

User Guide

Powder Coat System

555-58300



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Parts List



1	Spray Gun Pipe	14	Transfer Switch
2	Spray Gun	15	Ground Clip
3	Air Outlet Pipe	16	Foot Switch
4	Powder Cup	17	Foot Switch Cable
5	Air Input Pipe	18	Power Cord
6	Trigger	19	Scatter Tip (Large)
7	Regulating Screw	20	Scatter Tip (Medium)
8	Pressure Reducer Valve	21	Scatter Tip (Small)
9	Disposable Moisture Separator	22	Emitter
10	Air Line Fitting	23	Conductor Pole
11	Control Box	24	Ground Wire
12	Power Indicator Light	25	High Voltage Wire
13	Activation Indicator Light		

Technical Specs

Power Consumption	120 Vac 60 Hz
Output Voltage	20 Kv and 50 Kv Optional
Line Cord	6 ft L. 18AWG, 3-prong plug
Air Supply Pressure	10-30 PSI
Cubic Feet Per Minute	3.5 CFM at 30 PSI
Air Inlet Size	1/4 inch
Remote Activation Switch	8 ft. L.
Gun Powder Lead	7 ft. L. High Voltage Lead
Grounding Cable	8 ft. L. With Ground Clamp
Paint Curing Temperature	400° F. for 15 Minutes

Read Before Use

Thank you for your purchase of this JEGS Powder Coat System. Before use please be sure to read this user guide to ensure proper use.

This system employs electricity, powdered polymer powder, and high heat. Proper safety precautions are required.

An air compressor, and oven, or infrared light, capable of 400° F are required for the completion of the powder coating process.

If you have any issues, or if this powder coating system, or the unit is damaged, please contact customer service at: 1.800.345.4545.

Return Information: *Once this powder coating system has been modified, it will not be accepted for return.*

Work Area

Keep your work area clean and well lit.

- Powder coating powder can make surfaces slippery and may cause respiratory issues.

Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.

- This system creates sparks that may ignite dust or fumes.

Keep bystanders, children, and visitors away while operating a power tool.

- Distractions can cause you to lose control. Protect others in the work area from debris. Provide barriers or shields as needed.

Use this system in a well ventilated area.

- Spray dust can cause injury from accidental inhalation and poses an explosion hazard.

WARNING

**READ AND UNDERSTAND
ALL INSTRUCTIONS.**

Failure to follow all instructions listed in this user guide may result in electric shock, fire risk, and/or serious injury.

SAVE THESE INSTRUCTIONS!

Electrical Safety

Avoid contact with grounded surfaces.

- There is an increased risk of electrical shock if your body is grounded.

Do not expose powder coating system to wet conditions.

- Water entering this system increases the chances of electrocution and will result in clumping of the powder.

This system must be plugged into a properly grounded outlet. Never remove the grounding prong or modify the plug in any way. Do not use adapter plugs. Check with a qualified electrician if you are in doubt.

- If the system should malfunction the grounding will carry the electricity away from the user.

Do not abuse the power cord. Replace a damaged cord immediately

- Damaged power cords increase the risk of electrical shock.

When operating this system outside use an outdoor extension cord marked “W-A” or “W”.

- These extension cords are rated for outdoor use, and reduce the risk of electric shock

Personal Safety

Always stay alert. Watch what you're doing and use common sense when operating this system. Do not use if tired, or under the influence of drugs, alcohol, or medication.

- A moment of inattention while operating this tool may result in serious personal injury

Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep away from part being powder coated.

- Loose clothing, jewelry, and long hair may contact part and remove powder coat powder, or contaminate the material preventing proper adhesion.

Avoid accidental starting. Be sure the power switch is off before plugging unit into a wall socket or extension cord.

- This unit creates an electrical current with the part being coated. As such there is a shock risk when the power is turned on to the system.

Do not overreach. Keep proper footing and balance at all times.

- Proper footing and balance enables better control for superior coverage and reduces the risk of brushing powder off of the part.

Use proper PPE (Personal Protective Equipment).

- Always wear eye, face, and breathing protection.

Specific Safety

Maintain labels and nameplates on the powder coating system.

- These contain important information.

Always wear ANSI approved safety goggles, respirator, and work gloves.

- Use personal protective equipment (PPE) to reduce the risk of injury.

Maintain a safe working environment.

- Keep the work area well lit.
- Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris.
- Do not use this powder coating system in areas near flammable chemicals, dust, and vapors.
- Do not use this product in damp or wet locations.

Avoid unintentional starting.

- Make sure you are prepared to begin work before turning on this system.

Do not force the powder coater.

- This tool will do the best work when used at the speed and capacity that it was designed for.

Always unplug this system from its electrical outlet before performing any inspection, maintenance, or cleaning.

Never leave this system unattended while turned on.

- Turn power off when not in use.

Before each use make sure that hardware is secure.

- Ensure that powder cup, and scatter tip are securely fastened to the gun.

Keep extension cords away from water.

Always connect the powder coating system to a grounded electrical outlet.

The powder dust is flammable when floating in the air.

- Ventilate the area well.
- Verify that there are not flames or ignition sources nearby.
- Control excess dust by cleaning up after each use.
- Never vacuum up the dust using a non-explosion proof vacuum cleaner.
- Never cure the coated object in a gas oven as the fumes produced can be flammable. Only use an electric oven.
- Never smoke while using this powder coating system.

Avoid electrical shock.

- Never touch the spray gun emitter.
- After use, with the system turned off, touch the emitter to the ground clip to discharge it.
- Do not use the spray gun if you carry and use any electronic medical devices.
- Never touch the metal object during coating.

Avoid powder contamination.

- Wear an approved dust mask.
- Never cure parts in an electric oven that is used to cook food.

Grounding

This powder coating system comes with a three-prong grounded plug.

- This plug must be connected to a properly grounded outlet. If this system should electrically malfunction or break down grounding provides a low-resistance path to carry electricity away from the user, reducing the risk of electric shock.
- The grounding prong must never be attached to an electrically live terminal.
- Your tool must be plugged into an appropriate outlet, properly grounded and in accordance with all codes and ordinances.

WARNING

- Improperly connecting the grounding wire can result in of electric shock.
- Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.
- Do not modify the power cord plug.
- Do not remove the grounding prong from the plug.
- Do not use the tool if the power cord or plug is damaged.

Extension Cords

- Grounded tools require a three-wire extension cord.
- As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords of inadequate size wire causes a drop in voltage, resulting in loss of power, and possible tool damage.
- The smaller the gauge number of the wire, the greater the capacity. For example, a 14-gauge wire can hold a higher current than a 16-gauge cord.
- When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum required wire size.
- If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size.
- If you are using an extension cord outside, make sure it is marked with a "W-A" suffix.
- See the gauge to distance chart on Pg. 11 of this user guide.

Preparation

- Setup an air supply with an air pressure regulator and moisture trap. Do not use an inline air oiler. The compressor must provide an air pressure of 10-30 psi.
- Select a safe location for the spraying and curing of parts with the following.
 - Adequate lighting
 - Active ventilation
 - No flame or ignition source
 - A dry, clean, and covered area
- Have an activated charcoal filter respirator for use when curing parts.
- Have a disposable dust mask for use when spraying powder.
- Use ANSI approved eye safety glasses.
- If using an extension cord, it must be of the appropriate gauge and have a grounding prong.
- Setup a dedicated electric oven (not included) for curing the coated parts with a temperature capability from 300°-500° F. Ensure that the oven has adequate ventilation.
- **WARNING:** Never use a gas oven. The fumes from the powder are explosive. Never use a home oven that is also used for food. Contamination of food will occur.
- Properly prepare the part to be coated. Clean any old coatings, rust, grease, and oil.

Operation

- Place or hang the cleaned part to be coated near a ventilation system.
 - If the part has grooves or recesses, position it so that gravity will assist the powder mist to fall into these areas.
- Connect the Disposable Moisture Separator (9), with the airline Quick Adapter (10), to the Gun (2).
- Fill the Powder Cup (4) with up to two inches of coating powder (not included).
See Image 1.
 - Put on a pair of rubber gloves and disposable mask.
 - Place the cup on a level surface with the opening up.
 - Open the powder coating container, and with the use of a funnel, pour the powder into the powder cup.
 - Turn the spray gun upside down and screw the cup back onto the gun.
- Connect a 1/4" air hose (not included) to the Quick Adapter (10).

Image 1



Operation Contd.

- Screw in the desired Scatter Tip (19, 20, 21) to the Conductor Pole (23).
- Attach the Ground Clip (15) to the metal part being coated.
 - Securely attach the Ground Clip to an area that is not being coated. This connection is necessary to draw the electrically charged particles to the metal part.
- Place foot pedal near the workpiece.
- Choose the voltage by pressing the transfer switch to position I or II.
 - The dual voltage option allows you to choose based on the size and complexity of the part being coated. Smaller, less complex, parts can be coated at I (20Kv); while larger, more complex parts should be coated at II (50Kv). **See Image 2.**
- Turn on oven to preheat. Temperatures vary by powder, follow manufacturer specifications. Temperatures typically vary between 300° - 500° F.
- Turn on the air compressor and adjust the air pressure regulator to between 10-30 psi. Minor pressure changes can be made with the Pressure Reducer Valve (8) on the gun during operation.
- Press the Spray Trigger (6) and Foot Switch (16) at the same time and test the spray pattern on a piece of scrap metal.
 - The Trigger controls the air and powder flow. The Foot Switch controls the electrical charger. If the pattern is too small or too large change the Scatter Tip (19,20,21) size.
- Remember that the pointed end of the Scatter Tip faces toward the Spray Gun and screws on. The spray pattern can also be adjusted by using the Regulating Screw (7). Loosen the screw to expand, tighten the screw to reduce the pattern size. **See Image 3.**

Image 2

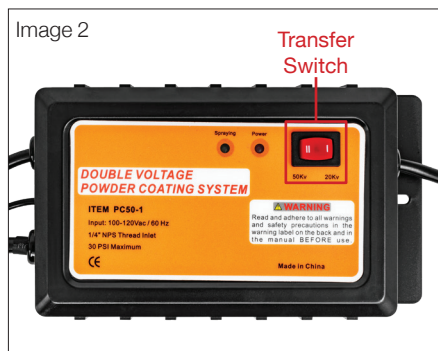


Image 3



Operation Contd.

- When coating, keep the spray gun approximately eight inches from the part.
- Point the spray gun toward the object at different angles to guarantee that all areas are coated. When completed, the object should be completely coated with a dull, opaque coat of powder.

WARNING

When unplugged after use, the spray gun is still electrically charged.

Discharge the conductor pole (23) tip to the Ground Clip (15) before touching or you could be shocked.

- When you are finished spraying.
 - Remove your foot from the Foot Switch (16).
 - Unplug the Power Cord (18) from the electrical outlet.
- Touch the Conductor Pole (23) to the Ground Clip (15) to discharge any residual electricity.
- Wipe the Scatter Tip (19,29,21) off with a clean towel.

Curing the Parts

WARNING

The fumes produced during curing are hazardous to your health.

DO NOT BREATHE.

Always use a NIOSH* approved respirator and safety goggles.

Avoid skin exposure.

Proper ventilation in the work area is required.

* National Institute for Occupational Safety and Health

- Before curing your parts make sure to put on your charcoal respirator.
- With the oven preheated to the powder manufacturer's suggested temperature, between 300° - 500° F, place the object on the oven rack, close the door, and turn on the ventilation system
 - Typical curing time is 15 minutes.
 - Check the powder coat container for recommended curing time and temperature.
 - If the object is large, curing may take more time.
 - The coating should melt to a smooth, glossy finish all over the object.
 - Check the part often to prevent over-curing. Over-curing can result in roughness to the finish.
- Once cured, turn off the oven and partially open the door to allow the part to gradually cool. If cooled too rapidly a dull finish may result.

Process Tips

- To remove any orange peel effect in the coating, wet-sand the part with 400 grit sandpaper, dry, and repeat the process with finer grits and finish with a polish.
- Polish with traditional paint polishes.
- Lightly buff the coating with a loose wheel and white rouge compound to remove imperfections.
- Thoroughly clean the Powder Cup (4) before changing powders.
 - Some powders are made from polyester, while others are made from polyurethane. A mixture of both can cause pitting on the coated part.
- Porous metal objects may need a thorough cleaning with a brush and pre-painting cleaning solutions
- If the powder starts to build up in place, blow it off with light air pressure.
- Moisture in the air will cause powder buildup. Replace the Disposable Moisture Separator (9) as needed.
- Poor disbursement can be caused by low air pressure. Adjust the air pressure or replace the moisture separator.
- The Cup (4) should have at least one inch of powder during coating.
- Use automotive paint remover to remove a cured coating.

Cleaning the Gun

- Wear disposable vinyl gloves and a respirator.
- Unplug the Power Cord (18) from the electrical outlet.
- Discharge the Conductor Pole (23) to the Ground Clip (15).
- Disconnect the air hose from the Quick Release (10).
- Remove the Powder Cup (4) and pour any remaining powder back into its original container.
- Using compressed air, blow out the Powder Cup (4) and all other parts that have collected powder.
- Uncontaminated powder residue can be stored and reused.
- Store Powder Coating System in its box. Place in a dry and safe location.

WARNING

Powder clouds/mist are explosive.

Before cleaning, remove any possible ignition source from the work area.

Extension Cord Minimum Wire Gauge (220 Volt)

Nameplate Amperes*	Extension Cord Length & Required Gauge Size				
	25 Feet	50 Feet	75 Feet	100 Feet	150 Feet
0-2.0	18	18	18	18	16
2.1-3.4	18	18	18	16	14
3.5-5.0	18	18	16	14	12
5.1-7.0	18	16	14	12	12
7.1-12.0	16	14	12	10	-
12.1-16.0	14	12	10	-	-
16.1-20.0	12	10	-	-	-

* At full load

** Based on limiting the line voltage drop to five-volts
at 150% of the rated amperes.