

Schmidt & Heinzmann

COMPOSITE EQUIPMENT & MACHINERY

INNOVATIVE COMPOSITE MACHINERY &
SERVICES FOR THE INDUSTRY



ABOUT OUR COMPANY



MILESTONES OF OUR HISTORY:

1949

Foundation of the Company by L. Schmidt and his nephew A. Heinzmann in Bruchsal, Southwest Germany

1973

Start of the Composite Machinery Business with first SMC, BMC and CIC Production Systems

1985

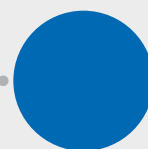
Installation of the first Prepreg Production System

2002

Acquisition of the Company by STAUFEN AG

2007

Development of unique Fibre Cutting Technology FiDoCut



WELCOME TO SCHMIDT & HEINZMANN SUPPLIER OF SPECIAL PURPOSE MACHINERY AND EQUIPMENT

Founded in 1949, Schmidt & Heinzmann enjoys an excellent reputation as a reliable and customer focused special purpose machinery and equipment supplier. A highly motivated team of more than 100 people is working in the headquarter located in Bruchsal, Southwest Germany.

In over 60 years on the market, the company has proven its know-how and has set a benchmark for quality and performance in the field of fibre reinforced plastics machinery and equipment. The products and services of our company have meanwhile won hundreds of customers in more than 70 countries around the world.

We are proud of our positions as market leader for Sheet Molding Compound Production equipment as well as for Fibre Cutting Technologies. The company's comprehensive product portfolio includes furthermore Polyester Plate Production Lines, Bonding Systems, Preforming Centers and 3D-Fibre Spraying Systems.

The company holds strong innovative power and puts every day great effort into the development of new technologies and automation solutions for its customers. The high degree of in-house production ensures best solutions and fastest deliveries thanks to the extensive scope of modern machine tools and the manufacturing and process know-how of its specialists.



2008
Move into our new
Headquarter and
Production Building

2012
Innovation Price of
Baden-Wuerttemberg

2014
Installation of the
first thermoplast
Prepreg Production
System

2015
Development of an
automated
Preforming System

2016
Installation of the
first robotized Fibre
Spraying Cell

2017
Installation of the
first automated
Bonding System

COMPOSITE EQUIPMENT & MACHINERY



Production Equipment

We offer special machinery for the production of semi-finished and finished fibre reinforced materials and parts. On various flat sheet machines matrix materials are reinforced with technical textiles. The reinforcement can be achieved through fabrics, mats, veils and fibres of different kinds. An extended range of options and features allows for an efficient production line according to any specific customer requirements.

SMC Production

As market and technology leader for SMC manufacturing technologies we offer solutions from small batches to large scale productions. For the entire chain of SMC manufacturing state-of-the-art process equipment and machines are available:

- ✓ **Material Preparation**
Solutions for the automatic and precise resin and filler dosage from raw material tanks into mixing vessels based on PLC stored recipes.
- ✓ **Pumping, Dosing and Mixing Systems**
Excellent multi-component pumping, dosing & mixing systems for precise combining of the thickener or hardener with the pre-mixed resin paste – essential to produce consistent high-quality SMC material.
- ✓ **Production Lines**
World-class SMC production lines for manufacturing of glass and carbon fibre SMC, customized to match specific requirements.
- ✓ **Cutting, Weighing & Stacking**
Comprehensive range of slitting & cutting machines for the cutting of matured SMC material into charge patterns.

Prepreg Production

Our company offers a wide range of prepreg production units. We divide our product lines into 3 different areas:

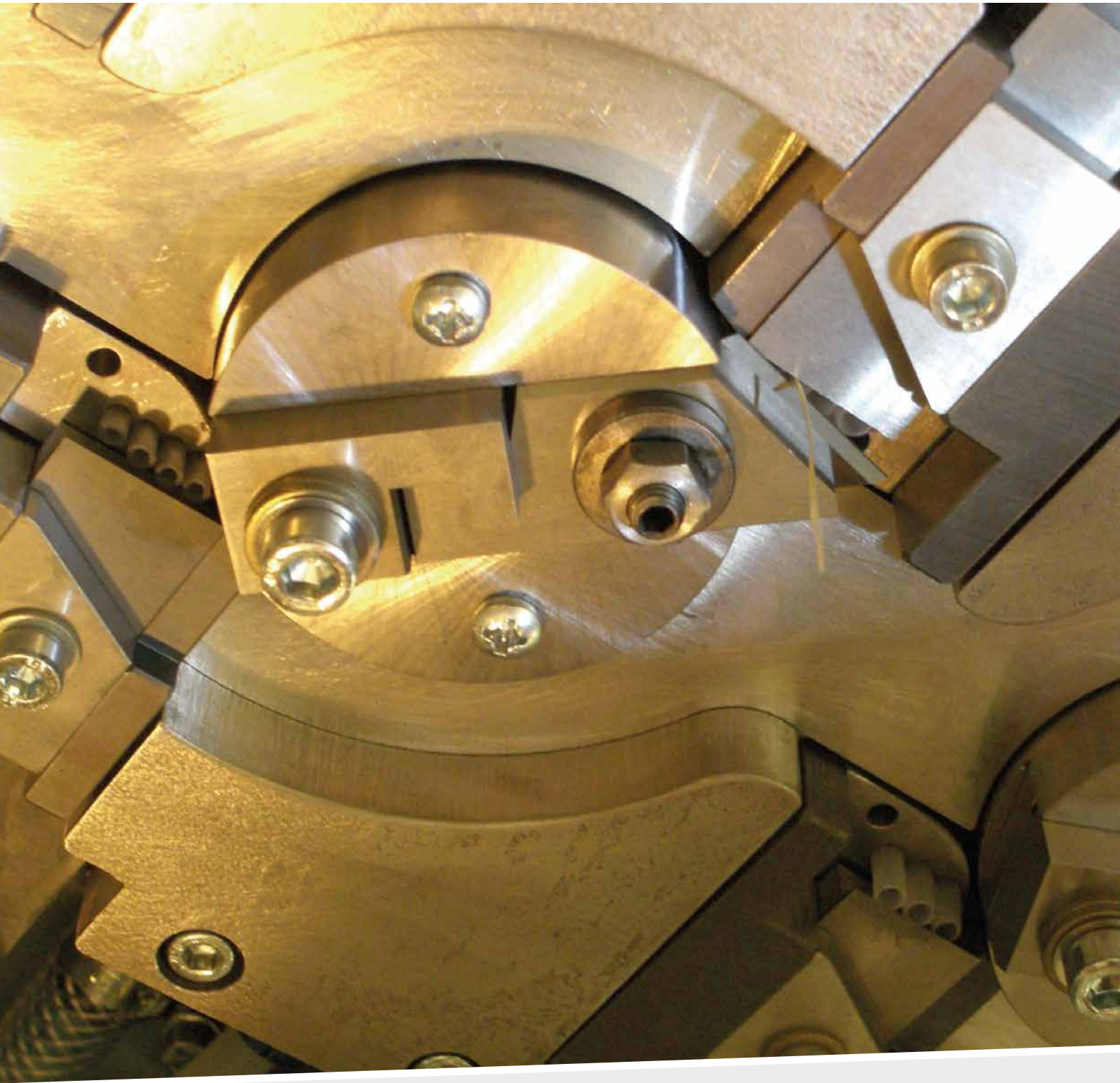
- ✓ **Thermoset Prepregs**
Wide range of thermoset prepreg machines, starting from flexible impregnation units for glass mats in a continuously impregnating and cross cutting machine.
- ✓ **Thermoplastic Prepregs**
Prepreg machines for impregnating glass or carbon mats with thermoplastic materials like PA. The production equipment allows for drying the technical textiles before usage, and tempering systems like heating rollers and infrared radiators ensure the required process temperatures.
- ✓ **Tapeline**
Customized tapeline production units. Based on carbon rovings, the tape is produced after spreading through tension, pressure and temperature controlled devices.

Polyester Plate Production

The high quality polyester plate (advanced laminate) production units can be equipped with various functions and applications. The working width is available up to 3,400 mm. The production units are worldwide accepted as high-quality units with a lot of innovative features for high class surfaces and outstanding performances.



COMPOSITE EQUIPMENT & MACHINERY





Fibre Processing

Depending on the application requirements, we offer different technologies for the cutting, dosing and distribution of brittle, ductile, visco-plastic and natural fibres. Virtually any kind of fibres which are feedable up to 10,000 tex can be cut.

Roving Cutter

We produce robust and reliable high-quality wide roving cutters for chopping of brittle fibres. The maintenance friendly and low wear cutters find a versatile usage in different industries and customized solutions and cutting lengths from 4 to 50 mm (1/6 to 2 inch) are available.

Fibre Dosing & Cutting System FiDoCut

With the newly developed and patented flexible high-performance fibre cutting system FiDoCut various types of fibres can be cut simultaneously and in industrial quantities. The advantages are:

- Cutting of virtually any kind of dry fibre up to 4,800 tex.
- Cutting length adjustable "on the fly," without retooling or machine stop.
- Output performance scalable through additional spindles.

Fibre Spraying

Through fibre spraying, the properties of fibre-reinforced materials and their production processes can be optimized through a selective reinforcement of load-critical zones with the precise accumulation of material in areas of stress peaks. The advantages are:

- Direct and fast manufacturing of 2D and 3D parts or preforms.
- Fibre length and grammage are locally adjustable.
- Fibre orientation adjustable in dry fibre spraying.
- Efficient and resource-saving manufacturing.
- No cutting scrap.
- Output performance up to 1 kg/min.

Automation & Robotics

Our expertise in automation includes the following:

- Press automation to produce FRP components such as SMC/CF-SMC, RTM, Prepreg and others
- Automation for the slitting and cutting of semi-finished materials in the areas SMC, CF-SMC, RTM, Prepreg, D-LFT, etc.
- Automation, linking and control engineering integration of various processes to produce semi-finished FRP materials and parts
- Retrofitting and modernization of existing production systems for semi-finished FRP materials and parts

✓ Rewinding

Automatic rewinding and cutting units for small and big rolls or festooned material. Material will be pulled in, optionally carrier or protection films can be taken off, then the product is rewinded to length while electrically driven longitudinal and cross cutting knives ensure the requested dimensions of the material.

✓ Cutting, Weighing & Stacking

A wide range of machines is available with different degrees of automation for cutting of material into required shapes. Subsequent processes like weighing and stacking can easily be implemented for highest quality and production safety.

✓ Preforming

Preforming is regarded as key technology in the production of fibre-reinforced plastic components by means of the RTM and similar processes. Very innovative and cost efficient solutions can be tailored to the needs.

✓ Cooling, Deburring, Cleaning

We offer automated solutions including handling for cooling, deburring and cleaning of FRP parts.

✓ Bonding

Leading bonding solutions for FRP parts with fully automatic handling and process control of all relevant parameters are available.



MANUFACTURING & ENGINEERING SERVICES

Metal

From single parts to complete machines and plants, we offer the complete manufacturing process according to your specifications:

✓ Engineering

For customers from a wide range of mechanical engineering, plant engineering, and jig making, we take responsibility for the turnkey manufacturing from raw materials to complete machines and plants.

- Engineering and design
- PLC programming
- Project management
- Documentation

✓ Welding

- We are a certified welding shop according to EN 1090-2 EXC 2 and ISO 3834-2.
- We can weld a wide variety of materials and use state of the art welding equipment.
- Maximum unit weight for the weld shop is 20 t. Together with our partners we are also able to manufacture pressure vessels according PED/AD2000 or ASME.
- We also offer additional services like surface and heat treatment

✓ Machining

With our modern machinery, we can manufacture your component in the required precision:

CNC Milling

- Up to 8,000 x 1,800 x 2,000 mm (also with rotary table)
- Swivel rotary table 5 axis machining 2,000 x 800 x 800 mm

Turning

- Up to Diameter 1,200 x 6,000 mm
- CNC Turning Diameter 400 x 2,500 mm

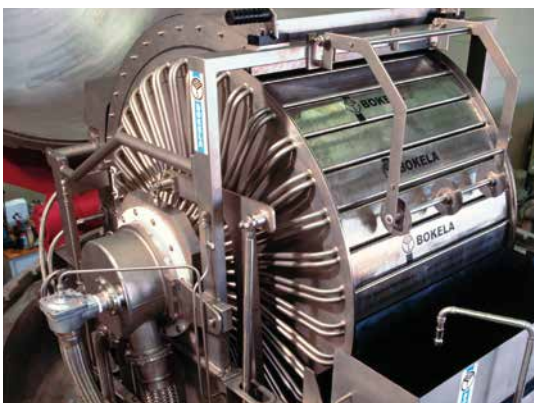
CNC Broaching Machine

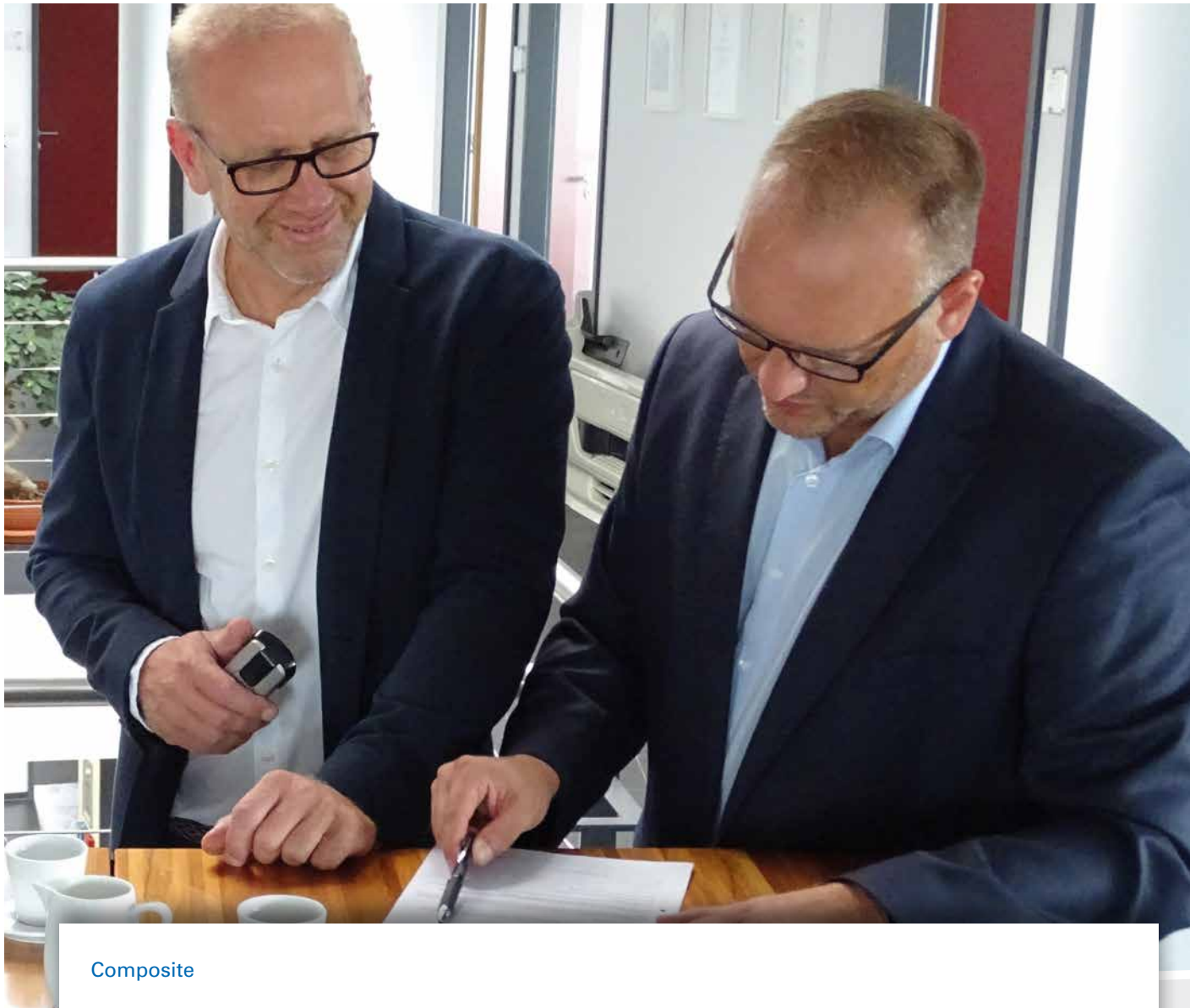
✓ Assembly & Services

Our service offers ranges from in-house assembly and shop dry run to on-site provision of expert staff for erection and commissioning. Also, later maintenance, plant modification or repair, as well as supply of spare parts can be included.

✓ Certificates

- ISO 9001:2015
- Steel constructions acc. to EN 1090-2 EXC 2
- Certified welding shop acc. to DIN EN ISO 3834-2
- Visual testing (VT) and penetration testing (PT), both level 2, acc. to DIN EN 473/ISO 9712
- Performance qualification records and welder qualifications for GTAW, GTAW-orbital, GMAW, SMAW acc. DIN/ISO
- Together with our partner: Manufacturer of pressure equipment acc. to PED 97/23/EC/AD2000 HP0 a. o. Restamping acc. to PED 97/23/EC and AD2000 W0





Composite

- ✓ Engineering
We offer a wide range of engineering services in the composite industry.

We have the competence of setting up the following processes:

- Manufacturing process of SMC or or CF-SMC semi-finished material
- Part production for SMC or CF-SMC parts
- Defining and producing preforms
- Defining bonding processes and production systems

We offer full service for the following activities:

- Planning the entire SMC or CF-SMC material production
- Planning of the production of SMC or CF-SMC parts
- Governmental approval processes
- Explosion protection and fire safety expertise
- Defining parameters of equipment to achieve product targets

- Define and simulate production process before production
- Calculation of cycle time, output and performance

- ✓ Tooling
We offer services for defining and ordering tools for part production of CF-SMC or SMC. Our engineers support the project from defining the specifications up to final approval of tools. Preforming and bonding tools can be defined and produced by our company.

- ✓ Preforming
The preform has major influence on the quality of e.g. the RTM product. We offer the service to define your preform and simulate the production process. Our service goes up to the production of samples in our laboratory for further process activities.



THANK YOU

We would like to thank all partners, who supported us creating this brochure!

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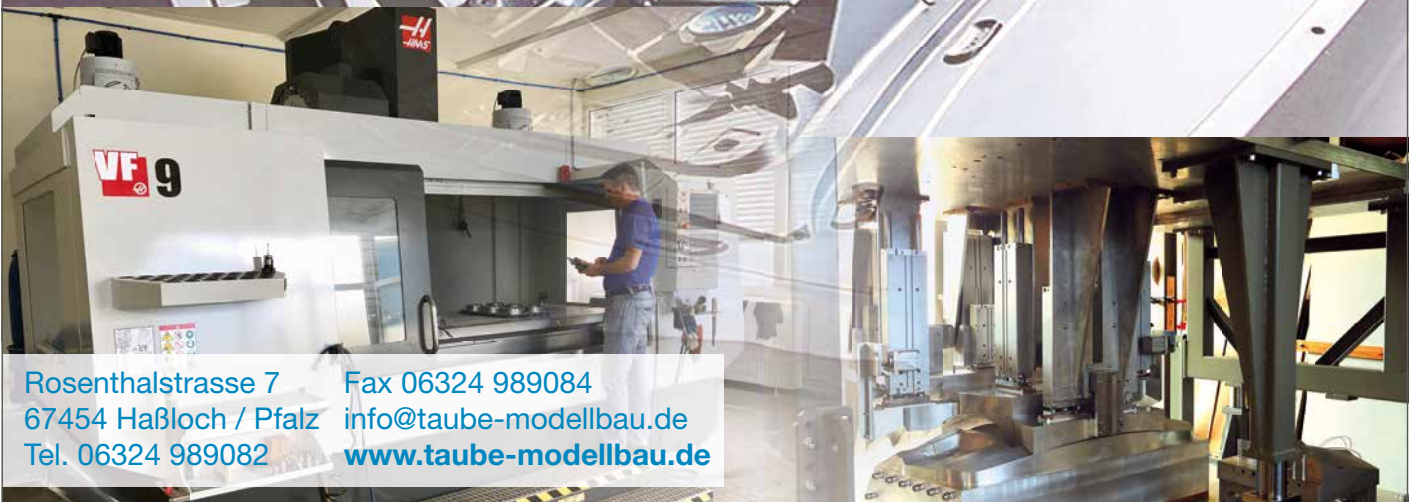


Innovationspreis 2011 Rheinland Pfalz



Entwicklung, Konstruktion, Prototypen, Serienprodukte ...

Wir sind ein mittelständiges Familien-Unternehmen mit Sitz in Haßloch/Pfalz, welches im Jahr 1986 durch Günther Taube gegründet wurde. Fundiertes branchenübergreifendes Know-how, professioneller Umgang sowohl mit traditionellen und bewährten als auch mit modernsten Materialien und Technologien sowie handwerkliches Können, garantieren unseren Kunden innovative und flexible Lösungen auch bei komplexen Aufgabenstellungen.



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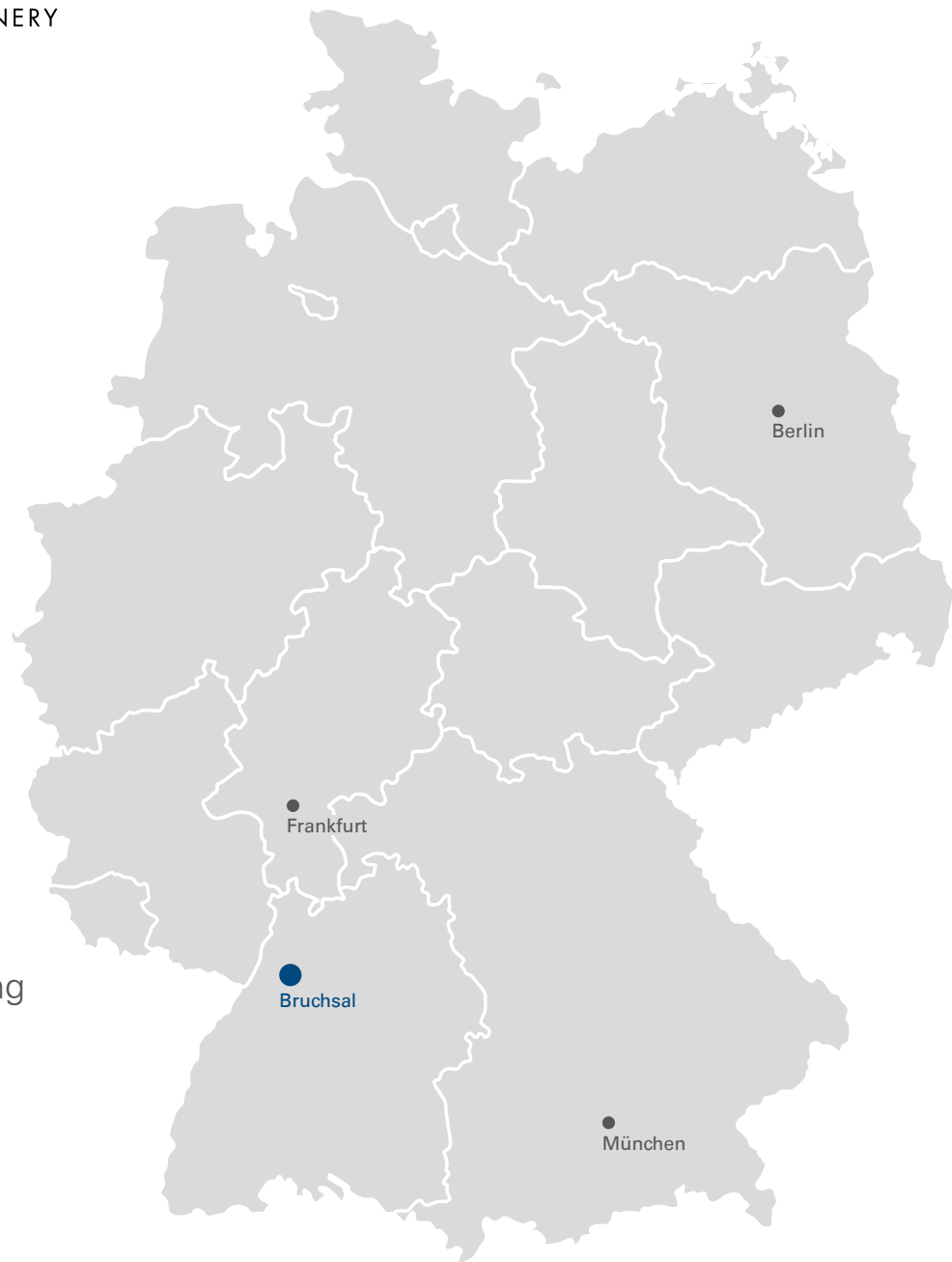
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Schmidt & Heinzmann

COMPOSITE EQUIPMENT & MACHINERY

Innovative Composite Machinery & Services for the Industry:

- SMC
- Slitting & Cutting
- Fibre Cutting
- Robotics & Automation
- Bonding
- Preforming
- Fibre Spraying
- Prepreg
- Advanced Laminates
- Engineering & Manufacturing



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