



# Innovative Disinfection for Air Conditioning Systems within the Oil & Gas Industry



UV-C Air Hygiene Systems  
Safeguard Company Values and Protect People

## Clean Air Strong Results

## UV Technology as the Basis for Efficient Disinfection

Advanced Air Hygiene Ltd is one of the UK's leading specialists in Air Disinfection using UV-C Technology. Our products take advantage of the germicidal effect of UV-C radiation to prevent the buildup of micro-organisms in air conditioning systems. Using our specialist knowledge we can design, manufacture and supply systems that can improve the health of your workforce.

### Advantages of UV-C Disinfection Technology

- Reduces long-term build-up of micro-organisms in air conditioning systems by up to 99.9% on a continual basis
- Fulfills the hygiene requirements of VDI 6022
- Disinfects 24 hours a day
- Proven to reduce sickness figures which can lead to increased productivity
- Excellent price/ benefit ratio
- Easy to integrate into existing and planned systems

### UV-C Technology for the Oil and Gas Sector

Our products can have a beneficial impact on output through improved personal health by reducing airborne contaminants. Following success in other industries, Advanced Air Hygiene has now entered the Oil and Gas Sector having recently designed UV-C products for use in air conditioning systems on board Floating Production, Storage & Offloading (FPSO) vessels and Process Platforms for a number of the world's leading oil and gas companies.

Our UV-C Disinfection Systems are available manufactured in stainless steel using appropriate material grades and thicknesses suitable for external "on deck" exposed installation, or material grades suitable for internal installation within the vessel / platform spaces to both essential and non-essential systems. The UV-C emitters and fixtures are manufactured from IP20 to IP67 (depending on the system needed) and control panels and controls meet ATEX Standards.

Within our extensive range of products, smaller units are available for use on crew boats, supply boats and other service and support vessels. This technology can also be used to reduce air-borne contaminants in refrigeration systems so are ideal for use in food storage areas to help maintain meats and fruits & vegetables by extending their shelf life.

We strongly believe that these UV-C Systems will provide significant protection in the offshore environment, where close living quarters increases the risk of infection and transference of bacteria and viruses which is detrimental to the wellbeing and productivity of personnel.



## Significant Build-up of Micro-organisms in Air Conditioning Systems Presents a Health Hazard

Experts are aware of the weak points in air conditioning systems which can lead to air contamination and micro-organism development. Air conditioning systems are the ideal breeding grounds for microbiological growth, for example in the form of mould and its multitude of spores. Furthermore, bacteria, viruses, algae and protozoan's also present a significant risk and **even the most up-to-date filter technology is not capable of specifically preventing air conditioning systems from becoming contaminated.** Allergies and toxic reactions are the possible results.

## UV-C Radiation – the Efficient Solution for Combating Contamination

The disinfection systems supplied by Advanced Air Hygiene significantly reduce the risk of contamination problems. Installed at the relevant weak points of the air conditioning system, UV-C ensures effective and constant disinfection. Whether it be the disinfection of water for re-circulating spray humidifiers or disinfecting air intake and circulated air in the ventilation shafts, Micro-organisms are subjected to the necessary UV-C radiation with a wavelength of 253.7 nm. **This results in up to 99.9% elimination of micro-organisms.**

Our UV-C units are designed so that no radiation leaks to the outside, ensuring that our disinfection systems can be used with **no risk to personal health.** The systems are integrated on an individual basis, depending on specific requirements which include air temperature, relative air humidity, particle levels and volume and speed of the air flow.

The UV-C modules are easy to install into existing ventilation and air conditioning systems. The disinfection systems are **practically maintenance-free and run 24 hours a day.** They meet all the hygiene requirements in accordance with VDI 6022 and employ state-of-the-art technology.

## VDI 6022 Sets High Hygiene Standards

In accordance with VDI 6022, air conditioning systems should provide a physiologically beneficial room climate and ensure that indoor air is of flawless quality with regard to hygiene.

Risks to health and negative effects on well-being are to be avoided at all costs. VDI 6022 explicitly states that up-to-date technological standards should be applied for the constant disinfection of air conditioning systems. The disinfection systems supplied by Advanced Air Hygiene perfectly meet the requirements of VDI 6022 and therefore have a great deal of practical relevance for designers, constructors and operators of ventilation and air conditioning systems.



## UV-C Radiation Reduces Risk to Health

The systems from Advanced Air Hygiene can reduce the concentration of microbes and endotoxins by up to 99.9% \*\* and has the following advantages

- **40% fewer respiratory problems** \*\*
- **30% fewer mucous membrane problems** \*\*
- **50% fewer complaints about muscle pains** \*\*



Employee absence due to sickness caused by microbiological contamination of ventilation and air conditioning systems can be drastically reduced by the integration of UV-C systems.



### Our Products:

Advanced Air Hygiene offers an extensive range of products for UV-C based disinfection of air, which can either be set up as standalone solutions or customised for simple integration into existing or planned air handling systems.

### UV-C - The Most Natural Form of Disinfection

Disinfection systems from Advanced Air Hygiene work on a purely physical basis. They ensure effective and continuous disinfection. This dispenses with the need for chemical cleaners that harm the environment and saves the operators additional cleaning costs.

### Advanced Air Hygiene Ltd - Your Partner for Ventilation and Air Conditioning Technology

Benefit from our experience in the planning and design of disinfection modules in existing and planned air conditioning systems.

*\*\* Dick Menzies, Julia Popa, James A Hanley, Thomas Rand, Donald K Milton. Effect of ultraviolet germicidal lights installed in office ventilation systems on workers' health and wellbeing: double-blind multiple crossover trial. The Lancet – Vol 362 – pp. 1785 - 1791, November 29 2003 – www.lancet.com*



10A Forest Street, Weaverham, Cheshire, CW8 3EY  
Tel: +44 (0) 1606 855063  
email: [sales@aahygiene.com](mailto:sales@aahygiene.com)  
website: [www.aahygiene.com](http://www.aahygiene.com)