No. C-40
AC Pulse Ionizing Clean Bar

Bar-type ionizers best suited to mounting to a variety of equipment. Air purge construction enables super-fast static electricity removal to be accomplished. With a line-up of abundant sizes, they respond to various applications.

Aerodynamic body design of the thin cross sectional area enables quick static electricity elimination to be achieved without causing changes in air flow in a clean room or above in a clean bench. Being capable of setting frequency in 10 levels as well as being equipped with auto ion balance mode in which ion balance is automatically adjusted according to the polarity of a charged object, these ionizers can make adjustments according to the installation distance or the amount of charge.

Frequency setting

<table>
<thead>
<tr>
<th>Installation place</th>
<th>Location</th>
<th>mm</th>
<th>Frequency, Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Film/conveyor</td>
<td>Close distance</td>
<td>50~300</td>
<td>20~50</td>
</tr>
<tr>
<td>Clean bench</td>
<td>Intermediate distance</td>
<td>600~750</td>
<td>8~10</td>
</tr>
<tr>
<td>Clean room ceiling</td>
<td>Long distance</td>
<td>900~1500</td>
<td>0.1~5</td>
</tr>
</tbody>
</table>
**C-series**

**AC Pulse Ionizing Clean Bar**

- **Ionizing method:** Pulse AC corona discharge
- **Applied voltage:** 8~12.5kVAC (p-p)

- **Super compact design in which a high voltage power supply, control circuit, and air circuit have been incorporated.**
- **Terminals are collected on one side for easy daisy chain.**
- **Newly developed needle electrode socket is an air purge construction in which air purge outlets are provided around electrode needles.** This does not only prevent contamination on the needle electrode tip but also helps super-fast static electricity removal.
- **Oppose electrodes are incorporated in the body. This structure prevents particles from adhering to the body outside that is caused by induction voltage, and minimizes losses in applied voltage, enabling the ion generation efficiency to be improved.**
- **Adopts the needle electrode socket type in which a needle can be easily replaced by one-touch operation.**
- **Equipped with auto balance mode that optimally adjusts ion balance automatically according to the polarity of a charged object. (Target distance: 50 to 100 mm)**

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**One point**

**AC Pulse Auto Balance Mode**

The C series are equipped with a mode to optimally adjust the ion balance automatically according to the polarity of the charged object. (Target distance: 50 to 100 mm)

- **C-series**

- **When positively-charged object remains**

- **More negative ions are generated.**

**AC pulse method**

Generating alternatively positive ions and negative ions from each electrode. Since ions are generated at the maximum width of each positive and negative electrode cycle, the ion volume is high and static electricity can be removed quickly.

**Typical alternating current**

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**Model No.** | **Overall length (mm)** | **Discharge needle useful length (mm)** | **Middle Blacket (pcs)** | **Electrode needle (pcs)** | **Weight (kg)** | **EDP No.**
--- | --- | --- | --- | --- | --- | ---
C-90 | 877 | 660 | 0 | 12 | 0.9 | 621851
C-100 | 1078 | 900 | 1 | 16 | 1 | 621852
C-120 | 1318 | 1140 | 1 | 20 | 1.2 | 621853
C-150 | 1558 | 1380 | 1 | 24 | 1.4 | 621854
C-170 | 1798 | 1620 | 2 | 28 | 1.6 | 621855
C-200 | 2038 | 1860 | 2 | 32 | 1.8 | 621856
C-220 | 2278 | 2100 | 2 | 36 | 2.3 | 621859
C-250 | 2518 | 2340 | 3 | 40 | 2.6 | 621860
C-270 | 2758 | 2580 | 3 | 44 | 2.8 | 621861
C-300 | 2998 | 2820 | 3 | 48 | 3.1 | 621862

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**Power supply**

- **Current consumption (mA):**
- **Decay time & Frequency:**
- **Pulse ratio & Voltage level:**

<table>
<thead>
<tr>
<th>Power supply</th>
<th><strong>Current consumption (mA)</strong></th>
<th><strong>Decay time</strong></th>
<th><strong>Frequency</strong></th>
<th><strong>Pulse ratio</strong></th>
<th><strong>Voltage level</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>24/DC±5%</td>
<td>600</td>
<td>within 0.8sec</td>
<td>10steps (0.1~50Hz)</td>
<td>±40~70% <del>60</del>30%</td>
<td>±10steps each</td>
</tr>
</tbody>
</table>

- **AC pulse method**

- **Generating alternating positive ions and negative ions from each electrode. Since ions are generated at the maximum width of each positive and negative electrode cycle, the ion volume is high and static electricity can be removed quickly.**

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**Model No.** | **Overall length (mm)** | **Discharge needle useful length (mm)** | **Electrode needle (pcs)** | **Weight (kg)** | **EDP No.**
--- | --- | --- | --- | --- | ---
C-40 | 422 | 240 | 5 | 0.78 | 621857
C-60 | 602 | 420 | 8 | 1.08 | 621858

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**Power supply**

- **Current consumption (mA):**
- **Decay time & Frequency:**
- **Pulse ratio & Voltage level:**

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**C-series**

- **Short type optimal for installation on a conveyor or in equipment.**
- **Consolidated terminals on the back side. Power can be supplied by daisy chain wiring.**

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**No. C-40/C-60**

**AC Pulse Ionizing Clean Bar**

- **Ionizing method:** Pulse AC corona discharge
- **Applied voltage:** 8~12.5kVAC (p-p)

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**VESEL**

Wide range of static elimination and size extension supporting any work environments Bar Type
**No. SL-series**  Ionizing Bar NEW

Ionizing method: AC high voltage applied type  Applied voltage: 4kVAC

- Compact & slim body designed.
- Detachable discharge needle & high-voltage cable.
- Changing an angle after the installation is available by the bracket.
- High-voltage power supply (No.GP-1) as an option makes it possible to control the removal of electricity precisely.

![Ionizing Bar Diagram](image)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Overall length (mm)</th>
<th>Discharge needle useful length (mm)</th>
<th>Electrode needles (pcs)</th>
<th>Weight (g)</th>
<th>EDP No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL-20</td>
<td>211</td>
<td>138</td>
<td>3</td>
<td>200</td>
<td>621877</td>
</tr>
<tr>
<td>SL-30</td>
<td>371</td>
<td>298</td>
<td>7</td>
<td>300</td>
<td>621878</td>
</tr>
<tr>
<td>SL-50</td>
<td>531</td>
<td>458</td>
<td>11</td>
<td>700</td>
<td>621879</td>
</tr>
<tr>
<td>SL-80</td>
<td>851</td>
<td>778</td>
<td>19</td>
<td>900</td>
<td>621880</td>
</tr>
<tr>
<td>SL-120</td>
<td>1,171</td>
<td>1,098</td>
<td>27</td>
<td>1,100</td>
<td>621881</td>
</tr>
<tr>
<td>SL-150</td>
<td>1,491</td>
<td>1,418</td>
<td>35</td>
<td>2,000</td>
<td>621882</td>
</tr>
<tr>
<td>SL-180</td>
<td>1,811</td>
<td>1,738</td>
<td>43</td>
<td>2,200</td>
<td>621883</td>
</tr>
</tbody>
</table>

Ion balance: within 50V, Decay time: within 10s, Airflow: 135L/min

Accessory: Grounding wire
Options: Connecting cable GP-EC25, GP-EC5, SJ-EC25, SJ-EC5, Needle electrode unit SJ-00HR

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**No. GP-1 4kV**  High Voltage Power Supply Unit NEW

Output voltage: 4kVAC (50/60Hz)

- Detects high voltage by an anomaly detection circuit.
- Can adjust ion balance with adjusting volumes.

![High Voltage Power Supply Unit](image)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Power supply</th>
<th>Size (L)</th>
<th>Weight (g)</th>
<th>EDP No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP-1 4kV</td>
<td>24VDC±10%</td>
<td>233.5x114.2x102.8</td>
<td>4500</td>
<td>623044</td>
</tr>
</tbody>
</table>

- Applicable: HPV-1, HPF-1, HPF-7, SL-series
- Relevant: Power Adapter No. AD24-GFE

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**No. SH-G3**  Power supply units

Ionizing method: Pulsed AC corona discharge  Applied voltage: 5kVAC-p

- Equipped with two sockets for connecting the SL ionizing bars. They can be installed and wired easily.
- With the ion balance adjustment function (pulse ratio).
- Equipped with a safety circuit that shuts down the output if overcurrent or high-voltage error occurs.
- Lightest-weight body in the industry: 1.5kg.

![Power Supply Unit](image)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Input power supply</th>
<th>Power consumption (W)</th>
<th>Frequency (Hz)</th>
<th>Plus ratio</th>
<th>Weight (kg)</th>
<th>EDP No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH-G3</td>
<td>100~240V AC (50/60Hz)</td>
<td>10</td>
<td>30</td>
<td>40~70%</td>
<td>60~30%</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Accessories: AC Power cable 1.8m for 100VAC, and input 2 cables.
High Power Ionizing Bar NEW

- Super slim model, optimum for installation in a cramped space of equipment.
- Titanium needle electrode, with less electric corrosion wear.
- Ion balance adjustment, Anomaly detection, Automatic stop, and Alarm output can be set with the high voltage power unit No. GP-1 4kV (option).
- Air Assist Bar is also available as an option.

<table>
<thead>
<tr>
<th>No.</th>
<th>HPB-series</th>
<th>Overall Length (mm)</th>
<th>Discharge needle useful length (mm)</th>
<th>Electrode needles (pcs)</th>
<th>Weight (g)</th>
<th>ED. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPB-300</td>
<td>300</td>
<td>240</td>
<td>17</td>
<td>501</td>
<td>623316</td>
<td></td>
</tr>
<tr>
<td>HPB-600</td>
<td>600</td>
<td>540</td>
<td>37</td>
<td>662</td>
<td>623336</td>
<td></td>
</tr>
<tr>
<td>HPB-810</td>
<td>810</td>
<td>750</td>
<td>51</td>
<td>774</td>
<td>623350</td>
<td></td>
</tr>
<tr>
<td>HPB-1005</td>
<td>1,005</td>
<td>945</td>
<td>64</td>
<td>879</td>
<td>623363</td>
<td></td>
</tr>
<tr>
<td>HPB-1200</td>
<td>1,200</td>
<td>1,140</td>
<td>77</td>
<td>988</td>
<td>623376</td>
<td></td>
</tr>
<tr>
<td>HPB-1500</td>
<td>1,500</td>
<td>1,440</td>
<td>97</td>
<td>1,148</td>
<td>623396</td>
<td></td>
</tr>
<tr>
<td>HPB-1800</td>
<td>1,800</td>
<td>1,740</td>
<td>117</td>
<td>1,309</td>
<td>623416</td>
<td></td>
</tr>
</tbody>
</table>

One point

For highly charged or fast moving products

Titanium discharge needles

A titanium needle is more wear-resistant and have a longer lifetime than a regular stainless steel. The needles are located every 15mm on the bar, allowing to generate many ions effectively. This design is suitable for a high speed application.

Super Slim

The sectional dimensions: 16.4 x 22.4mm. Can be installed even in a cramped space.

Mounting Bolts (M5)

2 pieces (standard accessory, included). 1 more every time the total length exceeds 1 m.

Dedicated High Voltage Power Unit

Use No. GP-1 4kV.

High Voltage Shielded Cable

As the high voltage cable is shielded, there is no need for further ground.