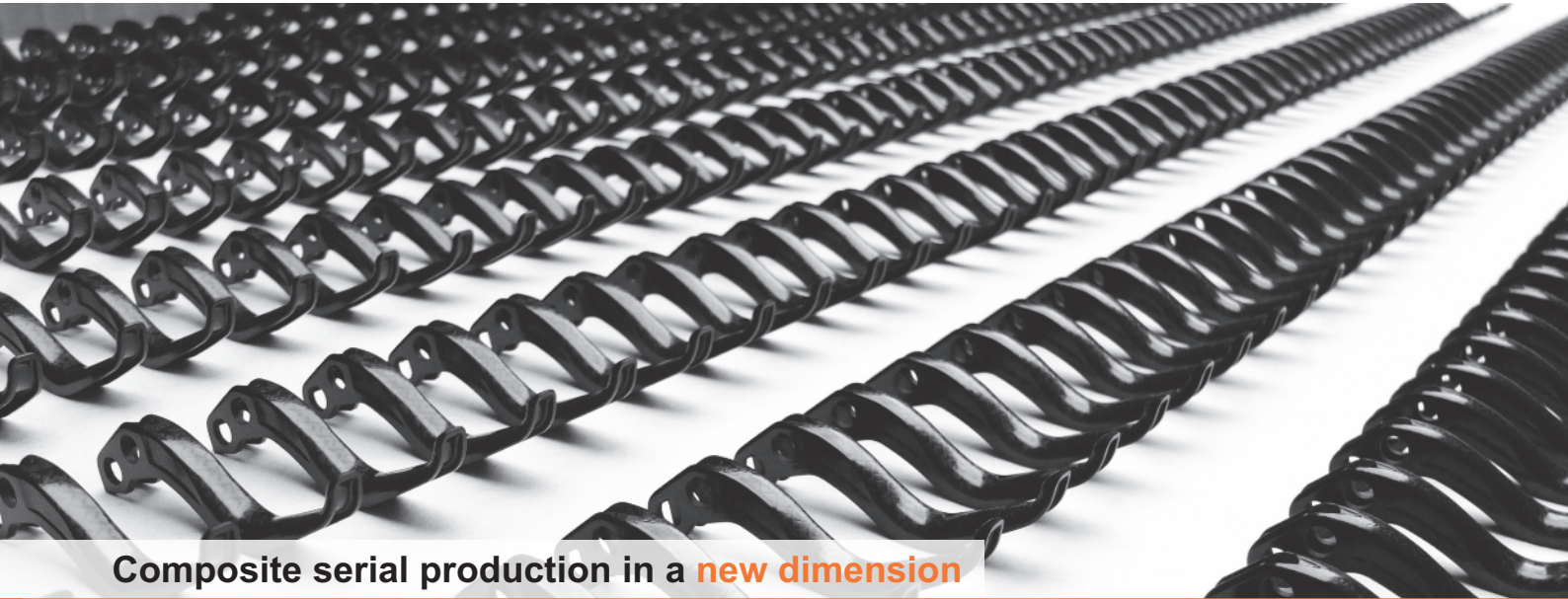


BIONTEC

BIONIC COMPOSITE TECHNOLOGIES



Composite serial production in a **new dimension**

MPT - Multi Parallel Technology®

**Serial Production of High Performance
Composite Components**



BIONTEC - Bionic Composite Technologies AG
Flurhofstrasse 150 | CH-9000 St. Gallen | Switzerland
Phone: +41 71 242 72 00
Email: composites@biontec.ch | Website: www.biontec.ch

Company Profile

BIONTEC combines the traditional expertise in composites and a new, in-house developed process technology with more than 100 years of tradition in textile manufacturing. Thanks to innovative, industrialized production processes and our experienced engineers, BIONTEC supplies high quality composite components with reproducible properties and outstanding performance – especially for medium and large series.



Development

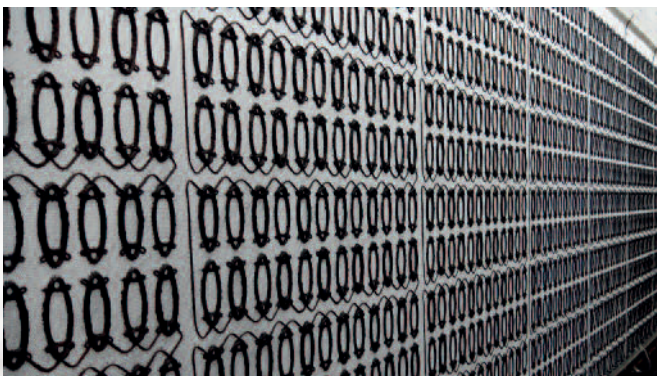
BIONTEC supports you as required partially or completely in the entire development and optimization of your product. Using the latest CAD and FEM software we tailor the exact properties already in an early development phase to your requirements. The close cooperation between customer, engineering and production guarantees an efficient development – from the first draft till introduction into serial production.



Industrialized composite production

The textile preforms are produced net shape by our unique Multi Parallel Technology® and processed by resin transfer moulding (RTM). Our equipment and tools are developed in-house and specifically designed to allow a high level of automation. Every step of the production can directly be influenced and controlled with the ultimate goal to satisfy all your high quality expectations – constantly and also for large quantities.

MPT - Multi Parallel Technology®



Bionic fibre placement

Bionic fibre placement based on load transmissions is the technological basis for our success in producing high performance composite components and has its roots in nature copying the growth of plants. It allows us to specifically design local reinforcements in critical areas and to save fibres in less critical areas – no wastage, just as in nature.

- A large variety of fibres from high tenacity (HT) to ultra high modulus (UHM) carbon fibres, glass, aramid and natural fibres can be processed.
- Nearly unlimited and variable choice of fibre orientation
- Computer controlled processes for very high reproducibility and productivity
- Economical efficiency thanks to our unique Multi Parallel Technology®



Bionic fibre placement, automated production of preforms and industrialized consolidation processes allow a production in unique efficiency and quality. The typical dimensions of our products range between a few centimetres up to several metres. We produce in constant quality and supply reliably for medium and large series from 100 up to 100,000 pieces per year.

Industries

We supply customers from the sectors

- mechanical engineering
- medical industry
- measurement industry
- sport and leisure

Advantages

	Weight reduction	Low α_T	X-ray transparency	Stiffness	Vibration damping	Design / Surface
Measurement industry	✓	✓		✓		
Sport	✓			✓	✓	✓
Mechanical engineering	✓	✓		✓	✓	
Medical industry			✓	✓		
Other	✓	✓	✓	✓	✓	✓



Complex components and integration of functions – saving costs thanks to reduction of attachment parts

With our know-how and our technologies complex monolithic structures can be produced in one shot. The constructive degree of freedom of the used RTM production process is very high. The individual assembly interfaces and assembly domes can be integrated in the geometry of the components and are produced net shape out of the mould.

Subsequently no laborious machining other than deflashing is necessary and therefore no fibres are cut. This is how we realize parts with outstanding mechanical properties and a great thermostability.



Serial production

Serial production of composite components is our daily business. The use of computer controlled machines reduces largely manual work and increases efficiency and precision. For example, BIONTEC produced more than 100,000 brake levers in different variations and no mechanical failure was reported. This confirms the constant high quality of our processes in serial production.

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Complex challenges – we will meet your requirements

Skills

- Design and industrialized production of net shaped, load optimized carbon fibre preforms
- Reproducible and efficient consolidation into high quality composite parts

Location

- Head office in St. Gallen, Switzerland
- Less than one hour by car or train from Zurich airport
- Only 5 minutes from the motorway A1

Company

Thanks to innovative and industrialized production processes Bionic Composite Technologies supplies components with outstanding properties and high reproducibility for medium and large series. Our technologies allow new approaches of composite components mainly in industries such as sport and leisure, mechanical engineering, medical and measurement industries. We develop the ideal fibre architecture and produce the net shape textile preforms in an automated manufacturing process. These preforms are processed by resin transfer moulding (RTM) to finally become custom-made components according to detailed specifications.



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