

Powder Center COLO-6600

Operation Manual



Safety Precautions

Installation Items installed by the user must comply with local safety standards.

Grounding Before each startup, check the grounding status of the spray booth and the powder feeding center. Users must pay special attention to grounding connections. Grounding points include the spray booth, cyclone separator, and powder feeding center. The workpiece and other devices should also be checked for grounding.

Operation For safe use of the equipment, it is essential to be familiar with safety precautions, production processes, and the functions of all parts of the system. Therefore, before starting production, read the safety precautions, equipment operating instructions, and control device instructions.

To ensure normal production, each startup must follow the operating instructions.

After commissioning, some failures or questions may arise. The operating manual can provide assistance. Therefore, the manual must be kept near the equipment.

If problem arise, the COLO technical service center will provide support at any time. The contact of the service center can be found in the relevant documents.

Routine Inspection The following items should be checked before each startup:

The suction sections of the spray booth and powder center must be free of any other objects.

The powder sieve should be properly connected to the powder center and securely fastened.

All air and powder hoses on the powder center must be correctly connected.

Maintenance All maintenance work shall be carried out by properly trained personnel.

Function Introduction



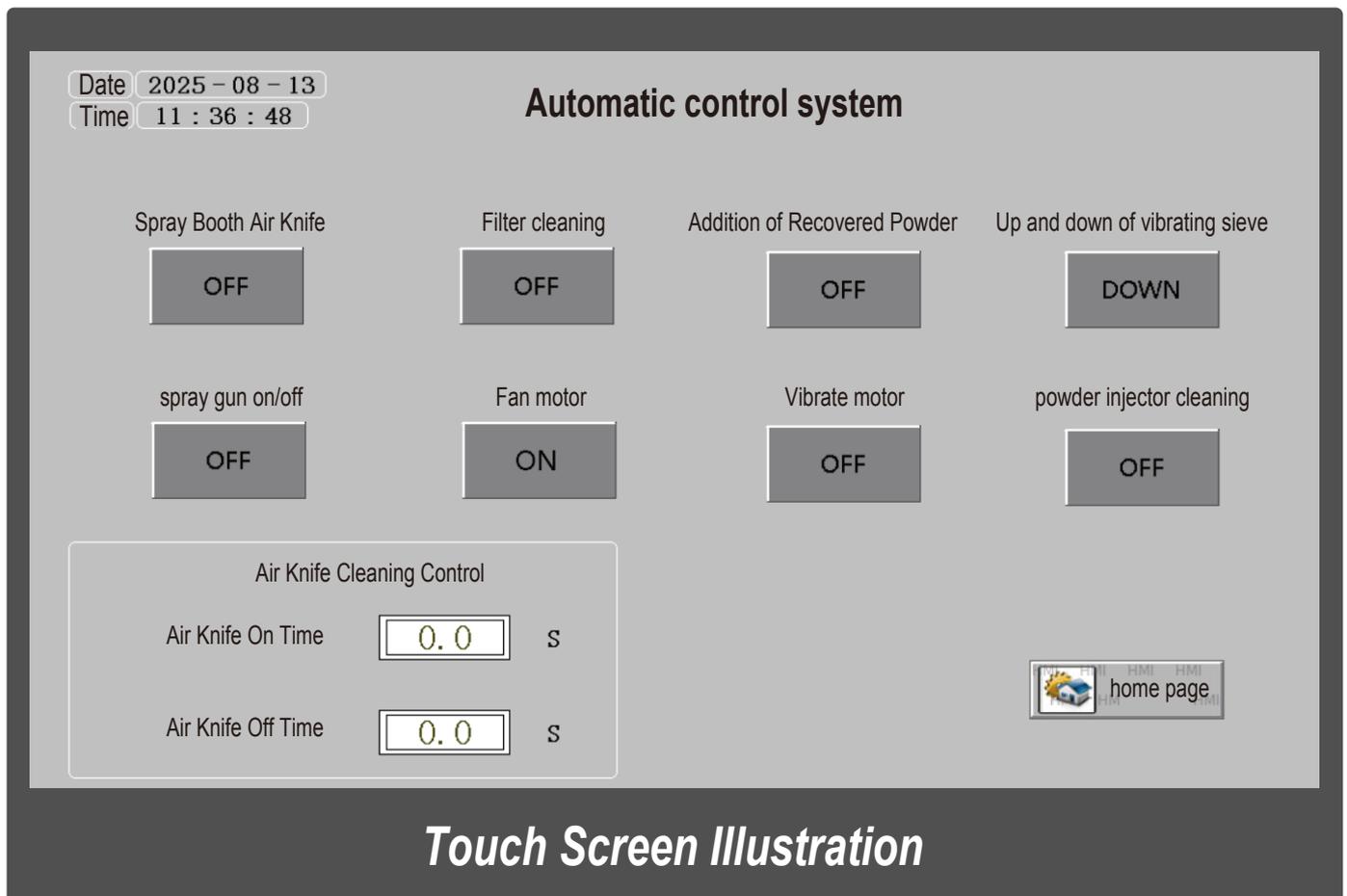
Application

The powder center is specially designed for fast color change, replacing traditional powder supply equipment.

Place the powder hopper at the center position of the powder center base. The powder center is an integrated component of the fast color change system and directly affects the final product's coating quality. It is usually regarded as a core part of automated production.

Main Features of the Powder Center:

- Large-capacity powder supply.
- Integrated control.
- Automatic cleaning of suction hoses, powder injectors, powder hoses, and spray guns.
- Recovery powder is automatically returned to the powder hopper with the powder sieve.
- Connected to a mono cyclone recovery system to prevent powder spillage during coating production and color changes.



Color change

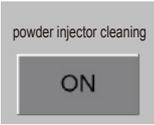
- ① Click some buttons on the touch screen, just keep fan motor on, other buttons keep off. as shown in the Touch Screen Illustration.

- ② Up the vibrating sieve 

- ③ Open the powder hopper adapter and insert it into the back-blow connectors on both sides of the powder center side panels

- ④ Click the button  to down the vibrating sieve.

- ⑤ Turn on the Vibration Sieve Motor  and Recovered Powder Addition buttons 

Turn on the powder injector cleaning button  to clean the powder injectors and any residual powder inside the hoses.

- ⑥ Once the powder injector has been cleaned, proceed to clean the spray booth (It is necessary to manually clean the interior walls and floor of the spray booth.).

- ⑦ Turn off the Vibration Sieve Motor and Recovered Powder Addition buttons.  

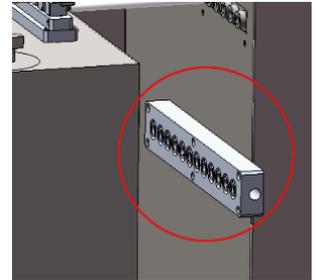
- ⑧ Click the button  to raise the vibrating sieve and clean it.

- ⑨ Remove the powder hopper, clean the hopper lid, and remove any residual powder on the powder center.

- ⑩ Clean the Mono cyclone. Open the cone under the cyclone to clean .

- ⑪ Refill the powder hopper with new powder. Reconnect the powder hopper adapter to the hopper lid.

- ⑫ Click the button to down  the vibrating sieve. Turn on  the spray gun.



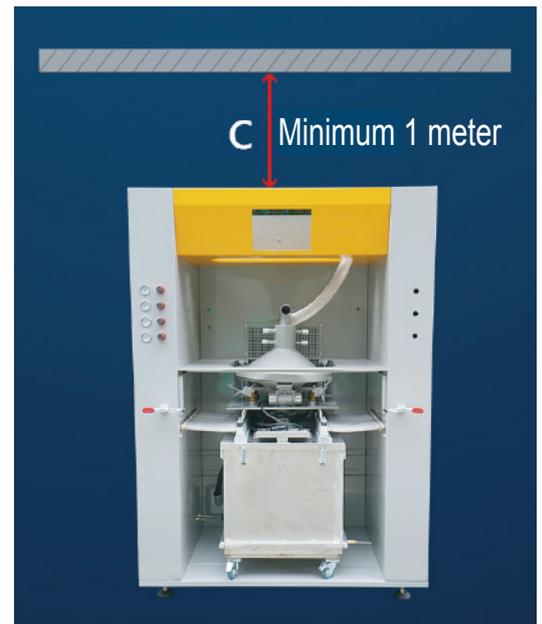
Technical Data

Parameter Type	Data	Parameter Type	Data
Overall Dimensions W*H*D	1350*1940*900mm	Voltage	(Customizable)
Frequency	(Customizable)	Power	(Customizable according to configuration)
Air In Pressure	6-8bar	Recommended Air Compressor HP	20kw(30HP)
Air Consumption	About 300 standard m ³ /h	Air tank	1-2 m ³
Max. Water Content	1.3 g/m ³	Maz. Oil Content	0.1g/kg
Powder hopper size	550*550*550mm	Sieve mesh	80 mesh
Sieve size	φ400mm		

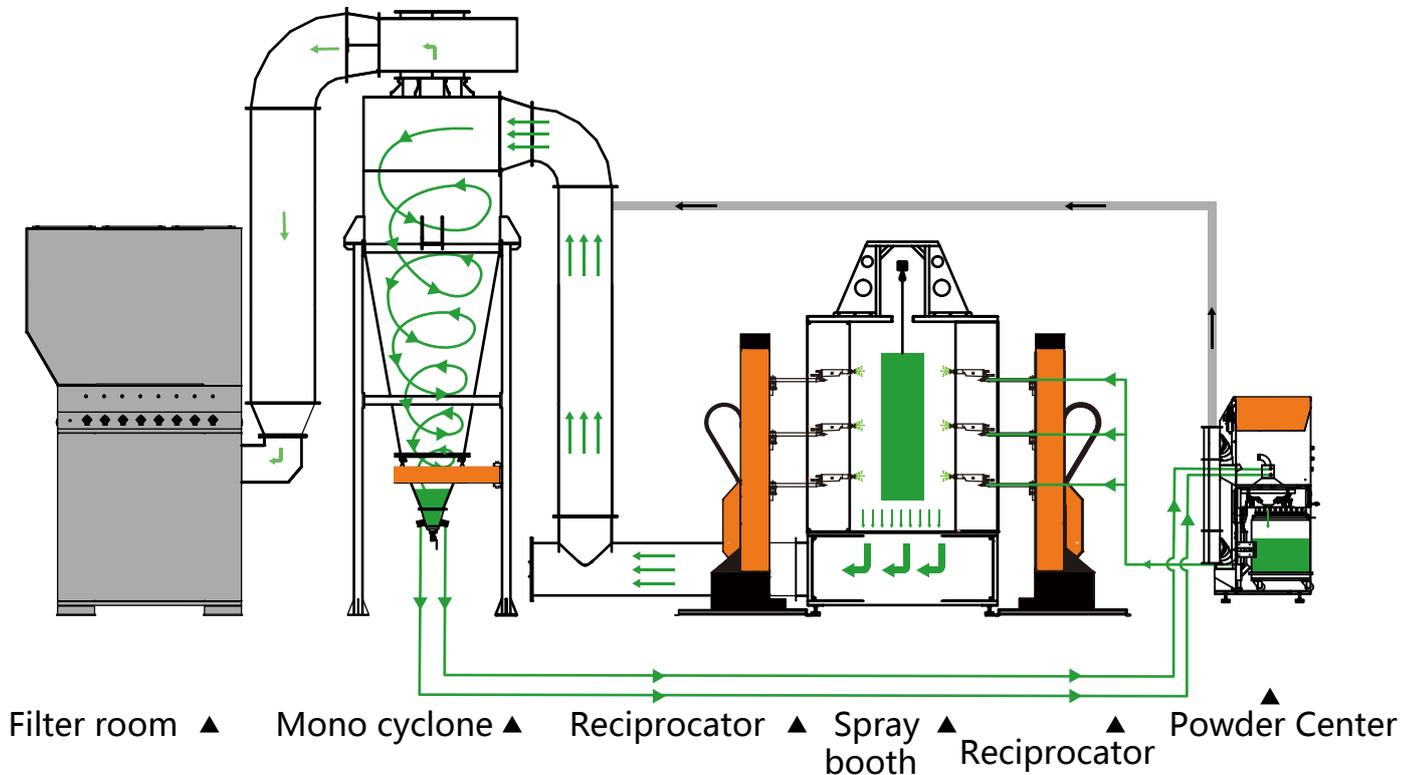
Installation Notes

When installing the powder center, the following requirements must be observed:

- The powder center must be placed on a stable surface, and the entire platform must be leveled absolutely.
- Proper grounding must be provided in accordance with local standards.
- To avoid interference from air convection, a minimum clearance of 1 meter must be maintained above the powder center (C). Additionally, sufficient space must be left on both sides for opening doors.
- When routing pipelines, try to increase the bend radius as much as possible (minimum radius: 300 mm). This reduces pressure loss and powder hose wear, and minimizes powder buildup on the inner walls. Proper arrangement of the powder hoses ensures a neat and safe layout, facilitates operation, and makes troubleshooting easier check.

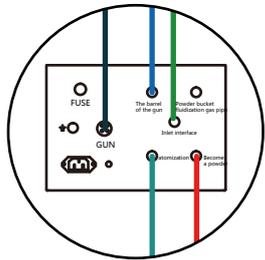


Powder flow diagram of powder supply center

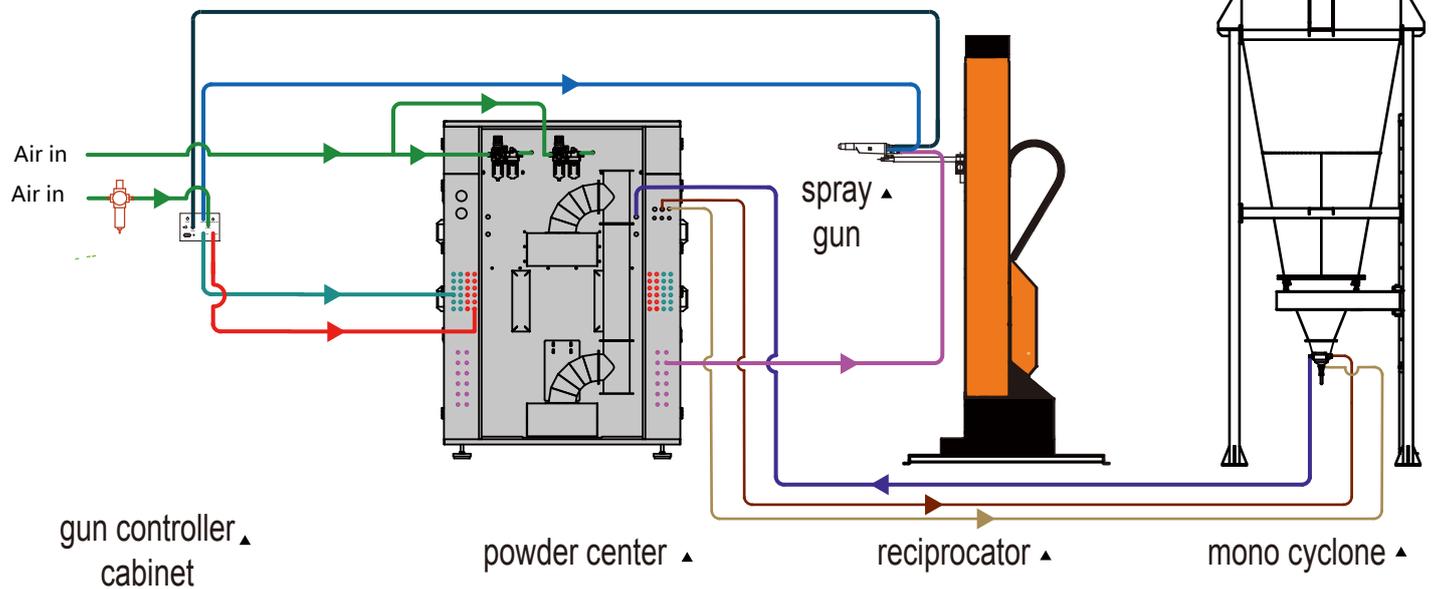
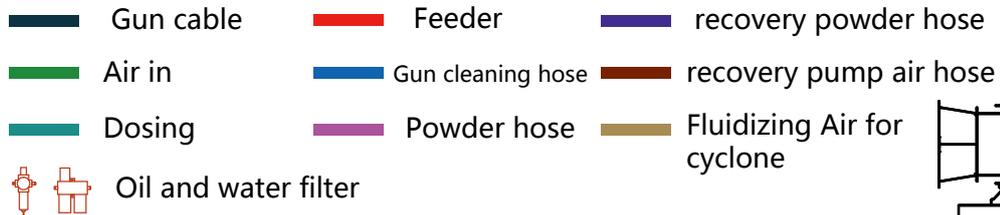


- The powder container is located in the powder center, here, the powder is fluidized.
- The injectors transport the powder through the hoses to the spray guns . The guns spray the powder/air mixture onto the workpieces to be coated. The powder which does not adhere on the workpieces falls on the booth floor and is sucked off and delivered to the cyclone separator as powder-air mixture.
- In the cyclone separator, the powder is separated by the influence of centrifugal force. There, the separated powder is cleaned in the cone under the cyclone and transported back to the sieve machine of powder center by a powder pump, after sieving, the powder is available again for the coating process.
- The rest of the few not separated powder (the most of it are small particles) goes into the After Filter.
- The after filter separates the powder into a refuse container, which is positioned directly under the filter elements. Then, the cleaned air leaves the filter back into the workshop environment.

Connection diagram



Controller of spray gun



Preparation Before Startup

The following works must be completed before operating the powder center:

- Conduct a Safety Inspection
- Check the grounding of the spray booth, powder center, and all devices in the coating system. If necessary, make the appropriate connections.
- Check the Compressed Air

Start the Powder Center

- Turn on the spray booth (for detailed information, please refer to the corresponding operating instructions of spray booth).
- Turn on the main switch of the powder center.
- Start the powder operation.

Warning: Press the input keys with your finger only. Do not use fingernails or any hard objects under any circumstances.

Turn off the powder center

Check whether all workpieces have been completely coated.
Turn off the main switch of the powder center.

Maintain

Maintenance After Each Shift

- Rough Cleaning of the Spray Booth
- Clean according to the Color Change Procedure (as shown on Page 4, steps 1–10)
- Check the wear condition of the nozzles

Weekly Inspection Tasks

- Check the powder at the outlet of the fan motor after the filter (in the filter booth) . The amount of powder here indicates possible damage to the filter or improper fixing of the filter.
- Thoroughly clean the powder center (do not wash with water).
- Check the oil-water filter . If necessary, drain it. (If oil or water is present, the air compressor must be inspected.)

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