

User Manual

ESDMAN P/N: H1212SAC

Please read carefully before using

- Thank you very much for purchasing our Ionizers
- Please read the instructions before use. Please use them according to the instructions, otherwise ESDMAN will not be responsible for the damages.

01 Product description

- According to the contents of 6.2.3.1 in ANSI/ESD S20.20, when static electricity is produced by electrostatic insulating objects or isolated semiconductors, positive and negative ion neutralization electrostatic should be produced by ionization technique. The ionization neutralization technique is ineffective for objects with large capacitors, such as human bodies, but it should be used in cases where grounding is not possible.
- According to IEC 61340-5-2:1, ionization neutralization techniques should not be the first choice for conducting objects and human bodies.
- H1212SAC is automatic cleaning type Ionizer, it has the cleaning brush inside, which is able to set up the cleaning brush automatically. Cleaning cycle within 0-999 hours, or can automatically clean the discharge needle(emitter needle). It is able to reduce the distress of frequent manual cleaning work, and ensure the long-term stability of static elimination device.
- H1212SAC is able to automatically clean the emitter point on time as per the set up. The excellent ion balance and decay time can be achieved for a long time.

02 What's in the packaging ?

Please confirm below content when the packaging is open

- Ionizer Unit * 1
- Power Supply * 1
- Bracket * 1
- Fixed handle * 2
- Rubber gasket * 2
- User Manual * 1
- Grounding Cord * 1
- Communication Cable for Option.

03 Main Features

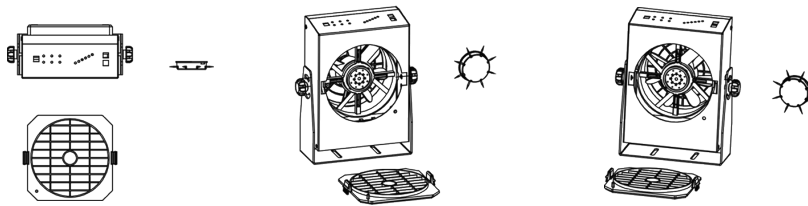
- The cleaning brush automatically cleans the emitter point
- Decay time is less than 1S @30cm
- Emitter needle material:99.99% tungsten,needle is replaceable
- Front louver panel easy to dismount and clean
- Auto Balance Technology ($\pm 10V$)
- The dust filter cover is for option to be purchased seperately
- LED Alarm Display, unit monitoring interface available
- 304 Stainless steel casing
- Wide Angle Louver Panel and Straight Louver Panel are for options



Wide Angle Louver Panel



Straight Louver Panel



Emitter Needle Replacement

04 Note

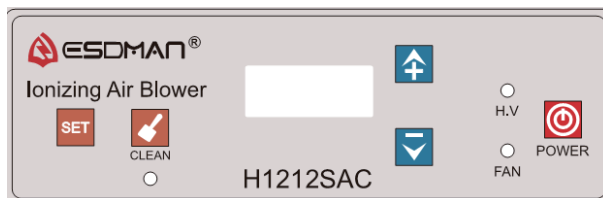
- To be safe, please observe the following matters.
- Please do not disassemble this product without authorization, or it will cause product malfunction.
- This product is not an explosion-proof product. It is strictly prohibited to use in hazardous environment (such as inflammable and explosive environment).
- This product has high pressure device and should avoid water or oil, high temperature or high humidity, especially high humidity and condensation.
- Please do not disassemble this product without authorization, it will cause product malfunction, personnel electric shock or even fire, and no warranty. If you need maintenance, please contact us directly.

05 Installation Method

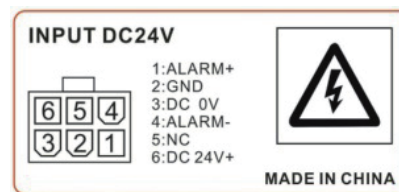
- Power Input: DC 24V
- Fasten the bracket to the Ionizer unit with plastic fixing knobs, and then place the rubber washer on the upper side of the bottom plate of the Bracket, and then connect the power supply cable and grounding cord.
- The grounding wire must be grounded according to provision.
- Note: The H1212SAC Ionizer unit must be grounded correctly to assure the auto balance of ion output.

06 Operation Method

Control Panel Diagram



Power interface and signal output port



- Put the H1212SAC at right position.
- There are 7 fan speed for options, choosing the right speed for operation (The greater the wind speed, the faster the electrostatic removal.)
- Turn on the power switch.
- After it is started for the first time, the LED indicators of "Run" "H.V" "Fan" are in green, it shows the ionizer running in good condition.
- Method for setting the whole machine locking, after starting the machine, hold the SET key for 3 seconds, the buzzer makes "tick, tick, tick" sounds, the whole machine is locked, all keys are invalid. Hold the SET key again for 3 seconds again, the buzzer makes "tick, tick, tick" sounds, the whole machine is unlocked.
- Method for manual cleaning, press the CLEAN key, start the cleaning brush, the cleaning brush rotates clockwise for 5 seconds and then counterclockwise for 5 seconds to clean the emitter needle, at this time, high voltage generator and fan stop running, after the cleaning brush stops, high voltage generator and fan resume running and start working.
- Method for manual cleaning, press the CLEAN key, start the cleaning brush, the cleaning brush rotates clockwise for 5 seconds and then counterclockwise for 5 seconds to clean the emitter needle, at this time, high voltage generator and fan stop running, after the cleaning brush stops, high voltage generator and fan resume running and start working.
- Power-off memory: Each time when the machine is turned on, it will run according to the air volume which was set before, and the cleaning brush will run according to the automatic cleaning cycle which was set previously.

07 Abnormal Alarm

- Once the "H.V Alarm" indicator is in red, it indicates that the high voltage generator is abnormal, please turn it off and clean the emitter needles.
- Once the FAN ALARM indicator is in red, it indicates an anomaly in the fan.
- Once the "C.C" indicator is in red, it indicates the cleaning of emitter needle is needed.
- H1212SAC is able to output 24V closed signal and with buzzer alarm.

08 Specifications

Part Number	H1212SAC
Power Input	DC24V±5%
Capacity	About 24VA
Discharge Time	Less than 1S @30cm
Ion Balance	±10V@30CM working distance
Ionization Technology	High Frequency AC Ionization
Electrostatic Needle Material	99.99% tungsten
Electrostatic Needle Replacement	Replaceable and effectively extend the life of the machine
LED Display	Power indicator, high-voltage operation and abnormal indicator, fan normal and abnormal indicator, cleaning indicator
Singal Output	When the high voltage or the fan is abnormal, it lights up red and outputs a 5V closing signal.
Air Volume Output	2.2-4.1m ³ /min
Filter	Optional 30ppi dust filter
Ozone Generation Amount (ppm)	Within 0.04ppm (measuring distance 150mm)
Environment Temperature	0-40°C
Environment Humidity	20%-70%RH (no condensation)
Dimension	620H×150W×90Dmm(The bracket is included)
Warranty	1 Year
Weight	4.5KGS
Certification	CE,FCC

09 Product Performance(Wide Angle Louver Panel)

Operating Voltage:DC24V

Testing Voltage: ±1000V - ±100V

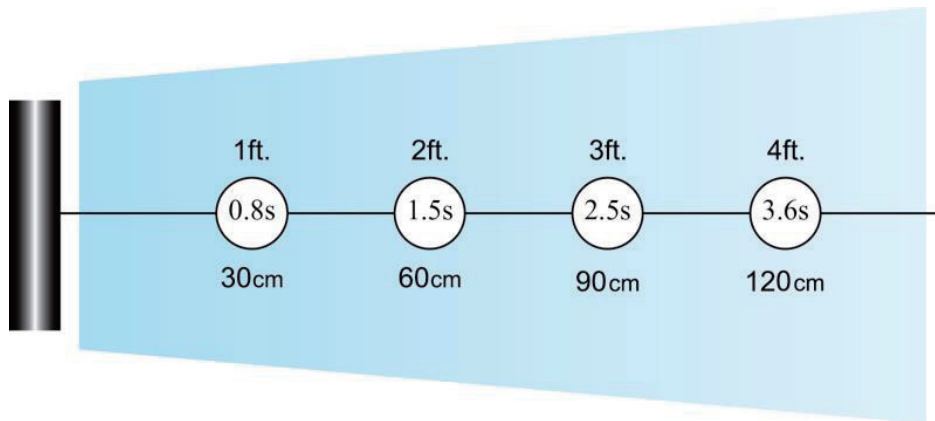
Temperature: 25°C

Distance	Ion Type	300mm	600mm	900mm	1200mm
Decay Time	+	0.8S	1.6S	2.4S	3.2S
	-	0.9S	2.0S	2.7S	3.6S
Ion Balance	+	±10V			
	-				

Notes:

- Measurement method: Measured with a 20PF and 150mm Charge PlateMonitor
- Decay time means the “fall time” from ±1000V - ±100V when the filter screen is not installed and the air volume is maximum.
- The Charge Plate Monitor is located at the center line of the fan outlet.

10 Discharge Time



11 Routine Maintenance

Emitter Needle Cleaning

- Cleaning of front windows
Remove the wrench on either side of the front window from the main engine by pressing the wrench inwards. It can be washed with cotton swab or with neutral detergents. After cleaning, the windows are installed back on the main engine after drying.
- Cleaning of emitter needle
After a long period of use of the emitter needle, dust and other contaminants will occur at or around the front end of the emitter needle. Please remove the contaminants with cotton swab. Emitter needle cleaning should be carried out regularly (every 100 hours). When the pollution is serious, cotton rods can be stained with alcohol for cleaning. Note not to damage the emitter needle when cleaning.

Emitter Needle Replacement

- Please check the emitter needle while cleaning the Emitter needles.
- Replace the new emitter needle immediately when the tip of the emitter needle is damaged.
- To pull out an emitter needle with a diagonal cutting plier, inserting a new emitter needle with the diagonal cutting plier to the original hole.
- The tip of the Emitter needle is very sharp. Please note not to get hurt when replacing it.
- The replacement period of emitter needle in the normal use environment is one year according to the actual use environment.

12 Troubleshooting Guide

Malfunction	Examination Content	Disposal Method
The power switch has been turned on, but no action has been made	Is the power supply connected properly?	Connect the power supply
	Whether the protective pillar of the front air window is broken	If breaking, please replace the front air window
There is wind, but the electricity removal effect is very weak	Is electrostatic needle attached to dust or foreign body?	Clean the emitter after power off
H. V is red and LED alarm light is on	Is there a foreign body around the emitter?	After closing the power supply, remove the foreign objects and connect the power supply.
	Is there a conductor approaching the emitter?	
FAN is red and LED is on	Are there any foreign bodies blocking fan blades?	Clean up the blade

Note:In the event of any failure other than the above mentioned, please contact our sales service department.

13 Product Picture

