SE-BLL Laminar Air Blower Ionizer

Wide-area pulsed DC static elimination up to 1000 mm — five lengths, no compressed air, replaceable ionizer module



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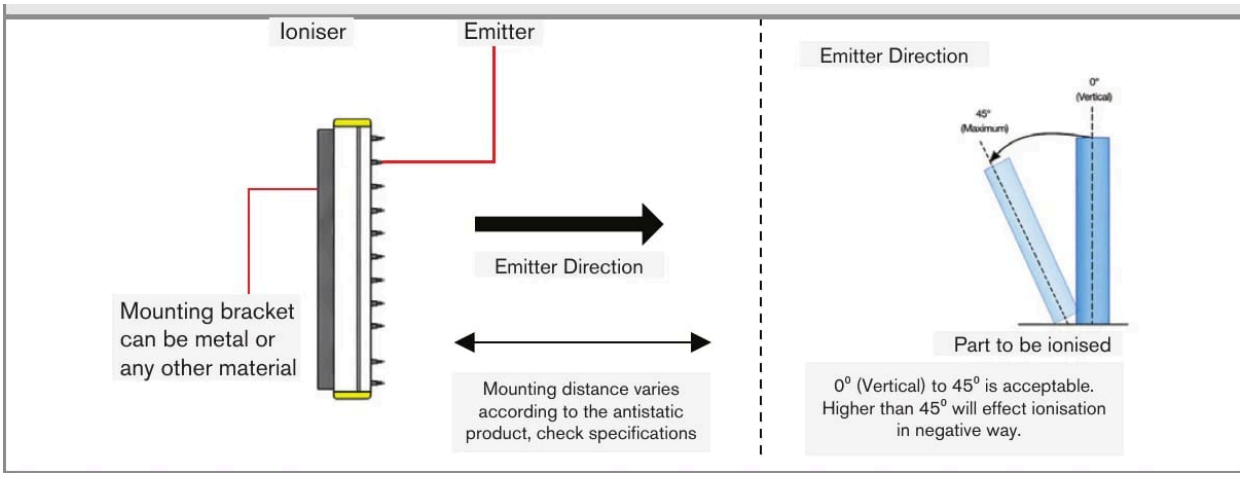
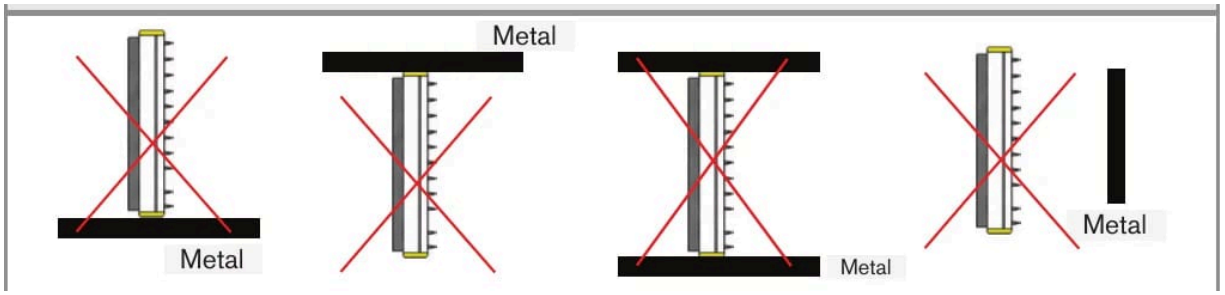
1 Important — mounting

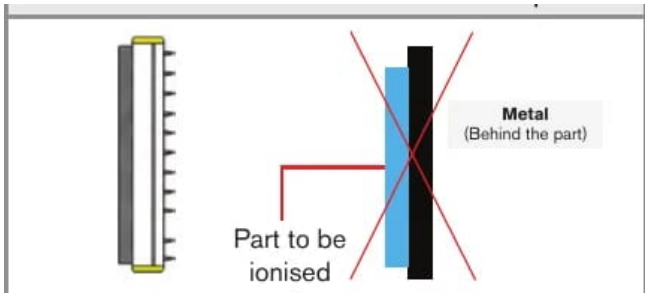
- When installing ionizers without air assist, always point the emitters towards the part. Tilted mounting of up to 45° from vertical is acceptable; a larger angle reduces ionization performance.
- Do not cover the ionizer with metal and do not attach metal close to the emitter pins.
- Never place metal behind the part to be ionized. Otherwise the static eliminator cannot neutralise the part.
- The mounting bracket can be metal or any other material.
- The mounting distance depends on the antistatic product — see the technical information.



Emitter direction and permissible tilt (0° – 45°)



Do not cover the ionizer with metal or attach metal close to the emitter pins



Never put metal behind the part to be ionized

2 Intended use

The SE-BLL-F series laminar air blower ionizer is an integrated high-power, high-speed DC ionizing air blower for neutralising electrostatic charges in industrial environments. It provides adjustable airflow for different applications and working distances.

It is intended for applications such as electronics assembly, plastics processing, printing, packaging and other environments where electrostatic discharge can affect product quality or process reliability. The ionization range is up to 1000 mm.

Use the product only within the technical limits and operating conditions specified by the manufacturer. Improper use or operation outside these conditions may reduce performance or cause safety risks.

3 Operating limits

The system must be operated within the limits specified in the technical data and in accordance with the technical specifications and installation instructions.

The system must be used in such a way that no persons are endangered and no machines or other material goods are damaged in the event of a malfunction or total failure of the system. Take additional precautions for safety and damage prevention in safety-related applications.

4 Technical information

Product code	SE-BLL-F-xxxx-C (530 / 700 / 1055 / 1420 / 2130)
Power supply (sold separately)	SE-PSU-24-C-M12 (220 V AC to 24 V DC)
Operating voltage	24 V DC (21 – 28 V)
Ionization type	Pulsed DC — shockless
Pin current (safety)	< 250 µA
Ionization range	Up to 1000 mm
Ionization performance	1 kV → 100 V in < 7 s at 1000 mm distance
Fan speed adjustment	Front panel buttons (▲ / ▼) — step-adjustable
Emitter pin material	Tungsten — extremely long lifetime
Pin cleaning	Manual — remove the front cover and clean the tungsten pins with the brush of the FÖGE maintenance kit
Ionizer module	Replaceable — the full unit does not need to be replaced at service
Filter	Replaceable foam filter, 10 PPI
Polarity	Alternating pulsed DC — balanced ion output
Connector	M12, 5-pin (cable not included)
LED indicators	24 V supply · ionization status (green: OK, red: fault) · fan speed level
Controls	Power button · fan speed buttons ▲ / ▼
Ground terminal	Yes — do not operate without connecting the ground terminal to earth
Mounting	Adjustable 2-way mounting bracket — bottom or rear mounting · 4 × ⌀ 9 mm holes
Operating temperature	0 – 50 °C
Max. humidity	70 % rH
Housing	Industrial-grade, impact-resistant
EMC compliance	2014/30/EU — EMC Directive
Electrical safety	2014/35/EU — Low Voltage Directive

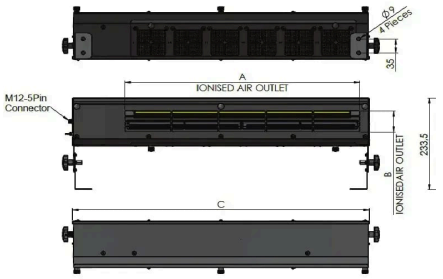
Ionization range measured under standard conditions (20 °C, 50 % rH) with fans at maximum speed. Effective range may vary with ambient temperature, humidity and fan speed setting. Air flow speed and noise level are measured at 1000 mm.

5 Dimensions and installation

Operating the system requires knowledge of the assembly instructions. The signal words used are explained in the section Safety.

The mounting brackets can be installed from the bottom or from the rear side, depending on the installation requirements (4 × ⌀ 9 mm holes).

Product	Ionized air outlet A (mm)	B (mm)	Overall length C (mm)
SE-BLL-F-530-C	541	53	684
SE-BLL-F-700-C	711	53	854
SE-BLL-F-1055-C	1066	53	1209
SE-BLL-F-1420-C	1431	53	1649
SE-BLL-F-2130-C	2141	53	2359



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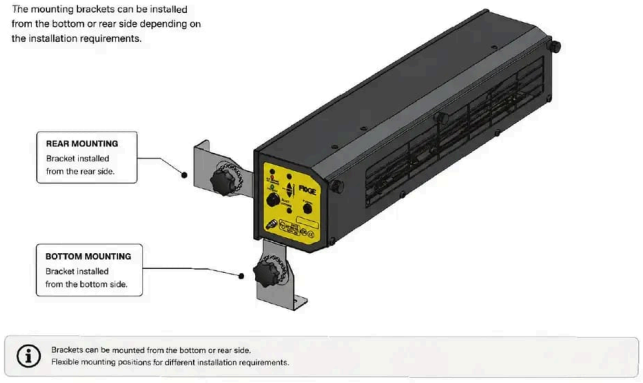
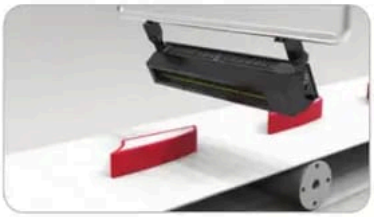
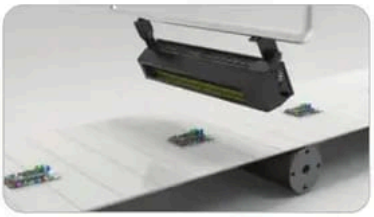
Dimensions



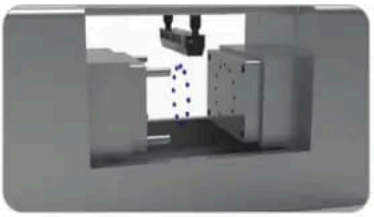
Mounting bracket options



Headlamp



Electronic Card



Injection Molding

Application examples

6 Electrical connection — M12

- Supply: 24 V DC via the M12 5-pin connector. Use the SE-PSU-24-C-M12 power supply (220 V AC to 24 V DC, sold separately).
- Use a 4-pin M12 cable for the electrical connection. The device connector has 5 pins; the centre pin is reserved for factory programming and is not used by the 4-pin cable.
- Connect the ground terminal to earth. Do not operate the unit without the ground connection.

Pin	Function
1	+24 V DC supply
2	Fault output
3	GND
4	Remote control

7 Control panel

Element	Function
Power button	Press to switch the unit on or off.
Fan speed buttons ▲ / ▼	Increase or decrease the fan speed.
24 V supply LED	Shows that the 24 V DC supply is present.
Status LED	Ionization status — green: OK, red: fault.
Fan speed LEDs	Show the selected fan speed level.



Control panel functions

8 Faults

- Do not open the product in any of the cases below or in any other case.
- Do not open the product in any of the cases below or in any other case.
- Status LED red: ionization fault. Switch the unit off and contact FÖGE.

9 Pin and filter cleaning

Regular filter cleaning ensures optimal performance and extends product life.

1. Emitter pins: loosen the knobs on the front cover and remove it. Clean the tungsten pins gently with the brush from the FÖGE Antistatic Products Maintenance Kit. Reinstall the front cover and tighten the knobs.
2. Filters: loosen the knobs on the bottom cover and remove it. The filters can be cleaned while installed on the cover, using a brush or compressed air.
3. For detailed cleaning, remove the filters from the cover and clean them with a brush, compressed air or water.
4. Reinstall the bottom cover and tighten the knobs.



Pin cleaning procedure



Filter cleaning procedure

10 Warnings

- Connect the power supply and the display/output device according to the safety regulations for electrical equipment.
- The supply voltage must not exceed the specified limits.
- Avoid shocks and impacts to the device.
- Protect the cable against damage.

Possible consequences of non-observance: risk of injury by electric shock; damage to or destruction of the device.

11 Maintenance

Due to the ionization process, airborne particles stick to the emitter pins and carbonise. This reduces ionization performance. All AC and DC ionizing bars must be checked and cleaned regularly with the FÖGE Antistatic Products Maintenance Kit (cleaning fluid and brushes).

The cleaning interval depends on the process and the environment.

⚠ Switch the device OFF before cleaning and do not switch it ON again until it is dry.

1. Clean the static control device with the FÖGE cleaning brush.
2. Attach a spray head to the bottle containing the cleaning fluid.
3. Moisten a cloth with cleaning fluid and wipe the static control device, taking care around the emitters.
4. Repeat brushing and cleaning until the static control device is clean.
5. Carefully polish the pins with a dry cloth.

12 Safety

Operating the system requires knowledge of the assembly instructions. The following signal words are used in these instructions:

Signal word	Meaning
WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
NOTICE	Indicates a situation that may result in property damage if not avoided.
ELECTRIC SHOCK	Indicates a risk of electric shock if the instructions are not followed.

13 Liability for material defects

All components of the device have been checked and tested for functionality at the production facility. If defects occur despite our careful quality control, FÖGE or your dealer must be notified immediately.

The liability for material defects is 12 months from delivery. Within this period, defective parts, except wearing parts, are repaired or replaced free of charge if the device is returned to FÖGE with shipping costs prepaid. Damage caused by improper handling, the use of force, or repairs or modifications by third parties is not covered. Repairs are carried out exclusively by FÖGE.

Further claims cannot be made. Claims arising from the purchase contract remain unaffected. In particular, FÖGE shall not be liable for any consequential, special, indirect or incidental damage. In the interest of further development, FÖGE reserves the right to make design changes without notice.

14 Decommissioning and disposal

Disconnect the power supply and the output cable from the device.

Incorrect disposal may harm the environment. Dispose of the device, its components and accessories, and the packaging materials in compliance with the waste treatment and disposal regulations applicable in the country and region of use.