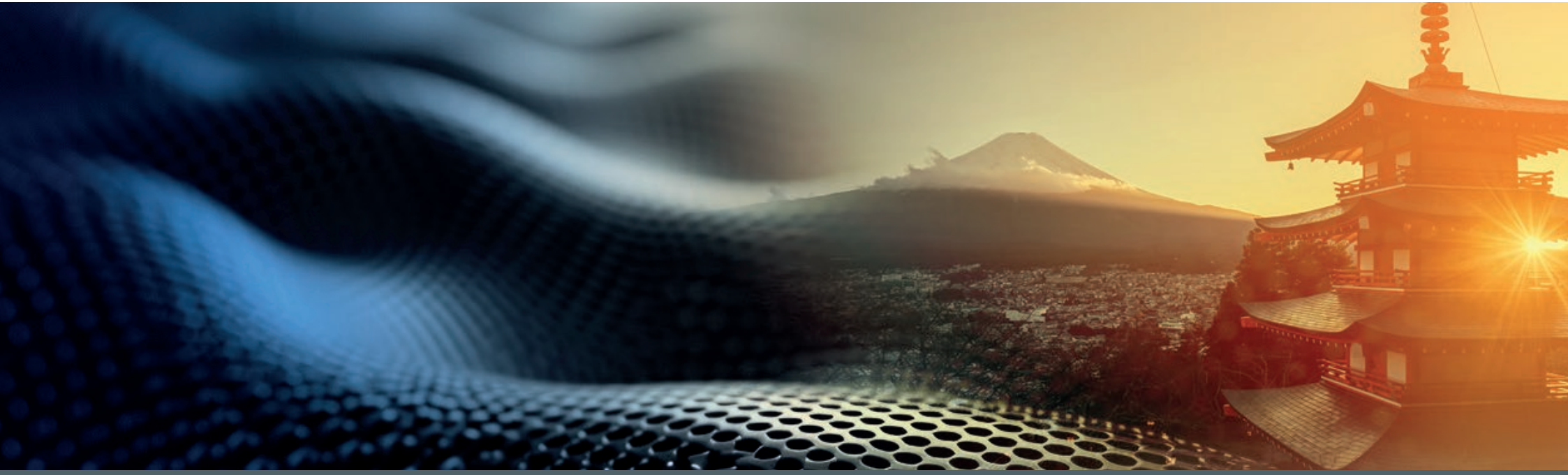
MITTELSTAND GLOBAL
FOREIGN MARKET ENTRY PROGRAMME



German Business Delegation Trip to Japan - Lightweight technologies

Kanazawa, Fukui, Gifu & Nagoya
20th – 24th October 2025

Company Products and Services Catalogue

In collaboration with

COMPOSITES UNITED

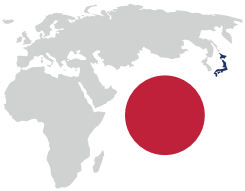
ICC Innovative Composite Center

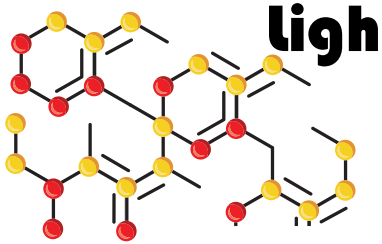
Project of

sBs systems for business solutions

German Business Delegation

Japan 20th-24th October 2025





lightweight

Lightweight technologies

German Companies

Broetje Automation GmbH

Cevotec GmbH

CompoSpring GmbH

CTC GmbH

ECOMAT e.V

Ensinger GmbH

herone GmbH

KROENERT GmbH & Co KG

KSL Joining Technology GmbH

POLYVLIES – Franz Beyer – GmbH

SWMS SystemtechnikIngenieurge-sellschaft mbH

ThermHex Waben GmbH

SBS systems for business solutions (SBS) in collaboration with the Innovative Composite Research and Development Center (ICC) in Kanazawa and Composites United e. V. will be conducting a business delegation of German technology providers to Japan October 2025 with a focus on the Lightweight Technologies Industry.

This project is supported by the German Federal Ministry for Economic Affairs and Energy (BMWE) within the framework of the BMWE Market Development Program. It aims to showcase some of Germany's best solution providers in the fields of innovative lightweight materials, production and process technologies for composites.

The lightweight technologies industry in Germany is a cornerstone of the country's economy, renowned for its innovation, engineering excellence, and global influence. The German companies will bring their expertise and offerings to the Japanese players, presenting opportunities for mutual growth and advancement. The focus on quality and reliability helps ensure that products meet the highest safety and performance standards.

ICC is coordinating two **Conferences and Business Matching Events** in Japan. The first one on **Monday, October 20th 2025 in Kanazawa** and the second one on **Thursday, October 23rd 2025 in Nagoya**. These Events are offering opportunities for presentations, expertise sharing, and individual business meetings with the German solution providers in this particular sector.

If your company is from the lightweight material and technology industry, join us for an exchange of knowledge and collaboration with German experts at the Conferences on 20th and 23rd October 2025 and at **individually arranged Business Meetings in Kanazawa, Fukui, Gifu and Nagoya**, which provide excellent platforms for stakeholders to explore new business opportunities.

Participation is free of charge but subject to previous registration.

Federal Ministry for Economic Affairs and Energy

MITTELSTAND GLOBAL
FOREIGN MARKET ENTRY PROGRAMME

Greeting message from the Federal Ministry for Economic Affairs and Energy

Mr. Werner Loscheider

Head of Division – Construction Industry, Lightweight Construction / New Materials, Resource Efficiency

Federal Ministry for Economic Affairs and Energy

A warm welcome to all participants on the German Business Delegation to Japan. This business delegation on lightweight technologies, which falls under the umbrella of the Market Entry Programme launched by the Federal Ministry for Economic Affairs and Energy in 2012 to support German companies in exploring foreign markets. Since the inception of the programme, over 10,000 SMEs have taken part in its projects, thus gaining access to new markets, securing existing ones, and establishing valuable networks.

Lightweighting technologies are applied across many high-tech industries and involve many materials and production methods. They generate economic value, create high-quality jobs, and drive technological advancement. Sustainable lightweight construction is also a key driver of climate change mitigation, one of the greatest global challenges of our time.

Japan and Germany have both recognised the potential of lightweight construction as a game-changer and are actively promoting technological development in this field. Japan is a global leader in advanced materials – including carbon fibre, high-performance composites, and innovative metal alloys – and in manufacturing technologies applied in the automotive, aerospace, robotics, and medical sectors. These strengths complement German expertise in engineering, system integration, and applied industrial solutions.

Japan is therefore not merely a sales market for lightweight products and new materials but offers broad opportunities for industrial cooperation. There is excellent potential for strengthening bilateral business relations across all areas related to lightweighting – from components and machinery to the marketing of new materials and manufacturing technologies, as well as joint research and development projects.

I wish all participants on this business delegation every success.

STAXX FAMILY
A MODULAR SOLUTION

BROETJE AUTOMATION

STAXX BOX

Application

This compact, flexible and easy to use automated fiber placement machine is ideally suited for the automated production of small composite parts at low cost.

- Small Parts
- Material Layup Tests
- R&T

Compact Work Cell Configuration

STAXX ONE

Application

The STAXX ONE Single Tow End-Effector is a highly flexible small and lightweight automated fiber placement end-effector. With its mass of about 60kg it can be mounted on a variety of standard industrial robots.

- Complex Parts
- Curved Structures
- Table Configurations possible

Flexible Work Cell Configuration

STAXX COMPACT

Application

Designed for high volume industrial production the system is ideally suited for the mass production of small composite parts. It achieves high workpiece quality while minimizing material waste.

- Serial production of small parts
- No limits in Fiber Orientation
- Easy Material Reloding

Enclosed Airconditioned Cell

STAXX ONE PORTABLE

Application

The portable STAXX ONE Cell has a fully 3D-capable AFP robot system in a self-sufficient and self-contained environment. The configuration with either a rotary table or a tailstock, both fully integrated into the controller, enables a variety of applications.

- Complex Parts
- Prototyping
- R&T Applications

Compact Work Cell Configuration

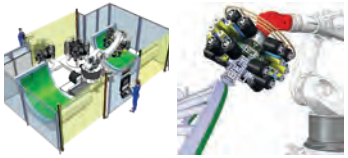
STAXX FLEX

Application

The system is ideal for automated fiber placement in serial production. It supports common materials such as PrePreg and Dry Fiber up to 50K per tow.

- Complex 2D and 3D Parts
- Easy Maintenance
- Automatic Changing Device

Flexible Work Cell Configuration



Summary

Broetje-Automation is the world's leading expert for production processes in the aerospace industry.

made in Germany

EQUIPPING THE FACTORY OF THE FUTURE

www.broetje-automation.com

Company profile

Based on more than 40 years of experience Broetje-Automation strives to be the best companion for automated production solutions. We build highest standard technologies to provide our customers with a tailormade solution fit to their individual cases. Our strongsuit is the individual integration of various processes into highly automated machine systems to make your shopfloor more efficient, ergonomic and flexible. For our customers we naturally enhance the production and quality of simple and complex structures and therefore help to implement complex technologies and connected digital production possibilities for the Factory of the Future.

Products / Services

Broetje-Automation is a global specialist in automated assembly systems, with operations across 23 sites. BA Japan has served the local market for many years, maintaining and supporting the delivery of advanced assembly technology and turnkey production lines; its team ensures smooth operation for customers.

The subsidiary offers Industrial Services, Training, support for Retrofits and Upgrades & Modifications and supports the full Broetje portfolio, including turnkey panel lines such as for MHI with localized service staff.

Broetje's digital solutions like SOUL OLPS support virtual machine simulation including the digital twin, enabling the Factory of the Future vision. This combination of local expertise, cutting edge technology and global support makes Broetje-Automation a reliable partner for Japan's aerospace industry.

References and export activities

Broetje-Automation is part of almost every civil aircraft program worldwide:

E175-190, A220, A320 Series, B737(max), MC21, Suchoi Super Jet, C919, C929, A330, A350, B787, B777, B747, A380, A400M.

Target group

Composite part manufacturers (AFP, CFRP), Wind Power Manufacturers, Aerospace Industry, Aerospace Engine Manufacturer and MRO´s.

Competitive advantages

We provide comprehensive machine, factory and process know-how from a single source:

- Automated Equipment ready for Industry 4.0
- End-to-End Digitalized factory using the Digital Twin
- The manufacturing processes you need! Tailormade and digitalized
- Turnkey Factory Integration from planning to operation
- Lifecycle Support. We care about your equipment and keep it up-to date the entire lifecycle

Ideal business partners

Broetje-Automation's ideal partners include Tier 1 suppliers of major aero structures, wind blade manufacturers, MROs maintaining and overhauling aircraft engines, final assembly providers for engines, and CFRP component manufacturers for Aerospace structures.

BROETJE AUTOMATION

BROETJE-AUTOMATION GMBH

Am Autobahnkreuz 14
26180 Rastede
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www.broetje-automation.com

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Project

German Business Delegation Japan 20th-24th October 2025

lightweight Lightweight technologies

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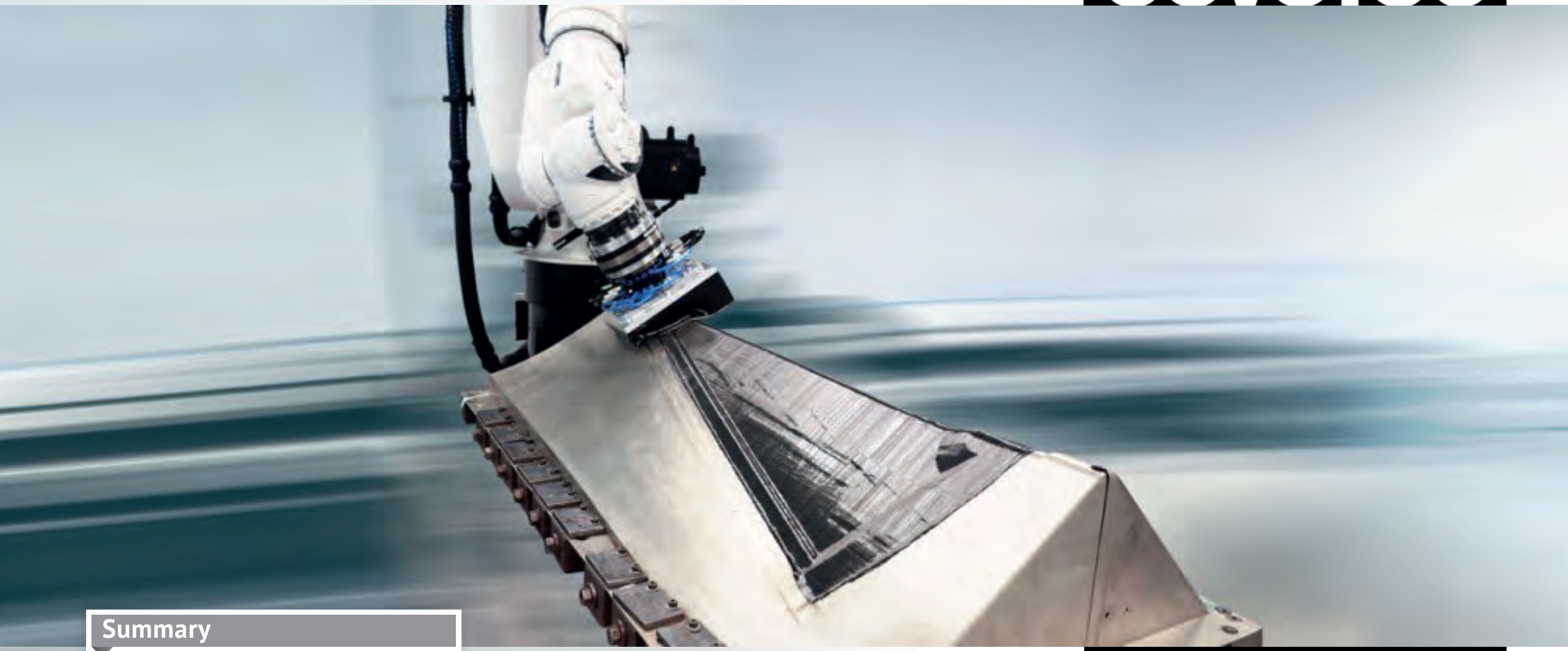
cevotec



Summary

Cevotec enables manufacturers to produce complex composites in high volume and superior quality – with robotic lay-up automation.

made in Germany

www.cevotec.com

Company profile

Cevotec empowers manufacturers to produce complex composites in high volumes and superior quality by using Fiber Patch Placement (FPP) technology. Our robotic SAMBA systems automate the precise placement of carbon fibers, glass fibers, adhesive films, and other technical fibers on complex 3D geometries, supported by our CAD-CAM software ARTIST STUDIO. The automated, quality-controlled lay-up process enables our customers in aerospace and renewable energy to meet strict quality, cost, and sustainability goals, with up to 60% savings in production time and cost.

Products / Services

- SAMBA lay-up automation systems
- CAD/CAM software ARTIST STUDIO to design the laminate and program the manufacturing process (automated offline programming)
- Product & application development services including design, simulation, prototyping, small batch manufacturing

References and export activities

Installations worldwide (publicly announced):

- National Composite Center, Japan
- National Institute for Aviation Research, USA
- Leonardo, Italy
- Fraunhofer Institute IGCV, Germany
- University of Augsburg, Germany

Selected partners & references: Airbus, GFM, Manroland, Cikoni.

International sales partners: Fuji Industries Co. Ltd. (Japan), Composite Automation (USA), Chunhua Technologies (China), HACO (China).

Target group

Aerospace OEM, tier 1 & 2 involved in composites manufacturing & development; composite pressure vessel manufacturers and developers.

Competitive advantages

1. Enable lay-up automation on geometries where other technologies face limitations
2. Handle a wide range of materials: carbon, glass and other technical fibers; prepreg and dry-fiber; adhesive films; honeycombs
3. Create locally optimized laminate designs with adjustable gap / overlap properties, also for pressure vessel dome reinforcements
4. Process repurposed (waste) materials from other processes as raw material

Ideal business partners

Departments and teams – both at manufacturers and institutes – that are responsible for

- Designing and developing new composite applications in aerospace and pressure vessels
- Automating existing lay-up processes
- Looking for ways to increase production rates, decrease cost, or improve quality

cevotec

Cevotec GmbH

Biberger Str. 93
82008 Unterhaching
Germany

www.cevotec.com

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Mobile: +49 151 7060 3863

Languages: English, German, Japanese

Project

German Business Delegation Japan 20th-24th October 2025

lightweight technologies

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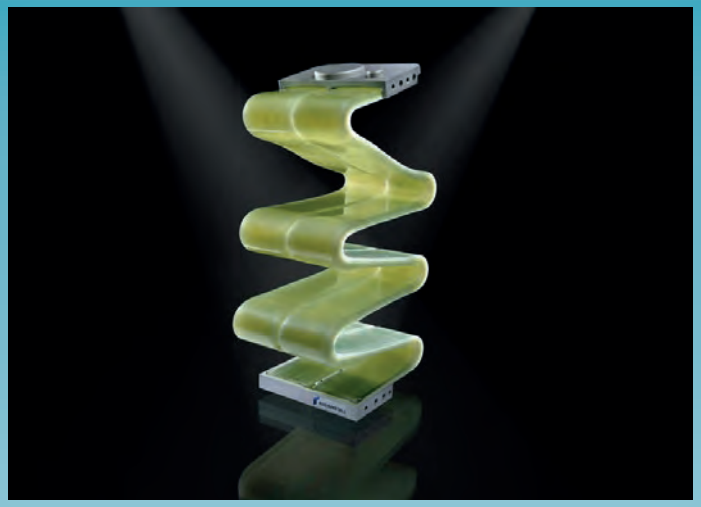
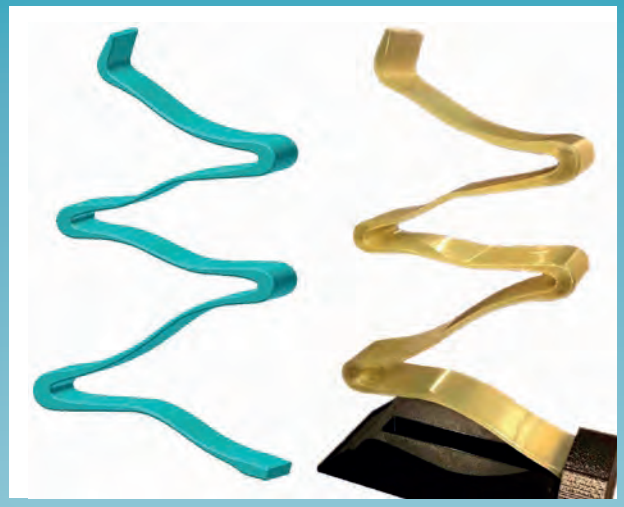
COMPO Spring





Summary

Developer and manufacturer of globally unique springs made of fiber-composites.

made in Germany

www.compospring.com

Company profile

With over 15 years of experience in developing and manufacturing unique composite springs, we are now conquering the mass market. Our strength is the flexibility in design with high-performance springs for different areas of application. Through various design options, we are able to fit our springs into any available installation space and implement different mechanical operating principles.

Products / Services

Advantages of FRP springs: weightsave 90%, variable design, high eigenfrequencies, magnetically neutral, not electrically conductive, secondary weight reduciton effects, direction of reaction force variable –> side, load compensation feasible, adjustable spring characteristics (declining to progressive).

References and export activities

Compospring customers are automotive OEM,big suppliers and SME, as well as research organisations.

Target group

Manufacturer and developer of handheld tools, rail transport, hose reels, oil and gas production, automotive, drones, machine and robotic manufacturer.

Competitive advantages

- Worldwide unique patented spring concepts for almost every application
- light
- very durable
- also well suited for high-performance applications
- different modes of action
- possibility of component reduction through novel approaches and thus secondary advantages
- flexible concepts that can be used almost anywhere
- fast scalability
- own simulation and development
- own production

Ideal business partners

Our goal is to have satisfied customers who value us as a partner. Every employee at CompoSpring is committed to this. We are committed to finding the optimum solution for our customers every day, both in terms of the quality of our products and our service.

CompoSpring GmbH

Am Geispitzheimer Hof 6
67596 Dittelsheim-Heßloch
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www.compospring.com

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Project

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lightweight technologies

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germantech.org

CTC

we are composites

an AIRBUS company

Summary

The Composite Technology Center / CTC GmbH (An AIRBUS Company) is a leading lightweight technology and innovation center in Europe, especially for the aerospace sector!

made in Germany

100% Aerospace Quality

www.ctc-composites.com

Company profile

The Composite Technology Center / CTC GmbH, based in Stade, is a 100% subsidiary of Airbus. At its core, the CTC develops innovative technologies for the industrial and automated processing of composites, especially CFRP. The focus is thus on application-oriented research for primary aircraft structures. However, CTC also develops technologies and holistic solutions for other industries within the scope of development and consulting projects. The focus is always on the satisfaction of our customers through the realization of the highest quality in compliance with aviation requirements.

Products / Services

The core competencies of the CTC are distributed over the four business fields “Innovation”, “Solution”, “Production” & “Education” and lie particularly in the areas:

- Composite product design and analysis
- Research and development projects for fibre composite and lightweight technologies
- Development, introduction and operation of highly automated production systems
- Consulting and series support for composite production
- Process recording, analysis and optimization
- Production of single and serial parts in aviation quality
- Training & Education in the field of composites and related technologies.

References and export activities

CTC is active worldwide in the field of lightweight solutions and technologies, especially with development services.

Target group

CTC’s target group are OEM and supplier of the mobility and industrial sector which are interested in holistic, smart and sustainable lightweight solutions as well as technologies.

Competitive advantages

CTC is a leading lightweight technology and innovation center in Europe, especially for the aerospace sector!

Ideal business partners

- OEM
- ODM
- Supplier
- Engineering service provider
- Companies with a need for innovation
- Companies with a need for professional training

With a focus on lightweight technologies and composites in aerospace, automotive, transportation, railway, shipbuilding, wind power, machinery and plant engineering sector.

CTC we are composites

an AIRBUS company

Composite Technology Center / CTC GmbH (An AIRBUS Company)

Airbus-Strasse 1
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www.ctc-composites.com

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Project

German Business Delegation Japan 20th-24th October 2025

lightweight technologies

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germantech.org

Summary

The ECOMAT e.V. focusses on supporting research and development with the aim for discovering common interests and exchanging ideas.

made in Germany

ECOMAT

Bremen Center for Eco-efficient Materials and Technologies

ecomat-bremen.de/en/home

Company profile

The ECOMAT Innovation Platform focusses on supporting research and development in the fields of materials technology, lightweight construction and production technologies in Bremen, with the aim of providing a platform for discovering common interests and exchanging ideas.

Founded at the start of 2019, its members work closely together to provide new impetus for the sector, expand research infrastructure, bundle areas of expertise and improve cooperation between industry, component suppliers and the world of science. It operates within a national and an international framework. The ECOMAT research and technology center in Bremen pools the expertise of industry and science in the sustainable transformation of the aerospace industry. It provides access to key technologies in the fields of cryogenic hydrogen, lightweight construction, manufacturing technology, 3D printing and virtual testing and approval processes. This strengthens Bremen's innovative capacity and competitiveness.

Products / Services

- representing interest groups and network management
- bundling areas of expertise
- creating more efficient R&D infrastructures
- supporting the next generation of scientists
- providing platforms for the exchange of information and a common public image
- organising events, issues publications and provides information using a number of different channels.

References and export activities

Research focuses on reducing resource use and emissions through cryogenic hydrogen, new materials, and advanced manufacturing. Under the "virtual product" concept, digital design, testing, and certification (e.g., for aviation systems) support efficient, eco-friendly aircraft development via end-to-end digitalization.

Target group

OEMs, suppliers and research institutes in the field of lightweight construction technology for application in aviation and aerospace, automotive engineering, wind power and ship-building and more

Competitive advantages

ECOMAT is both a research centre and a real community. Its laboratory facilities are just as important as the regular discussions and get-togethers where the 500 researchers who work there can swap ideas, creating industry-oriented applications which will quickly find their way into production in real life. Sharing laboratory facilities (e.g. CryoLab) and the technical centre creates the synergies which makes this possible.

Ideal business partners

OEMs, suppliers and research institutes in the field of lightweight construction technology for application in aviation and aerospace, automotive engineering, wind power and ship-building and more.

ECOMAT

Bremen Center for Eco-efficient Materials and Technologies

ECOMAT e.V.

Cornelius-Edzard-Str. 15
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ecomat-bremen.de/en/home

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Phone: +49 421 538 5826

Languages: English, German

Project

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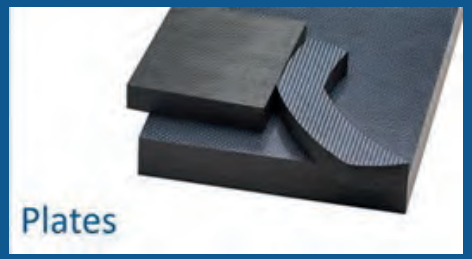
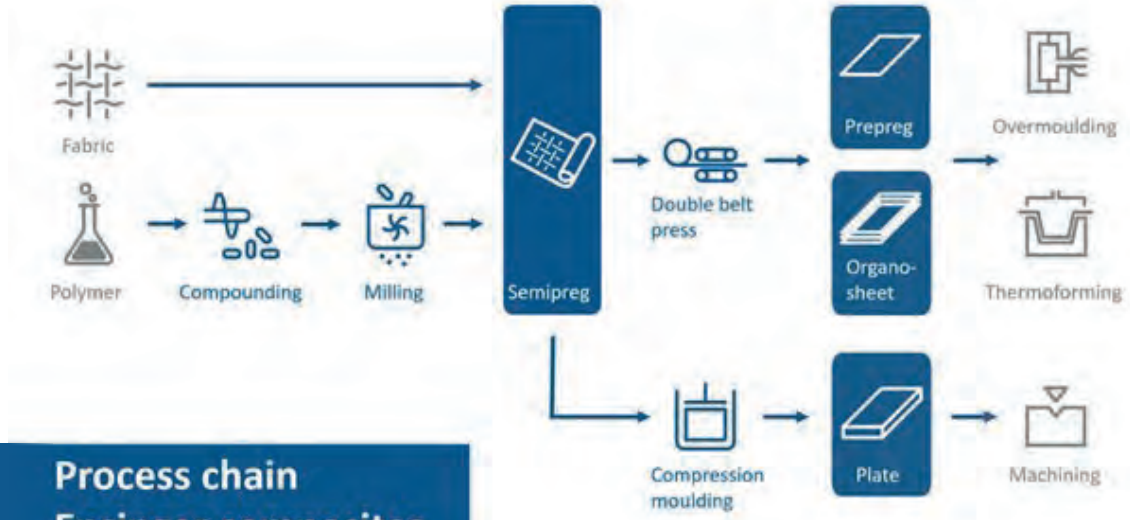
Ensinger


Organosheets

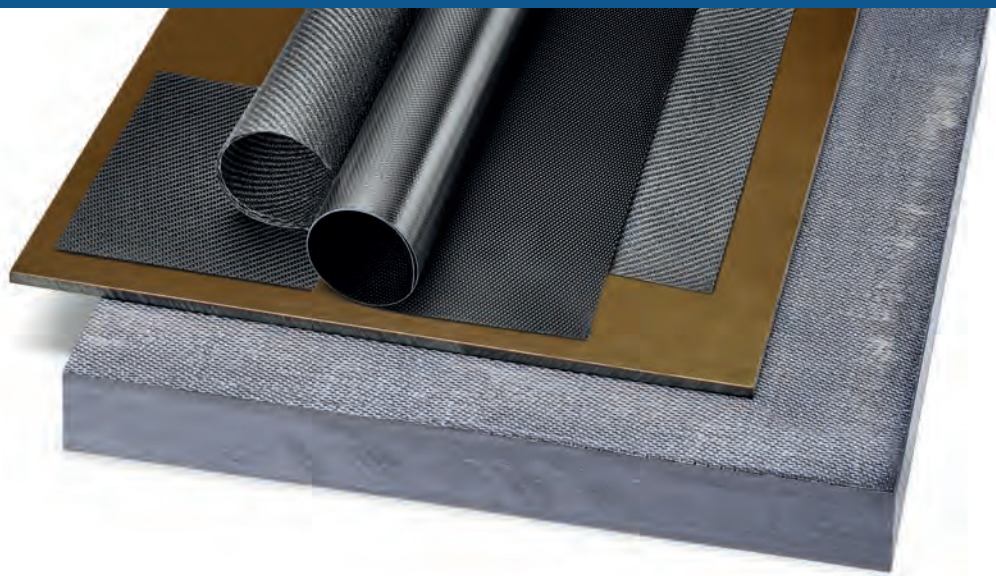

Plates


Prepregs


Semipregs



Process chain Ensinger composites



Summary

Ensinger offers high-performance thermoplastic composites and end-to-end support from material selection to prototype and series production.

made in Germany

www.ensingerplastics.com/en

Company profile

The Ensinger Group is engaged in the development, manufacture and sale of compounds, semi-finished materials, composites, technical parts and profiles made of engineering and high-performance plastics. To process the thermoplastic polymers, Ensinger uses a wide range of production techniques, such as extrusion, machining, injection moulding, casting, sintering and pressing. With a total of more than 2,500 employees at over 30 locations, the family-owned enterprise is represented worldwide in all major industrial regions with manufacturing facilities or sales offices.

Products / Services

At Ensinger, we cover the entire process chain in-house – from raw material granulates, to fully consolidated thermoplastic composite materials. Our portfolio ranges from polymer powders, semipregs, prepregs, organosheets, compression moulded composite plates to customer development projects that are realised with a wide variety of material combinations.

Years of experience in the processing of thermoplastic composites allow Ensinger to provide a tailored technical and economical solution for specific customer projects across many industries.

References and export activities

Ensinger is a global company with a strong international presence, operating in 33 locations worldwide. In addition to our global headquarters, we have established a legal entity in Japan, demonstrating our commitment to expanding our business into new markets.

Target group

Automotive, Aerospace.

Competitive advantages

State of the art equipment and a wide selection of textile and polymer combination makes Ensinger‘s range of products unique.

Through our in-house process development and fast technology transfer, we are able to bring innovative materials such as flame-retardant polycarbonate matrices, bio-based polymers, high-quality natural fibre fabrics and others to the market.

Ideal business partners

OEMs, TIER1s, moulders, design/engineering offices.

Ensinger GmbH

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www.ensingerplastics.com/en

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Phone: +81 3 5878 1903

Languages: English, German

Project

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lightweight
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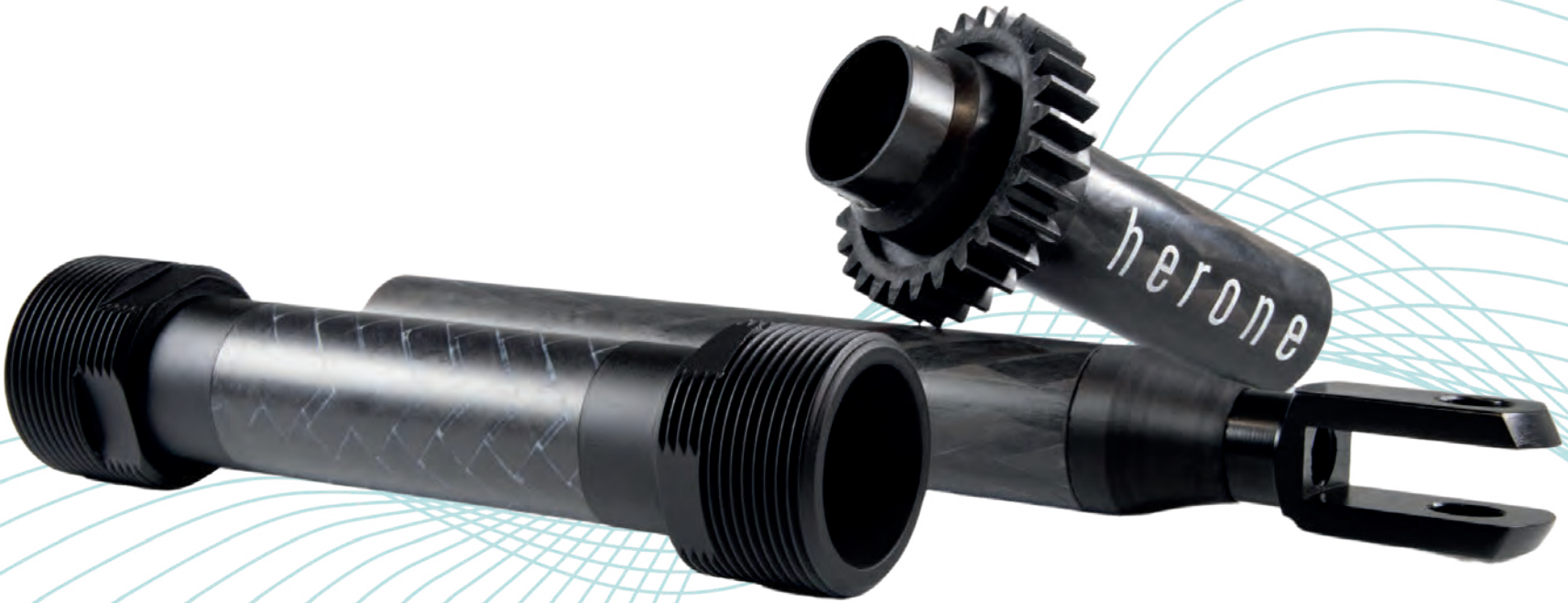
Thermoplastic composite profiles with integral functionality

herone



Summary

Invention and production of ultralight thermoplastic composite profiles to go beyond limits towards a cleaner future and a better life.

made in Germany

ultralight

sustainable

cost-effective

www.herone.de

Company profile

herone – innovate composites for sustainable living. We develop and produce ultralight thermoplastic composite profiles to enable to go beyond limits. With struts, shafts, and pipes we focus on the next generation lightweight solutions to transfer loads, movements, and fluids across industry sectors. To do so, we are committed to the highest quality standards and are EN 9100 certified.

The technological core is our herone technology. It combines automated preforming with efficient press molding to scale production and provide cost-effective solutions to our customers. By using recyclable and recycled thermoplastic material, we explore new ways to close the material cycle for high performance products.

Products / Services

Development and production of cost-effective ultralight composite profiles with tailored performance from recyclable composites.

To meet the demanding requirements of our customers across industries we are specialized in the high-performance thermoplastics at the top of the polymer pyramid (PEEK, PPS, PPA). With struts, shafts, and pipes we focus on profile shaped parts to transfer loads, movements and fluids for the next generation mobility and industry applications. We take the recyclability advantage of the thermoplastic material to explore new ways to close the material cycle towards more sustainable parts. We offer you a synergetic partnership form the definition of requirements through product development to the serial production.

References and export activities

Aviation: Airbus, Airbus Helicopters, Boeing, Collins Aerospace, SAFRAN, lilium, Rolls Royce, Adel Wiggins, Premium Aerotec, SFS intec

Space: MT Aerospace, Ariane Group

Automotiv: BMW, BMW M, Cikoni, Oehlins

Industries: FFT Automation GmbH, KEBA Automation, Stöhr Armaturen, Victrex

Sports: Wilson, Head, tune, DT Swiss

medical: Invibio

Target group

OEMs and Tier-1/2 in the field of aerospace, automotive, medicine, sports and industry sector.

Competitive advantages

Ultra light – we use the thermoplastic advantage with a simplified design to provide the highest lightweight potential.

tailored functionality – we use our expertise & the TP-advantage to tailor the part functionality to your individual needs.

cost-effective parts – simplified and integrated functionality + automation for the most cost-effective solution.

sustainable – our products save resources & are fully recyclable

Ideal business partners

OEMs and Tier-1/2 in the field of aerospace, automotive, medicine, sports and industry sector

herone

herone GmbH

Meschwitzstrasse 21
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www.herone.de

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Languages: English, German

Project

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lightweight technologies

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SBS systems for business solutions

germantech.org

KROENERT

YOUR MACHINE PROVIDER, FOR PREPREG PRODUCTION

Summary

Founded in 1903, KROENERT is one of the world's leading developers and manufacturers of tailor-made coating and laminating lines.

made in Germany

www.kroenert.de

Company profile

KROENERT manufactures innovative, reliable coating and laminating solutions for web-like materials such as paper, foil, film, cardboard and textile products, for example glass or carvon fiber structures. The product range includes customized production and laboratory lines.

We offer high-performance lines with web widths of up to 3,300 mm, coating thicknesses of more than 1 mm to a minimum of 100 nanometres and processing speeds of up to 1,600 m/min.

Over the decades, we have built up state-of-the-art research and development capacities at KROENERT. In our Technology Centre, we develop innovative solutions together with our customers, we test and optimise – until we achieve the perfect result. Our experts use the Technology Centre for product development as well as for defining new engineering processes.

Products / Services

KROENERT offers complete system solutions for the composites sector. These include customer-specific lines for the production of resin films and impregnation for the prepreg production of fiber construction materials.

The EPCO machine concept is our specialist for the production of prepregs.

Prepregs are manufactured in two steps - resin film production and subsequent impregnation. For mass production these steps are separated, as the resin film is produced at a higher speed than impregnation.

The resin film produced in the first process step is stored under refrigeration. Another machine is used to transfer this resin film to the textile fibers to be impregnated. One resin film production line meets the capacity for three impregnation machines.

References and export activities

KROENERT has been serving the market for composite applications since 1950 and can draw on extensive experience with more than 50 machines delivered worldwide.

KROENERT is a certified supplier to the aviation and automotive industry and supplies all leading carbon fiber suppliers which offer prepregs as semi-finished products.

Target group

Our customers are manufacturers of carbon fiber directly, but also suppliers, who produce prepregs for lightweight construction applications on our lines and supply them to aviation companies, automotive manufacturers and manufacturers of wind turbines and hydrogen tanks.

Competitive advantages

KROENERT lines for resin film coating as well as carbon fiber impregnation offer the highest precision in temperature control, coating accuracy, running speed and substrate tension.

The developed technology for grinding the heated rollers for coating as well as for calendering at process temperature results in highest running accuracy at the most used temperature in the application.

Ideal business partners

Suppliers of carbon fibers, as well as suppliers for the aerospace industry who use prepreg processes as well as other users for lightweight construction.

KROENERT

KROENERT GmbH & Co KG

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Project

German Business Delegation Japan 20th-24th October 2025

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KSL

Summary

Automation solutions for the processing of composites and all types of technical textiles.

www.ksl-joining.com

Company profile

KSL is the innovative solution provider for processing technical and non-technical textiles, leather and composites. At its sites in Kaiserslautern and Bensheim, the company develops, produces and markets high-tech industrial sewing machines, CNC sewing machines, sewing robots (2D/3D), welding machines, docu-seam systems, multi-needle sewing units and fully automated production solutions. Key markets (beyond the traditional areas clothing, shoes and upholstery) are the sectors automotive & aircraft, safety technology (e.g. airbags).

Products / Services

Counting on more than 60 years of experience in the field of technical textiles, KSL has developed functional heads which when combined with robotic systems allow 3D-processing. KSL's specialty is the development and construction of special sewing heads in combination with the synchronization of the robot movement with the sewing drive. This way a reproducibly consistent stitch length is achieved. In addition to one-side sewing heads, lockstitch or 2-thread chain stitch machine technology is also integrated into such systems. The integration of ultrasonic cutting heads for dry fabrics or prepreg-materials as well as functional heads for measuring and handling jobs are established. Laying heads and Z-pinning heads were developed to precisely introduce or apply reinforcements. The systems are future-oriented and equipped with tool changers so a subsequent extension is possible at any time.

References and export activities

Space: KSL is a special solution provider for several big space companies / Civil Aircrafts: Airbus A380 Pressure Bulk Head; Boeing 787 Test Door & Landing Gear Braces; R&D Center at OEMs; Universities: MSU / Sheffield.

Target group

Aerospace Industry, Automotive, Wind Blade Manufacturers.

Competitive advantages

Our highly motivated employees have the necessary experience in process engineering, electronic engineering, automation technology and robotics to master the future challenges of the markets with regard to automation and networking (Industry 4.0). PFAFF INDUSTRIAL and KSL are synonymous for reliable, high-performance and sustainable sewing and welding solutions.

Ideal business partners

Tier1 Supplier of structural parts for Automotive, Space and Aerospace Industry/ Universities / R&D Centers / Wind Blade Manufacturers.

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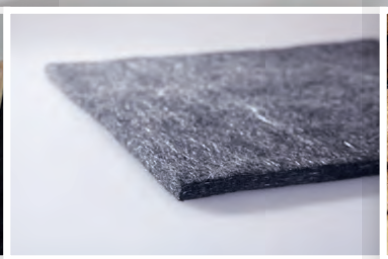
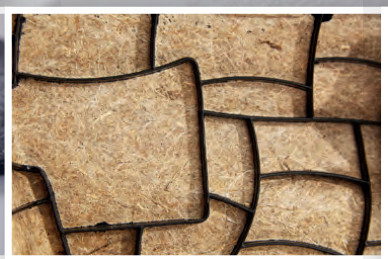




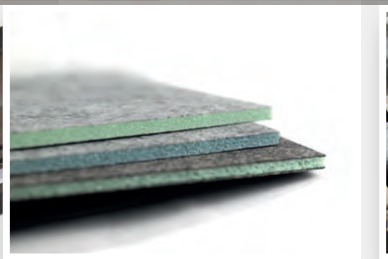


Nonwovens for Innovations

Summary

Development and Production of technical nonwovens for technical application like fiber-reinforced composites.

made in Germany

www.polyvlies.de

Company profile

Founded in 1850, the Polyvlies Group today has around 500 employees at 5 locations worldwide. In addition to the headquarter in the north west of Germany, the company has facilities in Eastern Germany, France, Slovakia and in North Carolina, USA. Polyvlies develops, produces and finishes technical nonwovens made out of synthetic, natural and/or mineral fibers. That offers a vast number of variations and processing possibilities. Because of incorporating the most modern technology Polyvlies is capable of producing technical textiles with a maximum working width of 7.00 meters and weights from 40 to 4 000 g/m².

Products / Services

We offer a wide variety of technical nonwovens from a multitude of different fibers. From synthetic fibers like polypropylene, polyester or polyamid to mineral fibers like glass as well as natural fibers like hemp, kenaf and flax. We are capable of blending these fibers to engineer the perfect solution for your needs.

Our products are used in the following areas, among others:

- automotive interior parts like door trim, headliner
- automotive exterior parts like underbody shields or wheel arch liner
- fiber reinforced composites
- geotextiles
- construction industry
- covering and protective nonwovens
- sound insulation
- home textiles

References and export activities

-

Target group

OEM and TIER1 automotive, Construction industry, Hometextiles, Greenhousing and many more.

Competitive advantages

Discover our customized and individual product development – perfectly tailored to the unique requirements of our customers. We create innovative solutions that meet your exact needs. In our technical center, we carry out our own basic development work, in which all materials and downstream manufacturing processes for our products – in particular for fiber composite technology – are sustainably researched.

Ideal business partners

OEM and TIER1 automotive, Construction industry, Hometextiles, Greenhousing and many more.

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Project

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SWMS
DIGITAL INNOVATIONS

Summary

Open CAM software for AFP, ATL & 3D printing—enabling efficient, flexible and sustainable composites manufacturing.

made in Germany

www.swms.de

Company profile

SWMS Systemtechnik Ingenieurgesellschaft mbH is a software company based in Oldenburg, Germany, specializing in automated path planning for additive manufacturing processes such as AFP, ATL, filament winding, and robotic 3D printing. With nearly 30 years of experience, SWMS develops CAESA®, an open CAM platform used by aerospace OEMs and research institutes for complex fiber placement and simulation. CAESA enables efficient, material-saving production by integrating process control, digital twins, and AI-based inspection. We support customers from first design to production ramp-up and contribute actively to composite innovation projects across Europe.

Products / Services

SWMS develops CAESA®, a universal CAM software suite for fiber-reinforced additive manufacturing. It supports AFP, ATL, filament winding, and robotic 3D printing. CAESA combines automated path planning, process simulation, and kinematic analysis in a single platform. The system enables efficient, material-saving layup strategies for both thermoset and thermoplastic processes. Compatible with CATIA, Siemens NX, and major robot brands (e.g., KUKA, Stäubli, ABB), CAESA also includes postprocessors for production integration. Additional modules support digital twins, thermographic inspection, inline monitoring, and AI-based defect detection. Tailored software adaptations and technical consulting complete our offering.

References and export activities

CAESA is used by leading research institutes and industrial customers across Europe, North America, and Asia. Our software supports international R&D collaborations and is exported as a machine-independent CAM solution for advanced composites manufacturing.

Target group

Our customers include research institutes, machine manufacturers, and production companies in the aerospace, automotive, energy, and shipbuilding sectors. We address engineering teams working on advanced composite processes who require high flexibility, process control, and efficient ramp-up capabilities in additive manufacturing.

Competitive advantages

CAESA combines path planning, simulation, and process analysis in one integrated platform, reducing iteration time and training effort. Its open architecture ensures compatibility with diverse machines and sensors. Our strength lies in quickly adapting the software to specific customer needs—ideal for research and industrial prototyping environments.

Ideal business partners

We seek partnerships with research institutions, machine builders, and manufacturers aiming to optimize their composite production processes. Ideal partners value flexible, open software solutions and are engaged in developing or operating advanced AFP, ATL, or robotic additive manufacturing systems.

SWMS DIGITAL INNOVATIONS

SWMS Systemtechnik Ingenieurgesellschaft mbH

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Project

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ThermHex

an econcore group company

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Brochure
PEI Honeycomb Cores

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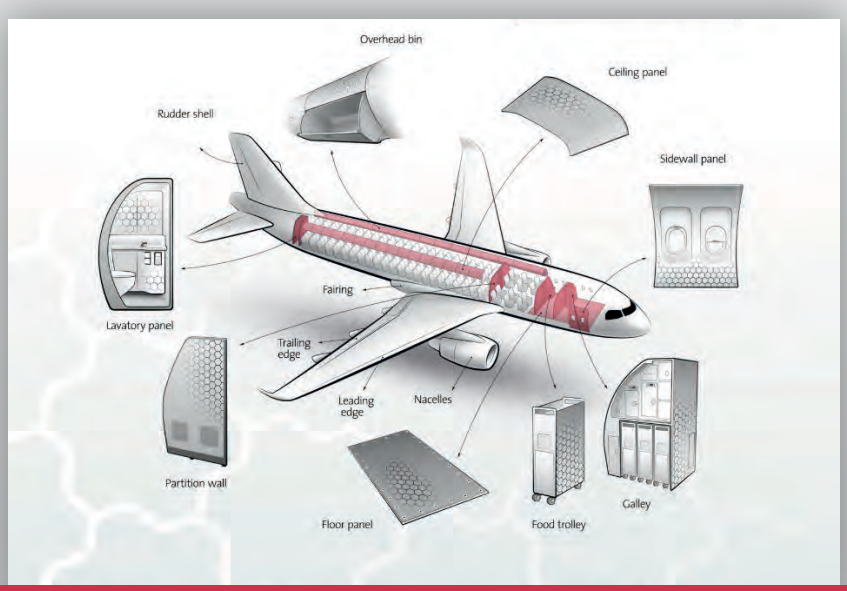
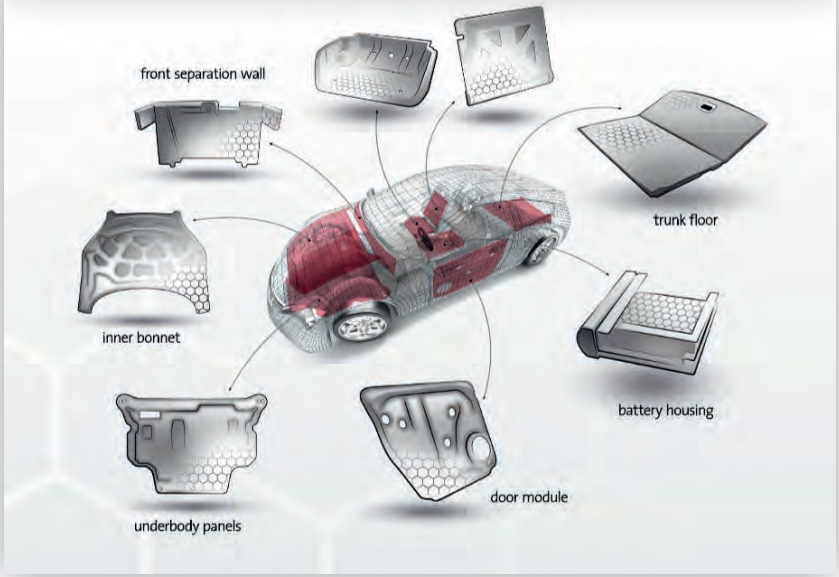
PP Sandwich Panels





Summary

ThermHex Waben produces thermoplastic honeycomb cores as core material for lightweight sandwich panels and components.

TÜVRheinland ZERTIFIZIERT
Management System ISO 9001:2015
www.tuv.com ID 9108647278

OK POWER GÜTESIEGEL

made in Germany

www.ThermHex.com

Company profile

ThermHex Waben produces thermoplastic honeycomb cores as core material for lightweight sandwich panels and components.

We offer our customers high quality honeycomb cores which help to produce better and more economic lightweight sandwich panels and parts for different applications.

We support our customers to ever better meet requirements of weight reduction and a more efficient usage of natural resources. Thru weight reduction in structural parts of many products we can help to reduce our environmental impact and contribute to sustainability.

Thanks to the patented and highly efficient ThermHex process for the continuous production of honeycomb cores, sandwich elements for lightweight products can be produced particularly economically. It enables the use of honeycomb cores even in areas where they have not yet been used, mostly for cost reasons.

Products / Services

Polypropylene (PP) honeycomb cores are a strong but flexible lightweight material that provides optimal mechanical performance in composite sandwich structures.

ThermHex Waben GmbH produces a broad range of high quality, durable and economic core products with a standard density of 80 kilogram per cubic meter (5.0 Lbs /ft^3).

The PP honeycomb sandwich panel is a semi-finished panel that consists of two thin skin layers of fiber reinforced thermoplastic composites.

PEI honeycomb cores and sandwich panels provide a more sustainable alternative to non-recyclable thermoset phenolic resin based honeycombs without compromising the markets needs in weight, fire-safety and performance.

References and export activities

We export our products to over 42 countries. As licensee and production location of EconCore, ThermHex is involved in several R&D projects with leading suppliers (e.g. Diehl) and OEM's (e.g. Airbus, Boeing).

ThermHex produces the honeycomb core and panel material for all Porsche 911 underbody panels and for the floor of the VW ID Buzz.

ThermHex developed with Diehl the recyclable EcoBin for for the next generation aircraft interior.

Target group

The EconCore technology has been licensed to Japanese partners e.g. Gifu Plastic Industry Co., Ltd.

Fiber composite industry, automotive supply industry. Sandwich panel producers and producers of panels for the truck and trailer industry. Aircraft interior panel and part producer.

Competitive advantages

Our materials are cost-effective, sustainable, weight-reducing, resource-saving, and reduce the CO2-footprint.

By using our lightweight panel weight savings of over 80% are possible compared to a monolithic construction. The ThermHex technology enables the usage of low-cost recycled material in the central layer oft he honeycomb cell wall.

Ideal business partners

Companies in the fiber composite industry and automotive supply industry.

ThermHex
an econcore group company

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Project

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SBS systems for business solutions

SBS systems for business solutions is a private consulting agency founded in 1999, with over two decades of experience in the planning, development and implementation of international projects. The company offers services such as workshops, events, individually organized B2B meetings, customized market entry strategies and support in the coordination of international teams for the Italian and German-speaking markets.

Since 2006, SBS has organized more than 300 internationalization projects, ranging from delegation trips abroad to large virtual conferences on behalf of several German ministries and other foreign government institutions.

In addition, SBS has been awarded the title of "Temporary Export Manager" by the Italian Ministry of Economic Development. A highly skilled team of project managers with multinational backgrounds at the Berlin and Rome offices is sensitized to the issue of cultural differences and therefore knows how to approach difficult cultural issues. SBS applies cross-cultural thinking and designs custom-made solutions that overcome intercultural borders to find the right partners for its clients. Thanks to a strong partner network and more than 1,000 German and international customers, SBS can facilitate a successful market entry in emerging and most attractive markets worldwide.

Innovative composite center (ICC)

Since its establishment in 2014, the Innovative Composite Research and Development Center (ICC) has become one of the Japan's largest R&D centers for composites, promoting collaboration with institutions and companies to expand composite material applications. ICC's well-equipped environment includes large-scale molding facilities, a chemical lab for matrix resin development, and advanced evaluation equipment, enabling seamless development from raw materials to prototyping, evaluation, and simulation.

The center supports both academic research and corporate product development under its "Under-One-Roof" concept, welcoming corporate researchers and fostering collaboration until the final stages of product development. Annually, over 60 researchers from 50 companies join ICC's membership program, which also offers networking and technological trend-sharing activities through monthly forums and events. These efforts are supported by 20 researchers, engineers, and a Strategy Planning Team assisting with R&D planning, funding, and operations.

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