



mist-air[®]

leaders in dust suppression technology 



world leaders in
dust & odour
suppression systems

**YOUR ONE-STOP SOLUTION FOR
DUST, DIRT & ODOUR**



www.mist-air.co.uk

THE ADVANTAGES OF THE **mist-air**[®] SYSTEM

- ▶ Solves environmental and occupational health issues for Dust, Odours, and Flies
- ▶ Everything stays dry including floors, machinery, personnel and stock
- ▶ Suppresses all types of dust, including wood, glass, grain, coal, brick, steel, biomass, gypsum, etc.
- ▶ Helps to prevent flash explosions caused by igniting airborne dust
- ▶ Does not require a water storage tank
- ▶ Does not require a compressor
- ▶ Uses very little water or electricity
- ▶ 6 independent circuits to suppress each area individually
- ▶ Timed intermittent operation on any circuit when required
- ▶ Chemical dosing system to control Odours and Flies
- ▶ Sanitising system to purge whole system against Legionella
- ▶ All wetted parts manufactured from Stainless Steel and non-ferrous materials so there can be no corrosion within the system
- ▶ 20 years corrosion warranty
- ▶ All electronics controlled by “Smart Wire” state of the art solid state electronics, and RCDs
- ▶ The whole system can be trace heated and insulated for protection down to -27°C
- ▶ The system can be adapted and retro fitted to any type or size of operation

THE **mist-air**[®] PRINCIPLE

mist-air[®] fog particles are separated and blown out by the silent stainless steel fans, into an ever enlarging cone so that all the particles are increasingly separated. The fog particles are attracted to fine dust particles as they form, preventing dust from rising into the air. This protects the operatives and creates a safe atmosphere.

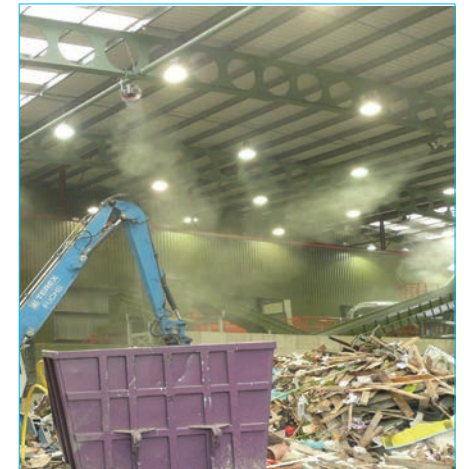
A **mist-air**[®] Base Unit turns small amounts of water into a micro-fine fog, which is distributed to fans throughout the working areas, treating each dusty area independently or simultaneously.

The fog floats in the air without dropping to the floor, suppressing airborne Dust and Odours: but floors, materials, machinery, personnel and stock all stay COMPLETELY DRY.

ANY size of building or operation can be effectively treated.



One Base Unit controls the entire system



Fine dry fog floats in the air

DUST CONTROL REDUCTION RESULTS

AIRBORNE MICRO ORGANISMS (Mesophilic Bacteria)	(CFU/m ³)		
	<i>Without Suppression</i>	<i>With mist-air® Suppression</i>	<i>Improvement</i>
Receptor 1	519	169	67% reduction
Receptor 2	374	91	75% reduction

AIRBORNE RESPIRABLE SILICA	(mg/m ³)		
	<i>Without Suppression</i>	<i>With mist-air® Suppression</i>	<i>Improvement</i>
Position 1	0.23	0.04	83 % reduction
Position 2	0.56	0.03	94 % reduction
Position 3	0.76	0.04	95 % reduction
Position 4	0.17	0.07	89 % reduction
Position 5	0.31	0.11	64 % reduction
Position 6	0.17	0.02	88 % reduction

GENERAL AIRBORNE DUST	(µg /m ²)		
	<i>Without Suppression</i>	<i>With mist-air® Suppression</i>	<i>Improvement</i>
PM 10s	6500	750	88.5% reduction
PM 2.5s	600	80	88.3% reduction
PM 1s	300	10	97.6% reduction



Tunnelling for the new tube lines under London & Edinburgh



Exterior Wood Recycling Hopper - Gruppo Frati, Italy

DUST SUPPRESSION WITHOUT WETTING *(continued)*



Paper and Cardboard Recycling - Aylesford Newsprint, Kent

DUST SUPPRESSION WITHOUT WETTING *(continued)*



Brick Manufacturing Factory - Ibstock Group, Leicestershire



Biomass and EFW Recycling Plant - Brockman, Germany



Biomass Woodchip Storage

DUST SUPPRESSION WITHOUT WETTING (continued)



Power Station Bunker encapsulates dust and odour.



Power Station Tipping Hall - Prevents migration of Dust or Odour

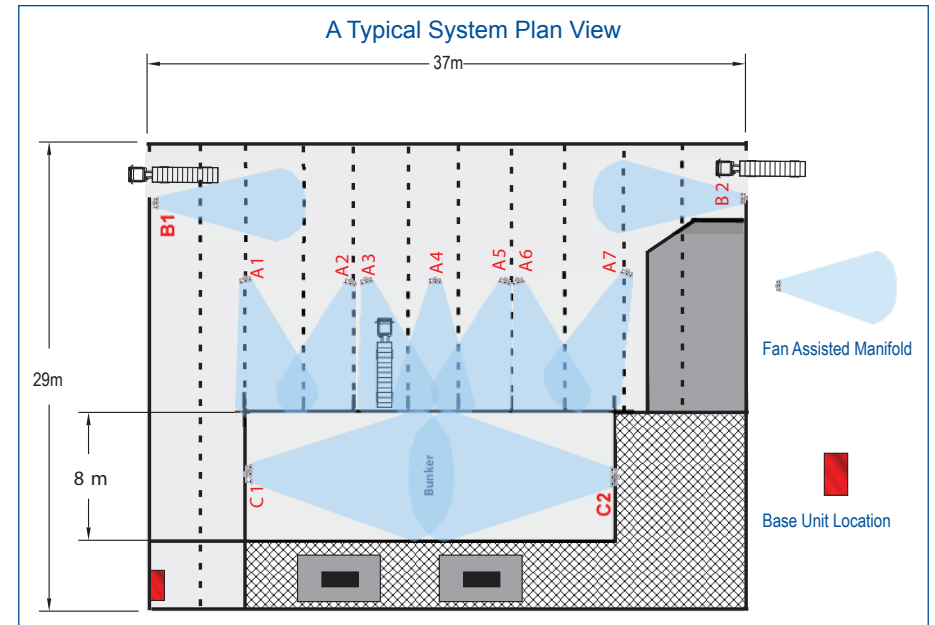
mist-air[®] has installed many systems for EFW sites throughout Europe for dust and odour suppression in the tipping halls, bunkers and infeed hoppers.

There are many areas where negative pressure cannot prevent Dust and Odours creating health hazards.

Dust extraction works well, when a machine can be completely enclosed with an extraction hood, however in practice dust is formed in many areas, so it is constantly dragged through the air to the extraction vents.

mist-air[®] kills the dust wherever it is formed so the operatives do not have to breathe it.

Send a drawing of your plant and we will design and cost a system for you without charge.



STATIC MISTING MANIFOLDS



Static misting manifolds are used to kill dust as it is being formed, preventing it from becoming airborne and migrating to other areas.

Ideal on Conveyor Transfer Points, enclosed Hoppers, Eddy Current machines, Light sorters, Screens and Paper Baler Chutes, etc.

Killing dust at source on conveyor transfer points



Static manifold across screens for Lafarge

STATIC MISTING MANIFOLDS *(continued)*



Static manifolds on Port Hoppers in the Philippines

STATIC MISTING MANIFOLDS *(continued)*



Suppressing dust when loading railway wagons



Underground storage bunker. Fog prevents dust and odour escaping when loading and unloading

When fog suppression is required during demolition and refurbishment, or for crushing and screening, or remedial work on landfill sites etc. and it is required to keep the area, materials, machinery and personnel dry.

mist-air® provide 2 options:

1. Movable Misting Screens:

Single or multiple misting screens can be used to provide a wall of fog up to 4 meters high. As these rely on wind to move the fog, they are normally placed upwind of the dust-forming area so that fog can drift over the site. *(for pictures see next page)*

2. Movable Fan Assisted Manifolds:

These have the added advantage of blowing the fog to the working area and are less influenced by the wind

Note: For large outdoor projects, a “fog cannon” which uses large water droplets, can be more effective and carry much further than the fine fog; but these usually use a lot of water, soaking the area.

mist-air® do not supply fog cannons.



Removing and replacing concrete machine beds for Airbus, preventing dust migration to surrounding wing-manufacturing areas

RAIN GUN SYSTEMS

MOBILE MISTING SCREENS *(continued)*



Lead slag being crushed



Outside wood shredding in Dubai



Compost turning & screening

Used to prevent dust and debris blowing around yards, road and stockpiles. A low cost solution to a common problem.

A single Base Unit supplies all the power for the system and flexible pipework supplies each Rain Gun on site, and allowing full control of which Rain Guns you want to use.

Operating automatically throughout a working day, delivering just enough moisture to keep the ground damp without creating run off.



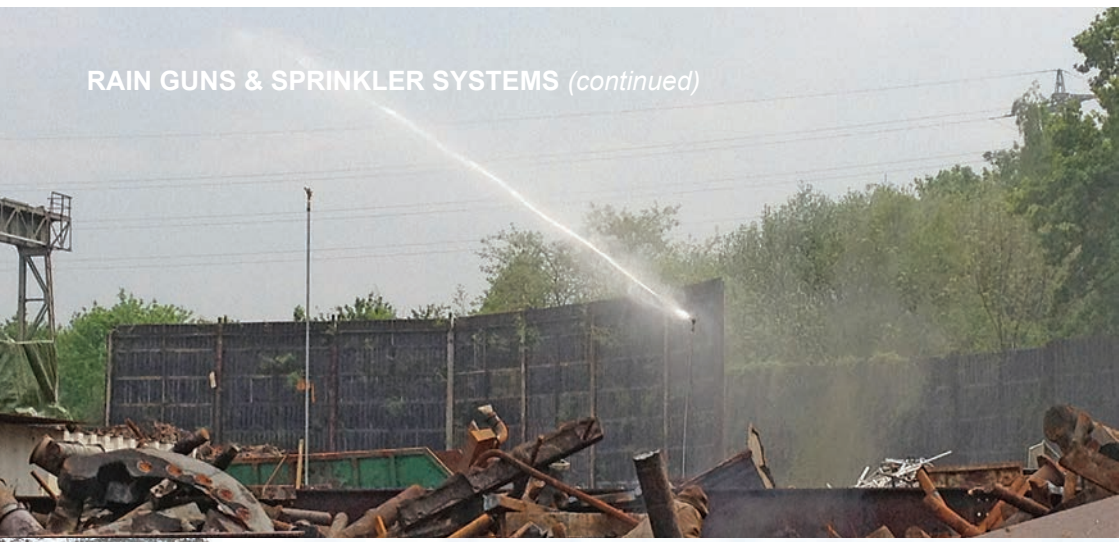
Centralised Base Unit



Above or below ground circulation lines around the site

ODOUR NEUTRALISER & DUST ABSORBER

RAIN GUNS & SPRINKLER SYSTEMS (continued)



Paul Jost GmbH - Karlsruhe, Germany

The **mist-air**® System Base Unit has an electronic chemical dosing pump to accurately dose chemicals through the system with the fog.

mist-air® Odour Neutraliser & Dust Absorber is injected in to the system at just 0.25%. This neutralises a wide spectrum of odours immediately. Plus it acts as a wetting agent to aid absorption of Hydrophobic Dust.

The picture below shows a demonstration of how carbon and silica carbide dust are absorbed immediately in a beaker of water containing Mist-Air Odour Neutraliser and Dust Absorber (left). With plain water (right) both substances just float on the surface.



mist-air® Odour Neutraliser & Dust Absorber is supplied as a concentrate in 25 litre containers or 1000 litre IBC's

*The product is available with the following trace odours:
Green apple, Cut grass, Juicy fruit, Cherry, Eucalyptus, or Neutral*



NB: This product is completely safe and contains no essential oils, which can result in sore throats, running eyes, and the system does not gunge up with non-miscible oil residue and water.



why **mist-air**[®] is best...?

- ✓ We survey your site free of charge, and then send you a site plan with our recommendations
- ✓ If you agree, our engineers will install the system, normally within 2 days, without disrupting your operations
- ✓ We Design, Manufacture and Install every system
- ✓ Stainless Steel and non-ferrous materials are used for wetted parts to ensure no corrosion
- ✓ The **mist-air**[®] system should not be confused with lines of misting nozzles in the roof or Rotary Atomisers, both of which are inefficient and wet stock and floors creating slip hazards
- ✓ Patented **mist-air**[®] system nozzles do not block. This is a problem associated with inferior systems
- ✓ A single **mist-air**[®] Base Unit can supply many fan units, covering perhaps a single shredder or many different areas or buildings simultaneously, each area having independent controls
- ✓ Virtually no running costs
- ✓ Inexpensive and fast to install and maintain
- ✓ Many thousands of systems satisfactorily installed Worldwide

For more details or a site survey, please contact Andrew or Mike on:

0044 (0)1691 828 487 / 991

or email info@mist-air.co.uk

**WITH OUR OVERSEAS PARTNERS WE SUPPLY
& INSTALL SYSTEMS THROUGHOUT THE WORLD**

www.mist-air.co.uk