

OPERATING MANUAL MIST CANNON



ABOUT COMPANY

Automeck is an Indian manufacturing company having PAN India strength of 50+ employees. Our strength is to design system and engineering products that are advanced in technology, excellent in quality and safe in operation with energy efficient, environment friendly with best return on investment.

Automeck came into existence in the year 2013. Because of its product superiorities the brand Automeck is moving fast towards most trusted engineering brand in India and abroad.

Our vision is to take challenges and innovate products that is unique is design. We provide a safe workplace, respecting the environment, caring for community and demonstrating high ethical standards.

We provide complete dust pollution control solution, automobile and industrial cleaning solutions and hydroseeding equipment.

We are the only company in India to manufacture the machine for hydroseeding. This hydroseeding equipment can be used in various areas for vegetation, greenery and dust suppression. Our main focus lies in converting ideal soil into green fields.

We work on providing environmental solutions that can benefit the mankind and reduce pollution from the atmosphere, hence aiming towards a greener India.

INTRODUCTION

DESCRIPTION

Mist Cannons are the ultimate tool for large-scale dust suppression. By means of a powerful turbo-fan, they discharge beam of finely-atomized water droplets into the air to suppress dust effectively over wide areas, before it disperses into the environment.

They have lots of benefits to reduce dust migration and save money in day-to-day operations. The machines provide fine droplets of water to capture and drop dust particles to the ground, reducing overall water consumption while running automatically.

Mist Cannons suppresses dust generated in crushing and demolition sites, in material storage, cross-docking of bulk goods and during the misting of spray products in agriculture and horticulture.

Double cannon is one of our newest products which provide maximum coverage area with enhanced throw range.

FEATURES

The mist cannon is covering a rotating angle of up to 320 degrees (also can be customized according to user need).

The horizontal movement can be controlled manually with the help of FWD / RER selector switch. An automatic system is also provided in order to get hand free operation (for semi-automatic & Fully Automatic Variant).

The vertical pitching of cannon is up to maximum of 45 degree.

The vertical pitching can be controlled through up / down selector switch (optional) (for Fully Automatic Variant).

Centralized control panel with all the necessary protection.

Remote operations with range minimum up to 100 meters (without any obstruction) (For Remote control variant).

Nozzle Grade - SS 316.

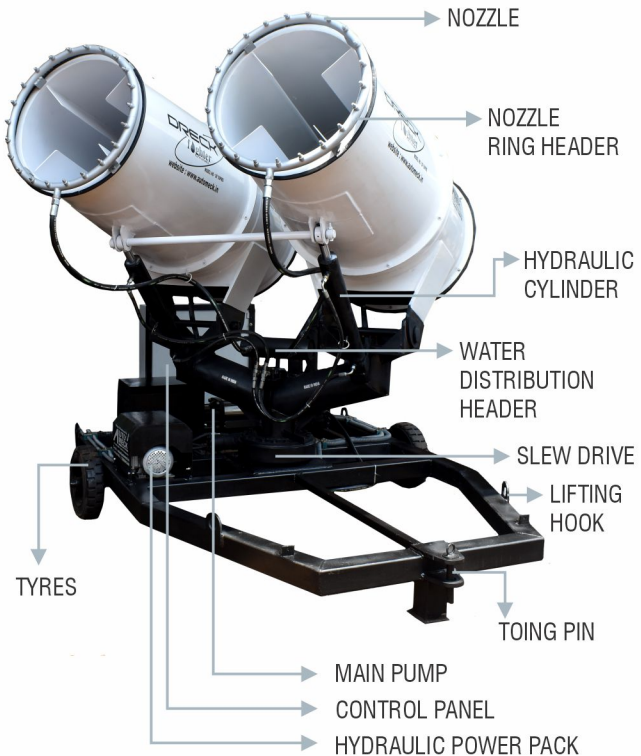
Starter Type-Automatic Star Delta Control Panel (For semi-automatic & Fully Automatic variant).

Operating Voltage- 400-415 Volt / 230 V / 50 Hz.



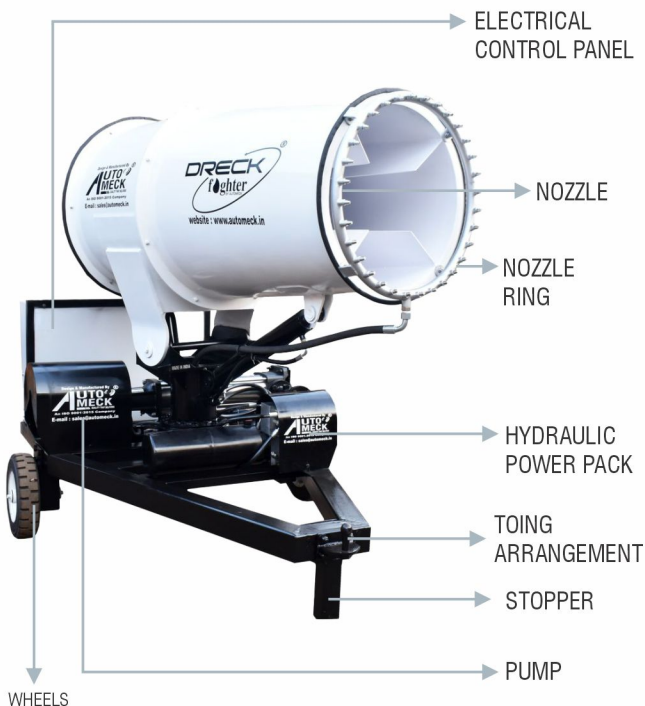
PICTORIAL DESCRIPTION

DUAL CANNON



PICTORIAL DESCRIPTION

SINGLE CANNON



CHECKLIST BEFORE STARTING THE MACHINE

- (1) Make sure the input connection is connected.
- (2) Check the input connection as per requirement.
- (3) Make sure the online strainer is cleaned.
- (4) Check for any unwanted thing near the CANNON
- (5) Check the water level is sufficient in water tank.
- (6) Make sure neutral is also connected.
- (7) Look for any kind of hindrance in front of sensors.
- (8) The emergency switch should be released.
- (9) Check for phase indicators for 3 phase supply.
- (10) Release the remote stop button.
- (11) Check the battery level for remote.
- (12) Make sure nothing is obstructing the sensors.



OPERATIONAL PROCEDURE (FOR MANUAL WITH DC MOTOR)

- MODE OF OPERATION**
- (1) Manual (from Control Panel)
 - (2) Remote

MANUAL OPERATION

- (1) First make the incoming mccb in on state.
- (2) To start the machine first, start the fan / blower by pressing fan on push button.
- (3) Next after 10 seconds start the pump by pressing pump start push button.
- (4) Now the machine is in running state.
- (5) Now to rotate the cannon to desired position use the forward and reverse selector switch.
- (6) Now to stop the machine press the fan stop push button and pump stop push button.
- (7) For any abnormalities of machine immediately press the emergency push button.

REMOTE OPERATION

- (1) For remote operation turn the remote on selector switch to on side.
- (2) Now when the control is in remote then push the start push button from remote.
- (3) To start the machine first, start the fan by pressing the fan start push button (F in green color).
- (4) Start the pump by pressing pump start push button (panel in green color).
- (5) For horizontal movement / oscillation press the right and left push button on remote.
- (6) To stop the machine, press the stop push button in remote.

OPERATIONAL PROCEDURE (FOR SEMI AUTOMATIC WITH DC MOTOR)

- MODE OF OPERATION**
- (1) Manual Operation (from Control Panel).
 - (2) Remote Operation

MANUAL OPERATION

- (1) First make the incoming mccb in on state.
- (2) To start the machine first, start the fan / blower by pressing fan on push button.
- (3) Next after 10 seconds start the pump by pressing pump start push button.
- (4) Now the machine is in running state.
- (5) Now to rotate the cannon in manual mode turn the auto / manual selector switch to manual side then to move cannon to desired position use the forward and reverse selector switch.
- (6) For automatic oscillation set the auto / manual selector switch to automatic side, then press the rotation start push button.
- (7) Now to stop the machine press the fan stop push button and pump stop push button.
- (8) And to stop the oscillation make the auto / manual selector switch to neutral(centre) position.
- (9) For any abnormality of machine immediately press the emergency push button

REMOTE OPERATION

- (1) For remote operation turn the remote on selector switch to on side.
- (2) Now when the control is in remote then push the start push button from remote.
- (3) To start the machine first, start the fan by pressing the fan. Start push button(F in green colour / fan start).
- (4) The start the pump by pressing pump start push button (IN green color).
- (5) For horizontal movement / oscillation press the right and left push button on remote.
- (6) To stop the machine, press the stop push button for pump stop, blower stop in remote.

OPERATIONAL PROCEDURE (FOR SEMI AUTOMATIC WITH HYDRAULIC POWER PACK)

MODE OF OPERATION

- (1) Manual Opeartion (from Control Panel).
- (2) Remote Operation

MANUAL OPERATION

- (1) First make the incoming mccb in on state.
- (2) To start the machine first, start the fan / blower by pressing fan on push button.
- (3) Next after 10 seconds start the pump by pressing pump start push button.
- (4) Now the machine is in running state.
- (5) To start the oscillation, turn on the hydraulic power pack by pressing hydraulic power pack start push button.
- (6) Now to rotate the cannon in manual mode turn the auto / manual selector switch to manual side then to move cannon to desired position use the forward and reverse selector switch.
- (7) For automatic oscillation set the auto / manual selector switch to automatic side, then press the oscillation start push button and auto oscillation starts.
- (8) Now to stop the machine press the fan stop push button and pump stop push button.
- (9) And to stop the oscillation press the hydraulic stop push button for hydraulic power pack and make the auto / manual selector switch to neutral(centre) position.
- (10) For any abnormal operation of machine immediately press the emergency push button.

REMOTE OPERATION

- (1) For remote operation turn the remote on selector switch to on side.
- (2) Now when the control is in remote then push the start push button from remote.
- (3) To start the machine first, start the fan by pressing the fan start push button (F in green colour).
- (4) Start the pump by pressing pump start push button (P in .Green colour).
- (5) To start the oscillation, press the hydraulic start push button (H in green colour).
- (6) For horizontal movement / oscillation press the right and left push button on remote.
- (7) To stop the machine, press the stop push button in remote or individually stop the pump, fan, motor & hydraulic power pack by pressing the individual stops.

OPERATIONAL PROCEDURE (FOR FULLY AUTOMATIC OPEARTION)

MODE OF OPERATION

- (1) Manual operation (from control panel).
- (2) Remote operation

MANUAL OPERATION

- (1) First make the incoming mccb in on state.
- (2) To start the machine first, start the fan / blower by pressing fan on push button.
- (3) Next after 10 seconds start the pump by pressing pump start push button.
- (4) Now the machine is in running state.
- (5) To start the oscillation, turn on the hydraulic power pack by pressing hydraulic power pack start push button.
- (6) Now to rotate the cannon in manual mode turn the auto / manual selector switch to manual side then to move cannon to desired position use the forward and reverse selector switch.
- (7) For automatic oscillation set the auto / manual selector switch to auto side.
- (8) Then start the auto oscillation & auto oscillation starts.
- (9) Now to stop the machine rotation in auto mode take the auto / manual selector switch to neutral(center) position.
- (10) Now to stop the machine press the fan stop push button and pump stop push button.
- (11) And to stop the oscillation press the hydraulic stop push button for hydraulic power pack and make the auto / manual selector switch to neutral(centre) position.
- (12) For vertical pitching an up/down selector switch is provided to adjust the inclination/ pitching of cannon.
- (13) For any abnormalities of machine immediately press the emergency push button.

REMOTE OPERATION

- (1) For remote operation turn the remote on selector switch to on side.
- (2) Now when the control is in remote then push the start push button from remote.
- (3) To start the machine first, start the fan by pressing the fan start push button (F in green color).
- (4) The start the pump by pressing pump start push button (P in green color).
- (5) To start the oscillation, press the hydraulic start push button (H in green color).
- (6) For horizontal movement / oscillation press the right and left push button on remote.
- (7) For vertical pitching of machine press the up / down buttons on the remote.
- (8) To stop the machine first, press the fan stop push button (F in red color). Then press the pump stop push button (P in red color) and then to stop the oscillation press hydraulic stop push button (HY in red color) in remote.
- (9) An emergency stop button is also provided for any abnormality in machine as it stop the machine at once.

TROUBLESHOOT

Sr.No.	PARTICULARS	PROBLEMS	REASON & SOLUTION
1.	Water pump	<ul style="list-style-type: none"> • Pump not throwing water. • Reduced water pressure • Pump making uneven sound while running 	<ul style="list-style-type: none"> • This may be due to pump might have taken air while suction, Fix - release air from air release points on pump while in pump on state. • This also could happen if the strainer gets jammed. Fix - clean the strainer • This can also occur if the strainer is jammed. Fix - clean the strainer. • This can also happen if nozzles get choked. Fix – clean the nozzles. • Something get struck at inlet side. Fix - open the inlet side and search for any unwanted material inside the pump. • This can also occur due to insufficient water. Fix - maintain the water level in tank. • This can occur due to more than half of nozzle get choked and pressure is coming back to pump which led to tripping.

TROUBLESHOOT

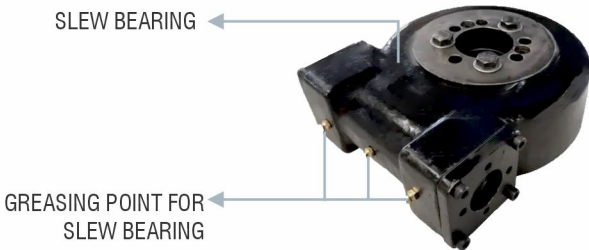
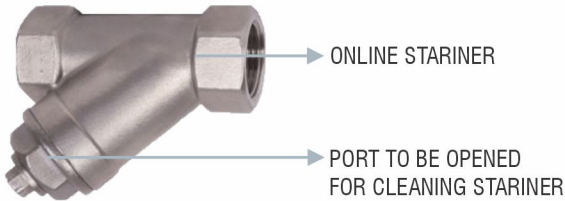
Sr.No.	PARTICULARS	PROBLEMS	REASON & SOLUTION
		<ul style="list-style-type: none"> Pump motor getting trip 	<p>Fix - clean all the choked nozzles.</p> <ul style="list-style-type: none"> Proper 3 phase not getting at the output of terminal to motor. <p>Fix - check for the power wiring of pump starter voltage line to line from incommer to output terminal.</p> <ul style="list-style-type: none"> Pump starter not working properly. <p>Fix - check all the connections with lose ends and also check for equipment damage.</p>
2.	Blower	Blower motor tripping	<ul style="list-style-type: none"> Starter not working properly <p>Fix - check for any lose ends and also continuity of circuit according to circuit diagram.</p> <ul style="list-style-type: none"> Electrical equipments gets damaged. <p>Fix - replace the damage equipment with new one.</p>
3.	Hydraulic power pack (rotation)	<ul style="list-style-type: none"> Mist cannon is not rotating properly. 	<ul style="list-style-type: none"> Bearing gets jammed. <p>Fix - in this case the bearing need proper Greasing.</p>

TROUBLESHOOT

Sr.No.	PARTICULARS	PROBLEMS	REASON & SOLUTION
		<ul style="list-style-type: none"> Hydraulic power pack motor tripping. 	<ul style="list-style-type: none"> Hydraulic motor not rotating. Fix - hydraulic oil needs to be topped up. Starter may be not functioning properly. Fix - check for any loose ends. Bearing gets jammed. Fix - proper greasing is required. Electrical equipments get damaged. Fix - replace the damaged equipment with new one.
4.	Remote	<ul style="list-style-type: none"> Remote not functioning properly. 	<ul style="list-style-type: none"> The battery may have drained up. Fix - change the battery for remote. The receiver may be not getting proper voltage. Fix - check the receiver power supply connection (220 ac).
5.	Sensor	<ul style="list-style-type: none"> Sensor not sensing 	<ul style="list-style-type: none"> The power supply for sensor must have disturbed. Fix - check the power supply for sensor.(+ brown, - blue) The signal wire of sensor must not be connected properly. Fix – tighten the signal wire (black).

MAINTAINANCE

- (1) On regular basis keep a check on hydraulic oil level in hydraulic tank for proper rotational and pitching movement (oil grade system 68).
- (2) On every interval of 3 months change the hydraulic oil of hydraulic power pack (oil grade system 68).
- (3) The slew bearing need to be greased on weekly basis.
- (4) On monthly basis tighten the flexible hoses.
- (5) Clean the nozzles on weekly basis.
- (6) Clean the online strainer on every day basis before starting the machine.
- (7) Replace battery for remote on every 8 weeks interval. (optional)



SAFETY AND PRECAUTIONS

- (1) Do not touch the inside of panel box at the time of running operation.
- (2) Check proper earthing before starting the machine.
- (3) At the time of maintenance, before working on circuit connection, make sure the incoming power supply is turned off.
- (4) At the time of machine running condition don't go in from side of machine.
- (5) Water level must be checked frequently or else major breakdown of unit may take place.
- (6) Please check for any items not close to of blower to avoid major accident.
- (7) Highly acidic or basic water quality may damage the pump.
- (8) Need to keep check on nozzles in case of chocking which may result in lesser efficiency of unit.

PREVENTIVE MAINTENANCE CHECKLIST

Sr No.	Check Points	Duration	Date Sign	Date Sign	Date Sign	Date Sign	Date Sign	Date Sign
1	Cleaning Of Nozzle	Weekly						
2	Cleaing Of Strainer For Water Pipelines	Weekly						
3	Sensor Cleaning	Weekly						
4	Checking Of Hydraulic Oil Leakage	Daily						
	Hydraulic Oil Level Check	Weekly						
5	Hydraulic Oil Changing Of Oil Tank (grade- System 68)	1000 Hrs/ 6-8 Months (whichever Earlier)						
6	Basic Tightening Of Hose Pipe	Monthly						
7	Greasing Of Slew Bearing	Monthly						
8	Greasing Of Screw Jack / Hydraulic Cylinder	Monthly						
9	Replace Battery For Remote Control	8 Weeks						

Extra suggestion box for preventive maintenance by service engineers / customers

WARRENTY CLAUSES

1. Warranty Coverage

Scope: This warranty covers defects in material and workmanship of the mist cannon manufactured by Automeck.

Duration: The warranty period is 12 months from the date of delivery.

Eligibility: The warranty is valid only for the original purchases of the product and is non-transferable.

2. Warranty Inclusion:

Parts and Components: The warranty covers all parts and components of the product.

Oscillation Mechanism (AC MOTOR DRIVEN) / Hydraulic

Electrical Control Panel (IP 55 or IP 65)

Ring Header (SS 316)

Nozzles (SS 316)

Water Filter

Pressure pump Or Centrifugal Pump

Blower Motor

Impeller

3. Warranty Exclusions:

Consumables: The warranty does not cover consumable parts such as nozzle filter and any other parts that are subjected to wear and tear.

Misuse or Negligence: Damage resulting from improper use, maintenance or storage of the product, including failure to follow the product manual and instructions, is not covered.

Unauthorized Repairs: Any repair or modifications carried out by anyone other than the authorized service center void the warranty.

Environmental Conditions: Damage caused by environmental conditions such as fire, earthquakes or other acts of God is not covered.

Electrical Issues: Any damage resulting from electrical supply issues such as power surges, incorrect voltage or improper electrical installation is not covered.

4. Warranty Claim Process:

Notification: To make a warranty claim, the purchaser must notify Automeck or its authorized distributor within 15 days of discovering the defect.

Documentation: The claim must include a copy of the original purchase receipt, a detailed description of the defect, and any relevant photographs or evidence.

Inspection: Automeck reserves the right to inspect the product on-site or request the product to be shipped to an authorized service center for evaluation.

Resolution: If a defect is confirmed, Automeck will repair or replace the defective part or product at no charge. The method of repair or replacement is at Automeck's discretion.

5. Limitation of Liability:

Indirect Damages: Automeck is not liable for any automatically is not liable for any indirect incidental or consequential damages arising from the use or inability to use the product.

Maximum Liability: The maximum liability under the spoil it is limited to the original purchase price of the product.

6. General Terms:

Governing Law: This warranty is governed by the laws of the jurisdiction in which the product was purchased.

Severability: If any provision of this warranty is found to be on a possible or invalid the remaining provision should shall remain in full force and effect.

Amendments: Automeck reserves the right to amend or modify the terms of this warranty at any time, provided that such changes do not retroactively affect warranty claims already submitted.

7. Maintenance Requirements:

Routine Maintenance: Regular maintenance as per the user manual is required to keep the warranty valid. This includes cleaning, checking for blockages, and ensuring proper operation.

Service Records: Maintain records of all maintenances activities as proof of compliance with warranty terms.

WARRANTY CERTIFICATE

To,

REF. PO NO.: _____

INVOICE NO.: _____

This is to certify that we offer Warranty on our Machine
i.e., _____ as
per the warranty conditions.

Warranty period shall be _____ from the date of
Installation.

Machine SRL NO _: _____

The warranty shall be valid from _____

Thanking You,

For Automeck India Limited

Formerly Shree Sahajanand Automeck Private Limited

(Accounts Executive)

Global Footprint



Peru | Thailand | Gabon | Africa | Middle East

AUTOMECK INDIA LIMITED

Plant -1

AUTOMECK HOUSE

E-48, Electronic Manufacturing Cluster,
Adityapur Industrial Area, Jamshedpur - 832 109,
Bharat (India).

Plant -2

E-45(A), Electronic Manufacturing Cluster,
Adityapur, Industrial Area, Jamshedpur - 832 109,
Bharat (India).



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