shieldex


Metallised Textiles for Challenges that Matter

We are Shieldex

Shieldex represents highest German manufacturing quality of extraordinary and individual solutions, a worldwide unique metallisation process as well as tradition consciousness with its production being located in Bremen. For more than 40 years, we have been metallising textiles for the industry's most diverse fields of innovation.

This brochure provides you with a brief overview of our know-how. We are your partner when it comes to developing and implementing new and innovative textile solutions. Whether you are a start-up, a medium-sized business or a large corporation, our passion for realising new ways of thinking is our capital - this applies to our products as well as to the relationships with our international customers and partners.

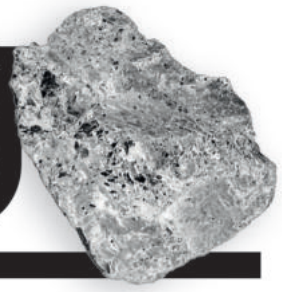
With Hanseatic greetings

Robert Erichsen – CEO

The unique properties of our metals

47

Ag

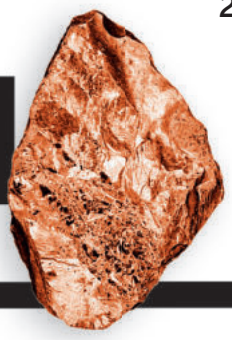


Silver - The top performer

99.9% pure silver is the most important basic material to produce our high-quality metallized textiles. As an extremely ductile precious metal, it sets itself apart from all other metals as the best electrical and thermal conductor. In addition, silver is not only highly antimicrobial, but also extremely kind to the skin and ideal for shielding electromagnetic radiation.

29

Cu



Copper - The all-rounder

Copper also impresses with its performance values in terms of electrical and thermal conductivity as well as with its ability to shield from electromagnetic radiation. Overall, Copper impresses as an all-rounder with its price-to-performance ratio and has extremely strong antiviral properties.

28

Ni

Nickel - The supporter

If direct skin contact is not required, nickel can also be an effective alternative for many fields of application. Particularly as a protective or reinforcing metal layer, nickel protects silver or copper from corrosion while enabling improved conductivity and performance of our shielding products.

50

Sn

Tin - Soldering & conducting

If the application is to be soldered in the industrial manufacturing process, our unique metallization process enables us to additionally coat our silver- and copper-plated textiles with tin. This would not only prepare the textile for processing but would also make it even more conductive thanks to the combination of different metal layers.

The Shieldex product world

Fibers and Yarns

Fabrics

↘ We are ready for any challenge you may face, may it be fibers or yarns for the apparel industry or metallised fabrics for industrial manufacturing in the production of e.g., consumer electronics – all of which are “Made in Germany”.

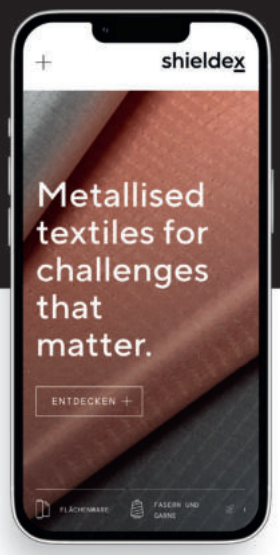
+ Antibacterial
+ Antiviral
+ Fungicide
+ Abrasive resistant
+ EMC Shielding
+ Thermally, electrically conductive
+ IR / Radar / Thermal shielding
+ Antistatic
+ Solderable

Components

Solutions

You are looking for the challenge. We offer the solution.

Companies around the world rely on our Shieldex products, which are perfectly and intricately manufactured from high-quality components. Do you have a special challenge? The creativity of our engineers and our technical expertise will be happy to support you in finding novel solutions for the most demanding requirements.



Let‘s get digital

Visit our website and be inspired by our products and solutions.

EMC Shielding

The function of electronic devices is affected by electromagnetic fields (EMF) from other devices if they are not shielded. Industry 4.0 is working intensively on the digitalization and wireless data transmission. As the number of connected devices increases, so does the number of potential sources of error. Shieldex offers both semi-finished and finished products for digital and mobile forensics. Mobile shielding tents / EMC enclosures from Shieldex also support all major manufacturers in the automotive and aerospace industries.

Electromagnetic fields | Room shielding | Shielding enclosure | Computer & mobile forensic | RFID curtains | Shielding garments | High frequency measurements | Basic material for EMI applications

Sensors, Heating & Lighting

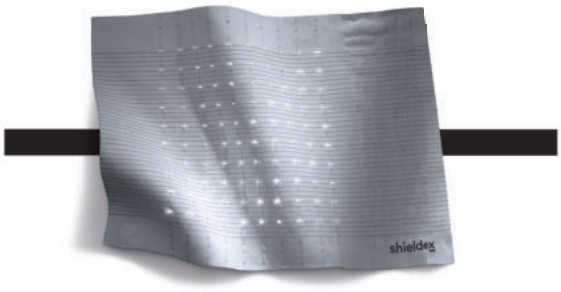
The modern requirements for tomorrow's electronics are clearly defined, flexible and durable - in some cases even integrated into clothing. The fusion of electronics and textiles has arrived in the apparel industry as well as in the automotive world. Our textiles can integrate light, heat, power switches, electronic and sensor technologies, and are characterized by robust, space- and weight-saving properties, which enables them to be used in a variety of ways.

Capacitive sensor | Textile connector | Textile cable replacement | Textile electrodes | Heating structures

Wound Dressing

For more than 20 years, Shieldex has been providing antimicrobial solutions to the healthcare and medical markets by manufacturing products used in every hospital. The antiseptic properties of silver allow for wound dressings and patches to be used for chronic and burn wounds, as well as for future visions of telemedicine wound monitoring.

Wound monitor system | Wound dressing | Pain treatment | Wound management



Flexible Circuits

Ideal for flexible high-tech applications, Shieldex partial metallization is a sustainable technology that makes it possible to implement customized circuit traces in any design. Textile and stretchable sensors, antenna systems, heating coils, signal lines and other textile components can be manufactured in this way.

Flexible sensors | Antenna systems | Conductive path design | Transmission lines

Health & Hygiene

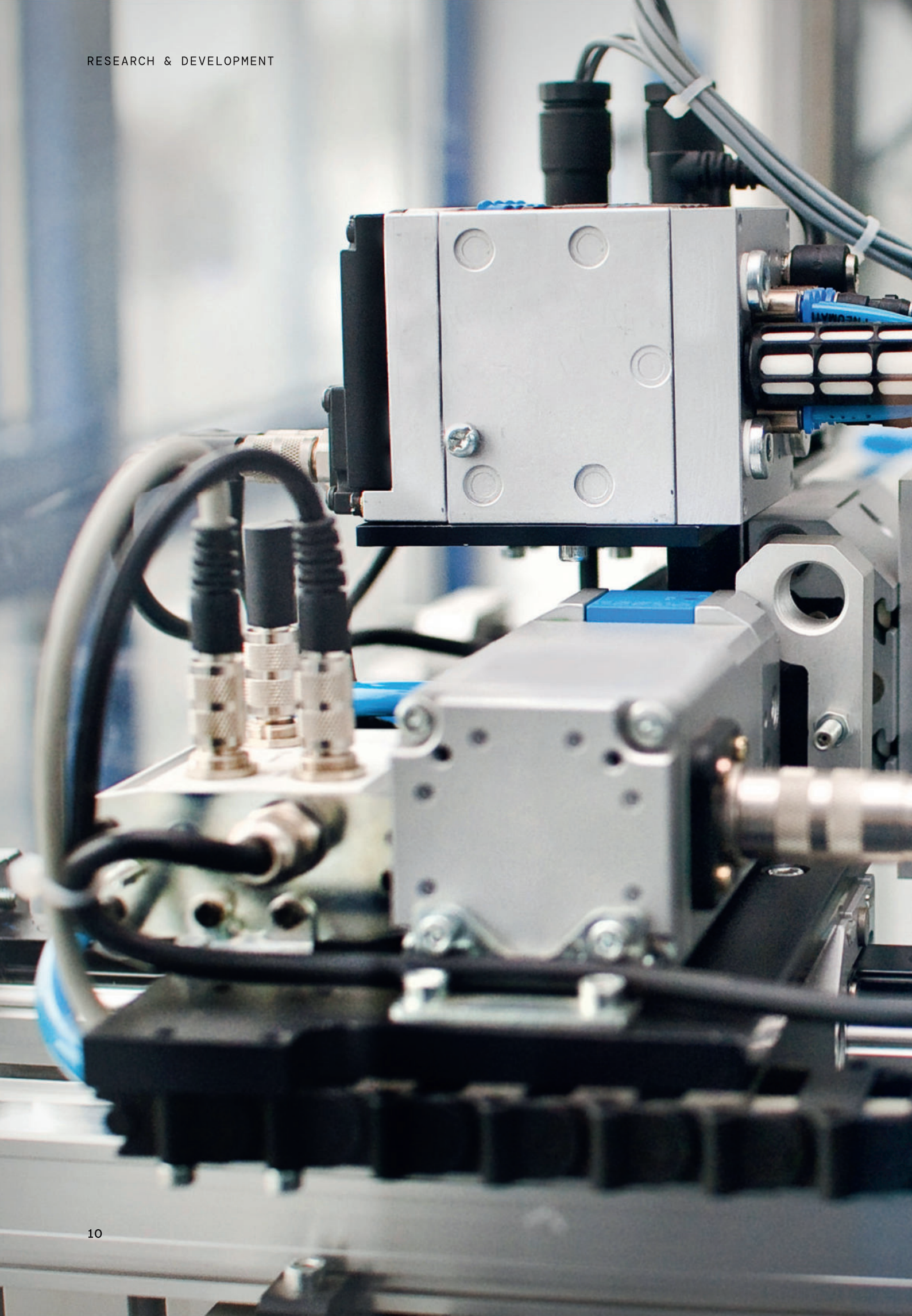
Shieldex products are an integral part of modern healthcare. Silver technology improves hygiene, whether it might be in modern air filters, water treatment in caravans or as surface disinfection of objects. Another area of application for silver textiles is Ambient Active Living, i.e., in assistance systems that promote a self-determined life. Here, technical devices worn close to the body for measuring vital parameters are often uncomfortable and difficult to clean - a problem tailor-made for Shieldex to solve.

Vital parameter | Motion detection | Air filtration | Textile electrodes | Water treatment

Wellness & Lifestyle

Silver-plated Shieldex materials have an antibacterial effect and carry the OEKO-TEX® Standard 100 seal of approval, making them ideal for odor-inhibiting applications in the field of sports & fitness clothing, as well as for skin conditions such as neurodermatitis or electro smog-shielding clothing. Silver ions have an antimicrobial, cooling, temperature-regulating, and odor-inhibiting effect. Silver textiles incorporated into clothing can also detect and transmit signals during sports activities. The integrated technology helps to make garments smarter and more comfortable.

Antimicroial garments | Garment production | Skin diseases | Electro-muscular stimulation (ems) | Hygiene



Two innovative approaches, limitless possibilities

↘ Research and development shape the future. It addresses social challenges, develops new approaches to solutions and achieves improvements for mankind. At Shieldex, the scientific and innovative urge drives the company. We respond to the technical, innovative, and future-oriented projects of our customers and partners with dedication and commitment. Our research is not only centred on the development of new products, but also offers the adaptation of Shieldex products tailored to our customer needs. We also draw on our international network of universities and research institutes and accompany many, worldwide innovation projects with our customers.

Product development: For your next challenge

↘ Developing new products and helping to shape the future of tomorrow is the ambition of our company. The highest quality is the standard in all areas of our work, and we aim to increase the efficiency and effectiveness of new and future-oriented products.

Partner requirements
Collecting data during our meeting

Evaluation
Evaluation of the data obtained

Sample inspection
Incoming inspection of the sample

Test metallisation
First test silver-plating in the laboratory

Evaluation & feedback
Evaluation of the test silver-plating. Outlook and feedback to sales/partners

Upscale
Upscaling and evaluation with at least three production runs

Approval & production
Possible release for production

Discussion
Final meeting with the partner

Product customization: Tailor-made for specific customer requirements

↘ Shieldex products are versatile and suitable for any application due to their textile properties. If you have specific requirements, we will gladly adapt our existing products to meet your needs. From evaluation to series production, we develop the right solution for you.

Partner requirements
Including desired changes to the original Shieldex product

Estimation
Theoretical estimation of the resulting costs or the new price

Feedback & test run
Feedback to the partner. Test run with adjusted parameters

Upscale
Upscaling and evaluation with at least three production runs

Approval & production
Possible release for production

Discussion
Final meeting with the partner

At home in Bremen - since 1978

We see our customers as our partners. Our understanding of cooperation: to support you professionally, goal-oriented, agile, and trustworthy. As the world market leader in the production of silver-plated fabrics, we combine competence with innovative product ideas. As an owner-managed family business, we are already meeting the highest demands when it comes to providing you with products and services in the third generation.

Robert Erichsen
CEO

Claudia Erichsen
Owner

Milan Christiansen
CFO

44+

Years of experience

3

Generations

25

Innovation Awards

1000+

Satisfied customers

27+

Current export countries

80+

Shieldex experts worldwide

The solution is just a phone call away

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