ESD-PROTECT
Schutz vor Elektrostatik

electronic
system
rel(e)vance

comprehensive esd protection and maximum safety are only achieved through the sum of our servic(e)s.

Michael Böhm

Michael Böhm

Owner

Marcel Böhm

Management

Welcome!

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

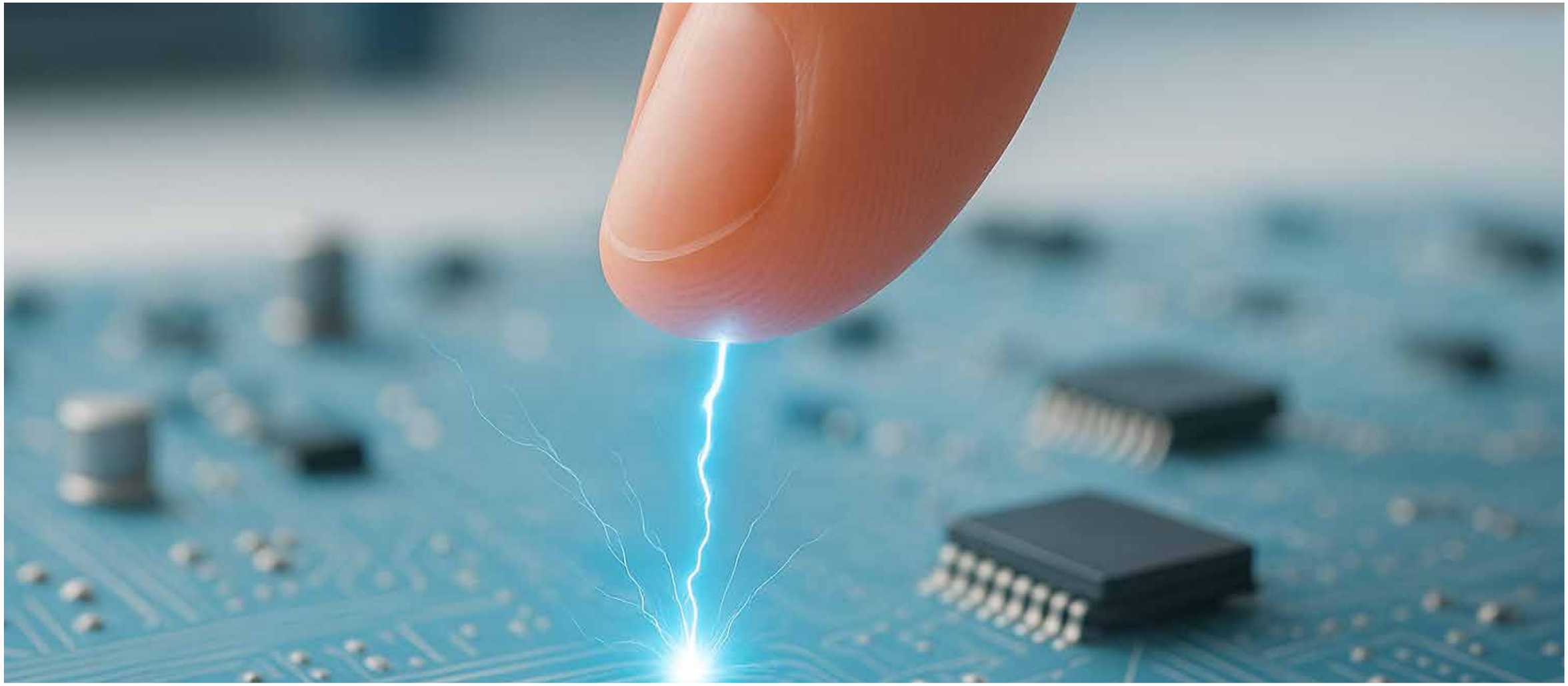
For almost 30 years, we have been passionately and expertly dedicated to ESD as our core business – the prevention of electrostatic discharge in industrial manufacturing. What was once primarily relevant in large production lines is now becoming increasingly important in a wide variety of industries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

Michael Böhm



What is ESD?

You cannot feel, see or hear ESD.

ESD is the abbreviation for electrostatic discharge and is caused by the exchange of charge between two bodies with different voltage potentials.

ESD damage is primarily caused by humans, who can absorb and retain high electrostatic charges. Humans only feel an electrostatic discharge at around 3,500 volts and above. A person walking across a carpet carries around 7,000 volts.

Even at 35 volts, sensitive electronic components begin to suffer damage.

Why is ESD protection necessary?

The ongoing development and miniaturisation of electronic components is leading to ever-increasing sensitivity and thus to a greater risk of damage and failure if ESD protection is neglected.

COMPONENT FAILURE

DEVICE FAILURE

PERSISTENT QUALITY PROBLEMS

→

High scrap and repair costs, damage to the company's image in terms of quality, warranty claims, product liability damages.

Designed with the industry in mind:

Customised ESD protection for greater safety in your industry

Companies that develop and manufacture electronic assemblies that are particularly sensitive to electrostatic discharge.

Manufacturers and suppliers who install electronic components in vehicles and require ESD protection for production and assembly.

Aerospace and defence industries, where highly sensitive electronics require reliable ESD protection.

Manufacturers of medical devices and systems where ESD protection is crucial for precision and safety.

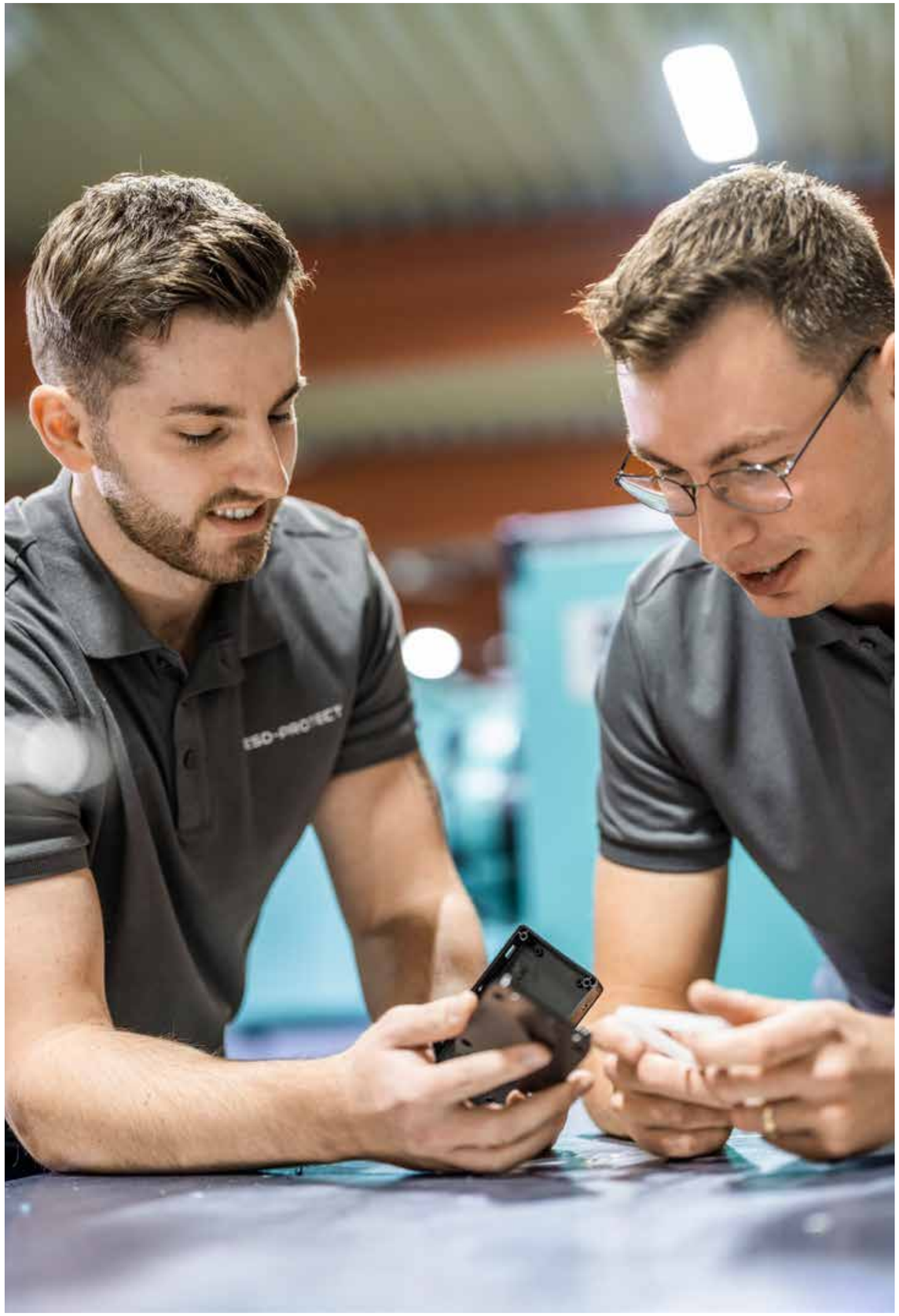
Companies that manufacture production facilities and technical equipment and set up ESD-safe areas for electronic components.

Small and medium-sized enterprises that supply electronic parts or assemblies and need to implement ESD-compliant processes.

Manufacturers of end-user products such as household appliances that require ESD-protected assembly areas for their electronic components.

Construction and planning companies that take ESD protection zones into account in new buildings or renovations of production facilities.

Service providers who repair electronic devices and use ESD-protected workstations to protect components.



We develop new ESD products

Manufacture of high-quality ESD measurement and testing technology

Innovative ESD solutions – developed and manufactured by ESD-PROTECT

As specialists in electrostatic discharge (ESD), we at ESD-PROTECT have been developing high-precision measuring and testing devices for many years – right here in our own company. Our expertise is based on in-depth technical know-how, a clear focus on quality and a passion for practical solutions. The result: products that stand out for their precision, reliability and user-friendliness.

Tailor-made technology – developed for your requirements

Standard solutions are not always sufficient. That is why we not only offer tried-and-tested series devices, but also develop customised measuring devices on request, precisely tailored to individual requirements. From the initial idea to design, production and final testing – we accompany every project personally and flexibly.

Precise measurement – reliable production

Our innovative ESD measuring devices ensure safety in sensitive production environments. They help you control electrostatic risks, comply with quality standards and reliably implement standards such as IEC 61340.

Our devices at a glance:

EPA-RESIST personal tester – model series

EPA-RESIST personal testers quickly and safely check the earth and leakage resistance of individuals – ideal for entrance areas to EPA zones. Available as a wall-mounted device and on a stand. Can be combined with access control as an option.

MultiGround Monitor

The MultiGround Monitor enables permanent monitoring of personal grounding in the workplace. Through continuous resistance control, it offers maximum safety without interrupting production – ideal for ESD-sensitive manufacturing.

With ESD-PROTECT, you are not only choosing measurement technology, but also safety, precision and partnership on equal terms. Put your trust in technology „Made in Britain“ – developed with passion, manufactured with quality.

ESD-PROTECT – WE MEASURE WHAT OTHERS CANNOT SEE.
YOUR SAFETY. OUR TECHNOLOGY.

Our highlights

In-house ESD software development

Optimal software thanks to customer proximity

Thanks to close, collaborative exchanges with our customers, we have a precise understanding of the requirements and challenges of their ESD testing processes. This understanding flows directly into our in-house software development. The result: measuring and testing devices that are particularly intuitive, efficient and practical.

Our software highlights

Inventix

- ESD inventory and measurement data management with reminder service in accordance with standards
- Transfer of resistance measurements directly from the teraohmmeter
- Storage of inventory photos with measurement points and visual inventory allocation Mobile app for tablets and smartphones

PCMaster-Suite

- Central database for all connected EPA-RESIST devices in the network
- Control of access authorisations
- Data logger: Central real-time storage of all measurement logs from the EPA-RESIST network with evaluable daily files
- User management in groups and departments

Your benefits

- Programming by ESD experts
- Personal support
- Solution-oriented software that takes external requirements such as data protection into account when measuring people
- High RFID compatibility
- Customised software adaptations to your operational processes
- Continuous further development
- Provision of free software updates in the customer portal

Planning based on needs

We support you right from the start

A standard-compliant ESD protection zone (EPA) reliably protects sensitive electronic components from electrostatic discharge – through the targeted use of tested ESD products and clearly defined protective measures. Only when all components work together – from the work surface to the floor to clothing – can safe ESD protection be guaranteed.

We plan your EPA individually in 3D, software-supported and in accordance with DIN EN IEC 61340-5-1. In doing so, we take all relevant factors into account: floor coverings, furniture, workstations, transport systems and the spatial conditions of your production facility. On request, we integrate existing facilities and develop tailor-made additions to retrofit existing areas in accordance with standards.

Regular checks and measurements are also part of a complete ESD infrastructure. We provide you with the appropriate testing and measuring equipment – for earthing tests, leakage resistance measurements or monitoring of people and workplaces. This ensures that your EPA remains compliant with standards at all times.

We also offer consulting and training services – from analysing your existing environment and developing an ESD concept to providing practial instruction for your staff. On request, we can accompany you from the planning phase to the successful acceptance of your new ESD protection zone. We are happy to support you in your EPA planning, implementation and qualification – for safe, efficient and standard-compliant ESD protection in your production.

Our ESD packaging concepts

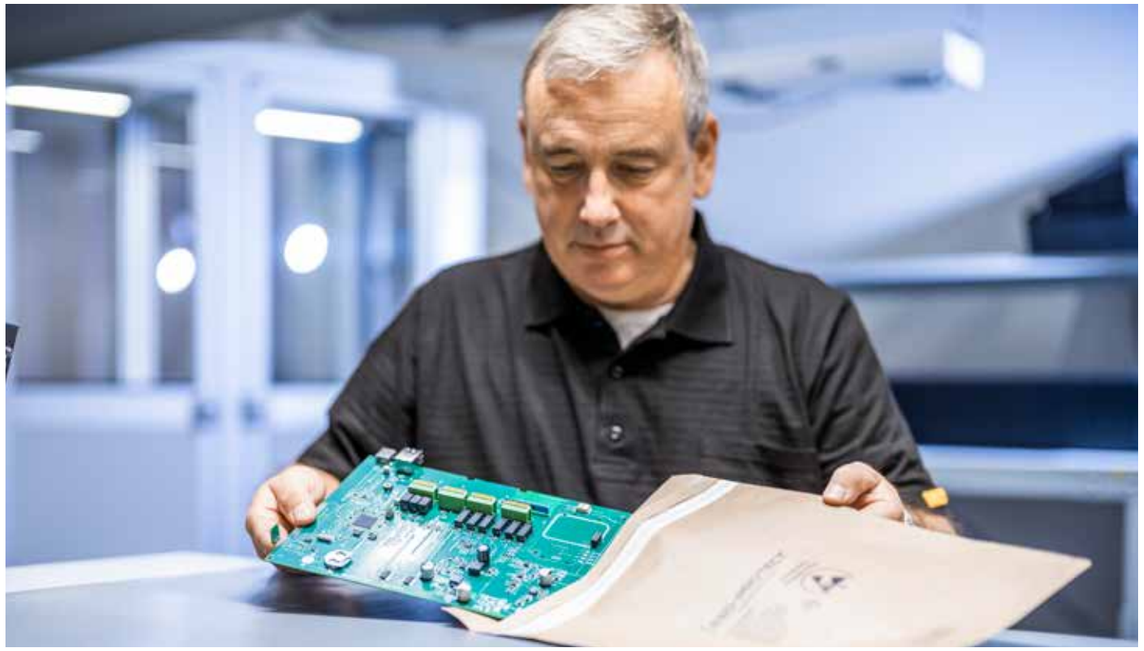
Sustainable and ESD-compliant

Electrostatic discharges (ESD) can cause considerable damage in electronics manufacturing – often even from discharges that humans cannot perceive. Custom-fit ESD packaging reliably protects sensitive components during storage, transport and handling, making it an indispensable part of modern production processes.

ESD-PROTECT analyses the ESD sensitivity of your components and develops a customised packaging concept that is precisely tailored to your application – in compliance with IEC 61340-5-1 and DIN EN 61340 standards.

ESD-Protect risk analysis

- Assessment of the ESD sensitivity of components and parts (ESD classes)
- Analysis of transport routes and interfaces (internal/external)
- Assessment of hazards caused by friction, contact charging, electrostatic fields
- Analysis of external influences such as mechanical stress, moisture, dust or dirtz



PaperStat® ESD packaging bags made from 100% recycled paper – permanently dissipative & 100% recyclable.

An ESD-compliant packaging concept prevents:

- Destruction of sensitive electronics
- Latency damage caused by ESD
- Complaints and failures at the end customer's premises
- High follow-up costs

What does the PPWR* mean for ESD packaging?

ESD packaging is special packaging designed to protect electronic components. This is its sole purpose. Electronics must be protected not only from moisture, dirt, dust and mechanical stress, but also, in particular, from electrostatic charges.

The problem: the majority of ESD packaging available (dissipative, conductive or shielding) produces hazardous waste. However, ESD-Protect already offers ESD packaging that complies with or fully meets the new PPW.

Product solutions from ESD-Protect

- PaperStat: permanently dissipative ESD bag made from recycled paper
- PinkPoly Bag (dissipative) with increased PCR recycled content
- Shielding bag, mono-PET of recycling class 1
- CompoStat: compostable, permanently dissipative plastic

* New EU Packaging and Packaging Waste Regulation (PPWR).

Our ESD flooring concepts

ESD flooring as a fundamental component in an EPA

An ESD flooring concept serves to prevent damage to sensitive electronic components caused by static electricity. The primary aim is to control the charging of people, equipment and surfaces and to create conductive paths for dissipation. A complete ESD flooring concept comprises several components and measures:

- Conductive or dissipative ESD floor coverings
- Floor grounding systems
- Control measurements
- ESD-compliant workplace equipment

Further ESD flooring services

- **Flooring installation service for ESD puzzle or roll flooring**
- **ESD ProFloor: Floor renovation concepts for existing ESD floors**
- **Floor inspections and ESD measurements**
- **ESD MultiClean: Special floor care for ESD floors**

ESD clothing made by ESD-Protect

Why is ESD clothing important?

ESD clothing is crucial for preventing electrostatic discharges in sensitive working environments such as electronics production, the semiconductor industry or laboratories. Electronic components are often extremely sensitive to electrostatic charges. Even a tiny discharge that is imperceptible to humans can damage components or impair their function.

ESD clothing minimises this risk by preventing the build-up of static electricity on the body's surface and dissipating existing charges in a controlled manner.

Special features of ESD clothing

Conductive materials: ESD clothing contains conductive fibres, often made of carbon, which dissipate static charges. These fibres are integrated into a special grid pattern to ensure even dissipation.

Made in Europe

- **Work coats**
- **T-shirts & polo shirts**
- **Jackets & sweatshirts**

Standard compliance

ESD clothing complies with specific standards (e.g. EN 61340-5-1) that ensure it is suitable for use in ESD-protected areas (EPA). Comfort and ergonomics: Modern ESD clothing is not only functional, but also designed for comfort to promote employee productivity.

The ESD-PROTEX added value

- Special sizes from XXS to 6XL
- High stock availability, fast delivery times
- Special colours according to your corporate identity
- Made in Europe from high-quality cotton

Possible customisations:

- Embroidery with company logo or employee names
- Logo placement on sleeves, collars, chest (pockets), back
- Digital direct printing on cotton
- Multicoloured ESD clothing according to your CI guidelines

Unser ESD-PROTECT Onlineshop

ESD products from all areas of ESD protection

Our range is clearly divided into four practical categories and comprises several thousand high-quality items. This ensures that you will find the right solution for every requirement – reliable, efficient and precisely tailored to your individual needs.

- **ESD personal grounding (HUMAN)**
  ESD textiles and products worn on the body.
- **EPA workplace equipment (EPA)**
  ESD furniture, ESD flooring and workplace accessories for setting up an EPA protection zone in accordance with standards.
- **ESD logistics (LOGISTICS)**
  Storage systems for warehousing, transport equipment, packaging materials and shipping boxes.
- **ESD technology (TECHNOLOGY)**
  Relevant measuring devices, test stations, testing equipment, ionisers and other measuring accessories.

THE ORIGINAL: THE ESD ACADEMY

The ESD Academy is the market-leading ESD training centre for intensive in-service training and further education in the field of electrostatics and prevention – in accordance with the requirements of the current ESD standard IEC 61340-5-1:2024.

For over 17 years, renowned companies worldwide have relied on our expertise in the areas of ESD training, ESD consulting, ESD auditing, ESD certification and other innovative ESD services.

ESD-AKADEMIE®
Wissen schafft Sicherheit

Visit the academy website

esd-akademie.de/en

seminars

workshops

consultancy

certification

audits

calibration

measurement

ESD standards at a glance

For EPA OPERATORS:

DIN EN 61340-5-1

Electrostatics – Part 5-1: Protection of electronic components against electrostatic phenomena – general requirements.

DIN EN 61340-5-2

Electrostatics – Part 5-2: Protection of electronic components against electrostatic phenomena – User guide.

DIN EN 61340-5-3

Electrostatics – Part 5-3: Protection of electronic components against electrostatic phenomena – Characteristics and requirements for the classification of packaging used for components sensitive to electrostatic discharge.

DIN IEC/TR 61340-5-5

Electrostatics – Part 5-5: Packaging systems in electronics manufacturing.

FOR MANUFACTURERS OF ESD CONTROL ELEMENTS:

DIN EN 61340-4-1

Electrostatics - Part 4-1: Standard test methods for specific applications (electrical resistance of floor coverings and installed flooring).

DIN EN 61340-4-2

Electrostatics - Part 4-2: Standard test methods for specific applications - Methods for determining the electrostatic properties of textiles.

DIN EN 61340-4-3

Electrostatics – Part 4-3: Standard test methods for specific applications (footwear).

DIN EN 61340-4-4

Electrostatics – Part 4-4: Standard test methods for specific applications – Classification of flexible bulk containers with regard to electrostatics.

DIN EN 61340-4-5

Electrostatics – Part 4-5: Standard test methods for specific applications (methods for characterising the electrostatic protective effect of footwear and flooring in combination with a person).

DIN EN 61340-4-6

Electrostatics – Part 4-6: Standard test methods for specific applications – HGB.

DIN EN 61340-4-7

Electrostatics – Part 4-7: Standard test methods for specific applications – Ionisation.

DIN EN 61340-4-8

Electrostatics – Part 4-8: Standard test methods for specific applications – Shielding effects against electrostatic discharge – Bags.

DIN EN 61340-4-9

Electrostatics – Part 4-9: Standard test methods for specific applications – Clothing.

DIN EN 61340-2-1

Electrostatics – Part 2-1: Measurement methods – Ability of materials and products to dissipate electrostatic charges.

DIN EN 61340-2-3

Electrostatics – Part 2-3: Test methods for determining the resistance and specific resistance of solid, flat materials used to prevent electrostatic charging.

DIN EN 61340-3-1

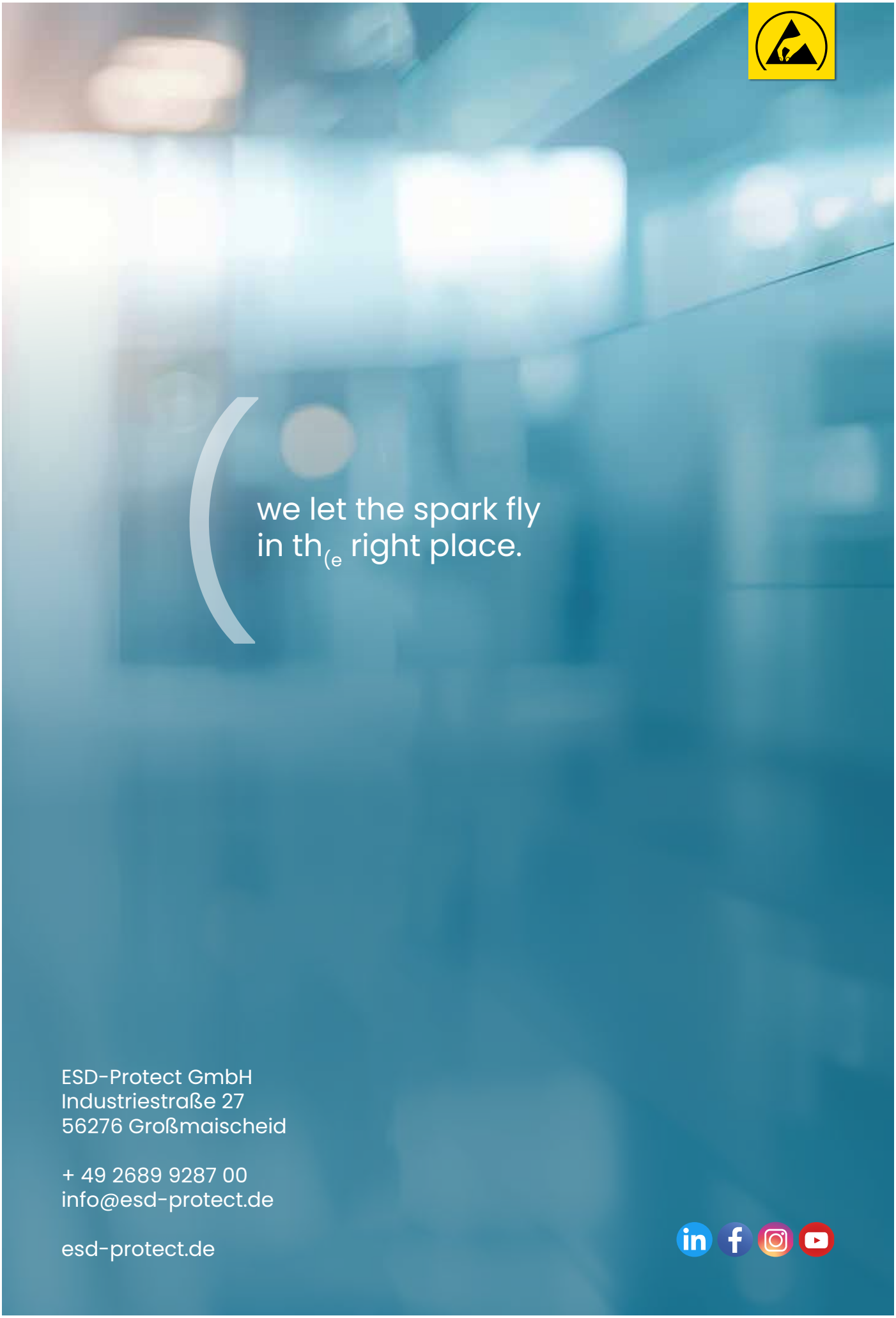
Electrostatics – Part 3-1: Methods for simulating electrostatic effects – Test pulse forms of electrostatic discharge for the human body model (HBM).

DIN EN 61340-3-2

Electrostatics – Part 3-2: Methods for simulating electrostatic effects. Test pulse shapes of electrostatic discharge for the machine model (MM).

ANSI/ESD S20.20 mit Untergruppen

ESD Association Standard for the development of a programme for controlling electrostatic discharges.
Protection of electrical and electronic components, assemblies and devices (except electrically ignited explosive devices).



ESD-Protect GmbH
Industriestraße 27
56276 Großmaischeid

+ 49 2689 9287 00
info@esd-protect.de

esd-protect.de