ION WIPER that incorporates a high-frequency AC type Ionizer and a built-in air curtain to maintain workplace cleanliness, along with highly efficient removing static electricity, dust removal, and dust collection in a single unit box.

**Crecede ION WIPER**

Three powerful functions (removing static electricity, dust removal, dust collection) in a single unit

High-frequency AC "Ionizer" Compact blow type

ONE UNIT BOX

Dust collection mechanism

Photograph is for image purposes only.
ION WIPER that incorporates a high-frequency AC type Ionizer and a built-in air curtain to maintain workplace cleanliness, along with highly efficient removing static electricity, dust removal, and dust collection in a single unit box.

ION WIPER prevents defects before they have a chance to occur due to electrical charges and dust adhering LCD, molded plastic, electronic, and other components.

This model provides charge removal, dust removal and a dust collection box in a new design. This small box configuration improves workspace economy and work efficiency, as well as quality and productivity.

A4 • A3
Desktop Clean Unit
High Performance Compact Static electricity removing unit “Ionizers”

These static electricity removing unit “Ionizers”, which boast a history of performance and reliability, are also available in blow, fan, air gun, and other types. A high-frequency AC system (68,000 Hz) produces outstanding ion generation balance and stability. Low output voltage of approximately 2 kV virtually eliminates noise. (EN55011: Satisfies Group1 Class A.)

Perfect for desktop operation


Supports in-line operation

An air curtain inside the box creates a local clean environment, extremely effective for in-line production.

Air Curtain

Supports in-line production

Inserting a workpiece activates an air curtain at the top of the box front and sides, which isolates the interior from the work site. This eliminates worries about dust scattering after blowing. Transparent anti-static covers on the sides provide a good visibility during operation. Even if small components fall through, they can be retrieved from the workpiece receptacle. They can be positioned to suit the work process.

Perfect for desktop operation

For cellular production

A4-size type that’s perfect for cellular production

Note: Not Ion air.

Shower nozzle (ion air outlet)

Ion air blower blows off dust that adheres due to static electricity.

Photoelectric switch (workpiece loading confirmation sensor)

For accurate loading confirmation of workpieces. Even if small components fall through, they can be retrieved from the workpiece receptacle.

Pressure gauge

For measuring the air pressure of the air curtain. For accurate positioning of the workpiece. Air pressure range: 0.5 to 0.7 MPa [7 to 73 psi]
An air curtain inside the box creates a local clean environment without scattering of post-blow dust.

**Ion balance**

±15V

**Charge removal performance**

1000V → 100V 1 sec (0.5 MPa [72 psi], 50 mm [1.969 in])

**Output terminal** (No-voltage a contact 24 VDC 2 A max)

- **ERROR** (Emergency stop)
  Conduction when there is an Ion wiper error stop.
- **ION END** (Ionizer operation ended)
  Conduction for about 0.2 seconds when ion air blower is ended. Can be used for an operation count or other process management.
- **VAC START** (external device operation)
  Conduction during the period from workpiece insertion to process end. Can be used to sync operation with an external dust collection device, etc.

**Ari IN port** (ø 8 mm [0.315 in] quick fitting)

**Throttle valve** (flow adjustment)

For Ionizer

**Ionizer operating time switch**

Can be used to select one of three settings (1 second, 2 seconds, continuous) to suit the workpiece.

**Reset button**

This button can be used to reset after an error stop.

**Exhaust duct**

Exhaust outlet for collected dirt. The piping port outside diameter is ø 76.3 mm [3.004 in] (recommended exhaust host nominal diameter: ø 75 mm [2.953 in]). If you have a dust collector, select the type without blower fan.

- Built-in dust collection blower fan type
  (A4-size type: DTY-WCM-S; A3-size type: DTY-WCM-L)
- Without blower fan
  (A4-size type: DTY-WC-S; A3-size type: DTY-WC-L)

**Ion wiper operation steps**

Inserting a workpiece sequentially executes each function.

1. **Workpiece insertion**
   Dust collection blower fan start (External device operation signal ON)

2. **Air curtain operation**
   Select from among: 1 second, 2 seconds, continuous (Error signal and stop when an ion wiper abnormality occurs)

3. **Ionizer operation**
   Ionizer operation end signal output for approximately 0.2 seconds

4. **Ionizer stop**

5. **Air curtain stop**

6. **Blower stop**
   Dust collection blower fan stop (External device operation signal OFF)

7. **Workpiece removal**
   Charge removal and dust removal operation end

* For details about operation steps, refer to page 56.

**A3-size type that's perfect for large workpieces**

Two Ionizers built into a unit with an installation area of 400 (W) × 366 (D) [15.7 (W) × 14.4 (D)], which is just about A3-size.
Examples of ion wiper uses

- Charge removal and dust removal from molded plastic components. Removal of dirt and other foreign matter following deburring.

- Charge removal and dust removal from mobile phone and other product assemblies. Two ionized air outlets enable removal from two units at the same time.
  
  Note: The left and right ionizers start and stop operation simultaneously.
  
  Operation can also be performed with both side covers removed.

- Charge removal and dust removal from meter panels, etc.

- Charge removal and dust removal from resin covers, lamp covers, etc.

- Charge removal and dust removal from digital camera lens units, etc.

- Charge removal and dust removal from a comparatively wide range of resin cases, etc.

- Charge removal of various types of substrates
  - Charge removal

- Example of in-line use. Ion wiper can be placed in a conveyor or other setting for component charge removal and dust removal.

- Example of in-line use. Ion wiper can be placed in a conveyor or other setting for component charge removal and dust removal.
**Ion wiper operation steps explained**

Operation Example: Ionizer operation time setting: 2 seconds. Dust removal blower built-in type.

Inserting a workpiece executes each function in the sequence illustrated below.

* Steps 1 to 8 (Sensor detection → Blower operation → Air curtain operation → Ionizer operation start) are executed in approximately 0.5 seconds.

1. **Workpiece insertion**
   - The sensor (photoelectric switch) detects insertion of the workpiece, and operation starts.

2. **Blower operation**
   - The internal dust collection blower fan operates.
     (Built-in dust collection blower fan type)

3. **Air curtain operation**
   - The air curtain activates at the top of the front and sides, which prevents dust from scattering in the surrounding area.

4. **Ionizer operation**
   - Ion air blower starts for the specified time (2 seconds).

5. **Ionizer stop**
   - The ion air blower stops after the specified time elapses.

6. **Air curtain stop**
   - Air curtain operation stops.

7. **Blower stop**
   - The dust collection blower fan stops.

8. **Workpiece removal**
   - Charge remove and dust removal stops. Remove the workpiece.
**Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>DTY-WC-S</th>
<th>DTY-WCM-S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blower fan</td>
<td>None</td>
<td>Built in</td>
</tr>
<tr>
<td>Power supply</td>
<td>100 VAC</td>
<td>±10% (50/60 Hz)</td>
</tr>
<tr>
<td>Consumption current</td>
<td>mA</td>
<td>Approx. 650</td>
</tr>
<tr>
<td>Built-in ionizer</td>
<td></td>
<td>DTRY-ELL01 (1 unit)</td>
</tr>
<tr>
<td>Ion balance max</td>
<td>V</td>
<td>±15</td>
</tr>
<tr>
<td>Media</td>
<td>Air</td>
<td></td>
</tr>
<tr>
<td>Decay time max</td>
<td>sec(1000V+100V, 0.5 MPa [73 psi], 50 mm [1.969 in])</td>
<td></td>
</tr>
<tr>
<td>Operating pressure range</td>
<td>MPa [psi]</td>
<td>0.2 to 0.7 [29 to 102]</td>
</tr>
<tr>
<td>Ionizer set pressure range</td>
<td>MPa [psi]</td>
<td>0.05 to 0.5 [7 to 73]</td>
</tr>
<tr>
<td>Port size</td>
<td>mm [in]</td>
<td>8 [0.315] Quick fitting</td>
</tr>
<tr>
<td>Ionizer operating time (switch)</td>
<td>s, s, continuous</td>
<td></td>
</tr>
<tr>
<td>External output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ERROR (emergency stop)</td>
<td>No-voltage a contact (24 VDC, 2 A max)</td>
<td></td>
</tr>
<tr>
<td>IDN END (ionizer operation ended)</td>
<td>No-voltage a contact (24 VDC, 2 A max)</td>
<td></td>
</tr>
<tr>
<td>VAC START (external device operation)</td>
<td>No-voltage a contact (24 VDC, 2 A max)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Ionizer error stop function (with reset button)</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Values measured under Koganei measurement conditions. Values are not guaranteed values.

**Dimensions (mm [in])**

- Power switch
- Throttle valve
- Air curtain pipe
- Regulator (for ionizer)
- Set pressure range: 0.05 to 0.5 MPa [7 to 73 psi]
- IN port φ8 [0.315] Quick fitting
- 0.2 to 0.7 MPa [29 to 102 psi]
- Reset button
- Ionizer operating time
- Switch
  - (1s, 2s, continuous)
- Output terminal
- Blower duct
- Transparent cover
- (Anti-static treated item)
- Expanded metal
- Photoelectric switch
- Air curtain
- Ion blow
- AC cord (Approx. 2.8 m [9.186 ft])
- With ground prong

**Types:**
- **DTY-WC-S** (Without blower fan)
- **DTY-WCM-S** (Built-in dust collection blower fan type)
**Specifications**

<table>
<thead>
<tr>
<th></th>
<th>DTY-WC-L</th>
<th>DTY-WCM-L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blower fan</td>
<td>None</td>
<td>Built-in</td>
</tr>
<tr>
<td>Power supply</td>
<td>100 VAC</td>
<td>Built-in</td>
</tr>
<tr>
<td>Consumption current</td>
<td>mA</td>
<td>A</td>
</tr>
<tr>
<td>Built-in ionizer</td>
<td>DTRY-ELL01 (2 units)</td>
<td></td>
</tr>
<tr>
<td>Ion balance</td>
<td>±15 V</td>
<td></td>
</tr>
<tr>
<td>Media</td>
<td>Air</td>
<td></td>
</tr>
<tr>
<td>Decay time</td>
<td>1 sec</td>
<td></td>
</tr>
<tr>
<td>Operating pressure</td>
<td>MPa [psi]</td>
<td></td>
</tr>
<tr>
<td>Ionizer set pressure</td>
<td>MPa [psi]</td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>mm [in]</td>
<td></td>
</tr>
<tr>
<td>Ionizer operating time (switch)</td>
<td>1s, 2s, continuous</td>
<td></td>
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<td>External output</td>
<td>ERROR (emergency stop)</td>
<td>No-voltage a contact (24 VDC, 2 A max)</td>
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<td>ION END (ionizer operation ended)</td>
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<td></td>
<td>VAC START (external device operation)</td>
<td>No-voltage a contact (24 VDC, 2 A max)</td>
</tr>
<tr>
<td>Mass</td>
<td>kg [lb]</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Ionizer error stop function (with reset button)</td>
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**Dimensions (mm [in])**

[Diagram showing dimensions and parts of the device]