

445EF Ionizing Air Snake

Instruction manual

Thanks for purchasing the Ionizing Air Snake. This unit is used for removing static and dust of the charged object. Please read this manual before operating the unit. Store this manual in a safe, easily accessible place for future reference.

Safety Instruction



WARNING:

This unit is not explosion proof. Do not use this unit near combustible gases or organic solvents.



NOTE:

- It is electrical equipment and please comply with the safety instruction.
- It must use the rating voltage and power according with values at the mark of the unit.
- No use the unit when its some parts are broke, especially the power cord is broke.
- This unit is not explosion proof. Do not use this unit near combustible gases or organic solvents.
- It designs for eliminating the electrostatic. Use it in the surrounding with electric conductor, such as water, oil and solvent etc. will invalidate insulation system. Prevent the unit from being used in a place where it is splashed with water or oil, or in a hot and humid place, and especially a very humid place with a possibility of appearance of dewdrop should be avoided.
- No use it in the surrounding with corrosive smog acid or alkali with and corrosive gas, such as chlorine.
- Please do the check daily and maintenance as the manual.
- If the unit cannot be in good service or happens any abnormal phenomenon, please stop use and check it or replace a new one.
- If drop the unit accidentally, it may be broken. When happening the state, it may be checked and maintained by the special person. If the unit is damaged, it will produce quite big current sound and the insulator will be burnt.
- Children don't recognize the danger of electrical appliances. Therefore use or keep the appliance only under supervision of adults and out of the reach from children.



: The unit should not be dispose of a household refuse.

SECTION 1 Summary

The 445EF Ionizing Air Snake is used for removing static and dust of the inaccessible charged object, and it can easily clear the parts and prevent it from being attached again after removing static. It must use with the 446EF high voltage power supply supplied by our company.

SECTION 2 Parts and Accessory

Main unit (ionizing air snake)	One
Connector of air supply	One
Connector (06-08)	One
Instruction manual	One

SECTION 3 Parameters



NOTE: Never use it over the following parameter range, otherwise it will damage the machine or hurt the human body.

Request of air supply:	Clean and dry air, 0.1~0.7Mpa
Connection with air supply:	a 6×8mm PU tube
Request of high voltage	7KVAC ⁰ _{-40%} , 50Hz/60Hz
Effective distance of removing static:	Within1000mm
Standard length of high voltage cord:	3 meter

SECTION 4 Installation

4.1 Installation of the high voltage power supply

High voltage power supply can be fixed on the wall or flat surface. Detailed operation can refer to the installation part of operation manual of high voltage power supply.

4.2 Grounding

1. For having a necessary good grounding between the ionizing air snake and the high voltage power supply, connect a cord with six lines of the ionizing air snake to the six-pins socket on the high voltage power supply and then screw down the locking cap.
2. For avoiding the badness grounding of the three-terminals socket, one end of the grounding cord (green & yellow, enclosing with the high voltage power supply) connects with the grounding pole on the high voltage power supply, and the other end connects to the earth.

4.3 Connection with the high voltage cord

After finishing the connection about the high voltage cord and grounding of the high voltage power supply, connect the plug of the high voltage cord of the ionizing air snake to the high voltage output socket on the high voltage power supply, and tighten the screw by hand. Please don't use any tool.

4.4 Connection with the outer air source

Connect the outer air source to the inlet of the ionizing air snake by a 6×8mm PU tube.

4.5 Connection with the power cord

The cord should be connected to a power supply of a rating voltage. These using conditions are listed on the nameplate. All power sockets should be the three-terminal sockets with a good grounding system.

NOTE:

- Do not to connect the power cord of power supply unit, before all grounding line and power cord connections completed.
- In order to use the ionizing air snake correctly and prevent operator from electric shock, make sure there is a reliable grounding among the ionizing air snake, high voltage power supply and the earth. Since the infectant air can block the nozzle or make it short circuit, the air should be filtered cleanly before using. Air pressure should be within 0.1~0.7Mpa.

SECTION 5 Operation



NOTE: when all the connections have finished, it can come to use the ionizing air snake.

1. Turn on the switch of outside air source.

2. Operation

Due to different “Controller”, the relevant working model is different.

1) With Pedal Switch:

When turn on switch, the display lamp is light. Press down Pedal Switch to produce high voltage from high voltage output terminal and output air from ion nozzle terminal. Ions emitting pin begin to ionize the air and emit positive and negative ions.

Positive and Negative ions will be output with airflow, and neutralize static charge of charged object within working area and clean the dust on object, and it also can prevent appearance of dust and the static once again. Loose the Pedal Switch to stop ion air output.

2) With Photoelectric Switch:

Turn on the Power Switch, and Photoelectric Switch can test the existence of charge object within its working range, and then the red lamp will be on, giving out a signal to make the Ionizing Air Snake work and blow ion air.

When first use, it is necessary to regulate air pressure to adjust outlet air speed. Regulate the air pressure-adjusting knob on the Power Supply. Turn the knob anticlockwise to increase the air pressure and clockwise to decrease air pressure.

3. If necessary, test the balance voltage. In case of balance voltage exceeds the normal range, adjust the adjustor on the High Voltage Power Supply.

4. Turn off the power switch, and the indicator lamp will be off, high voltage output is stopped.



NOTE: When the Power unit is turned on and off periodically, in a cycle, the on and off interval time should be one minute at least. If the interval time is less than this, the service life of the power unit may be shortened.

SECTION 6 Inspection and Maintenance

6.1 Checking of ionizing air snake

1. Recommend using a charge plate monitor (for instance CPM374) to check the ion balance, according to the Ionization Standard ANSI/ESD-STM3.1-2000 of the ESD Association.

2. If there is only a charge plate monitor held by hands, check the neutralizing performance periodically according to the following steps.

1) Measure the static voltage of a charged object by a charge plate monitor.

2) Turn on the power switch and the ionizing nozzle works normally. Make the charged objects under the air outlet of ionizing bar and 15~30mm from it for several seconds.

3) Measure the static voltage of the charged object again.


If the voltage obtained is within the eligible range, it means that the unit is in good service.



NOTE: If the ion balance has deflection, please adjust the ion balance adjustor on the high voltage power supply. When the offset is negative, adjust the adjustor anticlockwise and when the offset is positive, adjust the adjustor clockwise.

6.2 Regular maintenance

For working effectively, please keep the ion-discharged needle clean. Ion discharged needle can be cleaned by ordinary eraser. Turn off the power switch, put the eraser to placket of nozzle slowly, press it down lightly, and make the ion-discharged needle prick into the eraser and rotate the eraser at the same time. By this way the deposit in ion-discharged needle can be safely cleared.

 **NOTE: Not to use any sharp and hard object to scrape the ion-discharged needle, since it will scathe the ion discharged needle. Ion discharged needle should be kept as sharp as possible, in order to keeping the best effect of using. In case of ion discharged needle become blunt or scathed, replace it.**