

Specialists in Odour Control

About Us

Cobra Hydro UK is a fast expanding company that design, manufacture and install bespoke odour control systems and dust suppression systems across the United Kingdom and most recently, internationally.

We are a family owned business; designing and manufacturing all our equipment and blending our neutralisers. We have been providing odour control and dust suppression solutions for over 15 years.

Protecting the environment is always at the forefront of our minds. We therefore use environmentally friendly odour neutraliser products that are organic and non toxic.

Cobra Hydro UK employs qualified personnel for the design, manufacture and installation of equipment. All equipment is produced in house and made to a high standard.

We have a long track record in delivering specialised solutions to effectively tackle specific odour and dust problems. Our experience and expertise eliminates odour and dust issues in a wide spectrum of industries and environments.

Cobra Hydro UK also supply a free no obligation site survey and consult with the client at every stage of the process to ensure all requirements have been met.

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Perimeter Hi-Pressure Misting System





Cobra Hydro UK Ltd Perimeter System protection unit is a high pressure odour control unit, which is designed to provide protection against unpleasant odours escaping past site boundaries. To achieve this, an odour control chemical is automatically dosed into the system. This diluted with water, is pumped through a series of misting nozzles around the boundary. The fine mist produced absorbs and neutralises odours as they pass through the air, falls to the ground and is biodegraded.

The nozzles are high tech and self cleaning and therefore prevent blockages. The mist is a fogging mist that can reach up to 20 meters for excellent coverage to treat odour at source.

The option to have a wind speed and direction fitted to your system is an advantage. The systems are operational only when wind is blowing from selected direction at a set speed. Up to eight directions can easily be programmed into the unit by the user. Where the option is provided, a manual over-ride selector switch is fitted as standard.

Key Features

- Ultra fine mist
- Contains and neutralises odours
- Hi-Tech nozzles
- Wind speed direction control
- On/off timing system fitted for economical running costs





What is the Wall Fan and how does it work?

The Wall Fan is a fan assisted rotary atomiser mounted on a robust steel mast. The unit operates by pumping a mixture of water to a fan assisted rotary atomiser which distributes the solution within a tight droplet spectrum. This extremely fine mist is then propelled further by the fan behind the atomiser.

It's a highly powerful system, available in wall-mounted, ceiling mounted and mobile unit form. The oscillating unit will turn through 100 degrees, and the flow can be adjusted between 0 and 180 litres per hour. The spray will cover a staggering 30-45 metres.

All of our systems are designed to provide excellent coverage for odour control and/or dust suppression in both outdoor and indoor environments.

For best results, use in conjunction with our best-selling atom neutralisers!

Key Features

- Low maintenance
- Ultra fine mist
- Greater coverage
- Never blocks
- 0-180 litre pH flow adjustment
- Fixed or oscillating
- Used in conjunction with our best-selling atom neutralisers!



What is a Dry Vapour Unit and how does it work?

Evaporation from fluids takes place when the liquid molecules on the surface have enough momentum to overcome the intermolecular cohesive forces and escape to the atmosphere. When the liquid is agitated, momentum and the evaporation increases. A reduction of the pressure above a liquid will reduce the momentum needed for molecules to escape the liquid and increase the evaporation.

Dry Saturated Vapour

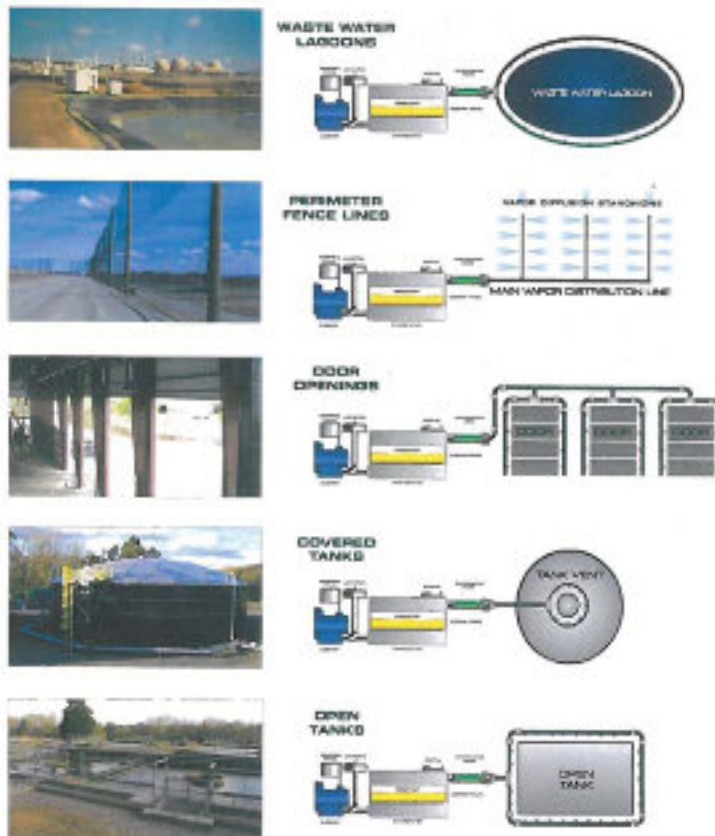
Dry saturated vapour is free from liquid particles – all particles are vapourised; any decrease in the vapour temperature or increase in the vapour pressure will condensate liquid particles in the vapour. A dry saturated vapour is a substance in the gaseous state which does not follow the general gas law.

Odour neutralising products function in a complex manner because of the makeup of the neutralisers. Those neutralisers that contain essential oils primarily function by capturing odour molecules in a charge film that surrounds the essential oil.

Neutralisers that contain other large organic molecules created by certain fermentation and blending processes function by absorbing odour molecules, by radical reaction, or by a condensation reaction between the odour and the neutraliser, thus producing a neutralising reaction product that does not create or leave a detectable odour.

Within the neutraliser groups, the essential oils tend to control a wider range of odours; however, there may be a slight detectable scent of the essential oil present after odour neutralisation has occurred. The use of chemical neutralisers to control these odours is regarded as an acceptable treatment option because of the minimal amount of capital investment required.

Other acceptable technologies, including combustion, oxidation and stripping are also very efficient, but require considerable capital equipment investment. In many industrial applications, odour control methods such as incineration, carbon adsorption, wet scrubbing, source modifications and odour masking may be found.



Odour Neutralisation with Essential Oils

When it comes to the control of non-specific odours from municipal waste, food waste, bio-remediation, landfill etc. Little works better than neutralising with essential oils.

Essential oils are liquids extracted from plant material by pressing, solvent extraction or steam distillation. These organic, naturally occurring essential oils are extracted from the seeds, bark, roots, leaves, flowers, wood, balsam, resin and fruit of plants. The oils are then re-distilled or rectified to remove any unwanted materials.

Essential oils evaporate easily, infusing the air without leaving any residue behind. They are extremely complex organic compounds consisting of hundreds of components and trace elements. The Oxi-Max odour neutraliser for example, contains over 200 trace elements at concentrations of less than one percent. As in all natural oil, trace elements supply the delicate, extremely complex nuances that provide a unique odour neutralising quality. The synergistic effect of trace elements enhances the blending and performance of the odour neutralising product. The blended product actually becomes greater in effectiveness and allows for a broader range of application than the oils would if used individually.

Odour neutralising agents are different from masking agents, which cover unpleasant smells with another, more pleasant scent. The odorous material can be considered the solute. The essential oils are fed to the air in a fashion that will initiate and optimise absorption and adsorption, the two physical processes that occur in the vapour phase between the essential oil and the odorous material.

Surface area, contact time, particle size, temperature, and the concentration of both materials will be important in optimising the efficiency of the neutralising processes. The essential oil will physically combine with the odorous material to form a new physical compound. This new combined product will have a net zero odour. Certain odours will be easily neutralised, and certain hydrocarbons (heavy and/or saturated) will be difficult. Hydrogen sulphide (H₂S), most mercaptans, Ammonia (NH₃) and most amine odours can be neutralised.

The Dry Vapour product has significant advantages over traditional reagents:

- Non-toxic and non-corrosive
- No need for large storage tanks
- No need for dosing equipment
- Replaces the traditional reactive agent and operates at a molecular level
- Economical to use
- No water supply necessary
- Can be used anywhere, inside buildings open yards, exhaust stacks and ventilation systems
- Has an immediate impact
- Neutralises a wide variety of odours
- Several delivery methods available depending on application requirements
- Simple to operate and install



What is the Odour master Fan and how does it work?

The Odourmaster Fan has parts made up from assisted rotary atomiser mounted on a robust steel mast. The unit operates by pumping a mixture of water to the rotary atomiser which distributes the solution within a tight droplet spectrum. This extremely fine mist is then propelled further by the fan behind the atomiser.

It's a highly powerful system, available in wall-mounted, ceiling mounted and mobile unit form. The oscillating unit will turn through 100 degrees, and the flow can be adjusted between 0 and 180 litres per hour. The spray will cover 30-45 metres.

All of our systems are designed to provide excellent coverage for odour control and/or dust suppression in both indoor and outdoor environments.

For best results, use in conjunction with our best-selling atom neutralisers!

Key Features

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- Never blocks
- 0-180 litre pH flow adjustment
- Fixed or oscillating
- Used in conjunction with our best-selling atom neutraliser!

These Units are Available to Hire or Purchase



Atom is a range of organic, non-toxic odour neutralisers. We have tailored our product to best suit our customer's needs, making it very popular within the odour control industry.

What does it do?

Unlike masking chemicals, Atom Neutraliser breaks down the odour molecule to a harmless form, whilst leaving a pleasant fragrance in the air.

Where is it used?

Our odour neutralising products are used all over the UK, mainly in landfill sites, sewage treatment works, composting sites, quarries and in industries where odour is a nuisance.

How does it work?

Our tailor made bespoke systems are designed to work alongside our atom range of organic non toxic odour neutralisers that breaks down odour molecules to a harmless form and leaves a pleasant fragrance in the air. Scents and strengths can be made available on request.

Is it environmentally friendly?

Yes, 100%. In no way are our products harmful to the environment, or to the people in it!



N1 is typically used for sites with low odour problems, such as composting facilities and/or landfill sites.



N2 is mainly required for odours that are offensive to employees and surrounding areas/people of waste transfer sites.



N3 is used for staggering levels of odour release, from manufacturing facilities, refineries, abattoirs and effluent plants. In these cases, hydrocarbons and mercaptans may also be present.



N4 is for the highest level of odour release e.g. oil refineries, effluent plants and high odour manufacturing facilities. More than likely, hydrocarbons and mercaptans will be present.

What is a Bio-Block and how does it work?

The problems associated with fat and grease build-up in Waste-Water Treatment Plants are well documented. The costs associated with the removal and disposal of fog, coupled with the repair and maintenance costs because of clogging and damaged to pipework and pumps make the problem one worth addressing.

There are numerous solutions to this problem. Mechanical removal and fat-reducing agents all have their part to play and can show positive effects, resulting in considerable financial savings over a given period. This is in spite of the intrinsic operational costs. Most dosing or remediation procedures require an on-site supply of energy, clean water, or both. Much of the specialist equipment needs monitoring and maintenance. This, coupled with the need for ample space to accommodate the procedure, can present the site with problems.

The Bio-Block has been developed to address the above-mentioned problems. The Bio-Block offers 24/7 operation with no need for dosing equipment, power, or storage and operation space. The block hangs in a wet well, positioned to the in-coming waste water flow. The turbulence of this water slowly erodes the block dosing the complete system and colonising all aspects of the operation.

The chemistry behind the Bio-Block

The Bio-Block is a formulation of aerobic and facultative bacteria, organic enzymes, proteins and micro-nutrients. Its carefully selected 'families' of bacteria offer an effective solution in the breakdown and digestion of fat and grease found present in waste water streams. The enzymatic action

of the Bio-Block attacks the fatty-chain molecules transforming them into suitable substrates on which the bacteria work, breaking them down further and causing the effective micro-organisms to proliferate in the process.

How is treatment implemented?

In some cases it may be appropriate for an initial removal of the residual build up of fog to allow for effective operation of the Bio-Block. An initial shock dose of a specialist agent is then applied at the earliest possible stage of the treatment operation. Once this has been achieved, the Bio-block is suspended in the primary wet well and passive dosing commences.

Though the active ingredients of the Bio-block are effective immediately, though its full effects are not seen for three to four weeks. This is due to the bacteria having to colonise, proliferate and penetrate the fat build-up. In fact, during this phase, more fat and grease may appear to be present as a result of old fat and grease deposits being freed and deposited in the system.

Key Features

- Organic and economical to use
- Can be used anywhere (inside buildings, open yards, exhaust stacks and ventilation systems)
- Has an immediate impact
- Simple to operate and install
- No need for large storage tanks

Applied through a static system



Applied through a mobile system



Applied through a high pressure misting system



Bio-Block



Before



After



Cobra-ANL

Cobra ANL is a liquid blend of pre-selected autotrophic microbes that are able to convert sulphides into elemental sulphur. By adding Cobra-ANL to sewage, the sulphide in the sewage water is removed.

Cobra ANL is a microbial formulation containing bacteria capable degrading volatile fatty acids and bacteria capable converting sulfides into elemental sulfur. The bacteria deals with the volatile fatty acids use this as a food source, converting it into new biomass and the CO2 reduces the septic odours from the sewage. The bacteria taking care of the sulfides take care of the H2S (rotten egg odour). The bacteria uses inorganic carbon and sulfides to grow and reproduce, producing new biomass.

Anti Odour Carbon Filters

Cobra Hydro Ltd is a specialist with anti odour activated carbon filters, that are used in various kinds of sewage system odours, including inspection chambers, sewage pumping stations, septic tanks and molecule chambers.

The main function of anti odour carbon filters is reducing odours escaping from sewage systems. Anti odour carbon filters neutralise the sewage system odours immediately. We supply a full range of filters.

The carbon media is converted by thermal decomposition in a furnace using controlled atmosphere and heat.

The resultant product has an incredibly large surface area per unit volume, and a network of submicroscopic pores where absorption takes place.

Cobra Acoustic Barrier

The Cobra Acoustic Quilt is a sound absorbing panel that is easily fixed to temporary fencing or other structure.

Our acoustic barriers have been developed by using a composite of fibres that absorb noise.

Independent testing has shown that the Cobra Acoustic Barrier can achieve up to 30dB of noise reduction, enabling construction sites, engineering sites, water utility works, hospitals, rail and roadside construction and other establishments where excessive or prolonged noise could pose significant disturbance to the wider community.

Key Features

- Reduce up to 30dB noise
- Extends site operating hours
- Sound absorbing products
- Fast and simple installation
- Dust Control

Cobra-ANL



Anti Odour Activated Carbon Filters



Cobra Acoustic Quilt



Service Contract Plans

1 Year contract

£300 per month

- 200 litres of atom product
- 2 services per year
- Any additional product charged at 75p per litre

2 Year contract

£650 per month

- 150m high pressure system (prices vary on quotation)
- 500 litres of Cobra atom per month
- Any additional product charged at 75p per litre
- 1 year warranty
- 1 service per year

3 Year contract

£580 per month

- 150m high pressure system (prices vary on quotation)
- 500 litres of Cobra atom per month
- Any additional product charged at 75p per litre
- 1 year warranty
- 1 service per year





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