Operating manual

Powder Coating Booth



STOP DANGER



High Voltage!
Turn power off
before servicing!

ADDRESSES

Hangzhou Color Powder Coating Equipment Co.,Ltd

Phone: (86) 8601 5003 - Fax: (86) 86015003

www.colourspray.com - www.hi-colo.com

CAUTION

Read rules for safe operation and instructions carefully!

Introduction

Technical data

Booth

Suction performance of the booth:	4000 m^3/h
Filter surface:	6 m^2 (1 cartridge1)
Compressed air requirement:	20 Nm^3/h
Motor output:	3.5KW
Voltage:	380V
Frequency:	50-60 Hz

Pneumatical data
Input pressure min. 6 bar / max. 10 bar
Recommended input pressure 7 bar
Water vapor content of compr. air max. 1,3 g/m³
Oil vapor content of compr. air max. 0,1 mg/kg

Operation and display elements

1---**Electro switching cabinet** three phase 4 wires

2-Filter /325mm*600

3-Air storage

4-Solenoid valve/380V

5- fan motor Centrifugal/ 380v,3.5kw, 50hz

Control cabinet



Bottom:

1,power on/off

2,hopper go up/go down

3, emergency stop

PLC Controller



Operation:

1. press bottom 1 ,make the power on



Then the PLC will display like this



2,Press  or ,make the display screen display like this



3,Press F4 ,then into the booth control interface like this



4,Press F6,then the fan will on ,like this



When you want to stop the work, please press F6 ,make the fan off, like this



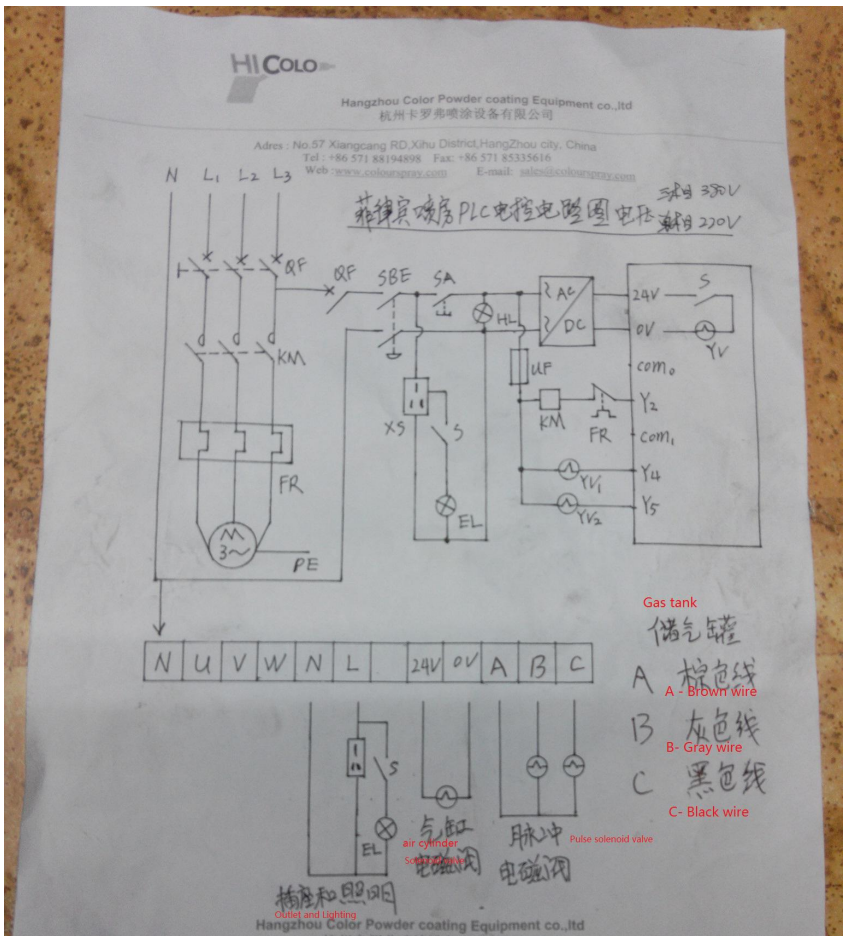
Then press the bottom 1 to make the power off.

In the side of the booth have the switch to control the light lamp





Electric circuit diagrams,



Warning –Please contact a qualified electrician to connect the circuit areas

Notes on special types of hazard

Power

It is necessary to refer once more to the danger of life from high-voltage current if the shut-down procedures are not observed. High voltage equipment must not be opened - the plug must first be taken out - otherwise there is danger of electric shock.

Powder

Powder/air mixtures can be ignited by sparks. There must be sufficient ventilation in the powder coating booth. Powder lying on the floor around the powder spraying device is a potentially dangerous source of slipping.

Static charges

Static charges can have the following consequences: Charges to people, electric shocks, sparking. Charging of objects must be avoided – see "Earthing".

Grounding/Earthing

All electricity conducting parts and machinery found in the workplace) must be earthed 1.5 meters either and 2.5 meters around each booth opening. The earthing resistancemust amount to maximally 1 MOhm. The resistance must be tested on a regular basis. The condition of the machinery surroundings as well as thesuspension gear must ensure that the machinery remains earthed. If the earthing of the machinery includes the suspension arrangements, then these must constantly be kept clean in order to guarantee the necessary conductivity. The appropriate measuring devices must be kept ready in the workplace in order to check the earthing.

Compressed air

When there are longer pauses or stand-still times between working, the powder spraying equipment should be drained of compressed air. There is a danger of injury when pneumatic hoses are damaged and from the uncontrolled release and improper use of compressed air.

Booth units assembled using plate welded structure, for powders recovery operations, so powder coating operation has a clean environment

Internal powder room is a flat structure, so clean-up powder room is more convenient, fast

Function

The booth function is characterized by:

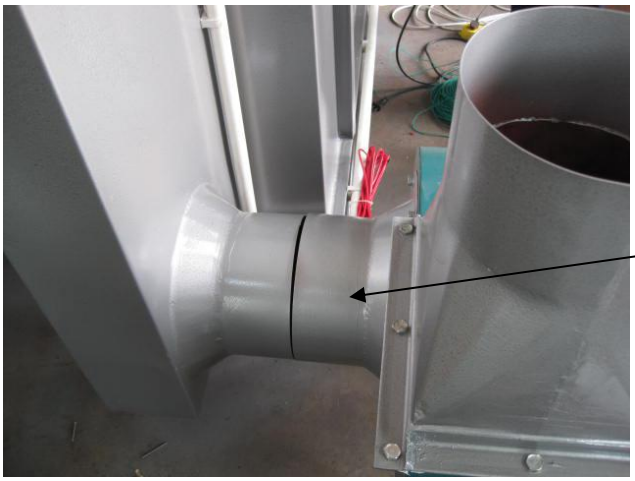
- The protection of the coating process from external influences, joined with the keeping clean of the booth environment

- The powder recovery

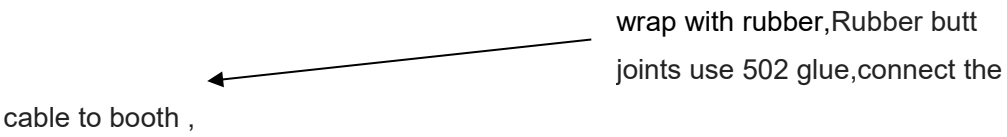
The booth function is based on a powerful exhaust air system, which sucks air from the booth interior through filter cartridges. The resulting negative pressure produces an airflow from the outside of the booth to the inside, thus preventing powder from escaping into the environment. During cleaning procedure, the powder adhering on the filter cartridges arrives into the booth and then into a powder trolley, with which the powder recovery is guaranteed.

Installation and commissioning









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Note: check whether the direction of rotation of the fan blade direction is same with the arrow shown

Safety regulations

Warning

This equipment can be dangerous if it is not operated in accordance with this operating manual!

(A) Installation

1.Install the ground should be flat, smooth landing foot machine, ventilator machine feet should be firmly fixed to the ground

2.spray booth enclosure must be grounded. Grounding Methods: Φ10 mm round long 1.5-2mminto the ground, exposed 10 mm, the solder terminals, with 4 mm 2 wire connection to the spray booth and the electrostatic generator grounding stud

3. Fitted with filters, elastic fit.

4. Intake pipe connected to the air supply, close the drain valve

5. switch box connected to the power supply, connect the power electrostatic generator

6. Start the exhaust fan button to check the motor rotation is correct

7. Compressed air must pass through an air purifier to remove oil and water, the water content of less than 1g/m3

(B) Operation

1. **Switching on the system**

1) Press blower button (green), dusting chamber filter out exhaust

2) Open the powder coating machine ,begin to do the powder coating

3)and a half hours of continuous spray by a pulse-jet cleaning, maintaining good ventilation filters. In the production process should always observe the instructions for each instrument cases, abnormal timely adjustments to ensure spray quality. Spray should be required before the workpiece surface state inspection, so as not to affect the plastic film adhesion

2. **Switching off the system**

1)Turn off the exhaust fan, cleaning interior plastic powder dusting, site preparation, tooling, cleaning

2) Turn off the total power

Maintenance and cleaning

The user **must** maintain the proper **grounding of all system components**!

Filter cleaning

The filter cartridges can be cleaned cyclically during booth operation. The cleaning cycle must be released manually with the switch. The cycle times are preset by factory.

Note:

The filter cartridges should not be cleaned more than 1-2 times per shift!

Replacing the filter cartridges Replacing the filter cartridges

Procedure for replacing the filter cartridges

If a filter cartridge is damaged, but the damage can not be found, then the complete filter cartridges set must be replaced. The access to the filter cartridges takes place from the rear of the booth

Dismantling:



fix the scew on the top



Hold the cartridge with both hands, so that the filter's six ears for quick release cover six corresponding gap



His hands up top, while the rubber ring as a fulcrum to sixty degrees clockwise



Check the filter is fully embedded in the quick release cover, hand gently pulled the filter is securely

Color change

Procedure

Clean the booth

Clean the powder trolley thoroughly

Clean the injector separately, blow off the powder hose and clean the gun according to the corresponding operating manual

Replace the filter

Ordering spare parts

When ordering spare parts for powder coating equipment, please indicate the following specifications:

- Type and serial number of your powder coating equipment
- Order number, quantity and description of each spare part