Specification

Power Frequency AC Ionizer_PF1203C

PF1203C ion blower is a special device in our ion blower series to eliminate static electricity, featuring easy installation, stable work and wide range of static electricity elimination.

01 Working principle

- Comply with the limit requirements of ANSI/ESD S20.20 for audit inspection and conformity verification test of ionization equipment.
- Comply with ANSI/ESD S20.20 -2014 ANSI/ESD STM3.1 requirements for audit inspection and testing of ionization equipment.
- PF1203C ion blower can generate the air flow with a large quantity of positive and negative charges, which can neutralize the charges on objects. Where the object surface has negative charges, it will attract the positive charges in the air, and vice versa, so that the static charges on the surface of the objects are neutralized and eliminate.
- The ion blower is equipped with 3 small fans to generate air flow, of which the speed can be adjusted with a speed regulating switch in a large range.
- Ionizer: Under the action of low current and high voltage generated by the high-voltage generator, the ionizer forms a stable high-intensity electric field, which ionizes the air and produces ions. The ions are delivered with the air flow to the object's surface and achieve the purpose of neutralization. Ionizer is furnished with a dedicated cleaner, which can remove the dust on the ion generating electrode, maintaining the normal operation of the ionizer.
- The ion blower is provided with a dedicated ion balance circuit, which can automatically balance ions generated.
- The ion blower is designed to solve the problems caused by the electrostatic effect in production, such as dust attraction caused by the static electricity, bonding of plastic products during processing, and misplacement of small parts caused by electrostatic repulsion.

02 Features

- Rapid neutralization of static charges.
- Large coverage of ion airflow.
- Wide range of airflow speed regulation.
- Dedicated cleaner for ion generating electrode.
- Ionization indicator.
- Reliable grounding protection.

03 Ion Output (Discharge Time)

Test Condition:
Operation Volage:110V/220V
Test Voltage:1KV-100V
Test Temperature:23°C

Distance of Tester	Left 300mm	Center line	Right 300mm
300mm	1.8s	1.2s	1.7s
600mm	2.5s	2.2s	2.3s
900mm	5.2s	4.3s	4.8s
1200mm	8.6s	7.5s	8.3s

- The ion balance voltage and static charge elimination time comply with ESD standards, of which the static charge elimination time is measured at the test voltage of 1000V-100V.
- The ME268A combo electrostatic tester shall be used in the test. The test data will vary with the temperature and humidity of the ambient air at the time of testing.

04 Static Elimination Performance

Operation Voltage:110V/220V Testing Voltage:±1000V-±100V
Temperature:23±3°C Humidity:50%±5%

Distance(mm)			300	600	900
Static Elimination Time	Left	Positive	0.7S	2.0S	3.6S
		Negative	0.9S	2.6S	4.5S
	Middle	Positive	0.6S	1.8S	3.2S
		Negative	0.9S	2.4S	4.3S
	Right	Positive	0.7S	2.0S	4.2S
		Negative	0.9S	3.1S	5.5S
Offset Voltage		Positive	±10V		
		Negative			
Measurement method: use 20PF, 150mm static elimination monitor to measure					
When the air volume is maximum, the dissipation time from ±1000V---±100V (this test result adopts the straight wind window test)					
Different environment test results are different, the above is the reference data, please testaccording to the actual use environment					

05 Specifications

Input Voltage	220VAC 50Hz/ 110VAC 60Hz
Current Draw	≤0.55Amp
Air volume Output	120-300CFM
Airflow Characteristics	60cm x 120cm coverage
Operating Temperature	32°F(0°C)-122°F(50°C)
Ozone Content	0.03PPM (Measured at minimum airflow speed and 6 inches in front of ion blower)
Noise	Min 55dB / Max 69dB
Enclosure	Aluminium alloy
Surface	Powder coat
Size	1100mmX170mmX100mm
Ion Balance	0v±10v

06 Safety

- Read the operating instructions before installation.
- The ion blower shall be reliably grounded before operation.
- Do not block the screened air inlet and outlet with any object.
- Do not use the ion blower in flammable and explosive environment.
- Do not repair the ion blower without permission.

07 Installation

- The PF1203C ion blower is light-weighted and enjoys long service life. Fix the U-shaped frame with screws on the side of the blower. Tighten the screws with M8 position after the torx head screws after aligning the ion blower.
- Install the optional filter when the ion blower is used in dusty environment.
- Connect the ion blower to the 220V, 50HZ (or 110V, 60Hz) power supply. Insert the plug in the standard single-phase grounding socket with safety ground cable.

Connect the power cord as follows:

- Brown - Phase line
- Blue - Neutral line Green
- Yellow - Grounding line

08 Maintenance

- The ion blower requires frequent maintenance but rare repair.
- Maintenance items: Cleaning emitters, ion balance calibration, and static charge elimination time calibration. Clean the emitter at least once a week, and periodically calibrate the ion balance and static charge elimination time to ensure that the ion blower runs properly.

A. Cleaning emitter

Cleaning the ion emitting point of the emitter. Rotate the handle of the cleaning disk clockwise, and loosen the handle until it stops. Repeat this operation until it is thoroughly clean. Clean the ion blower at least once a week.

B. Cleaning air inlet and outlet

Keep the air inlet and ionized air outlet unblocked to prevent blockage of air flow. Clean it with a soft brush or compressed air.

C. Ion balance test

Use a charge plate monitor or an ion tester to measure the ion balance (residual voltage).

D. Static charge elimination time test

Measure the static charge elimination time with the electrostatic analyzer or charge plate monitor.

F. Calibration

The ion blower is designed with stable and fixed ion output. As affected by voltage fluctuations, relative humidity and other factors in the ambient air, the ion balance may be subjected to deviation (residual voltage).
Deviation range: 0V ± 10V.

09 Operation

- Rotate the speed regulating switch clockwise until the indicator turns on, and the ion blower is switched on to generate ion airflow. Turn up the airflow speed by turn the speed regulating switch clockwise. Turn the switch to the "off" position, and the indicator turns off, indicating that the ion blower is turned off.
- Adjust the direction of the air flow by loosening the torx head screws on the frame; tilt the ion blower to adjust the upper and lower position; tighten the screws on the frame after it is aligned.
- Clean the ion emitter. Rotate the handle of cleaning disc clockwise until it stops repeatedly to thoroughly clean the ion blower.
- The ion blower produces ionized airflow covering the target area. The time required for the airflow to eliminate the static electricity is dependent on many factors, of which the two most important ones are the distance and airflow speed of the ion blower. The ions in the air are constantly neutralizing each other, and the positive and negative charges attract each other electrostatically, so the charges generated are transferred and neutralized. High airflow speeds can deliver the charges further before they are neutralized, so the higher the airflow speed, the faster it neutralizes the static electricity.
- When using an ion blower in assembly of electronic devices, cover the work area with ionized air flow as much as possible so that the positive and negative charges on the surface of the object are well neutralized, which can keeping the objects neutralized.

10 Maintenance

- The ion blower requires frequent maintenance but rare repair.
- Maintenance items: Cleaning emitters, ion balance calibration, and static charge elimination time calibration. Clean the emitter at least once a week, and periodically calibrate the ion balance and static charge elimination time to ensure that the ion blower runs properly.

A. Cleaning emitter

Cleaning the ion emitting point of the emitter. Rotate the handle of the cleaning disk clockwise, and loosen the handle until it stops. Repeat this operation until it is thoroughly clean. Clean the ion blower at least once a week.

B. Cleaning air inlet and outlet

Keep the air inlet and ionized air outlet unblocked to prevent blockage of air flow. Clean it with a soft brush or compressed air.

C. Ion balance test

Use a charge plate monitor or an ion tester to measure the ion balance (residual voltage).

D. Static charge elimination time test

Measure the static charge elimination time with the electrostatic analyzer or charge plate monitor.

F. Calibration

The ion blower is designed with stable and fixed ion output. As affected by voltage fluctuations, relative humidity and other factors in the ambient air, the ion balance may be subjected to deviation (residual voltage).
Deviation range: 0V ± 10V.