

Instruction Manual

Air Gun-type Ionizer 【DTRY-ELG11】

Thank you very much for purchasing our DTRY-ELG11 Ionizer. Although this device is not specified as a high-voltage device according to the Standard for Electrical Equipment, it uses AC high-voltage of 2,000 V. Please be extremely careful when you are handling this device. Read this instruction manual carefully to familiarize yourself with the device to be able to handle the device with thoughtful attention. Please keep this Manual nearby for your reference.

1. Safety Precautions

Because a high voltage is used inside this product, improper use of this unit may cause an accident resulting in injury or death, or may lead to a malfunction of the product. Our company will not be held liable for any usage outside the Product Specifications or any accident caused by noncompliance with the Safety Precautions.

Danger	Expresses situations that can be clearly predicted as dangerous. If the noted danger is not avoided, it could result in death or serious injury. It could also result in damage or destruction of assets.
Warning	Expresses situations that, while not immediately dangerous, could become dangerous. If the noted danger is not avoided, it could result in death or serious injury. It could also result in damage or destruction of assets.
Caution	Expresses situations that, while not immediately dangerous, could become dangerous. If the noted danger is not avoided, it could result in light or semi-serious injury. It could also result in damage or destruction of assets.
Attention	While there is little chance of injury, this content refers to points that should be observed for appropriate use of the product.

1.1 Danger

Do not use in locations with or near dangerous substances such as flammable or ignitable substances. This product is not explosion-proof. It could ignite or burst into flames.
When any wiring, installation, or inspection work is to be carried out, make sure that the unit is disconnected from the power supply, or else an accident, an electrical shock or a malfunction may be caused.
Never remodel the product, otherwise you could be injured by such as abnormal operations.
Do not splash water on the product. Spraying it with water, washing it, or using it underwater could result in malfunction of the product leading to injury, electric shock, fire, etc.
A high voltage is applied to the discharge needle. Do not allow any conductive material, including your finger, any part of your body, wire or any tool to get close to the needle, or an electrical shock accident or a malfunction of the unit may occur.

1.2 Warning

Do not use this product in excess of its specification range. Such use could result in product breakdowns, cessation of function, shutdown or damage. It could as well result in a significant reduction of its service life.
Handle the discharging needle with caution, since it has a sharp-pointed tip. Wrong handling of it could result in body injury.
Always supply the power of the blow type Ionizer with applying air. Otherwise, bad effects on the main unit and its surroundings may occur.
Do not operate the unit by turning the nozzle to human body, especially to the face or to the eye of a person. This may cause serious injury to the person.

1.3 Caution

The Ionizer emits ozone into an atmosphere. If a single unit is operated, ozone will reach the saturation point and will not increase beyond the certain level. However, if several units are operated simultaneously and if you smell ozone, pay attention to the ventilation of the ambient. Do not attempt to check the smell of ozone by directly bringing your face close to the outlet of ionized air flow, since you might get your nose and throat hurt.
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1.4 Attention

When the product can no longer be used, or is no longer necessary, dispose of it appropriately as industrial waste.

※For any other items of danger, warning, or caution, please refer to the “Safety Precautions” in the Catalog for the “Static Electricity Removing Unit; IONIZER” (Catalog No. No. R0003). (Be sure to refer to the Latest Version of the Catalog.)

2. Contents of the Product Set

When this product has been delivered to your site, check the package for any missing part or for any abnormality or damages that may have occurred during delivery before using the unit. In case any damage should be found or any abnormal operation should be observed, please contact the shop where you purchased the product (the agency), or the nearest service station of our company.

2.1 Contents of the Package

- Main unit...1 unit
 - Instruction Manual (this booklet)...1 booklet
 - Connection cable (3 m) ... 1 line
 - Nozzle*...1 piece
 - discharge needle*...1 piece
 - AC adapter ...1 unit
- * Attached to the Main Unit before shipment.

2.2 Consumable Items

To maintain the optimum performance of this product, it is recommended that consumable items should be regularly replaced.

- Discharge needle: DTRY-ZEM-G11

3. Product Overview

This product is an Air gun-type ionizer (static electricity removing unit) capable of immediately solving any problems that occur in connection with static electricity. By using ionized air it generates, the unit can promptly and efficiently eliminate the static electricity eliminate dust attached to the workpiece. In this way, the unit can efficiently control the problems caused by the static electricity and contamination caused by dust.

4. Specifications

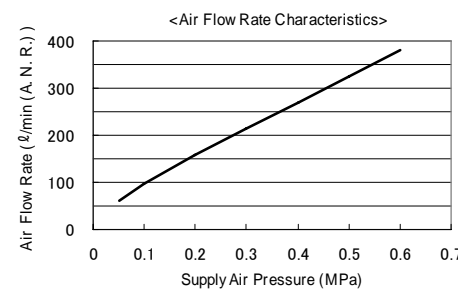
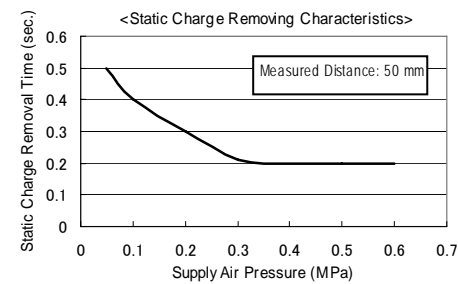
4.1 List of Specifications

Type	DTRY-ELG11
Input Power Voltage	DC24V±5% (Main unit)
Current Consumption	Approx. 100 mA
Output Voltage	Approx. 2 kV (High frequency AC type)
Displays	Power indication LED (Green) Abnormality indication LED (Red)
Outside Dimensions	138 (L) × 25 (W) × 142 (H) (not including protruding part)
Mass	250 g <Main unit only>
Ion Balance	±15 V ※
Generated Ozone Volume	0.04 ppm or less (Measured at 200 mm from the tip of the nozzle under pressure of 0.20 MPa)
Range of Air Pressure Used	0.05 ~ 0.6 MPa
Environmental Temperatures Used	Indoor: 0 ~ 40°C (no condensation allowed)
Fluid Used	Air (vapor- and oil- removed clean air)
AC Adapter	Rated input: 100~240 VAC: 50/60 Hz; 0.6 A Rated output: 24 V DC: 750 mA Cable length: 300 mm

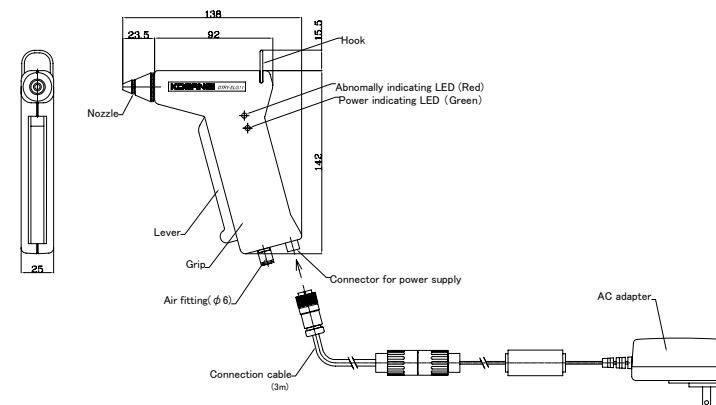
※Measured according to the measuring conditions of our company.

4.2 Static Removing Characteristics and Flow Characteristics

(※Measured according to the measuring condition of our company)



5. Appearance



6. Installation, Wiring, and Piping

6.1 Installation

- Please use this product by holding it with your hand in a similar manner as you would use a generic air gun. It is possible to suspend main unit by using a piece of hook.

Caution

Main unit incorporates piezoelectric ceramic components. Do not apply any shock to main unit by dropping it on the floor, etc. This may cause damage to this product.
Do not install the unit at a location where condensation is liable to occur or where it is exposed to any drastic changes in temperatures or humidity. This may cause damage to this product.

6.2 Power Supply Wiring

- Use the supplied connecting cable to connect the main unit and the AC adapter, and connect the AC adapter to the power source (100~200 V AC, 50/60 Hz).

Caution

Always use the dedicated AC adaptor. Such use or conversion could result in cessation of function, shutdown, or damage.

6.3 Air Piping

- Use clean air. No vapor and oil are allowed.
- Attach an air tube (with an outer diameter of φ 6 mm) to the air fitting of main unit. (Recommended tube: Urethane tube or nylon tube)
- Connect the air tube to the air supply source via a regulator.

Warning

Make sure that the air is supplied to the Unit before turning on the power to this Unit. The flow rate of the air in service should be adjusted to 65 (l/min. (A.N.R.)) or higher.
Do not replace the air fitting. This may cause failure to the main unit.

Caution

Do not use other nozzles than the dedicated nozzle, and not remodel nozzle. Such use or conversion could result in cessation of function, shutdown, or damage.

7. Operation

- ① Check to confirm that the power supply wiring and the air piping are correctly connected.
- ② Supply the main unit with air adjusted to the correct pressure by the regulator. Make sure that the setting of the pressure applied always remains within the specified pressure range of service.
- ③ Supply the AC adapter with the power (100~240 V AC; 50/60 Hz).
- ④ Hold the main unit firmly with your hand and turn the tip of the nozzle toward the workpiece. Pull the lever of the main unit. The power indication LED (green) will turn on and the ionized air will blow out from the tip of the nozzle.
- ⑤ To shut down the ionized air, release the lever of the main unit that you have pulled. The lever will return to the initial position, the power indication LED will go off, and the ionized air will stop.

Warning

Do not operate the unit by turning the nozzle to human body, especially to the face or to the eye of a person. This may cause serious injury to the person.

Caution

If the power indication LED does not turn on or the abnormality indicating LED is turn on, immediately turn off the power to the unit. Read “6. Installation, Wiring, and Piping” of this manual. If the trouble cannot be solved, refer to “8. Maintenance” and “9. Troubleshooting” of this manual.

8. Maintenance

- Cleaning of the discharge needle and its surrounding area

If the tip of the discharge needle is contaminated, the static electricity elimination effect will deteriorate. When the static electricity elimination effect is observed to have been deteriorated, use a cotton swab etc to clean the needle.

<Cleaning Method>

Rotate the nozzle to remove it from the main unit. Clean the discharge needle inside the main unit and the surrounding area by using a cotton swab soaked with alcohol (IPA). Contamination of the tip of the discharge needle will cause the static electricity elimination effect to be deteriorated. After cleaning the needle, restore the nozzle to the original condition and confirm that it is securely attached.

- Replacement of the discharge needle

The discharge needle is a consumable item and needs to be replaced in time. When replacing a discharge needle, be sure to use the dedicated tool (DTRY-ELB21) in combination with a torque driver. Set the tightening torque to 15 ~ 20N · cm. Tightening with incorrect torque may damage the screw on the main unit.

Warning

The tip of the discharge needle is sharp. Pay special attention when removing and cleaning the discharge needle, or else you may injure yourself. Be especially careful not to cause the discharge needle to be bent or damaged. This may degrade the performance of the unit.

Caution

To maintain the performance of the unit, be sure to carry out cleaning of the discharge needle and the surrounding area at a regular interval. If you continue to use the unit without doing maintenance, static electricity elimination may be insufficient or the work piece may damage.

Be sure to disconnect the connection cable before carrying out any maintenance work on the unit.

Make sure the room is thoroughly ventilated when alcohol or the like is used for cleaning. In addition, allow the unit to be fully dried after cleaning it with alcohol. Be sure to confirm that the unit is not wet with alcohol before using it.

Never use a wire brush for cleaning. This may cause serious damage to the unit.

9. Troubleshooting

- In case any abnormal condition is observed in this product, immediately turn off the power from the main unit. Disconnect the cable from the connector on the main unit. Then, read this section carefully and follow the instructions. If the abnormality cannot be solved even after that, please contact the shop where you purchased the product (the agency), or the nearest service station of our company.

○Symptom:

- The power indication LED or the abnormality indication LED does not light up even when you pulled the lever.

●Contents to be confirmed:

- Check the AC adapter to confirm that it is connected to the power source.
- Check the power supply to confirm that it is supplied normally.

○Symptom:

- No ionized air is supplied even when you pulled the lever.

●Contents to be confirmed:

- Check the pneumatic circuit.
- Check the compressed air to confirm that it is supplied normally.

○Symptom:

- When abnormality indication LED (Red) is lighted up.

●Contents to be confirmed:

- Check the nozzle to confirm that it is not touching any grounded article.
- Check the nozzle to confirm that there is no loosening.
- It is possible that the discharge needle is either contaminated or is broken, or the surrounding area of the discharge needle is contaminated. Carry out the maintenance work or replacement of the discharge needle in accordance with “8. Maintenance” of this manual.

○Symptom:

- No static electricity elimination is performed.

●Contents to be confirmed:

- It is possible that the discharge needle is either contaminated or is broken, or the surrounding area of the discharge needle is contaminated. Carry out the maintenance work or replacement of the discharge needle in accordance with “8. Maintenance” of this manual.

○Any other abnormal condition:

- If any other abnormal condition than above has been observed, immediately turn OFF the power from the product, and please contact the shop where you purchased the product (the agency), or the nearest service station of our company.



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※The specifications or the appearance of this product is subject to change any time without prior notice.

X903841 Ver1.02