

atg UV Technology: Business Model

atg UV Technology



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Company Profile:

atg UV Technology designs and manufactures UV disinfection and treatment systems for use across a broad range of market sectors, including municipal drinking water and waste water disinfection, industrial process and manufacturing, offshore and marine industries and swimming pool applications.

Over the last 10 years, the company has grown from just six individuals to a staff of 25, and now serves an international customer base, including many large blue chip organisations and government controlled agencies. To date they have supplied thousands of UV systems worldwide.

The company's UV technology solutions cater for new installations and retrofit, and for applications ranging from only a few m³/hr to full scale water treatment works treating more than 2500 m³/hr.

- Medium pressure ultraviolet systems provide solutions to large scale and complex disinfection demands and are capable of disinfecting up to 5000 m³/hr;
- Low pressure systems offer high efficiency with a limited maximum output, ideal for use in smaller scale applications. Features include remote mounted power/control systems, sample access ports and sophisticated monitoring technologies;
- 800 Watt UV reactors can be used in a wide range of applications including drinking water, wastewater, reuse/recycled water, and industrial process water. Their combination of minimal components with the closed vessel UV reactor design has resulted in the smallest footprint for an amalgam system in the world.

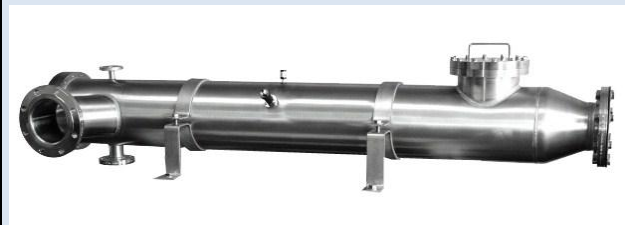
Each system can be tailored to suit customer needs as appropriate including, for example, products supplied in industry specified materials, or specification of exact dimensions for ease of installation.



Medium Pressure Ultraviolet Systems



Low Pressure Ultraviolet Systems



800 Watt Amalgam technology

Summary of Overall Business Model

- Strong focus on core activities of R&D, and continuous product improvement, driven by a clear understanding of the needs of their end user markets;
- Strategy to remain ahead of the competition in terms of product innovation and engineering quality;
- Direct sales of made to order, premium UV systems, primarily via carefully selected distributors with whom a long-term relationship is built;
- Priority given to ethical business values and staff retention.

Technology Value

Ultraviolet light in the range of 240 and 280 nanometres (nm) (known as UV-C) causes permanent damage to a wide variety of micro-organisms in water, air and other fluids. Examples range from nuisance organisms, such as Actinomycetes which can produce an earthy taste and smell in drinking water, to pathogens, such as Cryptosporidium Parvuum. UV does not affect taste, colour, or pH, and can therefore be used in situations in which conventional disinfection (e.g. with chlorine) is not appropriate and to treat the increasing number of chlorine resistant pathogens.

atg UV Technologies produces flexible UV light systems that can treat fluid applications ranging from a few m³/hr to > 2500 m³/hr.

Customer Segments

atg UV serves a number of distinct customer segments, but which have in common the need for highly effective disinfection or treatment of fluids. These are:

- Pools: the UV systems are both effective against chlorine resistant organisms and destroy chloramines, responsible for the 'irritant' nature of chlorine treated environments;
- Municipal drinking water: a range of independently certified solutions is available;
- Municipal wastewater: a range of compact closed chamber UV systems are available. These are easy to install into a pipeline, can deal with a wide range of water qualities and offer a high output within a small footprint;
- Industrial: a broad reach of sectors are served, including aquaculture, building services, food & drink, and pharmaceutical, in particular for processes that are chlorine intolerant;
- Offshore: these are predominantly large scale UV systems for the disinfection of process and drinking water for petroleum based companies, contractors, shipping vessels and cruise liners that can withstand extreme environments.

Value Proposition

atg UV generally supplies their UV units directly to a number of distributors (mostly suppliers of water treatment products and instruments) who in turn serve the end users. The company has therefore defined its Value Proposition both in terms of their immediate clients and their ultimate end user markets.

End Users:

- Quality: very high quality, sophisticated equipment able to adapt to multiple needs. In some countries this is backed up by a 5 year warranty on chambers, mechanical parts and electrical components;
- Flexibility: approximately 90% of any individual unit will be made 'off the shelf' allowing costs to be kept to a minimum. The remaining 10% may be tailored to meet end user specifications;
- Performance: systems are independently certified to the highest available standards (e.g. US EPA Ultraviolet Disinfection Guidance Manual: UVDGM 2006), an increasingly common regulatory requirement for critical systems (e.g. drinking water) where dose delivery must be assured;
- Environmental: the treatment of micro-organisms **without chemicals**.

Distributors:

- Cost: atg UV strives to keep production costs down, allowing distributors to make good margins on their product sales;

- Quality and reliability: sales are backed up by the highest quality, certified UV systems with a reliable supply of spares and any additional technical support that is needed;
- Support: potential for sales optimised via good quality marketing information on their website, together with well-designed sales and technical literature;
- Long-term relationships: atg UV aim to build lasting relationships with their distributors based on mutual trust and common objectives.

Key Activities and Resources

As a knowledge-based SME, atg UV has clearly identified that its most valuable resources are in-house IP, and the know-how brought and developed by the expert engineering staff. As a result, the company has taken a strategic decision to focus strongly on its core activities of R&D, and new product design and development.

The company primarily employs highly trained and specialised engineers, and maintains a relatively small in-house sales team. The staff are highly valued and expected to buy in to the company's strong ethical values. As a result, staff turnover is extremely low.

atg UV operates a modern, purpose built manufacturing facility in the North of England where it undertakes final assembly and testing of its prototypes and products. Components are sourced from a number of suppliers, selected on the basis of quality, consistency, reliability and value for money. Sales are achieved via a network of distributors (see Channels to Market).

Internationalisation

Today, approximately 60% of company sales are international, mostly in mature or rapidly developing economies, where there are increasingly stringent requirements for improved water quality and standards of hygiene. In line with its focus on increasing market share, the company has expanded rapidly and successfully into more than 30 international territories since 2005 (see Channels to Market).

Channels to Market

In both the UK and in international territories, atg UV reaches its end user markets via a network of distributors who:

- Handle primary sales and marketing, including setting terms and conditions;
- Undertake installation and maintenance;
- Provide customer support (with the exception of complex technical issues).

The nature of the contract between atg UV and its distributors varies depending on the nature of the internal market and its strategic importance to atg UV:

- Some distributors have exclusive rights over a territory. In these cases, the companies work closely together to sell and promote atg UV, which expects to maintain some control over the marketing process;
- Some distributors sell atg UV technology exclusively, whilst others sell a variety of water treatment products. In many instances the latter approach provides the opportunity to offer the end user complete solutions to complex treatment processes.

The choice of distributor is considered **crucial to success** and, as a priority, atg UV focuses on the potential to establish a long-term relationship. This often means that the distributors are relatively small (and therefore flexible) and like-minded in terms of values and desired outcomes. atg UV often use local embassies and existing contacts within a new territory to help them source the right company for distribution.

Key Partners

atg UV entered the US market in 2004, using the same distribution model as that described above. It soon became clear, however, that the market was considerably too large for this to be sustainable. As a result, the company subsequently formed a joint venture with their initial distributor (Engineered Treatment Systems), founding **ETS UV Technology** in 2007. A manufacturing facility was opened in Beaver Dam, Wisconsin, and is now supported by more than 30 distributors nationwide. Initially

focused on the pools and recreational water market, growth has been rapid and in 2009, **ETS UV Industrial & Municipal** became operational, offering low and medium pressure UV systems for municipal drinking water, wastewater and industrial UV applications.

Customer Relations

One of the company's consistent goals is to form long-term relationships with both suppliers and distributors and, as described above, atg UV invests considerable resources in selecting the right supply chain partners. Once a contract is in place, the company works closely with their distributors in terms of marketing and technical support, and strives to ensure that their systems remain competitively priced.

Competition

atg UV believe that they produce amongst the best UV systems that are currently available globally, and within the 'top end' of the market, they are focussed on increasing market share through continuous product improvement and the emphasis on third party certification. Manufacturers of poorer quality systems are gradually being squeezed out by this need for independent validation.

Cost Structure

- Low sales and marketing costs: atg UV has very small sales team and does not undertake any cold calling;
- High engineering costs: mainly retaining and training high calibre engineering staff;
- Medium manufacturing costs: in-house facility focuses on final assembly and testing;
- Medium component costs: local suppliers are selected on the basis of consistent quality at a reasonable price.

Revenue Streams

- Principally direct sales of units to order, usually to a distributor, but occasionally direct to the end customer (UK only);
- Supply of after sales support (service and spare parts).