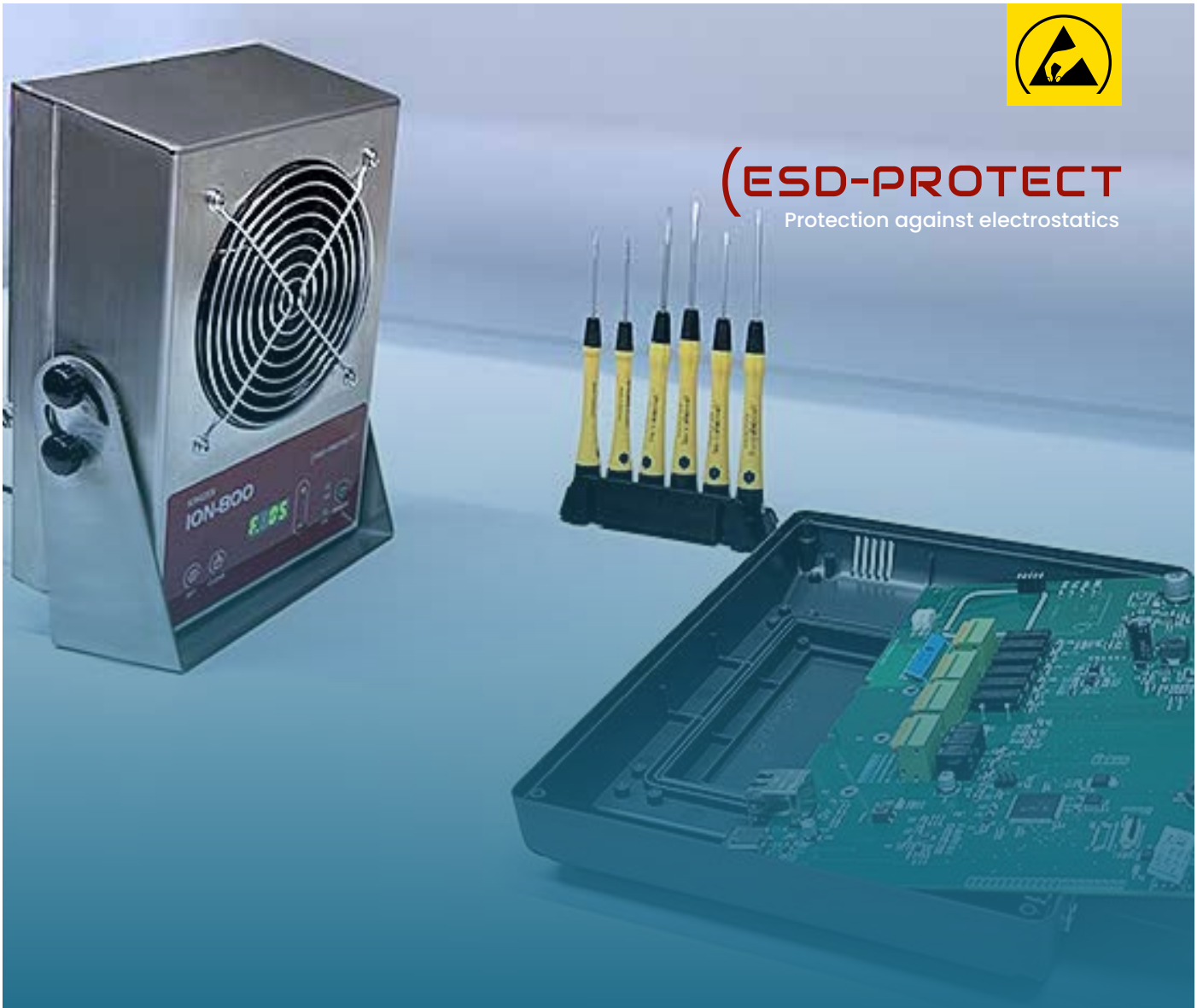


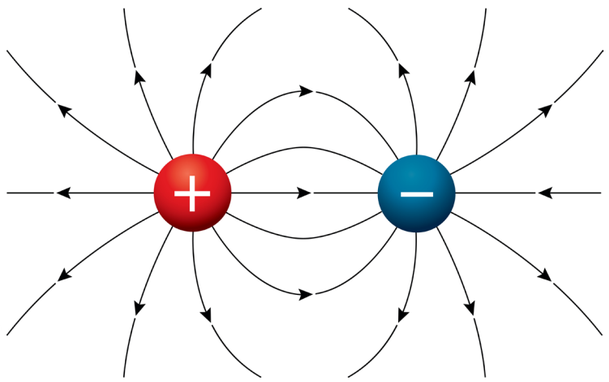
ESD-PROTECT
Protection against electrostatics

ionisers

what does ionisation mean in esd ar(e)as?

Why ionise?

What happens during ionisation
Electrostatic charges should be avoided in ESD areas; ideally, ESD-compliant materials should prevent them from occurring in the first place. However, charges can still occur due to the nature of the process – for example, during assembly processes, when connecting cable lines, in machines or due to conveyor technology.



These static charges must be reduced to below 100 volts and neutralised. Ionisers are used for this purpose.

They also perform important services in the packaging industry: they prevent plastic films or sleeves from sticking together, thus ensuring packaging quality.

In assembly and clean room processes, ionisers also neutralise workpieces, remove adhering dust and dirt particles and ensure clean, stable processes.

Typical application of ionisers in electronics production
In the work situation shown, an electronic circuit board (PCB) is inserted into a plastic housing that is highly susceptible to electrostatic charging.

Such housings can build up high charges during handling and damage sensitive components. For this reason, an ioniser is used to neutralise the charge on the housing and the ambient air.

This ensures ESD-compliant installation, reduces the risk of damage and protects product quality.

Two different techniques: AC & DC

DC ionisation (direct current)
DC technology applies a constant voltage (positive and negative remain the same). Positive and negative ions are generated simultaneously and released onto the surface in a targeted manner. The advantage is the high ion density with fast and effective neutralisation of the process air. Regular testing with charge plate monitors is important to ensure the correct balance.

Typical areas of application are ESD zones and clean rooms with sensitive components such as semiconductors, displays or control units.

AC ionisation (alternating current)
With AC technology, the voltage is alternating. This means that positive and negative ions are produced alternately and applied to the surface to be ionised.
As a result, the ionisation performance is lower than with DC technology and discharges take longer. Although these ionisers require less maintenance, they are significantly less precise than ionisers with DC technology and have a smaller effective range. Typical applications include the ionisation of general processes with less sensitive components, such as in the packaging, printing and plastics industries.

	AC	DC
Technology	**AC**	**DC**
Polarity	alternating	constant
Ion type	+ / - alternating	mostly single-pole
Precision	medium	high
Maintenance	low	higher, regular checks necessary
Application	broad with less sensitive components, such as in packaging systems or the plastics industry.	specialised with sensitive components and parts, such as ESD areas.

Rule of thumb:
AC if you want robust, uncomplicated discharge.
DC if you need maximum control and precision.

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Ionising devices: Tabletop devices

Neutralisation of process-related charging
Table ionisers neutralise electrostatic charges in ESD areas. They are compact systems for neutralising electrostatic charges in locally limited work areas. They are mainly used at workstations in EPAs where earthing via conductive materials is insufficient, for example with non-conductive materials or insulating packaging.

EP0401001

Ioniser ION-1000

- Ionisation range: 30 cm -120 cm
- Dimensions (height x width x depth):
- 24.1 cm x 15.2 cm x 7.9 cm
- Weight: 2 kg
- Ventilation: three levels
- Self-balancing of offset voltage
- Housing material: stainless steel
- Adjustable tilt angle
- Neutralisation time within a range of 30 cm: < 2 seconds

EP0401034

AP&T 2811 tabletop device

- Ionisation area: 15 x 120 cm
- Dimensions (height x width x depth):
  20.65 cm x 15.6 cm x 7 cm
- Weight: 1.35 kg
- Ventilation: five levels
- Automatic balancing and adjustable cleaning time
- LCD display
- Adjustable tilt angle

EP0401021

AP & T White Ioniser tabletop device

- Ionisation range: 75 cm x 30 cm
- Dimensions (height x width x depth):
  18.5 cm x 14.5 cm x 5.5 cm
- Weight: 0.52 kg
- Ventilation: single stage
- Housing material: powder-coated aluminium
- Adjustable tilt angle

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Ionising devices: Mini tabletop devices

Compact solution against process-related charging
Mini table ionisers specifically dissipate electrostatic charges in small work areas. Thanks to their compact design, they are not only suitable for ESD workstations, but also for integration into machines and systems – especially in cases of process-related charging.

EP0401002

EMIT Mini Zero Volt Ioniser ZVI 2

- Ionisation area: 15 x 61 cm
- Dimensions (height x width x depth): 14 cm x 19 cm x 4 cm
- Weight: 0.5 kg
- Ventilation: two-stage
- Self-balancing of offset voltage
- Housing material: stainless steel
- Adjustable tilt angle

EP0401026

AP&T Mini desktop blower

- Ionisation area: 45 cm x 30 cm
- Dimensions (height x width x depth): 12.9 cm x 12.3 cm x 4.5 cm
- Weight: 0.38 kg
- Ventilation: three levels
- Housing material: powder-coated aluminium
- Adjustable tilt angle

Ionising devices: Overhead ionisers

Effective ESD protection without grounding
Overhead ionisers neutralise electrostatic charges across entire work areas where grounding is insufficient. They are mounted above the workplace and reduce the risk of ESD with non-conductive materials. Regular checks of the ionisation performance ensure ESD control in accordance with IEC 61340-5-1.

EP0402010

Overhead Ioniser ESD-PROTECT Q133-2 with 2 fans

- Ionisation range: 55 cm x 75 cm
- Dimensions (height x width x depth): 757 x 84 x 160 mm
- Ventilation: four levels
- Weight: 3.1 kg
- Housing material: Powder-coated aluminium
- Self-balancing ± 2V
- Replaceable air filters
- Function monitoring with audible and visual alarm

EP0402011

Overhead Ioniser ESD-PROTECT Q133-3 with 3 fans

- Ionisation range: 80 cm x 75 cm
- Dimensions (height x width x depth): 967 x 84 x 160 mm
- Ventilation: four levels
- Weight: 4.1 kg
- Housing material: powder-coated aluminium
- Self-balancing ± 2V
- Replaceable air filters
- Function monitoring with audible and visual alarm

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Ionising devices: Overhead ionisers

Overhead Ioniser ESD-PROTECT Q133-4 with 4 fans

EP0402012

- Ionisation range: 105 x 75 cm
- Dimensions (height x width x depth): 1177 x 84 x 160 mm
- Ventilation: four stages
- Weight: 5.2 kg
- Housing material: powder-coated aluminium
- Self-balancing ± 2V
- Replaceable air filters
- Function monitoring with audible and visual alarm

Overhead Ioniser ESD-PROTECT Q133-5 with 5 fans

EP0402013

- Ionisation area: 130 x 75 cm
- Dimensions (height x width x depth): 1387 x 84 x 160 mm
- Ventilation: four stages
- Weight: 6.2 kg
- Housing material: powder-coated aluminium
- Self-balancing ± 2V
- Replaceable air filters
- Function monitoring with audible and visual alarm

Remote control for overhead ioniser ESD-PROTECT Q133

EP0402015

- Remote control for switching on and off and adjusting the fan speed
- Starting the self-cleaning programme of the ionisers
- Dimensions 85 x 40.7 mm
- Distance to the overhead ioniser 1 - 2 metres

AP&T Overhead DJ2812, 2 fans

EP0401035

- Ionisation area: 75 cm x 55 cm
- Dimensions (height x width x depth): 500 x 154 x 70 mm
- Weight: 2.6 kg
- Ventilation: five levels
- Housing material: powder-coated aluminium

AP&T Overhead DJ2812, 3 fans

EP0401036

- Ionisation range: 75 cm x 80 cm
- Dimensions (height x width x depth): 750 x 154 x 70 mm
- Weight: 3.65 kg
- Ventilation: five levels
- Housing material: powder-coated aluminium

AP&T Overhead DJ2812, 4 fans

EP0401037

- Ionisation area: 75 x 105 cm
- Dimensions (height x width x depth): 1000 x 154 x 70 mm
- Weight: 4.85 kg
- Ventilation: five levels
- Housing material: powder-coated aluminium

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Ionising devices: Overhead ionisers

White Overhead Ioniser 2-fan

EP0401023

- Ionisation area: 60 cm x 30 cm
- Dimensions (height x width x depth): 600 x 150 x 55 mm
- Weight: 2.45 kg
- Ventilation: continuously adjustable air flow
- Housing material: powder-coated aluminium

White Overhead Ioniser 3-fan

EP0401024

- Ionisation range: 80 cm x 30 cm
- Dimensions (height x width x depth): 800 x 150 x 55 mm
- Weight: 2.5 kg
- Infinitely adjustable air flow
- Housing material: Powder-coated aluminium

White Overhead Ioniser 4-fan

EP0401025

- Ionisation area: 102 x 130 cm
- Dimensions (height x width x depth): 1000 x 150 x 55 mm
- Weight: 3.1 kg
- Infinitely adjustable air flow
- Powder-coated aluminium

Ionising devices: Compressed air ionisers

Mobile ESD protection for specific applications
Ionising guns neutralise electrostatic charges on surfaces and are particularly suitable for manual processing and cleaning processes. Positive and negative ions reduce the risk of ESD, lower failure rates and support compliance with IEC 61340-5-1. Regular performance checks ensure reliable operation.

IG200 ionisation gun

EP0403022

- Dimensions: 203 x 25 x 110 mm (LxWxH)
- 24 ionising gun with hose (2.5 m) incl. power supply unit
- Powerful blowing performance, IsoStat® technology
- Ozone generation < 0.05 ppm
- Self-balancing of offset voltage

AP&T AZ3201 ioniser, gooseneck

EP0401042

- Dimensions: 156 x 127 x 117 mm (LxWxH)
- Neutralisation time: < 1.5 seconds (at a distance of 150 mm)
- Offset voltage: < ±50 V (150 mm distance from the outlet)
- Weight: 0.724 kg (including power supply and bracket)
- Operating voltage: AC 3500 V

Charged Plate Monitor

Measuring the efficiency of ionising devices
A CPM measures in real time how well the ioniser is working to neutralise the electrostatic charge.

- Measuring ion concentration: The charged plate monitor measures the charge on a plate near the ionised air.
- Monitoring the ionisation rate: The monitor can measure the ionisation rate of the devices. This means that it checks how effectively the ioniser produces ions to reduce static electricity in the environment.
- Ensuring the balance between positive and negative ions.

Charged Plate Monitor DESCO 19494

EP0201086

- Handheld device for measuring offset voltage and discharge times in air ionisers
- For regular testing in accordance with ANSI/ESD SP3.3 and ESD TR53
- Timer for decay rates from ±1200 V to ±100 V
- Measures neutralisation capability for positive and negative electrostatic charges
- 180° rotating head with 70 × 25 mm measuring plate
- Display readable from different angles

EP-EFM 825 electric field meter with CPS accessory set

EP0201115

- With the Charge Plate Set 823, the EFM 823 becomes a Charge Plate Monitor
- Dimensions: 122 × 70 × 26 mm (L × W × H)
- Weight: approx. 139 g (without battery)
- Display:
  2-line alphanumeric LCD display (12 digits each)
  Top line: Measuring distance (cm)
  Bottom line: Measured voltage (volts)

About us

Working together for ESD protection
Technically strong. Personally close.

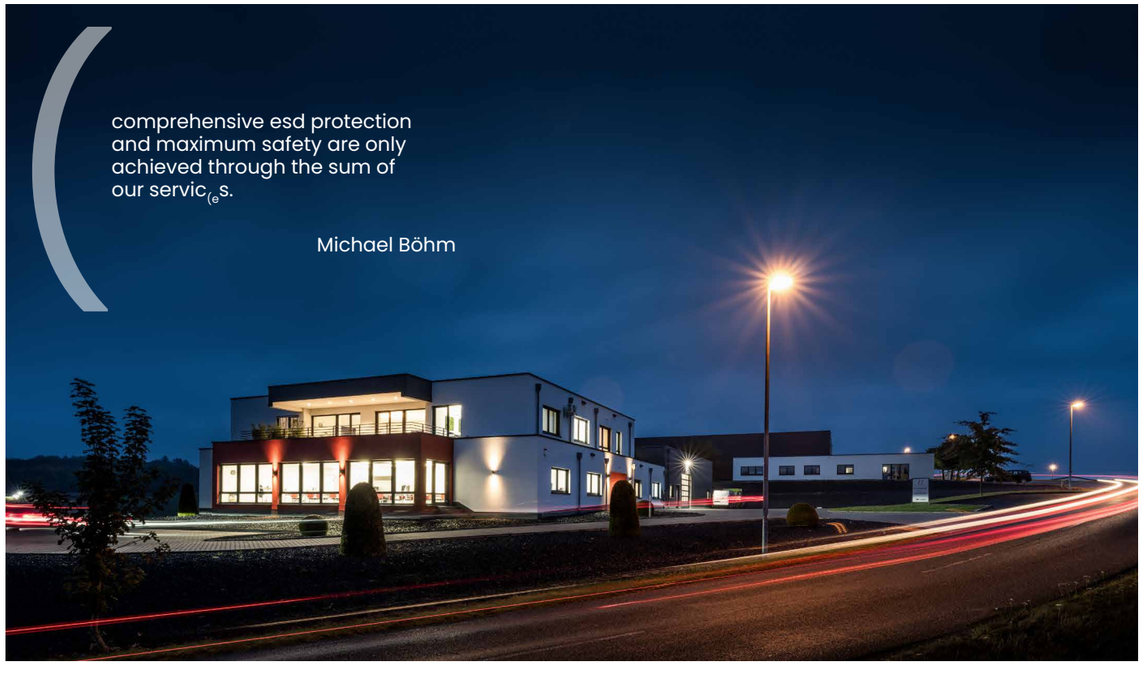
Reliability, expertise and a genuine flair for individual solutions – that's what sets us apart as a system provider for ESD solutions.

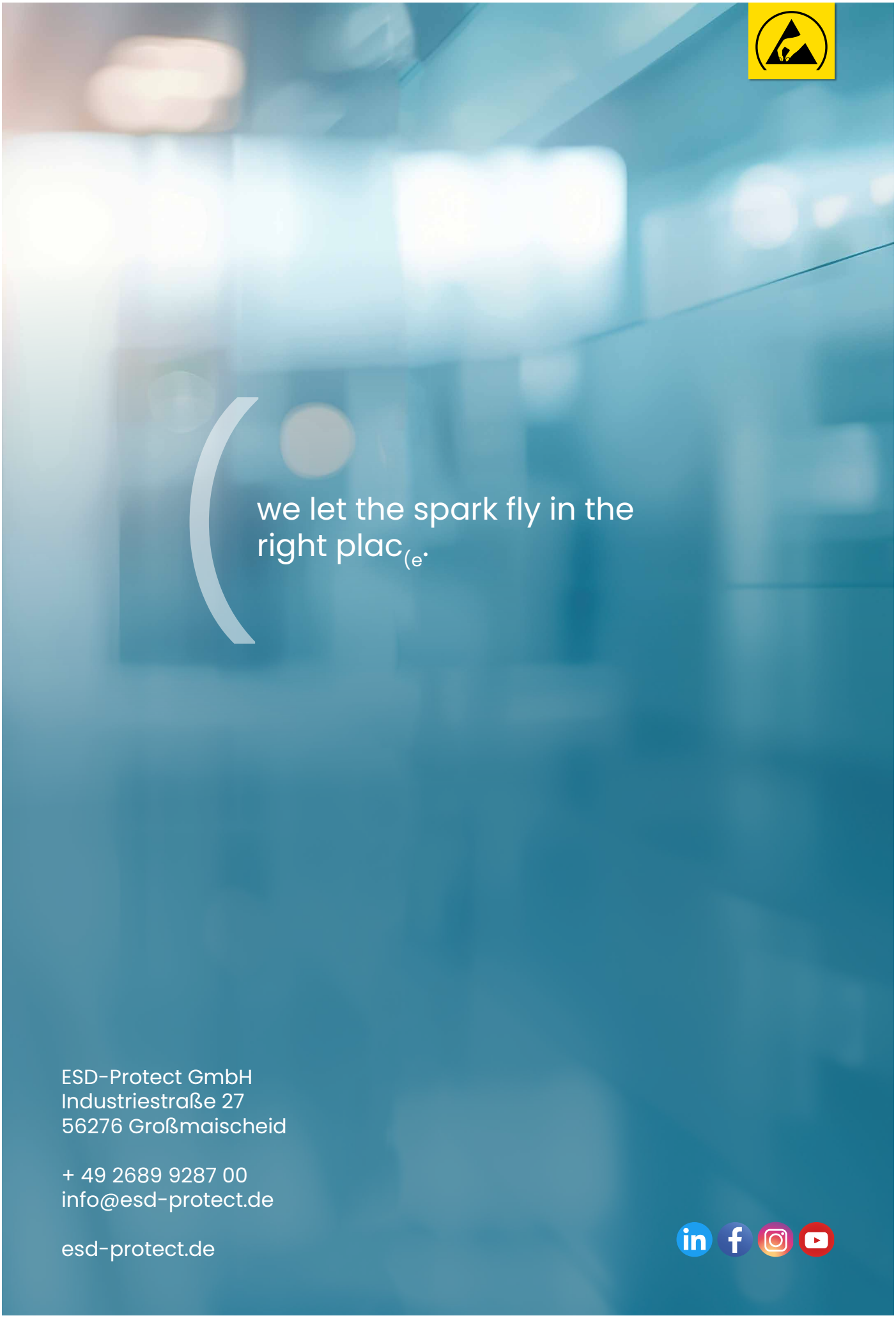
For almost 30 years, we have been passionately and expertly dedicated to ESD as our core business – the prevention of electrostatic discharge in industrial manufacturing. What was once primarily relevant in large production lines is now becoming increasingly important in a wide variety of industries and areas of application.

As a reliable partner to the electronics industry, the automotive sector and companies in the aerospace, mechanical engineering and medical technology industries, we offer a broad portfolio of high-quality products for protection against electrostatic discharge – reliable, compliant with standards and practical.

Whether it's a mobile phone repair shop or an automotive group, we listen, understand our customers' requirements and find tailor-made solutions. We consistently adhere to the ESD standard 61340-5-1 and bring our many years of experience to every project.

Your requirements are our strength – and your protection is our commitment.





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