SE-ARN-80 Ionizing Ring – 8 kV

8 kV AC wide-area static elimination for complex 3D parts — ionizing ring only or complete rotating air nozzle system



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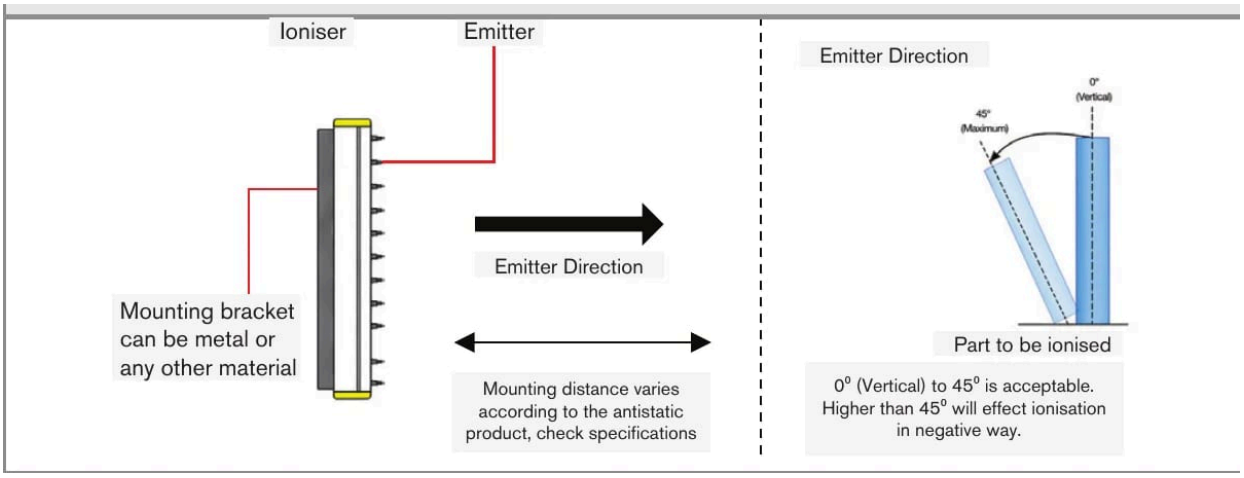
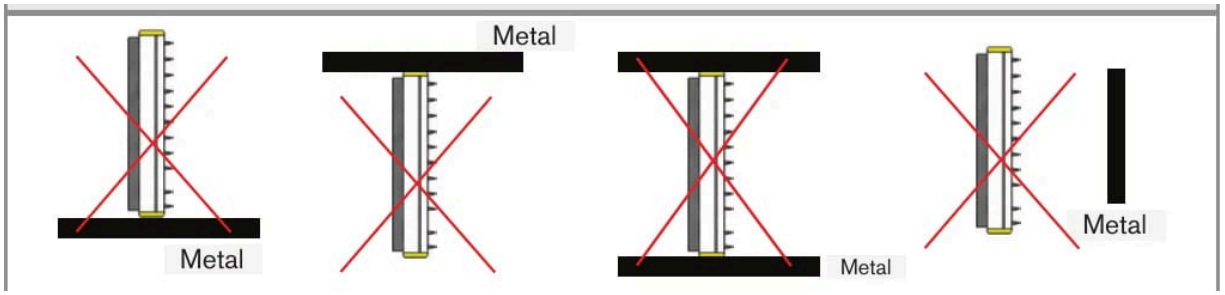
1 Important — mounting

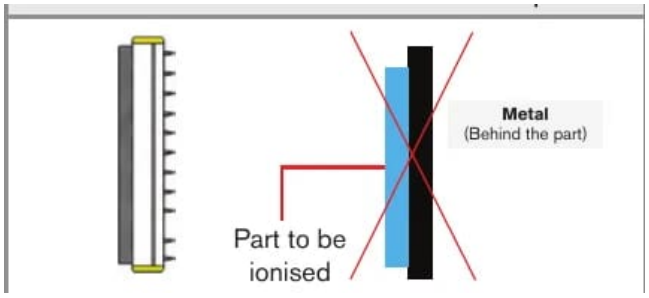
- When installing ionizers without air assist, always point the emitters towards the part. Tilted mounting of up to 45° from vertical is acceptable; a larger angle reduces ionization performance.
- Do not cover the ionizer with metal and do not attach metal close to the emitter pins.
- Never place metal 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-ARN-80 AC ionizing ring is designed for use in industrial areas. It neutralises static electricity on plastic, glass, fabric and other non-conductive parts, including complex three-dimensional parts that are placed in or passed through the ring. Tungsten ionizing pins arranged around the ring are supplied with 8 kV AC by an SE-PAC-80-2-C or SE-PAC-80-4-C power unit and ionize the part from all sides.

The AC01 variant provides ionization only and is combined with the customer's own air or nozzle system. The PA variant integrates a pulsed-air rotating nozzle that also removes dust; operate it with clean, dry, oil-free and filtered compressed air at 4 – 8 bar through an 8 mm hose.

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

Variants	SE-ARN-80-112-C3-AC01 (ionizing ring only) · SE-ARN-80-112-C3-PA (complete rotating nozzle)
Compatible power unit	SE-PAC-80-2-C (2 outputs) · SE-PAC-80-4-C (4 outputs) — SE-PAC-55 is not compatible
Ionization type	8 kV AC — shockless
Ionizing pin type	Tungsten — extremely long lifetime
Rotary nozzle (PA)	Body ⌀ 70 mm, nozzle hole ⌀ 1.8 mm (FG-AC-0002)
Pin current (safety)	< 250 µA; transformer current max. 5 mA (fused)
Polarity	Alternating AC
Operating temperature	Max. 60 °C
Max. humidity	70 % rH, non-condensing
Protection class	IP66 — fully sealed
Housing	Industrial-grade, impact-resistant
EMC compliance	2014/30/EU — EMC Directive
Electrical safety	2014/35/EU — Low Voltage Directive
Cable — C3 (standard)	3 m HFFR-protected flex cable with HV connector
Cable — C5 (option)	5 m HFFR-protected flex cable with HV connector
Cable — C12 (option)	12 m HFFR-protected flex cable with HV connector
Units per power unit	Up to 4 units per SE-PAC-80 power unit, within the 12 m total cable length per power unit

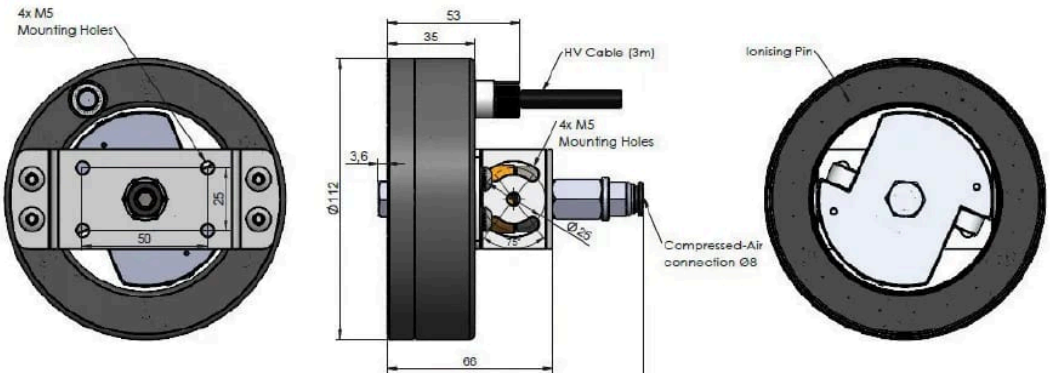
Variant-specific values (air connection, air consumption, ionization range, noise) are listed in the variant table above.

5 Dimensions and installation

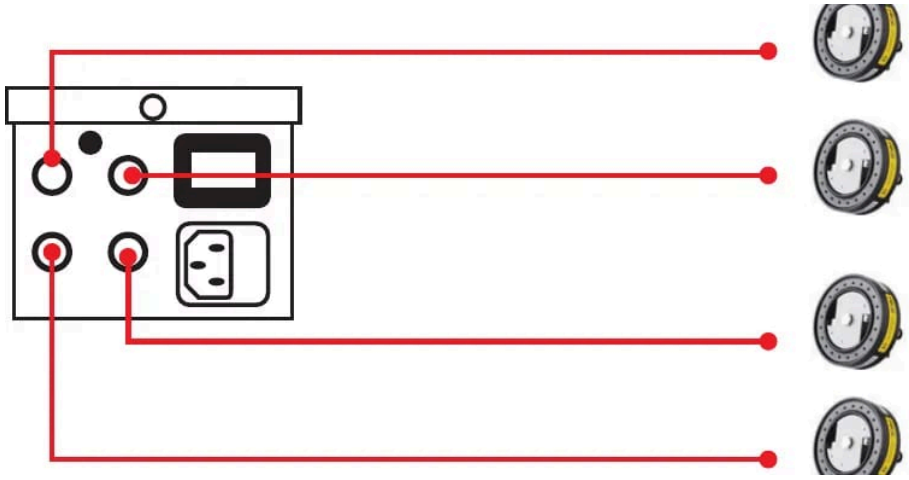
Operating the system requires knowledge of the assembly instructions. The signal words used are explained in the section Safety.

- The total cable length connected to one SE-PAC-80 power unit must not exceed 12 m. The length of the SE-ARN-80 ring itself counts as 0 m, so one ring can be connected with the 12 m C12 cable.
- If the permissible total length is exceeded, the power unit may not function properly, may be damaged, or may interrupt the power supply to prevent further damage.
- Available cables: C3 (3 m, standard), C5 (5 m) and C12 (12 m), HFFR-protected with HV connector.

tools used for safety is shown in section 5(Safety) of manual.



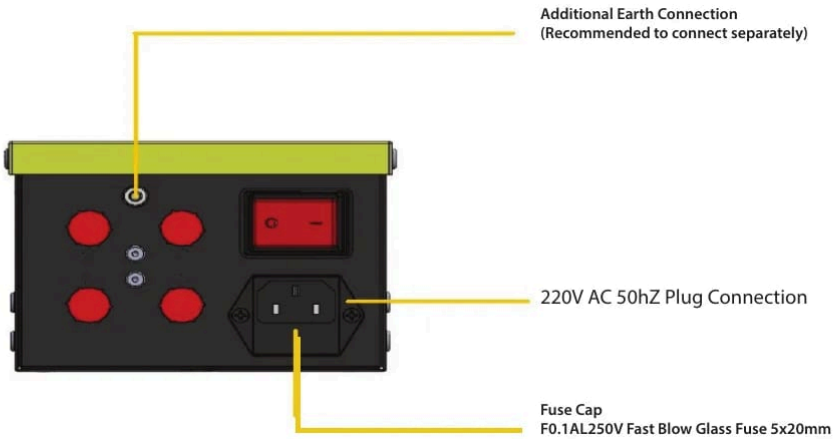
Dimensions



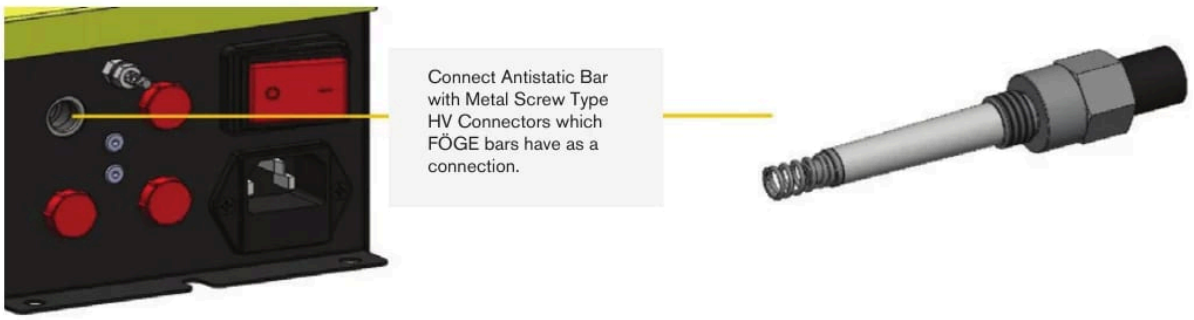
Connection of up to four devices to one SE-PAC power unit (total length of devices and cables within the permitted limit)

6 Electrical connection (SE-PAC power unit)

- Connect the device to the SE-PAC power unit with its metal screw-type HV connector.
- Power unit supply: 220 V AC, 50 Hz plug connection.
- Fuse cap: F0.1AL250V fast-blow glass fuse, 5 × 20 mm.
- An additional earth connection is recommended; connect it separately.

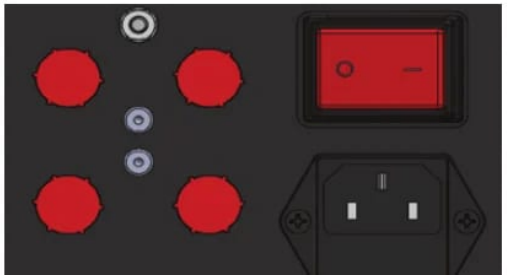


SE-PAC power unit: earth connection, mains plug and fuse



Connect the device with its metal screw-type HV connector

7 Display and controls (SE-PAC power unit)



SE-PAC: ON/OFF switch

Element	Function
ON/OFF switch	Switches the power unit on and off.
ON/OFF light	Shows whether the power unit is switched on.

8 Faults

- Do not open the product in any of the cases below or in any other case.
- If the switch is on but the ON/OFF light is off, replace the fuse in the power unit: F0.1AL250V fast-blow glass fuse, 5 × 20 mm.

9 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.

10 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.

11 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.

12 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.

13 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.