



PowderCoatPro

Powder Coating Cup Gun

Model KV100

100Kv Powder Coating Kit



Assembled in the USA



Operating Instructions

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General Safety

The PowderCoatPro Model Kv100 is manual coating equipment that conforms to industry recognized technical safety regulations and is designed for normal powder coating applications.

Any other use is considered non-compliant. The manufacturer or distributor of this equipment shall not be liable for damage resulting from any such non-compliant use and the user shall bear sole responsibility for such actions.

PowderCoatPro must be contacted before this equipment is used for any other purposes or substances beyond those indicated here.

Observance of the operating, service and maintenance instructions Specified by the manufacturer is also part of conformity of use. The relevant accident prevention regulations, as well as other generally recognized safety regulations, occupational health and structural regulations are to be observed.

Furthermore, the country-specific safety regulations also must be observed.

General Dangers

Start-up and operation of this equipment can only occur after it has been established that the equipment has been set up and wired according to U.S. guideline for machinery.



General
dangers

Unauthorized modifications to the Kv100 system will exempt the manufacturer or distributor from any and all resulting accidents or damages.

******If you have a medical condition or wear a pacemaker, check with a doctor before using this equipment.***

For Your Personal Safety

Before Operating This Equipment

- Make sure that your equipment has been properly grounded.

Wear conductive shoes not sneakers (natural soles) when powder coating. If wearing gloves cut out palm of glove to expose



Electrical
danger

For Your Personal Safety (continued)

- Do not touch the tip (electrode) of the gun while in use. Do not touch or hold part while coating. **Do not touch tip of gun to the part, the booth or any ground point at any time during coating or you risk damaging the gun and voiding your warranty.** Powder coat paint can be flammable and a spark from the tip of the gun can cause an explosion under certain conditions.
- When changing electrode tip or cleaning gun, first touch tip of gun to grounded surface to dissipate any residual charge. Do **NOT** squeeze trigger while grounding tip or damage will occur and your warranty will be voided.
- If you use an extension cord with this equipment, make sure it is the 3 prong type with a built-in ground wire. **NEVER OPERATE THE GUN WITHOUT IT PROPERLY GROUNDED.**
- Do not use a vacuum unless it is equipped with an explosion-proof filter and motor.
- Never smoke while powder coating.
- Do not apply powder coat near any source of ignition, e.g. open flames, sparks, space heaters etc.
- Use the same precautions that you would for liquid solvent based coatings. **DO NOT USE A GAS OVEN TO CURE POWDER COATING!**
- Wear a mask or respirator.

Shop Safety

- Make sure your work area is clean and dry.
- Start your booth filtration system before beginning to powder coat.
- Make sure you use a properly grounded 110-120VAC outlet to plug your powder coating gun into and if you must use an extension cord, make sure that is a 3 prong type cord with built in ground.
- Keep the power booth and surrounding area clean of all excess powder. Powder coating can be flammable and explosive under the right conditions so practice clean shop standards on a daily basis.

Technical Specifications

Power Supply Source Voltage: 110V AC 60Hz with U.S. Plug

Output voltage: 0—100KV (Adjustable)

Output Micro amps 0-100 (Adjustable)

Polarity: Negative

Maximum output current: 100 Micro Amps

Max Operating Air Pressure: 70PSI

Min Operating Air Pressure 60PSI

Air Consumption: 0 to 5 m³/h (2.9CFM)

Weight of spray gun: 600 g (1Lb. 5oz)

Max. Possible Powder yield: 550g/min (19.4 OZ/min)

Volume of Powder Cup Hopper: 502.75ML (17oz)

Work temperature range:-10°C—45°C (50°F to 113°F)

Box Contents

1- 100Kv Powder Coating Cup Gun with Flow Control Valve.

1- Powder Coating Cup & Lid

1- Round powder coating nozzle/electrode set with 21mm round diffuser tip.

1- Spare round 21mm diffuser tip.

1- Flat nozzle/electrode set.

1- Powder Coating Gun Controller with 0kv- to 80Kv adjustment.

1- Power cord for controller.

1- Gun cable- (gun to controller.)

1- Air hose- (gun to controller.)

1- ¼" NPT Female to 6mm Tube Connector with 6" Tubing Whip (Air nipple not included)

1- Ground wire with Squeeze Clip (for controller to part.)

1- Ground wire with Squeeze Clip (for controller to Earth Ground.)

1- Quickstart Connection Guide

1- Instruction Manual (English.)

1- One (1) Year Full Repair/Replacement Warranty.



System Set Up

DO NOT EVER....

Touch the tip of the gun when in use.

Touch the tip of the gun to the part.

Touch the tip of the gun to ground.

Never hold tip near ground to create a spark.

1. Insert washer into bottom of gun.
2. Screw in air valve assembly and tighten with an adjustable wrench or plier only until just snug. (Do not overtighten.)
3. Connect one end of the gray gun cable to the rear of the controller and the other to the bottom of the gun making sure to screw in chrome nut rings until finger tight.
4. Remove chrome nut from air out connector on controller and slide over clear tubing. Push the tubing onto the connector, then slide the nut down the tubing and screw tightly back onto the connector.

Connect the other end of the tube to the powder control valve on the gun by pushing it gently into the connector until it seats itself.

5. On the rear of the controller, remove the wing nut for the ground wire. Slide the 2 ground wire loops (Green/yellow wires) over the stud on the controller and then reinstall and tighten the nut to secure the wires.

Connect one wire to an Earth Ground as close to where you will be using the gun as possible and the other directly to the part or part holder.

*****IMPORTANT*****

For best results, we recommend driving an 8' copper rod (available at your local home center) into the ground and attaching the green system ground wire to it. It is OK to extend the green wire if needed with more similar sized wire if the ground rod has to be located outside.

If installing a ground rod is not possible in your situation, then just plugging in the power cord on the controller will ground the system safely for you, however **you will always get better powder coating results with a ground rod installed.**

6. Fill a powder cup approximately one third of the way with powder and screw onto the gun gently.

7. Select the correct tip for the part you wish to coat (round or flat) and screw onto gun.

8. Plug the controller power cord into a properly grounded outlet and turn the system on.

9. Pointing the gun away from the part to be coated, pull the trigger briefly one or two times to start the powder flow, then squeeze and hold the trigger to adjust the powder flow using the white control valve at the base of the gun to your liking.

10. Turn the Kv knob to the powder manufacturers recommended setting and coat the part keeping the gun tip 8" to 10" inches away from the part, **turning DOWN**

the Kv level for each coat you apply after the first coat (1st.)

2. Connect the green/yellow clip coming from the back of the guns controller directly to the ground rod. It is OK to extend the wire (not supplied) to reach the ground rod if needed using additional same size wire
3. Run the second, green/yellow wire from the ground rod to the parts hanger-rack-cart or directly to the part itself.
4. Be sure to periodically clean the parts hanger and cart/trolley ground contact points to maintain a good ground.

Operating Instructions

1. Follow the powder coat paint manufacturer's instructions for properly preparing the part to be coated.
2. Hang and ground the part directly or to a properly grounded booth, cart, or part holder.
3. Fill the powder cup approximately one third of the way with fresh powder and install cup onto gun.
4. Connect a clean, dry supply of air of **no more than 70 PSI** to the "Air In" terminal on rear of the controller box.
5. Select either a round or a flat nozzle and install on to the front of the gun. (Flat nozzles are best for large flat areas such as panels, cabinets or boxes and round tips work best for wheels & rims, and most car parts.)

6. Turn on the power switch.

7. Set voltage knob (Kv) according to the powder manufacturers recommendation. Use the chart below for general startup settings and adjust as necessary to your part profile.

Part Profile Settings	KV	Ma
Flat Parts	100	100
Metallics & Textures	50	16 to 20
Complex Shapes	100	20
2nd & 3rd Coats	100	16

8. Pointing the gun away from yourself and the part to be coated, squeeze the trigger and adjust the powder stream to your liking using the precision air control on the cup.

9. Once you are satisfied with the flow rate, move towards the part keeping the gun tip 6" to 10" from the surface of the part. Working from the inside out, evenly coat the parts surfaces as you work to towards the front of the workpiece.

10. When finished, cure the part in the oven to the manufacturer's specification. (Remember to go by part temperature for curing times not oven temp.)

Cleanup

A cleanup must be performed after each color change and when coating is completed on a project. To clean you gun properly for storage and use next time, please follow these important guidelines.

1. Unplug the unit.
2. Unscrew the muzzle that holds the nozzle in place and remove it and the nozzle.
3. Next, remove the cup assembly from the bottom of the gun.

Cleanup (Continued)

4. Using shop air, blow a steady stream of air through the bottom of the gun where the cup attaches and continue to blow air through until no more traces of powder can be seen exiting the gun at the tip.
5. Blow down the electrode/nozzle assembly and muzzle with shop air both inside and out and reinstall on the gun.
6. Clean out the cup assembly of all powder then blow clean with shop air. A final wipe with a clean cloth towel is a good idea. Be sure to NEVER USE any type of cleaner on or in the cup assembly or gun.

Powder left over in the cup may be used again so store tightly covered in a dry, warm place. Do not try to recycle powder from the floor of the booth for reuse. It will not spray correctly a second time and will ruin you project.

Wear Parts - Replacement Parts- Service

The only wear parts on your gun are the electrode/nozzle assemblies which can last a year or more depending on use. Other than that, your gun is design to last for many years of worry-free service.

Spare Powder Cups with lids

Replace Flat Nozzle Sets

Replace Round Nozzle Sets

Diffuser Tip Spare Diffuser Tips for Round Nozzles in any of three (3) sizes (Small 17mm, Medium 21mm or Large 24mm)

Parts and service are always available from PowderCoatPro.com if you need it. Just call us toll free at 855-445-9660 or visit us at

<https://www.powdercoatpro.com/> or email us at sales@powdercoatpro.com

1 Year Warranty

For a period of 12 months from the date of purchase, PowderCoatPro, LLC will repair or replace at its sole discretion any components that are alleged to be defective either in material or workmanship on any PowderCoatPro powder coating gun purchased from us and which has been used under normal operating conditions.

Items such as O-rings, deflectors, nozzles (electrodes), muzzles, front caps and air supply fittings are considered normal wear items and are not warranted unless they are alleged to be defect in material or workman ship at the time a warranty claim is made to us.

Also excluded from this warranty is normal wear and tear or damage caused by misuse, abrasion, corrosion, negligence, accident, faulty installation or operation by the buyer.

Any modifications or tampering to the unit will also exclude unit from this warranty.

The cost of shipping the unit to and from PowderCoatPro is the **responsibility of the buyer** and is not covered by the warranty. This includes any and all charges, duty taxes or fees for any out of country shipments.

Units outside of the warranty may returned for repair at the buyer's expense. An estimate detailing the cost of any parts and labor will be presented to the buyer before any repair is made.

To return a unit for consideration under warranty, it is necessary to first obtain a return authorization number (RA) from a PowdercoatPro representative by calling 855-445-9660 toll free.