30 years and offer a wealth of industry experience, specialised knowledge and expertise.

As an independent UK manufacturer, atg UV Technology strives to define the market with innovative designs and related technologies.

Our mission is to be recognised as having the greatest knowledge base of all UV manufacturers, and to be acknowledged as a company with high integrity, honesty and values in all its dealings.

With thousands of UV installations worldwide, a committed research and development team and an ongoing validation programme, atg UV Technology is a clear market leader for the supply of high quality low and medium pressure UV systems.

# “DETERMINED TO SUCCEED TOGETHER”

*For over 30 years we have listened to and worked with our clients, suppliers & partners. Our success has been underpinned by our philosophy of ‘Determined to Succeed Together’*



## GENEROUS & CARING

The continued sustainable growth and success of atg UV Technology has been achieved by investing in our people, products and in our wider community.

## PASSION FOR QUALITY

atg UV Technology is passionate about delivering first class products and customer service, providing the ultimate in trouble free disinfection.

## EXCEEDING YOUR EXPECTATIONS

Our team enjoy providing all of our customers with the best possible experience. Talk to us today to find out how we can exceed YOUR expectations.



# Ultraviolet Disinfection

## A HIGHLY EFFECTIVE, CHEMICAL FREE DISINFECTION

ULTRAVIOLET LIGHT IS A HIGHLY EFFECTIVE, CHEMICAL FREE DISINFECTION SOLUTION. UNLIKE CHEMICAL BIOCIDES, NO KNOWN MICROORGANISM HAS DEMONSTRATED ANY IMMUNITY TO UV LIGHT.

Ultraviolet (UV) light operating between 200 and 280 nanometers (nm) is commonly known as germicidal UV-C light. UV-C light has the ability to protect against all known species of harmful microorganisms in water by causing irreparable damage to their DNA.

UV-C at a peak wavelength of 265 nm is absorbed into the nucleus of the cell, causing permanent damage to the structure of the DNA molecule through the formation of thymine dimers. This process prevents the recombination of DNA strands during cell division, rendering the

microorganism harmless. The same principle applies to RNA in viruses. In particular, UV-C light is a proven and effective barrier for Cryptosporidium, Giardia and the 15 other known chlorine resistant waterborne microorganisms.

Considered one of the best disinfection technologies available, UV disinfection is now an established technology used throughout the world for both primary disinfection, and secondary disinfection of water in a vast range of industries and applications.



WITH HUNDREDS OF  
UV SYSTEMS & OPTIONS  
AVAILABLE, ATG UV  
TECHNOLOGY REMAIN  
THE MARKET LEADER FOR  
FLEXIBLE UV SOLUTIONS



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

### Low Pressure

- ✓ 15, 30, 55, 75, 120, 200, 325 Watt UV lamps
- ✓ Single & multi-lamp configurations
- ✓ Traditional U and S shape UV chamber design
- ✓ WRAS approval
- ✓ Capacities from 1.0 m3/hr - 2,000 m3/hr
- ✓ 12,000 hour lamp life
- ✓ Effective for a large range of applications
- ✓ ATEX hazardous area versions available
- ✓ Large range of custom options available

### 800 Watt Amalgam

- ✓ 800 Watt high output amalgam UV lamps
- ✓ Single & multi-lamp configurations
- ✓ Hydraulically efficient 'end feed' chamber design
- ✓ Closed vessel design, installs directly into the pipe
- ✓ NWRI validation for drinking water & water reuse
- ✓ 100% to 30% variable power stepping
- ✓ Capacities from 50 m3/hr - 5,000 m3/hr
- ✓ 16,000 hour lamp life
- ✓ Effective for low quality water from 20% UVT

### Medium Pressure

- ✓ 1.0, 1.3, 1.5, 2.0, 2.5, 3.0, 5.0 & 7.3 kW UV lamps
- ✓ Single & multi-lamp configurations
- ✓ Hydraulically efficient 'In-line' UV chamber design
- ✓ Ultra compact design, installs directly into the pipe
- ✓ US EPA UVDGM validation
- ✓ 100% to 50% variable power stepping
- ✓ Capacities from 1.0 m3/hr - 5,000 m3/hr
- ✓ 9,000 hour lamp life
- ✓ Effective for a large range of applications

# UV Applications



## Drinking Water

atg UV Technology offers a range of validated amalgam and medium pressure UV systems for potable drinking water. Used as an effective barrier against *Cryptosporidium* and Adenovirus, UV disinfection is now an established technology used throughout the world for both ground water and surface water applications.



## Building Services

From standard building services applications, such as mains water treatment, point of use installations and cooling loops, to grey water reuse and rain water harvesting, atg UV Technology's product range provides both low and medium pressure solutions for almost any application.



## Wastewater & Water Reuse

Used extensively in wastewater applications throughout the world, UV disinfection offers a highly effective, chemical free solution for final effluent treatment, wastewater discharges and advanced digestion. Additionally, validation to the NWRI protocols allows for water reuse to both irrigation and drinking water standards.



## Food & Beverage

Water borne microorganisms are responsible for adverse effects on flavour, colour, odour, shelf life and product safety. UV disinfection provides a highly effective, chemical free treatment solution for make-up water, wash water, process water, fruit juices, brines, liquid sugars and sweeteners.



## Industrial & Process Water

From process water disinfection, wash water, water reuse and effluent discharges, to advanced processes, such as TOC (total organic carbon) reduction, de-chlorination and de-ozonation, atg UV Technology offers a wide range of industrial UV systems for almost any water disinfection / treatment application.



## Aquatics & Swimming Pools

Recommended by the Model Aquatic Health Code, UV systems are a highly effective form of protection against chlorine resistant pathogens, such as *Cryptosporidium*. In addition, UV provides clear, sparkling water and fresh clean air through the elimination of problem chloramines.



**“A HIGHLY  
EFFECTIVE  
CHEMICAL FREE  
SOLUTION”**

*UV light at 254nm (UVC) has a high disinfection efficiency, typically providing a greater than 3log reduction (99.9%) of Cryptosporidium in a single pass.*

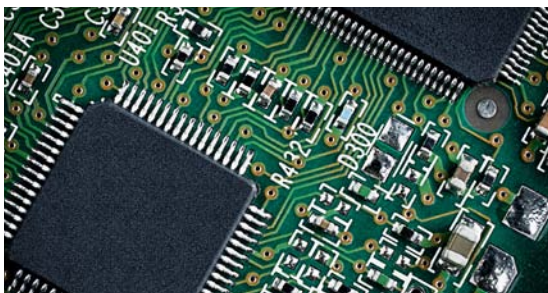
**Talk with our technical engineers today to find out how our award winning UV systems can benefit you**

# UV Applications



## Oil & Gas

atg UV Technology is the clear market leader for petrochemical UV applications, including: drinking water, SRB reduction, pipeline hydrotesting, unconventional gas recovery (hydraulic fracturing) and well injection. Key products include: offshore specification UV systems, skid packages, containerised designs and ATEX hazardous areas.



## Electronics & Semi-conductors

atg UV Technology has developed a specialised range of UV systems for the generation of ultra pure water used in electronics manufacturing. Our ground breaking technology offers a range of advanced photolytic process solutions, such as TOC reduction, de-chlorination and de-ozonation



## Marine & Cruise Ships

atg UV Technology is a specialist in the design and manufacture of UV systems and integrated technology packages for the marine industry. Our standard marine applications include: effluent wastewater treatment, potable water disinfection, shipboard aquatic facilities, ATEX hazardous areas and ballast water treatment.



## Aquaculture

Market pressures are forcing the industry away from the use of chemicals and antibiotics. To improve yields and protect against disease, chemical-free UV disinfection provides a cost effective solution for shelf fish, hatcheries, recirculating aquaculture systems (RAS), well boats and aquariums.



## Pharmaceuticals & Ultra Pure

atg UV Technology has developed a range of pharmaceutical grade UV systems, specifically designed to meet the most stringent hygienic requirements and exacting material specifications. Standard UV applications include ultra-pure water, liquid sugar, dechlorination and TOC reduction.



## Horticulture

UV treatment is an effective, chemical free disinfection solution. Unlike chemical methods, such as hydrogen peroxide, ultraviolet light does not effect the chemistry of the water fed into the Rhizosphere, helping to maintain normal germination and seedling development.



# “WE TAKE A FLEXIBLE APPROACH TO DESIGN”

*With a dedicated in-house engineering team, atg UV Technology are experts in the manufacture of UV disinfection systems.*

*From standard products to bespoke projects, our flexible approach to design has placed atg UV Technology as a clear market leader in the UV industry.*

**Talk with our technical engineers today to find out how our award winning UV systems can benefit you**



# Guaranteed Performance As Standard

## ADVANTAGES OF THE US EPA UVDGM VALIDATION SYSTEM

Using the test protocols developed by the US EPA Ultraviolet Disinfection Guidance Manual (Long Term 2 Enhanced Surface Water Treatment Rule), atg UV Technology systems are rigorously biometrically tested using live surrogate microorganisms (MS2). This provides guaranteed UV disinfection performance against Cryptosporidium, Adenovirus and other harmful waterborne microorganisms.

Unlike alternative validation protocols, such as DVGW or ONORM, which only test to a single UV dose set point of 40 mJ/cm<sup>2</sup>, the US EPA UVDGM validation method allows for the selection of multiple data points. The result is a highly flexible performance validation that allows for guaranteed

UV doses between 10 mJ/cm<sup>2</sup> RED and 120 mJ/cm<sup>2</sup> RED. This is of particular importance when aiming for a log reduction of microorganisms, such as Cryptosporidium, Giardia, E-Coli and Adenovirus.

By adopting the US EPA UVDGM Validation, UV systems can be sized to provide the correct amount of UV intensity in direct relation to the specified UVT%. In the case of UVT% values higher than 90% T10, the power savings are typically 50% when compared to the DVWG and ÖNORM solutions, which can only offer 40 mJ/cm<sup>2</sup>. Table 1 is based upon the US EPA UVDGM log reduction tables for a 3 reduction of Cryptosporidium: 12 mJ/cm<sup>2</sup> RED multiplied by the required RED Bias in relation to the UVT% value.

Table 1 Required UV mJ/cm <sup>2</sup> RED Dose for 3 Log Reduction (99.9%) of Cryptosporidium			
UVT%	US EPA UVDGM	DVGW	ONORM
95% UVT	16.56 RED	40 RED	40 RED
90% UVT	20.76 RED	40 RED	40 RED
85% UVT	24.12 RED	40 RED	40 RED
80% UVT	26.64 RED	40 RED	40 RED
75% UVT	28.32 RED	40 RED	40 RED
70% UVT	30.06 RED	40 RED	40 RED



WORLD LEADER FOR THE  
DESIGN & MANUFACTURE  
OF BESPOKE, TURN-KEY  
SKID PACKAGES &  
MOBILE CONTAINERISED  
SOLUTIONS



## SPECIALIST UV PRODUCTS & ADVANCED DESIGNS

### Specification & Design

- ✓ High purity finishes and hygienic designs
- ✓ Exotic materials - super duplex 25% Cr steel
- ✓ ATEX / IE CEX hazardous area zones 1 & 2
- ✓ ASME VIII Div 1 / PD5500 / EN13445 designs
- ✓ Robust 'vibration proof' upgrades
- ✓ Material certifications & advanced PMI & NDT
- ✓ 230 V / 400V / 480 V / 690 V designs
- ✓ Bespoke designs and R&D projects available

### Skid Packages

- ✓ Purpose built 316L stainless steel skid frames
- ✓ Euro code 3 design & CE marked
- ✓ DNV certified for a single point offshore lift
- ✓ 3rd party stress analysis + nozzle loads
- ✓ Combined technology options e.g. with filtration
- ✓ ATEX / IE CEX hazardous areas zones 1 & 2
- ✓ Winterisation (heat tracing & insulation)
- ✓ Design & manufacture to client specifications

### Containerised Solutions

- ✓ Onshore & offshore design specifications
- ✓ 10ft , 20ft, 30ft & 40ft designs
- ✓ Turn-key design
- ✓ DNV certified for a single point offshore lift
- ✓ 3rd party stress analysis + nozzle loads
- ✓ Combined technology options e.g. with filtration
- ✓ ATEX / IE CEX hazardous areas zones 1 & 2
- ✓ Design & manufacture to client specifications available

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

**CONTACT US TODAY**



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