DAX airscience

Guaranteed Odour & Bacteria Control

AIRsteril®
SCIENTIFICALLY PROVEN PRODUCTS

www.daxairscience.co.uk

Cost **effective** odour management solutions for **toughest environments**

Dax Airscience offer proven unparalleled odour and microbial control technology to the waste management sector. Offering the modern solution for odour control in Materials Recycling Facilities, Anaerobic Digesters, Waste Transfer Stations, and many more sites...

Initially designed as a medical product used extensively by the NHS, we refined the unique technology to provide efficient odour control in the toughest environments, whilst still reducing the risks from bioaerosols and even surface bacteria 24/7. We utilise the latest U/V and ozone technology to eliminate odours and improve the quality of air we breathe. We have successfully eradicated odour issues on all the sites we have worked with, from the largest waste transfer stations (over 10,000m2) down to individual anaerobic digesters.

Most odours from waste are created by bacteria and Volatile Organic Compounds (VOC'S). The issues become worse during warm weather as this speeds up decomposition and the associated off-gassing.

Many people are unaware that fragrances or perfumes do nothing to remove odours, only attempt to mask them, with extreme odours this often creates a more unpleasant smell than the original problem.

We target both the bacteria and VOCs which cause the odours, units operate around the clock cleaning everywhere the purifying air reaches.

There is no requirement to clear personnel or machinery from the area and we offer solutions for all buildings where waste is processed or stored.

Guaranteed Odour & Bacteria Control

Not only will you **eradicate odours**, you will cut operating costs and keep your **neighbours happy**

By its nature waste transfer, processing and recycling activity creates odours which is a primary reason you need a permit to operate and an odour management plan.

Happily we have been able to resolve a wide range of issues with odour complaints and prevent our customers being exposed to the risk of fines. Customer feedback has shown in many cases local residents actually found masking fragrances more of an issue than the original odour which is why we are now getting increased demand to install complete systems at the front end.

Our technology not only eliminates odours but has a significant impact on bacteria, viruses and bioaerosols. This means not only a positive change to public perception but also an improved, healthier working environment for all.

Benefits

- ✓ Eliminate odours & odour complaints
- ✓ Reduce Bioaerosols
- ✓ Cut odour management costs
- ✓ Healthier workplace
- ✓ Cut staff turnover and absenteeism
- ✓ Improve carbon footprint
- ✓ Independently proven odour control
- ✓ Independently proven microbial control

Independently Tested

Tested by multiple independent laboratories worldwide including:

- *ALS Global Laboratories*
- *SGS Laboratories*
- *Odournet*
- *The Health Protection Agency (now part of Public Health England)*
- *Hygcen Laboratories Germany*
- *eco-INSTITUT Germany*

An average of 78% odour reduction inside containment buildings.
Over 98% reduction in specific airborne bacteria.
Over 99% reduction in total bacteria count.

Ground Breaking **Technology**

A unique combination of internal and external technology, each part can be individually adjusted to create tailor-made solutions and superior odour elimination:

Inside our units

- **Dual waveband UV** with our catalyst transforms Oxygen into a highly reactive state of Ozone and Superoxide Ions which leave the unit as **"Plasma Quatro"** oxidising odours.
- **PCO – Photocatalytic Oxidation**, UV reacts with our catalyst to form highly reactive hydroxyl radicals which break down volatile organic compounds and odours.
- **Germicidal Irradiation** by dual Ultraviolet light, kills bacteria, viruses and mould.

Released by our technology

- **Superoxide Ions** are negatively charged and react with airborne contaminates causing them to cluster together and fall from the air as they become too heavy.
- **Targeted Ozone** gets to the hardest to reach areas breaking down contamination in the air and everywhere it penetrates, neutralizing odours.

Safe and Proven **Technology**

Our technology has been supplied to the NHS since 2014 and is utilised in a wide array of areas. Even in perceived "clean" environments like Ambulances, recent testing demonstrated over 95% reduction in surface microorganisms and over 81% reduction in bioaerosols.

During the peak of the pandemic demand from our "infection control" work became so high we had to focus our efforts on this, but since increasing our production capacity we are now re-focusing on areas where odours are the more prevalent issue.

Worldwide our customers cover all industries including Food production, Healthcare, Education, Sports, Offices, Gyms and Exhibition centres, with recent high profile sites including COP26 Climate Change Summit in Glasgow, the seven storey QEII Centre in central London and Brussels Expo (one of the largest exhibition centres in Europe).

The beauty of our technology is that the individual levels can be adjusted to the challenges of every particular site, whether strong odour issues or targeting harmful bioaerosols. The same technology we use in Exhibition centres or Hospitals will eliminate all genuine odour complaints from waste processing.

Save money whilst eliminating odours and elevating hygiene levels!

Our Products
- Mega Thermal Range

The most efficient and cost effective way to help you achieve superior standards in odour control

Improving air quality in waste processing plants will clear odours and improve the working environment. The Mega Thermal eliminates unpleasant odours, reducing contamination both in the air and on all exposed surfaces. With no need for chemicals, minimal maintenance and low power consumption, the Mega Thermal provides a true green solution. Fully automated system meaning staff can just focus on their work, while the Mega Thermal takes care of the odours.

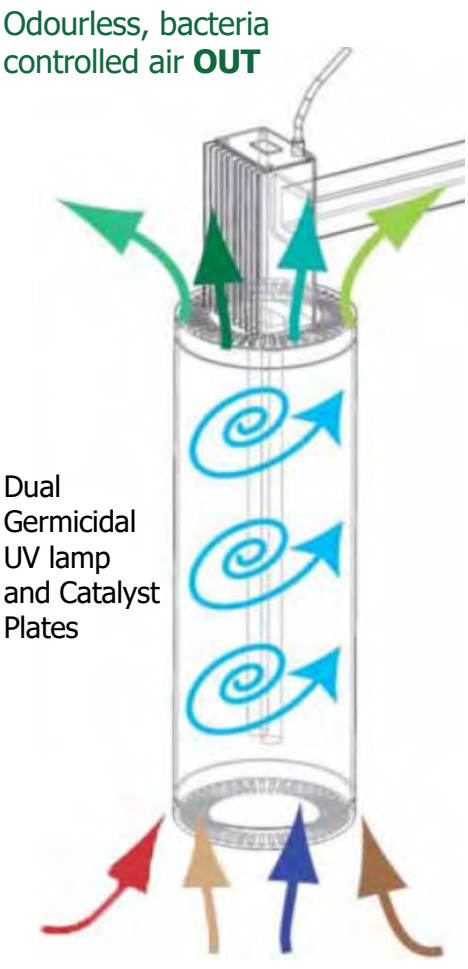
Thermal Convection

The advanced technology of the Mega Thermal allows the control of Bacteri and VOCs more efficiently than ever before.

All of this is achieved without fans and with low power consumption. The custom designed Thermal convection system ensures that contaminated air processed through the unit achieved optimum dwell time in the purifying chamber.

As the processed air leaves the unit then in itself it becomes an efficient cleaning agent targeting contamination in the air and on surfaces.

The Mega Thermal offers a unique design without the need of a fan motor or moving parts. All parts which could be affected by onerous off-gassing of caustic materials are encased in a hermetically sealed insulated chamber.



MEGA THERMAL

Our Products
- Complete Range

Water resistant, fan driven, stainless steel casing; suitable for the toughest environments

ULTIMATE RANGE

Our newest product range, IP65 water resistant and originally developed for the food industry, the Ultimate has the flexibility to cope with strong persistent odours even in areas prone to higher moisture levels, where airflow is inconsistent or space is limited.

Using the most advanced catalyst baffle plate and UV lamp combination, the Ultimate can be customized to cover a variety of area sizes and odour challenges. In waste processing this can be a more suitable option for odours generated from waste to energy processes.

General Odour and Infection control

All commercial and industrial sites have odour issues. First impressions count, the perception of customers and visitors can be seriously affected by offensive odours in reception areas, washrooms and offices. Staff turnover and absenteeism will result from smelly and unhealthy working conditions.

We offer a full range of products to cover all areas with some detailed below. We have demonstrated a 42% reduction in absenteeism with our units on an NHS site and recent testing in busy airport washrooms demonstrated over 77% reduction in airborne microorganisms and the elimination of unpleasant odours.

WASHROOMS

WT 10, 20, 30 **WC30, WC40X**

OFFICES

AS10, AS20

CHANGING AREAS

MF 20, 40, 60, 80

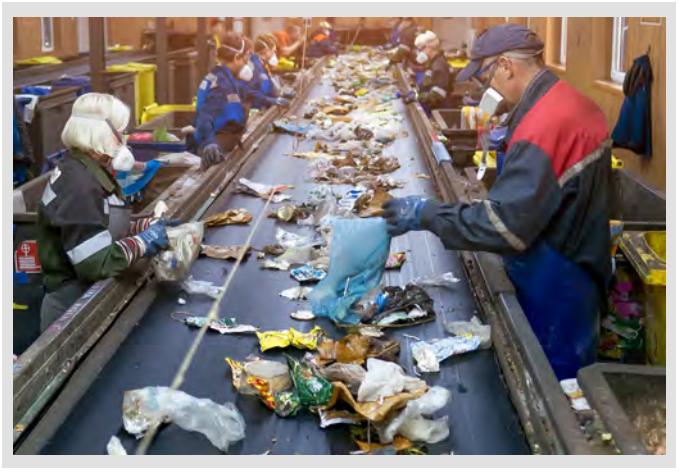
MOBILE USE

MP100

Bioaerosols Study

Employees working in MRFs, waste transfer stations and anaerobic digesters can be exposed to general airborne dust above the level where it is considered a substance hazardous to health (10 mg/m3 as an 8-hr TWA).

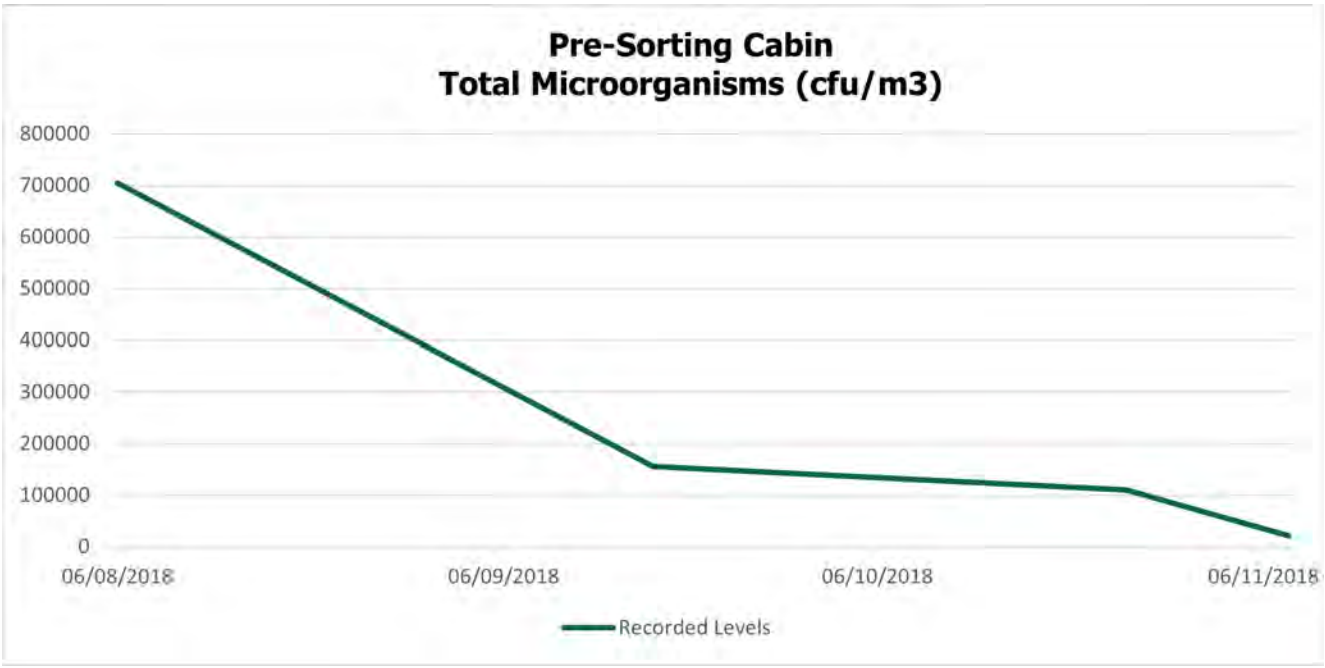
There is also the potential for exposure to airborne fungi (moulds and yeasts) and bacteria which can cause infections and trigger allergies and asthma; and to potentially harmful mould volatile organic compounds (mVOCs) and bacterial endotoxins.



Recent trials at MRFs demonstrated a 97% reduction in bioaerosols over 3 months.

Samples of bio-aerosols were taken over a 12 hour shift. When AIRsteril was installed the initial count of micro-organisms was 704,800 colony forming units/m3.
Monthly bioaerosol sampling after installation demonstrated a continuous reduction in microorganisms, down to 21,000 cfu/m3 after 3 months.

Products were installed in Pre-Sort, Sorting Cabins, and baling areas. A typical reduction in bio-aerosol levels (total counts of micro-organisms) is shown below.



IF YOUR PROCESS GENERATES **OFFENSIVE ODOURS**, IT'S A SURE SIGN THAT **THERE WILL BE COMPLAINTS**

Full Odour Management:
Installation, Service, Maintenance, Infection Control and On-going Technical Support

Eliminate Offensive Odours

✓

Cut Odour Complaints

✓

Control against infections

✓

Protect & Upgrade Permits

✓

Comply With Regulations

✓

Reduce Chemical Usage - Improve Carbon Footprint

✓

Improve Staff Working Environment

✓

Lower Staff Absenteeism

✓

Reduce bioaerosols and help prevent respiratory diseases

✓

For **FREE** Site Survey, Consultation & Quotation **Call** 01234 871 147 or **email** info@daxairscience.com

DAX airscience

DAX airscience Ltd
Unit 23 High Barns Farm, Roxton, Bedfordshire, MK44 3ET
Tel: 01234 871 147, Email: info@daxairscience.com
www.daxairscience.co.uk