



24015

Electrostatic Powder Coating Machine



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Specification

Product Description

This machine is used in the production process of powder coating. Hang the work piece to be coated in a well ventilated area and ground appropriately to achieve consistent coverage using the powder coating machine. Ensure the item is appropriately cured once coated.

We at Monster Group UK understand that it is a new and exciting purchase, and although it is tempting to get stuck in, please CAREFULLY read the instructions and safe working practices before you start using the machine.

Please Note: The T-Mech Electrostatic Powder Coating Machine is designed to be used by a competent person. It should not be used or stored in wet or damp conditions. Personal Protective Equipment (PPE) must be worn by the operator of this equipment.

Please refer to and read Safety Advice, Safe Working Practice to ensure prevention of injury or damage to the device before starting.

Item Contents

1 x Control Panel and Support Bracket and Powder Gun Holder

1 x Base Plate

1 x Support Post

1 x Moisture Filter, with Bracket

1 x Fluidisation Regulator with Bracket

1 x Manual Coating Gun with Nozzles, Cable and Velcro Wraps

1 x Powder Hose for Gun

1 x Stainless Steel Hopper with Lid and Seal

1 x Injector

4 x Small Screws

8 x Small Bolts with 4 x Nuts

4 x Large Bolts

4 x Wheels with Large Nuts

4 x Hopper Bumpers

1 x Long Clear Air Tube

1 x Regular Clear Air Tube and 1 x Blue Air Tube

1 x Venting Tube

Specification

Technical Information

Voltage:	220- 230V, 50- 60Hz
Input Power:	40W
Electromagnetic Valve:	24V
Output Air Pressure:	0- 0.5Mpa
Air Consumption:	Max. 13.2m ³ /hr
Output Powder Volume:	Max. 600g/min
Output Current:	0- 150uA
Temperature Range:	0-40°C

Product Specifics

Dimensions: 740mm H x 650mm W x 500mm D

Weight: 26.8KG

Hopper Capacity: 45L

Monster Guarantee

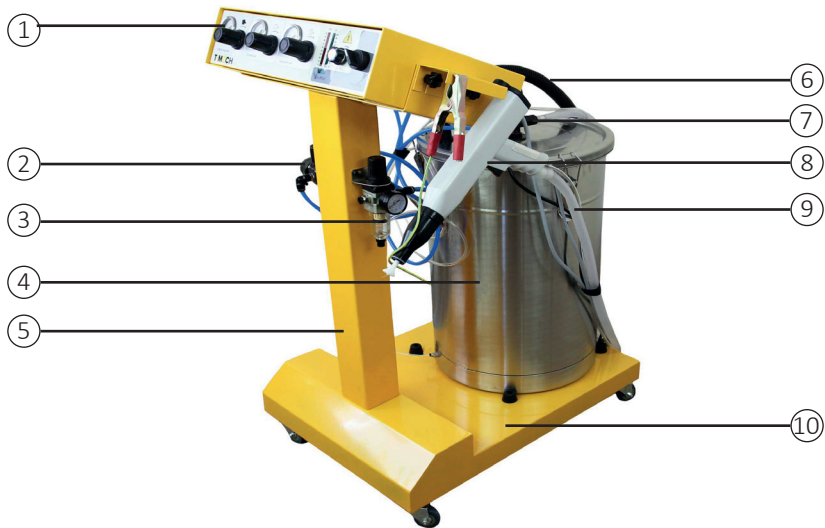
If you wish to return a product in perfect working order, we provide a 30 day returns policy as long as the item is unopened and in a resalable condition.

A 12 month warranty applies to all of our electrical products; we will cover the cost of labour and parts. Our policy is to try and repair the item before arranging an exchange or refund.

If for any reason a part is missing please get in touch with us within 7 days on receipt of your order. You can contact our friendly and helpful Customer Support Team via email or call. For full terms and conditions contact our Support Department via the details on the Contact Us page.

Specification

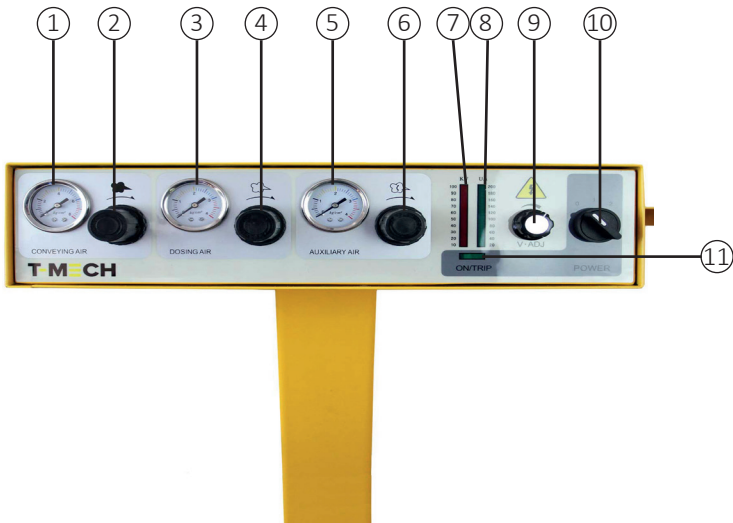
Product Features



1. Control Panel
2. Fluidisation Regulator
3. Moisture Filter
4. Powder Hopper
5. Support Post
6. Venting Tube
7. Powder Pump
8. Powder Gun
9. Powder Hose for Gun
10. Base Plate

Specification

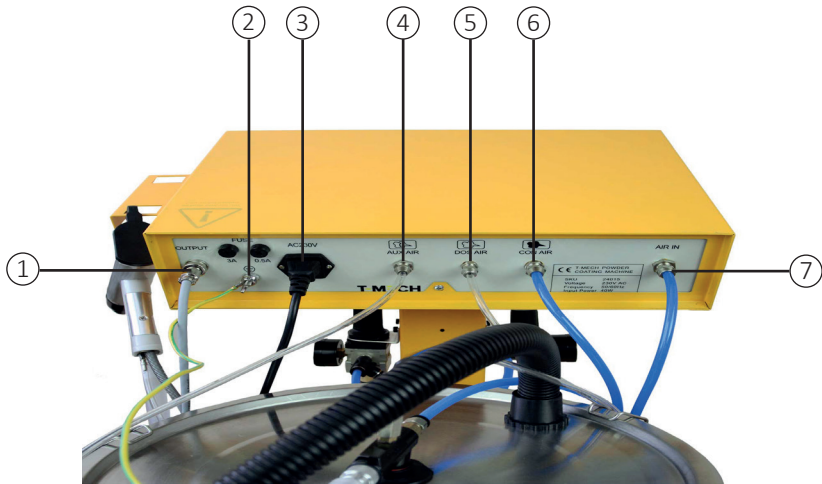
Product Features



1. Conveying Air Pressure Gauge
2. Conveying Air Control
3. Dosing Air Pressure Gauge
4. Dosing Air Control
5. Auxiliary Air Pressure Gauge
6. Auxiliary Air Control
7. Voltage Control
8. Voltage Indicator
9. Current Indicator
10. ON/OFF Dial
11. Power Light

Specification

Product Features



1. Powder Gun Cable Socket
2. Grounding Clip Socket
3. Power Socket
4. Auxiliary Air Tube Socket
5. Conveying Air Tube Socket
6. Dosing Air Tube Socket
7. Air Input Socket

Safety Advice

Safe Working Practice

Please read through the safe working practice to ensure prevention of injury or damage to the device.

This machine must not be used in damp or wet conditions. When not in use, store in a dry location. Do not use/store outdoors.

The area must be clean and well ventilated.

Do not use in an area exposed to flammable or corrosive gases.

Ensure that there are no open flames or live wires in the work area when spraying. Do not smoke when operating this machine.

You must wear a Tyvek suit or appropriate coveralls to protect your skin, as the powder material/paint can cause irritation. Check the individual safety recommendations of product you are using.

You must wear gloves and sufficient eye protection at all times, as the powder material/paint can cause irritation. Check the individual safety recommendations of the product you are using.

You must wear a dust mask at all times whilst using and working around the machine.

Ensure that long hair is covered or bound. Do not wear loose clothing or jewellery when operating this machine.

Do not modify the equipment or attempt to use for any purpose other than that which it is intended.

Use only appropriate attachments. Each attachment is for a specific function. You should not use attachments which were not designed for this machine.

Do not overreach when operating this machine. Maintain proper balance and footing, and do not reach across running machines.



Safety Advice

Safe Working Practice

This item should be grounded before use.

Ensure all connections are secure before operating the device.

Do not use if any parts are damaged.

Ensure maintenance is carried out by a qualified technician.

When not in use, store the device in a secure area. Keep out of reach of children.

This machine should not be operated by or near anyone who carries or uses an electrical medical device, including pacemakers.

Do not touch the metal emitter (nozzle) of your spray gun. This is electrically charged. Ensure the gun is discharged after each use by turning the machine off and touching the emitter to the grounding clip.

Excess dust should be cleaned after each use to prevent explosion. Do not use a vacuum to clean the dust, unless it is fitted with an explosion proof motor.

All items should be cured in an electric oven which can maintain the required temperature and will not be used for food. Do not cure your work piece in a gas oven as the fumes can be flammable.



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Assembly Instructions

You will require a spanner, a set of Allen keys and a cross head screwdriver for assembly.

1. Attach the hopper bumpers using 4 x small bolts and the corresponding nuts. Push the bolt through the top of the hopper bumpers to create the hole required, place on the base plate and secure with the nuts.
2. Attach the wheels using the large nuts and attach the support post using the large bolts. The slanted end of the support post should be at the top to place the support bracket on.
3. Attach the support bracket to the top of the support post and secure using the cross head screws.
4. Loosen the bolts on the side of the control panel and place on the support bracket. Choose a side to place the gun bracket and slot this on top of the control panel bolts before tightening to secure.
5. Attach the brackets for the fluidisation regulator and moisture filter to the side of the support post using the remaining small bolts. Unscrew the plastic nuts from the tops of both the moisture filter and fluidisation regulator. One at a time, place this into the bracket from underneath and secure by screwing the nuts back into place. Screw the three-way connector into the right hand side of the moisture filter.
6. Place the powder hopper onto the base plate. Unscrew the plastic nut from your straight powder tube. Place this on the under side of your lid and secure to the middle hole by screwing the nut back on from the other side of the lid. Push the powder pump into this tube now also. Secure the venting tube to the lid by taking the plastic nut and separating into two pieces. As before, secure this to the remaining hole in your lid by screwing back together. Push the venting tube into the top of this.
7. Place your seal around the top of your powder hopper. This should fit snugly, but may need to be trimmed at the end. Place the lid on top and secure using the latches.
8. Place the blue air tube into the right hand side of the fluidisation control and cut off a small piece, just long enough to reach to the three-way connector on the moisture filter. Secure this small piece into the side of the moisture filter connector.

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Assembly Instructions

9. With the remaining piece of blue tube, secure into the back control panel and into the air input. The small nut attached to the input connector should be removed and placed onto the tube to secure it. Again, cut a small piece of the blue tube off, just long enough to reach the bottom of the three-way connector on the moisture filter. Secure the rest of the blue tube to the con air fixing on the back of the control panel, using the same method as above. Push the other end of your blue tube into the smaller side on your powder pump.
10. Take your shorter clear air tube and secure this to the left hand side of the fluidisation regulator. Cut a small piece of this tube off, just long enough to reach the small hole toward the bottom of the powder hopper. Screw the small connector pipe into the bottom hole on your powder hopper, then push the tube into this. With the remaining piece of clear tube, secure to the dos air fixing on the back of the control panel as previously, then push the other end to the top fixing on your powder pump.
11. Take the powder hose for your gun and secure this to the remaining attachment on your powder pump. The other end will fit to the bottom of your powder gun.
12. Secure the grey wire of your gun to the output fixing on the back of your control panel.
13. Take your final clear air tube and secure one end to the aux air fixing on the back of your control panel as previously and the other end to the final fixing on the bottom of your gun.
14. Secure all the tubes and wires using the provided Velcro straps to ensure they are not a tripping hazard.
15. Remove the wing nut from the back of your control panel and place the ringed end of your grounding clip to this. Secure by screwing the wing nut back into place. Plug the power lead into the back of your control panel and then into the mains supply. Do not switch on until you are ready to use as this will electronically charge your grounding clip.
16. Attach your compressed air to the final fixing on the right hand side of your moisture filter using an 8mm tube and fill your powder hopper as required.

User Guide

General Powder Coating

1. Powder Coating should be undertaken by an experienced and competent person. This is in no way an exhaustive and complete guide of how to Powder Coat/Cure.
2. You should wear a Tyvek suit/coveralls and gloves to protect your hands and skin. Eye protection should be worn at all times. A dust mask will protect you from inhaling any paint. Electrostatic paint can dry out your skin and cause irritation.
3. Determine the type of material you are going to powder coat and select a suitable powder for the finish.
4. Dismantle all threaded or lubricated interfaces before you begin, including anything you don't want coated. The powder coat you apply will adhere to everything on your rig, this will make clamps, bolts and nuts useless after blasting. A high temperature masking tape can be placed on the parts you don't want powder coated, and it can be left on while in the oven, but it will need to be removed quickly afterwards.
5. Clean the base metal thoroughly. Remove any rust or debris from the metal.
6. Apply the powder to the object to be powder coated. This is done using a spray gun or a compressed air sprayer which charges the powder material so that it sticks to the base metal object receiving the coating. After applying the powder, be careful not to brush or blow on the powder coat, as the powder could fall off and leave you with a less precise finish.
7. Cure the metal at an appropriate temperature for the powder material you are using. Normally the object is heated to 175 to 190°C (350 to 375°F) for about 10 to 15 minutes, and allowed to cool. The curing oven raises the product mass and coated material to a specified temperature for a set time.

User Guide

Operation Instructions

1. Turn on the power supply. The power indicator light should light up.
2. Set the Voltage to the desired level by turning the Voltage Adjustor clockwise to increase, or anti-clockwise to decrease. The maximum voltage is 100KV.
3. Set the Conveying Air, Dosing Air and Auxiliary Air pressures by turning the relevant dial clockwise to increase or anti-clockwise to decrease. The recommended settings are as follows:

Conveying Air: 3- 4 KG

Dosing Air: approximately 0.3 KG.

Auxiliary Air: approximately 0.1 KG.

Settings will vary depending on the powder used and the thickness required. Check your powder for more information.

4. Press the switch on the powder gun to adjust to the required voltage. Do not touch the nozzle as this is now electrically charged and may result in a shock.
5. Load the required powder into the powder hopper. Do not fill past approximately $\frac{2}{3}$ of the barrel as this may result in the powder overflowing into the venting tube. Maximum capacity for this barrel is 45 L.

User Guide

Operation Instructions

6. Check the fluidisation settings on the fluidisation meter. Adjust your compressed air input until the powder in your barrel resembles water simmering at a low temperature. It should not look like it is boiling. Reduce air pressure if this is the case.
7. Once you have set your machine to the desired settings, spray the gun into your powder coating booth (not at your work piece) and check that the powder cloud emitted is sufficient. If not, amend your Conveying and Dosing Air settings until the desired powder cloud is achieved.
8. When the powder cloud is set to the desired density, with no surges, attach your grounding clip to the back of the control panel and clip the end to either the work piece or a conductive rig attached to your work piece.
9. When you have completed your project, ensure that the powder gun is discharged by touching the nozzle to grounding clip. Unplug the machine from the power source. If finished for the day, ensure the daily cleaning procedure is completed and the compressed air supply is turned off and disconnected from the machine.

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Cleaning Instructions

The Powder Coating Machine must be cleaned on a regular basis to ensure no contaminants are left in the machine which may affect use, including when changing powder colour.

After each use:

- Clean the powder pump. This is done by removing the pump from the powder hopper and tubes and blowing through with clean and dry compressed air. Replace once completed.
- Clean the powder gun. Remove the gun from its associated tubes. Blow through with clean and dry compressed air. Wipe the outer plastic of the gun with a clean, dry cloth or brush. Replace once completed.

Please ensure the spray gun is discharged before any cleaning or maintenance is completed.

- Clean the powder hose. Disconnect the powder hose from the powder pump and spray gun. Blow through with clean and dry compressed air. For best results, insert a small piece of packing foam into the tube before blowing with compressed air. This will dislodge any powder more efficiently. Replace once completed.
- Drain moisture filter. Unscrew from bracket and drain of liquids. Dry with a clean cloth and replace.

Each week:

- Clean the powder hopper. Disconnect all tubes and attachments from the powder hopper. Empty any remaining powder into a container and seal. Purge the lid of the hopper with compressed air and blow through the suction tube with compressed air. Clean the container and lid with a dry cloth and brush. Reconstruct container.
- Clean the auxiliary air tube. Disconnect from control panel and gun. Blow through with clean and dry compressed air. Replace once completed.

User Guide

Maintenance Instructions

The T-Mech Electrostatic Powder Coating Machine must be maintained regularly by an appropriately trained person.

We recommend the following actions to be completed weekly:

- Check the control unit grounding connection. If the clip is becoming loose or the wire frayed, do not use until this has been fixed or replaced.
- Check power cables for loose connections or frayed/damaged wires.
- Check all air tubes for damage. Replace immediately if any damage has occurred.

The above maintenance frequency is for standard or light use. If used more frequently, increase the frequency of maintenance checks accordingly.

If at any time your powder becomes clumpy, drain your moisture filter and replace the powder. If this does not solve the problem, replace the internal filter. It is recommended that this filter is replaced approximately once a month, depending on frequency of use.

Troubleshooting

Resolution Guide

Please read through the guide below if you have any issues or faults with your device. The information covers and resolves the majority of frequently asked questions.

Q: There are parts missing from my order.

A: If there appears to be any part missing from your package contact our Customer Support team via the details on the Contact Us page within 7 days of receipt.

Q: There appears to be an electrical fault.

A: Do not touch or tamper with any of the wires or components. Repair or maintenance of inside the control box should only be carried out by skilled electricians.

Q: The powder is not sticking to the entire work piece.

A: The work piece may not be sufficiently grounded. Ensure that the grounding clip is attached to the work piece or conductive hook properly. Alternatively, a grounding rod may need to be used instead.

Q: The finish is not smooth.

A: This could be for a number of reasons. Ensure that the piece was thoroughly cleaned before powder was applied and that the correct pretreatment process was completed. Also, check your powder hopper to ensure your powder has not been contaminated or become wet. Replace if this is the case. Finally, ensure that the piece was heated to the correct temperature for the correct amount of time when curing. You may need to sand the piece and start the powder coating process again.

Q. The powder is leaking out of the vent tube when I turn the Powder Coating Machine on.

A. The fluidisation input settings may be too high. Adjust the settings until powder is no longer escaping from your vent.

For all other issues please contact our Customer Support department via the details on the Contact page.

Contact Us

Sales Department

For information regarding this device or other products from our Monster divisions please use the following details below.

Tel: 01347 878888

Email: hello@monstershop.co.uk

Support Department

For queries about this device, warranty, returns or reporting faults please use the following details below.

Tel: 01347 878887

Email: help@monstershop.co.uk

Website

To view our product range and fantastic offers in the Monster Chef division please visit our website

www.monstershop.co.uk

Address

To visit our office Monster House and view our products, send postal correspondence or return items our address is provided below.

Monster House, Alan Farnaby Way, Sheriff Hutton
Industrial Estate, Sheriff Hutton, York YO60 6PG



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