

# the Misting Company

Commercial, Industrial and Residential Misting Systems

## NEW TECHNOLOGY IN EFFECTIVE DUST CONTROL

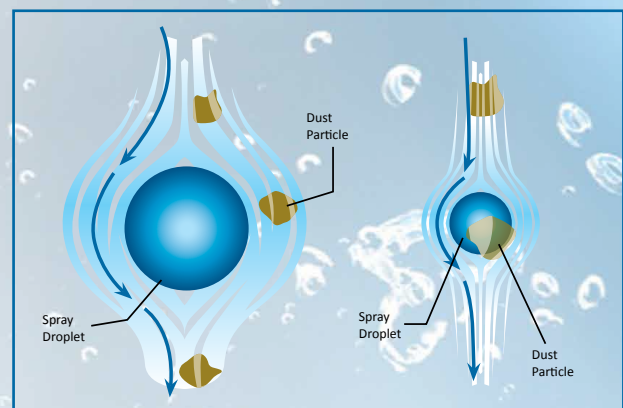
### Effects of Dust

Air-borne dust particles (spraying, coating, sanding, grinding, cutting, blasting) produced by the processing, production, transfer or movement of materials can be a serious problem. Fugitive dust particles adversely affect workforce health, machinery efficiency and can interfere with production quality. Dust pollution is a waste of man-hours on cleanup and poses tricky problems when dealing with neighbouring companies or businesses negatively affected by it. Occupational Health and Safety regulations already legislated are increasingly being enforced and employers would be well advised to comply as soon as possible.

### Industrial Dust Suppression

Until recently, dust suppression has involved expensive equipment and complicated systems such as extraction fans, bag houses and electrostatic precipitators. The Misting Company (TMC) now introduces the use of advanced high-pressure water fog systems, better known as TMC Dust Suppression Technology. Advanced product development has been essential in helping clients achieve effective dust suppression. TMC Dust Control System's proven technology generates 10-micron and smaller water droplets which attract and suppress breathable and smaller dust particles. Billions of micron sized droplets lower the level of breathable dust through the principle of agglomeration (see, *How it Works*). This low-moisture-addition technology stops the dust at source and does not leave any significant residual moisture. The systems are designed and engineered specifically for each application, taking into account the type of dust and the processes that produce it. Systems include automated controls that can be linked with existing Building Management Systems (BMS).

### Dust Suppression – How it Works



Airborne dust particles can be difficult to remove due to the fact that they are so small in size (2 to 10 microns). These particles drift everywhere and can be a significant health hazard. Engineers often look to control the problem by spraying a fine water mist to capture these dust particles. This is the correct approach however not always that successful. This is due to the fact that large droplets (80 to 100 microns) will travel through the air and collide with very few particles on the way. The air-stream present around the much larger droplet deflects the dust particle outwards and away, thus avoiding collision. To capture a dust particle in the best possible manner it is required that the water droplets be the same size and weight as the dust particles themselves. If you want to capture 1 million dust particles it would be best to produce 1 million water droplets of the same size to capture them. TMC Dust Control systems produce 10 micron micro droplets capable of capturing dust particles through the process of agglomeration.

# TMC DUST BUSTA

The Dust Busta provides effective dust particle control to an area larger than 200 square metres from a single location. The Dust Busta system uses a series of customer specified and project related nozzle systems to atomise water droplets between the ranges of 50 – 200 microns, this is the optimum size for particle attraction and area coverage, and then distributes this mist using powerful case axial fan according to specifications. The ducted fan generates the air through the barrel, giving the unit a wide range of coverage. The Dust Busta unit uses various water pressure pumps to create suitable mist to attract dust, odour and fume particles that drives them to the ground. This however will not create any excess moisture on the ground. Therefore this system not only alleviates dust, but also reduces odours and fumes thereby improving worksite safety.

## Dust Busta Features:

- Powerful customer and project specified fans are used to create the correct airflow which is required.
- A hydraulic assisted height elevator so that the fan can be adjusted.
- Atomized spray that has a reach of more than 35 metres forward and up to 5m wide.
- Various nozzle applications can be designed to atomise water into droplets to suit client and project specifications.
- The misting system and fan have been designed to work together to ensure optimum flow, spray angle and delivery pressure to achieve the droplet size, velocity and distribution required for the most effective dust control.

## Misting Specifications

- Stainless steel mist manifolds with various nozzle capacities are available.
- High pressure hydraulic hose (feedline).
- Various water pressure pump motors are available.
- Control panel.
- Filtration system.
- Various tank sizes available according to client and project specifications.
- Optional dosing pump.
- Optional dust suppression chemicals.

## Fan Specifications

- Various fans with speed control to adjust air flow and pressure.
- A nominal 500mm fan with 250mm hub and 14 blade aluminium impeller. Casing thickness of 5mm steel, hot dip galvanized.
- A discharge cone complete with screen.

## Control Panel Specifications

- Fan and mist start up and shut down.
- Low water indicator (low water automatic shutdown).
- Phase and overload protector for fan.
- Phase and overload protector for mist system.

## Mounting Specifications

- Hot dipped galvanized mild steel frame with skid mount.
- Hydraulic height elevator (hand operated hydraulic ram for height adjustment).
- A suitable trailer can be specified according to client specifications allowing for a trailer mounted mobile solution.

