the preform experts

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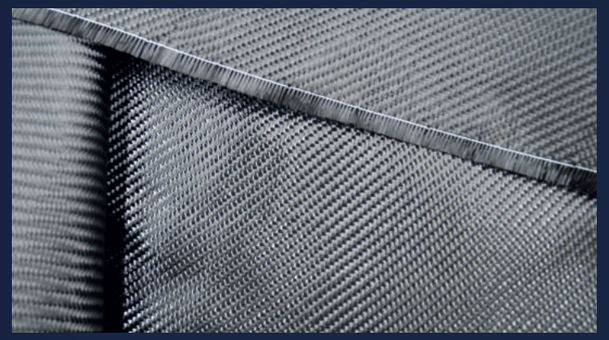

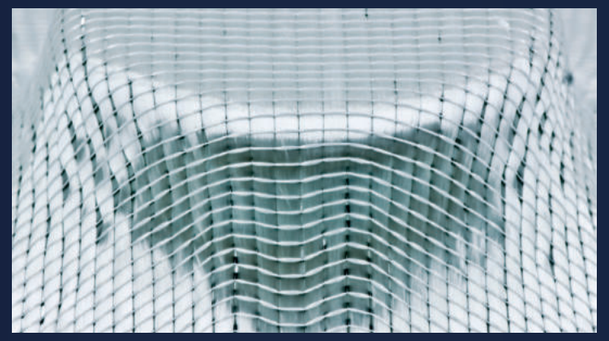

FOCUS ON GERSTER TECHTEX

turning vision into reality

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Gerster TechTex

Content

At home in Biberach - since 1882

The Gustav Gerster GmbH & Co. KG is one of the leading European textile manufacturing companies with its headquarter in the heart of South Germany, in Biberach/Riss. Gerster has been producing exclusive curtains and accessories that meet the highest quality standards for over a century.

In 2004, a new business unit for technical textiles, **Gerster TechTex**, was established. The know-how in textile technology supported by the long-lasting experience has encouraged the rapid development of the company, its services and partner network.

Our key expertises are preforms and reinforcements for composites and narrow woven ribbons. Gerster TechTex manufactures a broad range of products for the automotive, aerospace, building and constructing, sports equipment and many other branches. We operate on a flexible and creative level and support our customers in bringing their ideas to life. Gerster develops and produces special made-to-order textiles from carbon, glass, aramid and offers a great variety of technical synthetic fibers using the most modern equipment.

turning vision into reality

Our technology facilities consist of six textile technologies: yarn twisting, braiding, narrow and broad weaving, knitting (crocheting) and coating. With our yarn twisting technology we are able to produce reinforced and functionalized gussets.

Due to our braiding machines Gerster TechTex can produce a wide range of quality hoses for industrial and automotive applications. The knitting technology offers enormous possibilities for the production of biaxial and multiaxial textile preforms, especially drapable & non-crimp fabrics, heating textiles and electronics integration.

Gerster TechTex offers our customers our exclusive know-how about round-weaving which enables the continuous manufacturing of products, such as carbon spirals.

With our broad weaving machines, we are able to produce flax, glass and carbon fibers. In addition, we are capable of coating the finalized product with thermoplastic and epoxy.

140 + Years of experience

5 Generations

2 Certifications

6 Textile technologies

from an idea to mass production

2004 Foundation TechTex

500+ Partners

For over 20 years, Gerster TechTex is developing and manufacturing high performance technical textiles for a broad range of applications and markets.

Gerster TechTex is your partner for demanding and custom-tailored textile solutions, because of our knowledge of materials and its applications.

Our flexible and creative mode of operation and work makes it possible to realize your ideas. Our team supports our customers throughout the entire product development process and takes care of creating the best scenarios to deliver a high-level quality solution.

Our services include design & construction, planning & development, production & preforming, consultation & support.

Your Partner

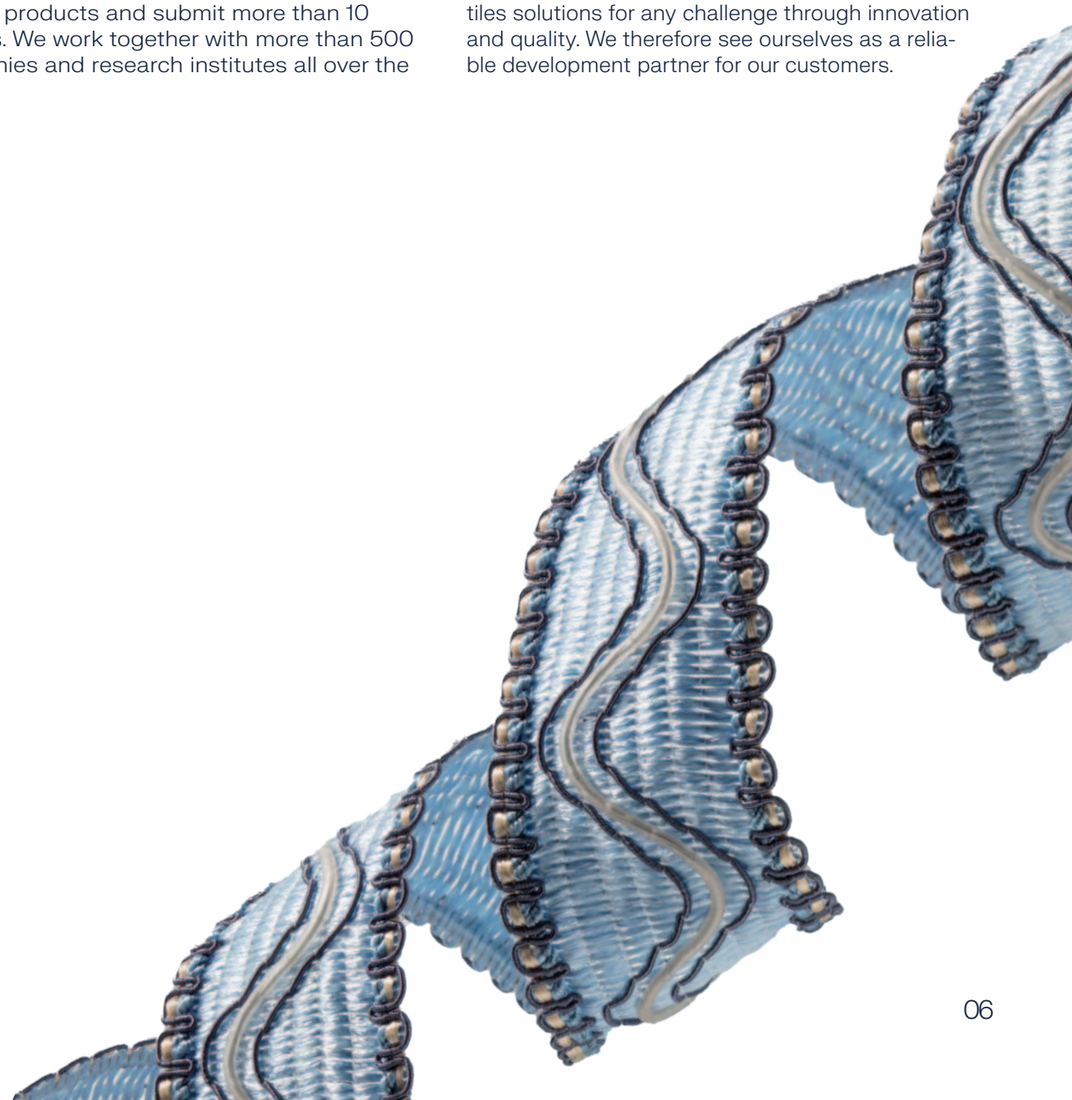
for innovation

Our TechTex experts advice on material selection, technological approaches for implementing fiber reinforcements, technical textiles products and smart textiles.

Since 2004, we accomplished to develop more than 12 products and submit more than 10 patents. We work together with more than 500 companies and research institutes all over the world.

Gerster TechTex offers products for the automotive, transportation, aerospace, civil and machine engineering, sports equipment, authorities and securty, medical and healthcare and smart textiles industry.

Our mission is to produce the best technical textiles solutions for any challenge through innovation and quality. We therefore see ourselves as a reliable development partner for our customers.



Areal Weight
130 g/m² - 1500 g/m²

Width
400 mm - 2200 mm

Length
50 m - 500 m

Gerster TechTex produces **broad fabrics** using high-performance yarns such as carbon, glass, aramid, and flax. Each material offers unique technical advantages: carbon stands out for its exceptional strength-to-weight ratio, glass for its high-temperature resistance and durability, aramid for outstanding impact resistance and cut protection, and flax for sustainable stability with a natural origin.

Our wide fabrics are available as homogeneous or hybrid structures, offering flexibility to meet diverse requirements.

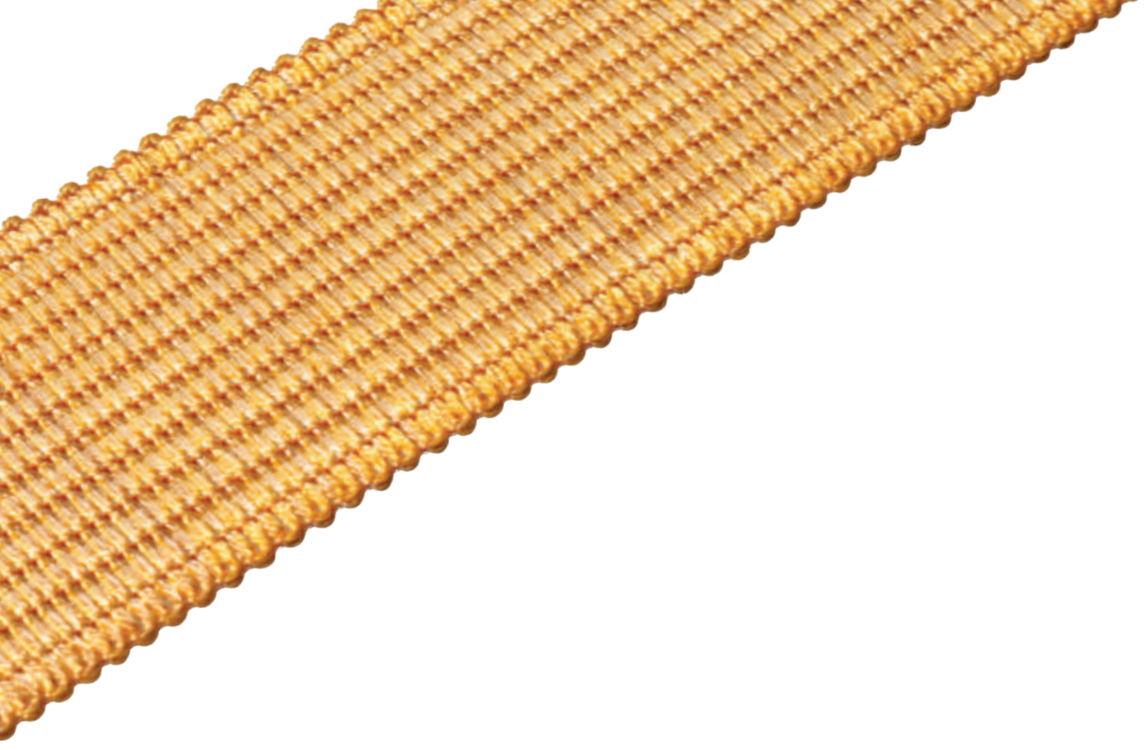
With multi-lane production capabilities and customization of width and areal weight, we deliver tailored solutions for any challenge.

Our wide fabrics are used in industries such as automotive, medical prosthetics, occupational safety, and military applications.

With Gerster TechTex, you choose top-quality fabrics known for precision, versatility, and high technical standards.

Broad Fabrics

For large-area high-performance fabrics with custom widths



Woven Ribbons

For high-performance products and composites

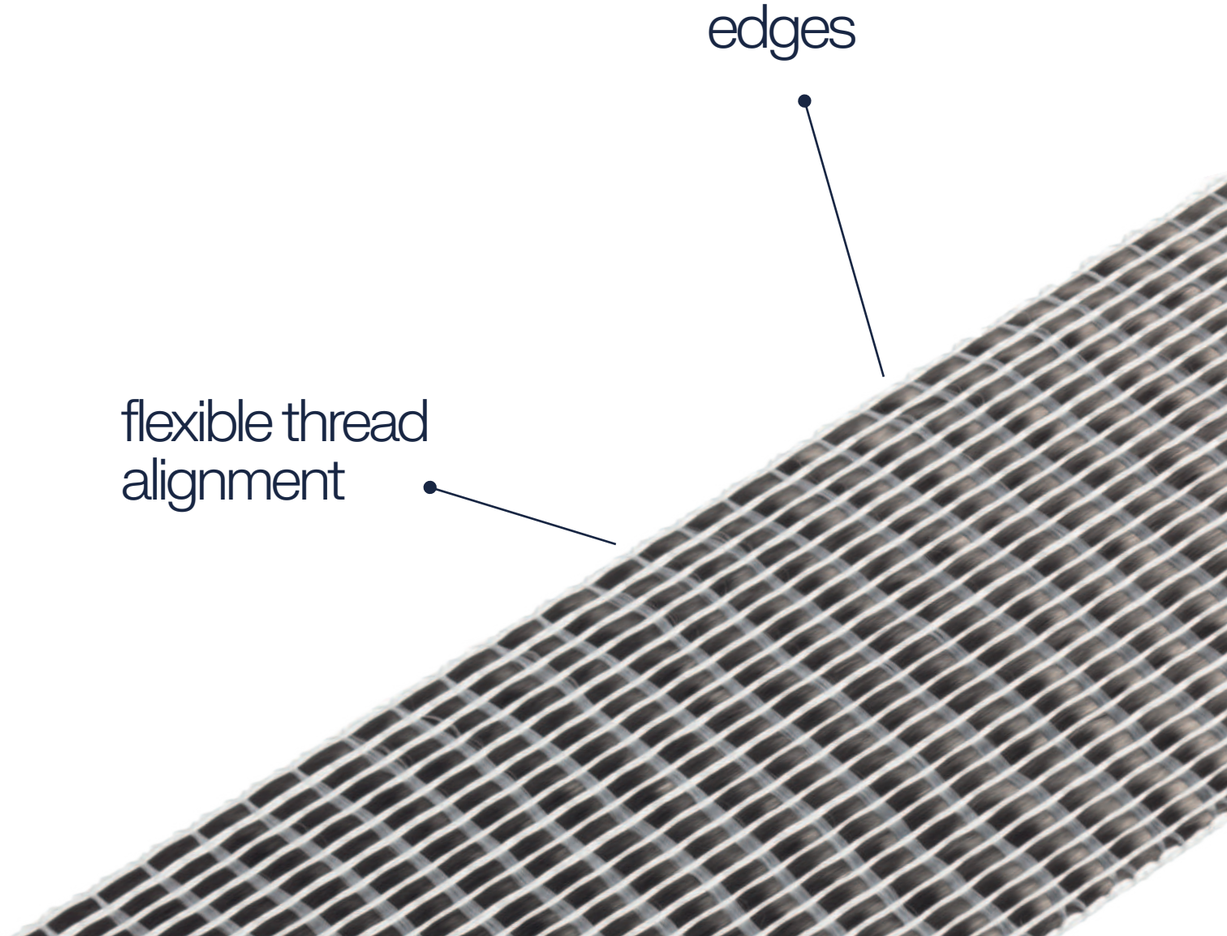
Areal Weight
130 g/m² - 900 g/m²

Width
10 mm - 350 mm

Length
50 m - 300 m

Narrow **woven ribbons** are a highly requested solution for composites, industry and other technical applications and therefore are one of our most sought-after products. We offer our customers great variability in materials and structures. A part of our service includes the implementation of hybrid and multi-layered ribbons that include twisted and braided local reinforcements, fast prototyping and cost-efficient manufacturing. We produce more than hundreds of custom-made technical ribbons annually.

Gerster TechTex supplies its ribbons to a great variety of markets such as sports gear, rescue and medical equipment, shipbuilding, wind turbines, aerospace, authorities and safety, construction and mechanical engineering. We process diverse fibers such as carbon, glass, aramid, PA6 and basalt. The ribbons can be reinforced with metal monofilaments, functionalized with conductive yarns or provided with an epoxy coating. All of our ribbons can be used for other processes such as RTM, vacuum infusion or pultrusion.



Woven Spiral Ribbons

For curved fibre-reinforcement structures

Areal Weight
min. 250 g/m²

Width
20 mm - 280 mm

Length
customized

Gerster TechTex offers an innovative solution with its **woven spiral ribbons** for curved fiber-reinforced structures, ideal for lightweight, corrosion-free brake and grinding discs. Made from carbon, glass, aramid, and other technical fibers, spiral ribbons are also used in high-performance, fast-rotating components.

The length and number of spiral layers are precisely adapted to the batch thickness, ensuring optimal performance. Spiral ribbons are widely used in the automotive and engineering industries for their robustness, dimensional stability, and versatility.

As a result of the round weaving technique, spiral ribbons are produced endlessly without material waste, offering a cost-efficient and sustainable solution for a range of applications.

endless fibres

load-oriented fiber direction

Areal Weight
min. 250 g/m²

Width
60 mm - 280 mm

Length
customized

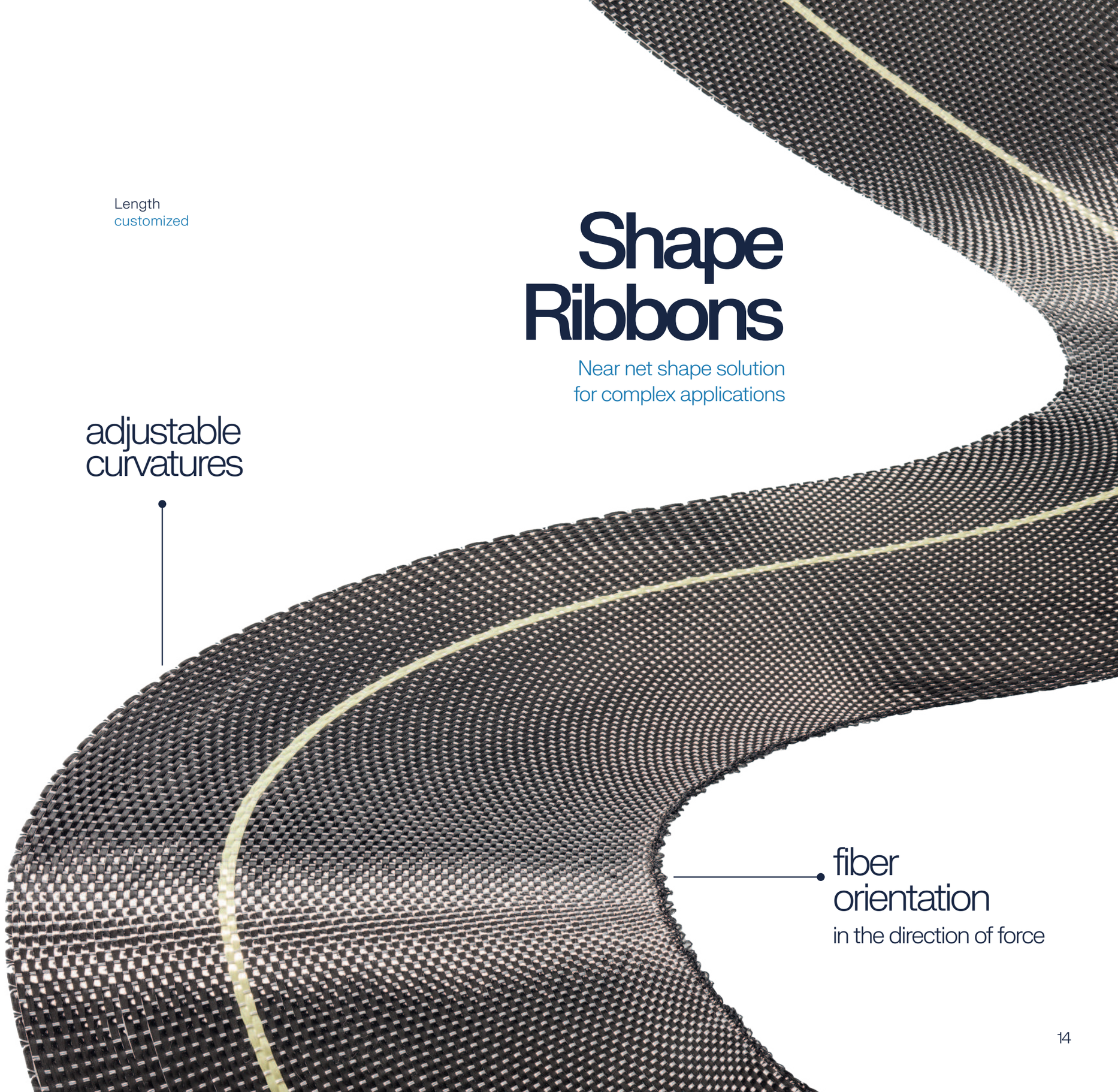
Gerster TechTex's **shape ribbon** technology redefines lightweight design in the automotive, transportation, and aerospace sectors. Using a cutting-edge circular weaving process, high-strength S- and Z-shapes made from carbon, glass, and other fibers are produced cost-efficiently and waste-free.

Ideal for vehicle frames, shape ribbons offer unmatched flexibility with customizable fiber orientations, adjustable curvatures, and options for continuous or segmented designs. Their versatility extends to single- or multi-layered preforms and hybrid textiles, ensuring tailored solutions for demanding applications.

Recognized with the AVK Innovation Prize 2016, shape ribbons deliver efficiency, sustainability, and high performance for modern lightweight construction.

adjustable curvatures

s- and z-Shapes



Shape Ribbons

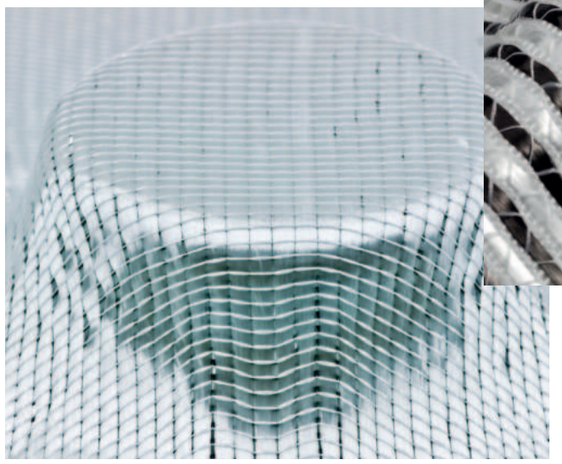
Near net shape solution
for complex applications

fiber orientation
in the direction of force

Drapfix and Draptex

Post-drapable
non-crimp fabrics

Drapfix®



Draptex®

DRAPFIX® and **DRAPTEX®** by Gerster TechTex are an innovative, crimp-free carbon fiber fabrics designed for the efficient preforming of fiber-reinforced composite components. Their exceptional drapability ensures flawless application to complex shapes, making it ideal for local reinforcements in automotive, aerospace, construction, and engineering sectors.

The unique structure of DRAPFIX® enables seamless adaptation to surface contours, minimizing draping failures like overlaps and folds while reducing cutoff waste. The DRAPFIX® hybrid variant, featuring continuous fiber composites with a thermoplastic matrix, allows for short flow paths and cycle times, optimizing production efficiency.

With excellent drapability, easy processing, and suitability for prototypes and mass production, DRAPTEX® and DRAPFIX® ensure reliable, cost-efficient manufacturing with superior results.

Areal Weight	Width	Length
customized	100 mm - 1.000 mm	50 m - 200 m

Gussets and Profiles

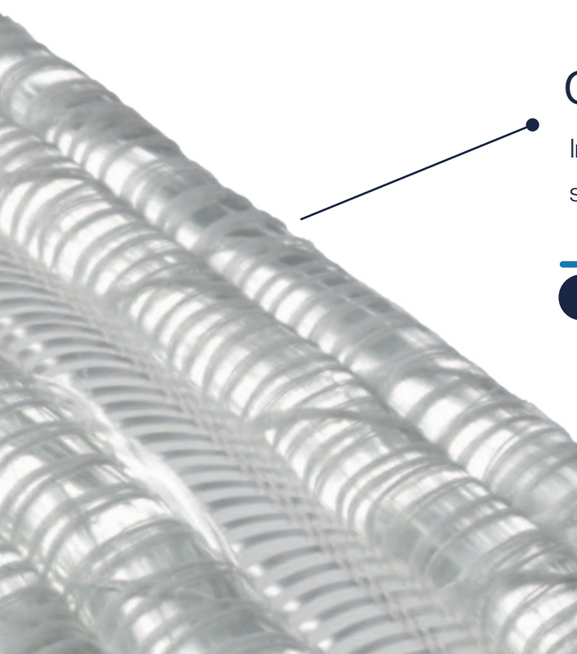
For preforms and edge reinforcement

Gerster TechTex is capable of producing **gussets** in a variety of materials, for instance carbon and glass. Our manufacturing facilities offer the flexibility and diversity in gusset configurations and design. We are in a position to produce our gussets with additional trims, user-defined diameters and then simply process them into a preform.
Our gussets serve as a reinforcement for corners and bend points and enable the load distribution within a composite assembly to be optimized. These gussets prevent the bending and breaking of parts that are under high pressure and support their stability.

Another key advantage is the elimination of resin pockets, leading to a significant reduction in resin usage. We offer a wide range of standard gusset models in our product portfolio. Gerster TechTex also provides rapid prototyping and customized adjustments to gusset structures and diameters. To provide an example, Gerster TechTex is able to produce three twisted carbon ribbons separately and can join them together with our knitting technology. The cord in the middle has a greater diameter than the other two.
This structure enables perfect adaptation of the gusset to the angle connection.

Diameter
1 mm - 10 mm

Length
50 m - 200 m



custom profiles

Individual diameters for costumer
specific preforms and edge reinforcement

GUSSETS & PROFILES

closed
edges

Width
10 mm - 200 mm

Length
25 m - 50 m

Our **resin distribution tape** is a textile flowing aid which supports and improves the manufacturing of fiber reinforced composites by a vacuum infusion process. The wrap-knitted tape consists of monofilament loops that serve as a flow channel for resin.

Resin distribution tapes are produced with a double-sided self-adhesive tape that simplifies its surface application. The structure of the resin distribution tape ensures homogenous distribution throughout the reinforcement fabric and can therefore be easily adapted to curved shapes.

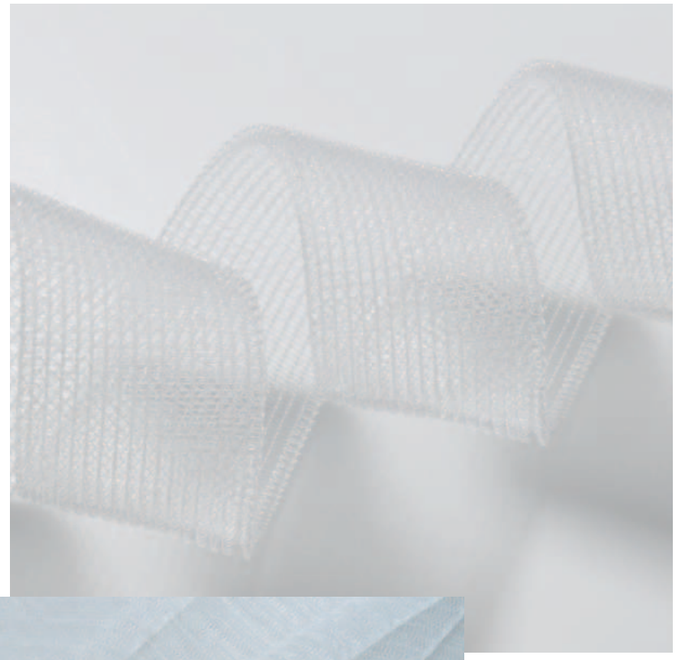
The adapter for the resin distribution tape serves as a connection between the resin or vacuum hose and the resin distribution tape. It supports the infiltration process during the manufacturing of fiber-reinforced compounds.

Due to its outstanding flexibility and elasticity, the resin distribution medium is easily adapted to the most demanding shapes of the designed composite assembly. The low weight per unit reduces resin waste sufficiently.

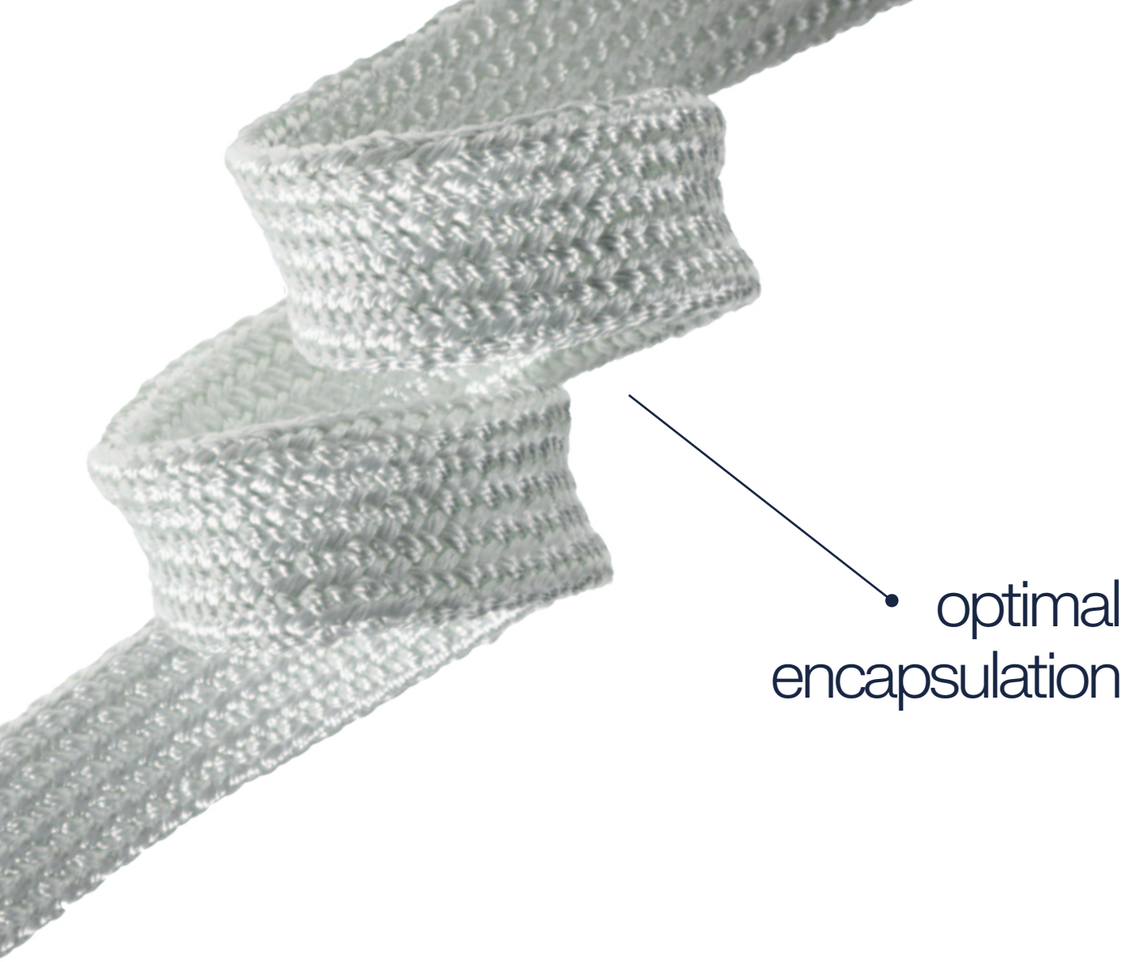
Resin distribution

Tape and media for vacuum infusion process

Tape



Media



optimal
encapsulation

Woven and braided hoses

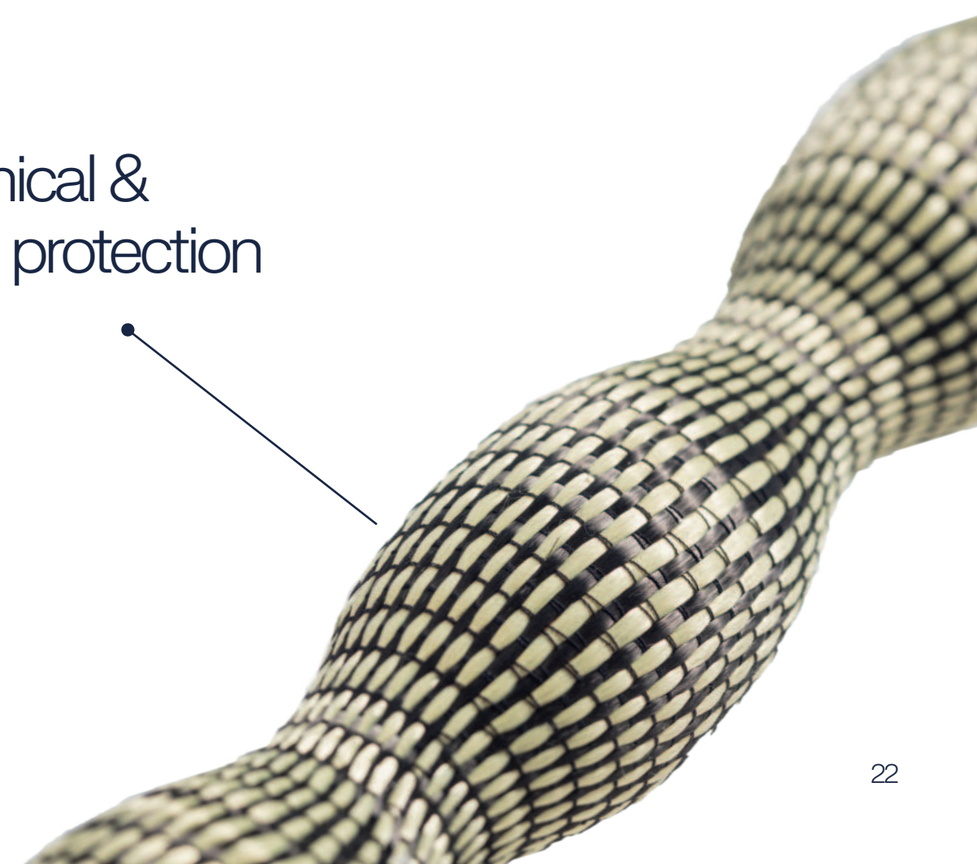
For mechanical and thermal protection

Areal Weight	Width	Length
customized	10 mm - 300 mm	50 m - 200 m

Our **woven** and **braided hoses** made of carbon, glass, aramid or polyester fibers offer an advantageous solution for protecting tubes, pipes and other cavities from mechanical and thermal loads. Whether woven or braided, our hoses offer excellent performance and contribute to safety features of many applications.
Gerster TechTex is able to produce elastic hoses that can be perfectly adapted to pipes and hoses with the most complex shapes.

Woven and braided hoses are most commonly used in the composites market for insulation and protection of components.
We offer our customers individual designing with no limitations in material choices and construction, to fulfil our customer's wishes and needs.
Due to our technology and know-how, Gerster TechTex accomplished the implementation of linear and curved hoses.

mechanical &
thermal protection



HEATING TEXTILES

Heating Textiles

for composites, construction, transportation and medicine

The technology of Gerster TechTex **heating textiles** allows them to be used in a variety of ways. They are developed in close cooperation with our customers and therefore enable a wide range of unique design option and precise fiber layouts. The variability in the choice of materials and structures offers a wide range of possibilities to provide efficient solutions for complex and demanding tasks. Our heating textiles are characterized by a short heat-up time, even temperature distribution and heat radiation, as well as excellent drapability and reliability.

Areal Weight	Width	Length
customized	10 mm - 1.000 mm	50 m - 200 m