



DUST SUPPRESSION SYSTEMS

PRODUCT CATALOGUE V2.1

 **DUZTECH**
Do it with water







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DUZTECH provide solutions for dust suppression. **OUR PRODUCTS** work with water. A mist of micro water droplets (optimized to the right size) is sprayed to suppress the dust. **WE OFFER YOU** knowledge, hardware, systemdesign and support in the area of dust suppression in- and outdoor. Normally Duztech works with water guns and/or fixed spray systems.

OUR PRODUCTS are designed, constructed and assembled in Sweden. Our products are technically market leading and the company has a deep knowledge on designing and manufacturing machines for dust suppression.

WORKING WITH THE ENVIRONMENT We use modern technology to make the environment better. We invest in development of energy efficient equipment for dust suppression. During operation the equipment consumes a minimum of power and only water and air is used in the process.

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DEMOLITION Application



CONCRETE CRUSHING Application



QUARRY Application



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COAL YARD Application





STEEL PLANTS Application



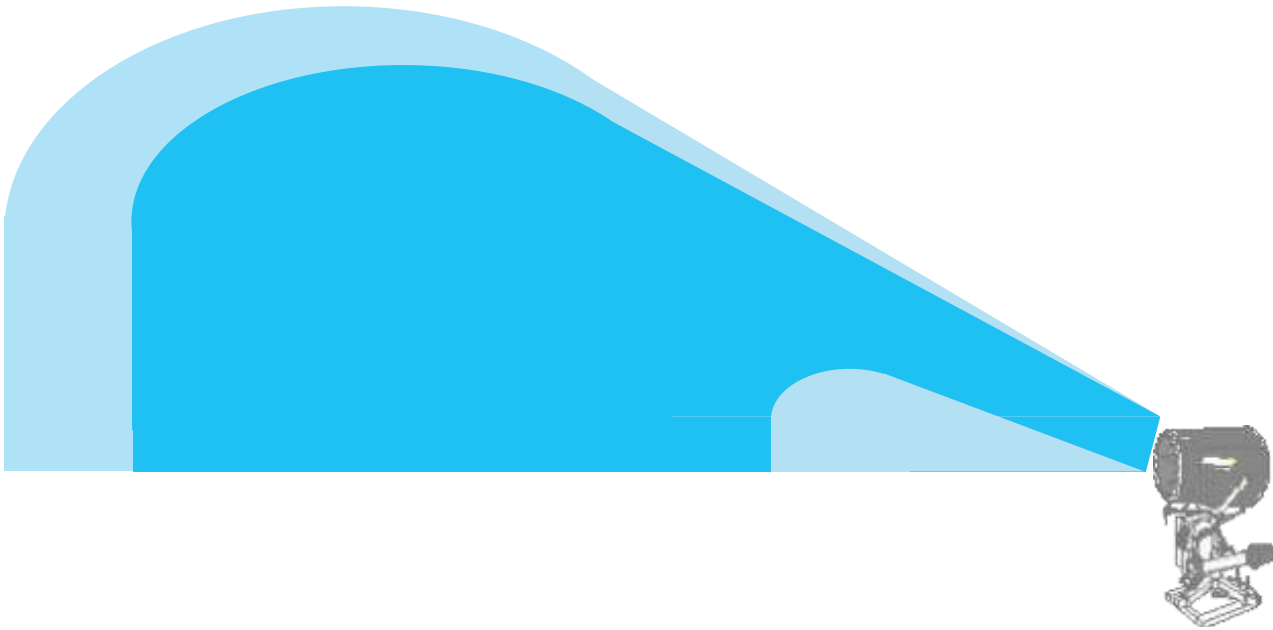
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Throwing distance of fan machines

in theory & reality...



D 35	Max 35m:	70% of water volume at 10-35m
D 45	Max 45m:	70% of water volume at 15-45m
D 60	Max 60m:	70% of water volume at 25-60m
D 80	Max 80m:	70% of water volume at 30-80m

Some data in this publication can be nominal.

We reserve the right to change specifications and design without prior notice.

The illustrations do not necessarily show the standard version of the machine.

Values at MSL (Mean Sea Level) (0 m above sea level at 15°C at 1013,25 hPa / mbar).

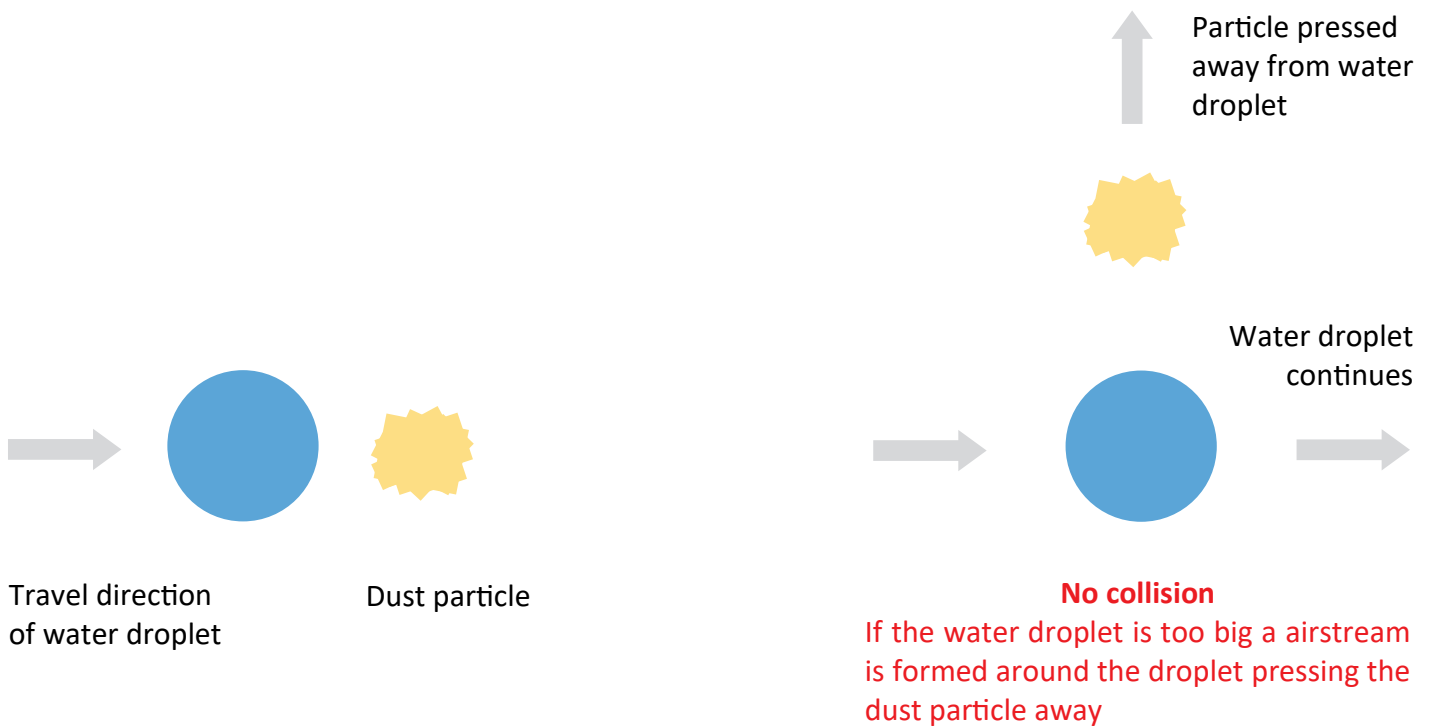
Measurements made at windless conditions.

Throw length /height varies with wind.

Areal coverage depending on setting of turning device.

Theory and application of dust suppression

Research in connection to development of dust suppression systems shows that if a number of droplets in the approx. the same size as the dust particle is generated, the changes of collision is high.



AUTOMATIC Dust Control System

DUZTECH Dust Control System for Mist Cannons & Fixed Nozzle Installations

The system controls dust suppression units based on information from weather station, dust and movement sensors or manual control.

Units can be fully controlled according to the current circumstances.

Communication to dust suppression and water supply units is performed via radio or cable. The system can be connected to internet for supervisory control and remote support.



Mounted in a container for tough environments

The control system is mounted in a container for reliable function in all environments. The container also has a mast for optimal placement of antennas and weather station.



Control panel with touch

The system is controlled from a touch panel. From the panel the units can be controlled individually and the system can be configured. It is also possible to save and display log data. The system can also be used with a tablet or smartphone via network.



Remote control for flexible usage

The system can be equipped with a remote control making it possible to start and stop groups of units from the site, driving cabs or in the control room.

Weather control for all circumstances

Weather data are collected with a motion free and winter adapted weather station.

The following weather data can be used to control the system:

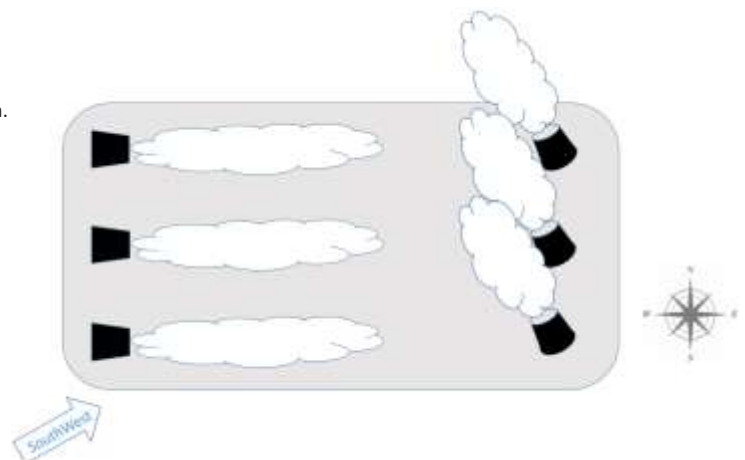
- Air temperature
- Air humidity
- Wind speed
- Wind direction
- Precipitation

Units can be stopped during heavy rainfall, heating can be turned on at low temperatures and the system can adapt to the wind circumstances.

Wind control works with the wind

The system controls the horizontal and vertical direction of the units according to the current wind situation. This makes it possible to create a very effective dust suppression in all different wind conditions.

No machines are allowed to work against a strong wind, instead the units with head wind will create a mist barrier by turning upwards in the wind direction. The system behavior can be adjusted according to customer needs.



Wind direction is southwest. The west units are directed horizontal and forward, the east units are tilted upwards and turned in a northern direction to create a mist barrier.

SYSTEM SOLUTIONS

The use of automation, working with the wind and sensing dust particles saves energy which makes Duztech AUTOMATIC Dust Control System more environmental friendly than standard solutions on the market. The use of a smart automatic Mist Cannons with wind control increase the throwing distance drastically! Measurements show that the throwing distance can increase as much as three times compared to a manual Mist Cannon on the ground. If combined with Duztech HS System for fixed operation at transfer points the system will have an efficiency up to 90%. Sensors allowing the system to notice wind and weather conditions together with dust particles in the surrounding air will make the Duztech Dust Suppression system a clear choice for you!



DUZTECH are capable of providing complete Analysis, Planning and Engineering for your site!



D35

The D35 is a high-performance Dust Suppression / Mist Cannon with 25-35 meter range used for dust, odour and air pollution control in different applications. Equipped with a robust frame the D35 is built to last and can be a mobile or permanent installation. The D35 is well suited for heavy duty applications such as Mining, Crushing, Demolition, Rental and Cement industry. Features as electric tilt, automatic main valve and remote control are standard. Automatic oscillation up to 360° to distribute water mist over large areas are also standard. The D35 is connected to a standard 16A socket. It can be powered by 400V/50Hz from the main grid or from a generator.

The flow rate is adjustable to suit different applications. The water mist droplet size is between 20-200 microns which makes the D35 ideal for various applications.

**STEEL - MINING - DEMOLITION
BULK HANDLING - CRUSHING - RECYCLING
CROWD COOLING - CEMENT - RENTAL
ODOUR CONTROL**



Specifications

Effective range 25-35 meter
Area covered 3.800 m²
Voltage / Frequency 400 VAC / 50 Hz
Current consumption 14 Amps
Fan motor power 5,5 kW
Pump motor power 2,2 kW
Power connector 16 A - 5 pin
Water flow 12 - 60 LPM
Water connection Thread 1" BSP (DN25)
Required in pressure 2-12 bar
Water quality Portable / Filtered
Tilt angle -20°/ +50°
Automatic oscillation 10° to 360° steps of 10°
Operating temp. +1°C to +50°C
Length with fork stand 1.160 mm
Width with fork stand 1.100 mm
Height with fork stand 2.070 mm
Dry weight 415 kg

Standard Equipment

Electric tilt
Booster pump
Run dry protection
Filter system 300 micron
Water drain valve
Automatic oscillation system
Chassis with heavy duty fork pockets
Electric water main valve

Optional Equipment

Remote control
Winter kit
Wheel set
Wall mounting
Dosing pump with 60 L tank

D45

The D45 is a high-performance Dust Suppression / Mist Cannon with 35-45 meter range used for dust, odour and air pollution control in different applications. Equipped with a robust frame the D45 is built to last and can be a mobile or permanent installation. The D45 is well suited for heavy duty applications such as Mining, Crushing, Demolition, Rental and Cement industry. Features as electric tilt, automatic main valve and remote control are standard. Automatic oscillation up to 360° to distribute water mist over large areas are also standard. The D45 is connected to a standard 32A socket. It can be powered by 400V/50Hz or 480V/60Hz from the main grid or from a generator.

The flow rate is adjustable to suit different applications. The water mist droplet size is between 20-200 microns which makes the D45 ideal for various applications.

**STEEL - MINING - DEMOLITION
BULK HANDLING - CRUSHING - RECYCLING
CROWD COOLING - CEMENT - RENTAL
ODOUR CONTROL**



Specifications

Effective range 35-45 meter
Area covered 6.350 m²
Voltage / Frequency 400 VAC/50 Hz (480@60Hz)
Current consumption 19 Amps (27@60Hz)
Fan motor power 7,5 kW (11@60Hz)
Pump motor power 2,2 kW (3@60Hz)
Power connector 32 A - 5 pin
Water flow 12 - 60 LPM
Water connection Thread 1" BSP (DN25)
Required in pressure 2-12 bar
Water quality Portable / Filtered
Tilt angle -20°/ +50°
Automatic oscillation 10° to 360° steps of 10°
Operating temp. +1°C to +50°C
Length with fork stand 1.160 mm
Width with fork stand 1.100 mm
Height with fork stand 2.070 mm
Dry weight 415 kg

Standard Equipment

Electric tilt
Booster pump
Run dry protection
Filter system 300 micron
Water drain valve
Automatic oscillation system
Chassis with heavy duty fork pockets
Electric water main valve

Optional Equipment

Remote control
Winter kit
Wheel set
Wall mounting
Dosing pump with 60 L tank

D60

The D60 is a high-performance Dust Suppression / Mist Cannon with 50-60 meter range used for dust, odour and air pollution control in different applications. Equipped with a robust frame the D60 is built to last and can be a mobile or permanent installation. The D60 is well suited for heavy duty applications such as Mining, Crushing, Demolition, Rental and Cement industry. Features as electric tilt, automatic main valve and remote control are standard. Automatic oscillation up to 360° to distribute water mist over large areas are also standard. The D60 is connected to a standard 63A socket. It can be powered by 400V/50Hz from the main grid or from a generator.

The flow rate is adjustable to suit different applications. The water mist droplet size is between 20-200 microns which makes the D60 ideal for various applications.

**STEEL - MINING - DEMOLITION
BULK HANDLING - CRUSHING - RECYCLING
CROWD COOLING - CEMENT - RENTAL
ODOUR CONTROL**



Specifications

Effective range 50-60 meter
Area covered 11.300 m²
Voltage / Frequency 400 VAC / 50 Hz
Current consumption 45 Amps
Fan motor power 18,5 kW
Pump motor power 2,2 kW
Power connector 63 A - 5 pin
Water flow 12 - 60 LPM
Water connection Thread 1" BSP (DN25)
Required in pressure 2-12 bar
Water quality Portable / Filtered
Tilt angle -20°/ +50°
Automatic oscillation 10° to 360° steps of 10°
Operating temp. +1°C to +50°C
Length with fork stand 1.160 mm
Width with fork stand 1.100 mm
Height with fork stand 2.070 mm
Dry weight 445 kg

Standard Equipment

Electric tilt
Booster pump
Run dry protection
Filter system 300 micron
Water drain valve
Automatic oscillation system
Chassis with heavy duty fork pockets
Electric water main valve

Optional Equipment

Remote control
Winter kit
Wheel set
Dosing pump with 60 L tank

D80

The D80 is a high-performance Dust Suppression / Mist Cannon with 55-80 meter range used for dust, odour and air pollution control in different applications. Equipped with a robust frame the D80 is built to last and can be a mobile or permanent installation. The D80 is well suited for heavy duty applications such as Mining, Crushing, Demolition, Rental and Cement industry. Features as electric tilt, automatic main valve and remote control are standard. Automatic oscillation up to 360° to distribute water mist over large areas are also standard. The D80 is connected to a standard 63A socket. It can be powered by 400V/50Hz from the main grid or from a generator.

The flow rate is adjustable to suit different applications. The water mist droplet size is between 20-200 microns which makes the D80 ideal for various applications.

**STEEL - MINING - DEMOLITION
BULK HANDLING - CRUSHING - RECYCLING
CROWD COOLING - CEMENT - RENTAL
ODOUR CONTROL**



Specifications

Effective range 55-80 meter
Area covered 20.100 m²
Voltage / Frequency 400 VAC / 50 Hz
Current consumption 55 Amps
Fan motor power 30 kW
Pump motor power 2,2 kW
Power connector 63 A - 5 pin
Water flow 12 - 100 LPM
Water connection Thread 1" BSP (DN25)
Required in pressure 2-12 bar
Water quality Portable / Filtered
Tilt angle -20°/ +50°
Automatic oscillation 10° to 360° steps of 10°
Operating temp. +1°C to +50°C
Length with fork stand 1.160 mm
Width with fork stand 1.100 mm
Height with fork stand 2.270 mm
Dry weight 585 kg

Standard Equipment

Electric tilt
Booster pump
Run dry protection
Filter system 300 micron
Water drain valve
Automatic oscillation system
Chassis with heavy duty fork pockets
Electric water main valve

Optional Equipment

Remote control
Winter kit
Wheel set
Dosing pump with 60 L tank

The **DUZTECH TWG** is a self contained dust suppression system.

The mist cannon is mounted on a trailer with integrated water tank and generator set. The mist cannon uses a powerful fan to spread a fine water mist with the purpose of binding airborne dust particles and force them to the ground.

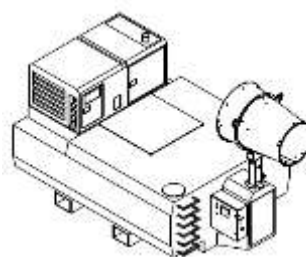
The trailer is independent of water and electric supply and can therefore be used where there is no local power or water supply. The machine can be connected to the power grid and/or local water supply.

The frame is built for heavy duty operation with an integrated water tank. The water tank and electric generator are placed low which makes it possible for the mist cannon to operate 360° still having a very compact unit.

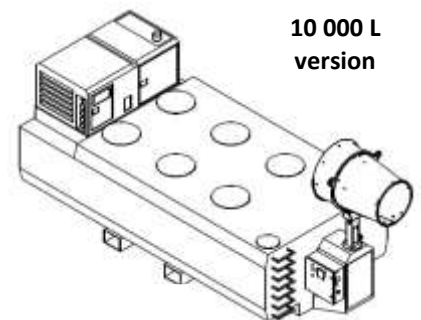


The **DUZTECH TWG series** are also available as self contained **SKID/TRUCK** mounted units.

The mist cannon and generator are mounted on a mobile water tank. The units are fitted with fork pockets and can be moved by a wheel loader or fitted to a truck and easily moved between job sites.



5 000 L version



10 000 L version

SPECIFICATIONS

	TWG35	TWG 45	TWG 60	TWG 80
Fan motor rating	5,5 kW	7,5 kW	18,5 kW	30 kW
Pump motor rating	2,2 kW	2,2 kW	2,2 kW	2,2 kW
Throw (up to)	25 - 35 m	35 - 45 m	50 - 60 m	55 - 80 m
Generator	20 kVA	20 kVA	40 kVA	60 kVA
Fuel tank (DIESEL)	55/250 L	55/250 L	105/480 L	160/520 L
Running time generator	13/60 h	13/60 h	13/60 h	12/50 h

Operating temperature +1°C to +40°C

SIZE & WEIGHT

	TWG 40	TWG 50	TWG 60
Dry weight, MAX	2 850 kg	3 100 kg	3 750 kg
Length	6 200 mm	6 200 mm	6 200 mm
Width	2 230 mm	2 230 mm	2 255 mm
Height	3 150 mm	3 150 mm	3 350 mm

STANDARD EQUIPMENT

Booster pump
Automatic turning system
Electric elevation
Water drain valve
Pump run dry protection
Filter system 300 micron
5 000 L water tank
Heavy Duty Wheels 400/60x15.5

OPTIONS

Wireless remote control
Dosing pump for additives
Extended operational time of Genset
Bigger fuel tank



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X35 400V - 3 PHASE

DUZTECH X35 mist cannon is a energy efficient machine with high performance. Automatic swing operation up to **360°** to distribute the water mist over larger areas with a throwing distance of 25 - 35 m. The unit feature low power consumption. It's connected to a standard **3 phase 400V 16A** socket.



SPECIFICATIONS

Fan motor rating	3 kW
Pump motor rating	2,2 kW
Current consumption	13 Amps
Specified voltage	400 AC (380-415)
Frequency	50 Hz
Power connector size	L1-L2-L3-N-PE / 16 A - 5 pin
Control panel	Start / Stop Turn left/right Auto turn on/off
Throw	25 - 35 m
Water flow	15 - 30 LPM
Water connection	Thread 1" BSP (DN25)
Required in pressure	2 - 10 bar (min flow of 30 LPM)
Water quality	Portable / non portable
Elevation, HAND	-20 / +60°
Automatic turning system	25° to 350° in steps of 25°
Turning area	350°
Operating temp.	-25°C to +50°C (winter kit needed below 0°C)
Storage temp.	-40°C to +60°
Length	910 mm
Width	930 mm
Height	2 100 mm
Dry weight	225 kg

STANDARD EQUIPMENT

Booster pump 6 - 16 bar, Water swivel
Power connector placed on fork chassis
Pump run dry protection, Filter system 300 micron 1"
Pressure gauge (nozzle), Water drain valve
Automatic turning system, Chassis with fork pockets
Automatic water inlet valve (*open at start*)

OPTIONS

Wireless remote control
Dosing pump for additives
Winter Kit
Misting system LOW FLOW - FINE MIST
70 bar pump with 5-60 micron droplets
Flow 8 LPM - Pump 1,5 kW - Filter 60 micron
POLE mounted (no fork pockets)

X15 230V - 1 PHASE or 115V - 1 PHASE

DUZTECH X15 mist cannon is built on the same robust and compact frame as the X-35.

The unit feature low power consumption and is the obvious option when power is limited. It's connected to a standard **1 phase** 230V wall socket (16A). Optional 110V 32A. Automatic swing operation up to **360°** to distribute the water mist over larger areas with a throwing distance of 15 - 20 m.

SPECIFICATIONS

Fan motor rating	1,1 kW
Pump motor rating	1,2 kW
Current consumption	12 Amps
Specified voltage	230 AC (220-240)
Frequency	50 Hz
Power connector size	L-N-PE (Schucko) (type F)
Control panel	Start / Stop Turn left/right Auto turn on/off
Throw	15 - 20 m
Water flow	15 - 25 LPM
Water connection	Thread 1" BSP (DN25)
Required in pressure	2 - 10 bar (min flow of 25 LPM)
Water quality	Portable / non portable
Elevation, HAND	-20 / +60°
Automatic turning system	25° to 350° in steps of 25°
Turning area	350°
Operating temp.	-25°C to +50°C (winter kit needed below 0°C)
Storage temp.	-40°C to +60°
Length	910 mm
Width	930 mm
Height	2 100 mm
Dry weight	205 kg

STANDARD EQUIPMENT

Booster pump 6 - 8 bar
Water swivel
Power connector placed on fork chassis
Pump run dry protection
Filter system 300 micron 1"
Pressure gauge (nozzle)
Water drain valve
Automatic turning system
Chassis with fork pockets
Automatic water inlet valve (*open at start*)

OPTIONS

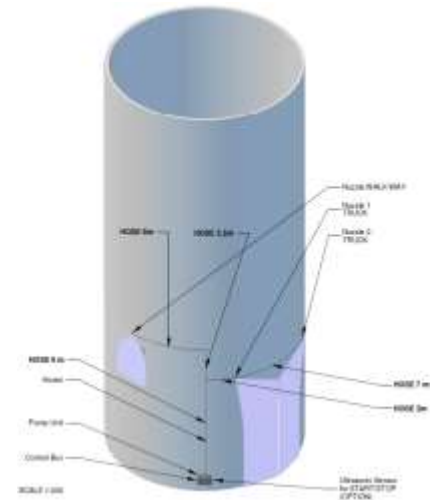
110 V edition (110/115V 50Hz 23Amps)
Wireless remote control
Dosing pump for additives
Winter Kit
Misting system LOW FLOW - FINE MIST
70 bar pump with 5-60 micron droplets
Flow 8 LPM - Pump 1,5 kW - Filter 60 micron
POLE mounted (no fork pockets)



HS SYSTEM

DUZTECH HS SYSTEM are a fixed system for reduction of dust particles. The flow rate is low and thereby the moisture content is kept low. Low flow rate is also of great importance if the availability of water is limited. The water droplets are adapted for PM 2,5 - PM 10 particles.

SPECIFICATIONS	HS2	HS4	HS8	HS13
Water flow	2 LPM	4 LPM	8 LPM	13 LPM
Pump motor rating	0,55 kW	1,1 kW	1,5 kW	2,1 kW
Throw (up to)	5-15 m depending of installation angle			
Power cable length	5 m			
Specified voltage	230 VAC (220-240)			
Frequency	50 Hz			
Line connection	L1-N-PE			
Power connector size	2 pin + PE (Schuko) (type F)			
Socket fuse	16 Amps			
Control panel	Start / Stop MAN / AUTO			
Water connection	Thread 1" BSP (DN25)			
Required in pressure	2 - 10 bar (min flow of 15 LPM)			
Water quality	Portable			



Consult DUZTECH to determine OPTIMAL flow rate and placement

STANDARD EQUIPMENT

- Booster pump 60-100 bar
- Pump run dry protection
- High speed nozzles
- High pressure hose
- Nozzles adapted for PM 2,5 - PM10 particle size
- Automatic (electric) water inlet valve (open at start, close at stop)
- Manual water drain
- Filter system 5-60 micron
- Pressure gauges

OPTIONS

- Wireless remote control
- Ultrasonic sensor detection
- Filter with automatic cleaning
- Heating / Winter kit



Ultrasonic Sensor



Wireless Remote Control



NOZZLE SYSTEM



PUMP SYSTEM



FILTER



WATER SUPPLY

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MOSQUITO 230V-1 PHASE

DUZTECH MOSQUITO mist cannon is a small machine that can be moved by hand. Compact and light in weight makes it perfect for indoor demolition.

Standard is automatic swing operation to distribute the water mist over larger areas with a throwing distance of 10-15 m. The unit feature low power consumption. It's connected to a standard 1 phase 230V wall socket.

The water mist generated by this unit is **extremely fine** and therefore effective against airborne dust, but also for humidification when the ground/surface is sensitive for wetting. The MOSQUITO cannon are also suitable for odour control.

The MOSQUITO generates a water mist with droplet sizes 10-50 microns with a mean droplet size of 25 microns.

Droplet size: 10 - 50 microns
Mean droplet size: 25 microns

SPECIFICATIONS

Fan motor rating	1,1 kW
Pump motor rating	0,6/1,5 kW
Current consumption	8/12 Amps
Specified voltage	230 AC
Frequency	50 Hz
Power connector size	L-N-PE (Schucko) (type F)
Control panel	Buttons
Dry weight	90 kg
Length	750 mm
Width	750 mm
Height	900 mm
Elevation, HAND	-20 to +60°
Throw (up to)	10-15 m
Water flow	2 LPM / 8 LPM
Water connection	Thread 1" BSP (DN25)
Required in pressure	2 - 10 bar
Nozzle pressure	70 bar
Filtration system	20 microns
Wheel set	YES
Operating temp.	+1°C to +40°C
Storage temp.	-30°C to +60°

Wall mounted edition available



This preparation guide helps you prepare for the commissioning of your new dust suppression machine.



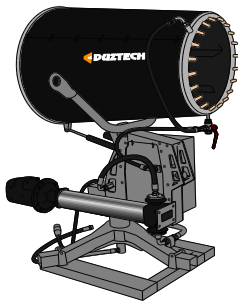
Water

The machines consumes less than 70 liters per minute.
The pressure need is minimum 2 bar. There are many types of connections so let us know which type you want on your machine.
All machines have 1-inch pipe thread as standard.
Do not forget the water hose!



Electric Power

External power supply is required.
Check that voltage, amps and frequency match your machine.
If using a generator please consult Duztech.
Do not forget the power cable!



Placement

Consider how you will use the machine.
Fixed or mobile installation?
The machine shall stand on a flat surface.
Is remote control necessary?



Winter operation

Should the machine be used at temperatures below freezing point?
In that case the machine should be protected against frost.
Remember that the hoses freezes quickly if there is no flow.
Disconnect and drain hoses when not in use!



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