

# KARL MAYER

## **Warp knitted solutions with great leverage**

*Using technical warp knitted fabrics from WEFTRONIC® II G to provide greater efficiency on construction sites*

Due to the strong economic growth in emerging markets and low interest rates in most developed countries the global construction market is experiencing a sustained period of growth. The future forecasts are also optimistic. In particular, planned investments in renewable energy infrastructure and urbanisation will continue to ensure full order books for construction companies and their suppliers.

The booming market rewards innovations for greater efficiency and speed in construction, as demonstrated by the textile solutions created on machines developed by KARL MAYER Technische Textilien. These well-thought-out products offer a variety of advantages across different applications.

### **Greater efficiency in infrastructure and house building**

In new road construction, warp knitted, geogrids with large stitches increase the structural capacity of subsoils while also taking on filtration and separation tasks, thereby making additional layers superfluous. Used under the asphalt surface, these open structures also ensure a longer service life for both motorways and rural roads alike. The reinforcement prevents reflective cracks and wheel track rutting caused by truck tyres, and also distributes traffic loads horizontally.

In infrastructure projects, geogrids are also used to secure slopes. These textile solutions represent significantly better value than their steel counterparts, offer excellent static load capacity and can be installed with minimal interference with nature.

Technical warp knitted textiles with tighter stitches are used in building construction to reinforce security gates. Despite their thin design and low weight, these powerful items protect against attacks from most electric power tools, and can be quickly installed in just a few steps.

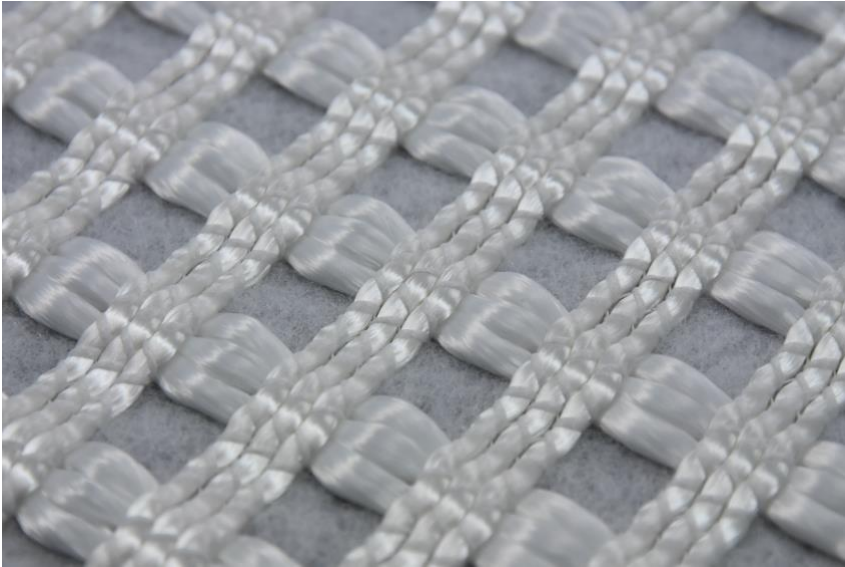
In addition to this, warp knitted fabrics with weft-insertion and with coatings are also used to make cost-effective roofing systems for industrial buildings. The flexible, stable roofing membranes adapt perfectly to the specific structural conditions, are UV-resistant, and reflect incident sunlight. This reduces the amount of energy used to air condition the building.

In building construction, plaster grids are a firm fixture in the cladding of interior and exterior walls. The glass fibre structures prevent cracks from forming and spreading while also distributing the forces that act upon the walls optimally across the entire surface, thus ensuring a long service life. Warp knitted variants can be produced much more efficiently than comparable woven products.

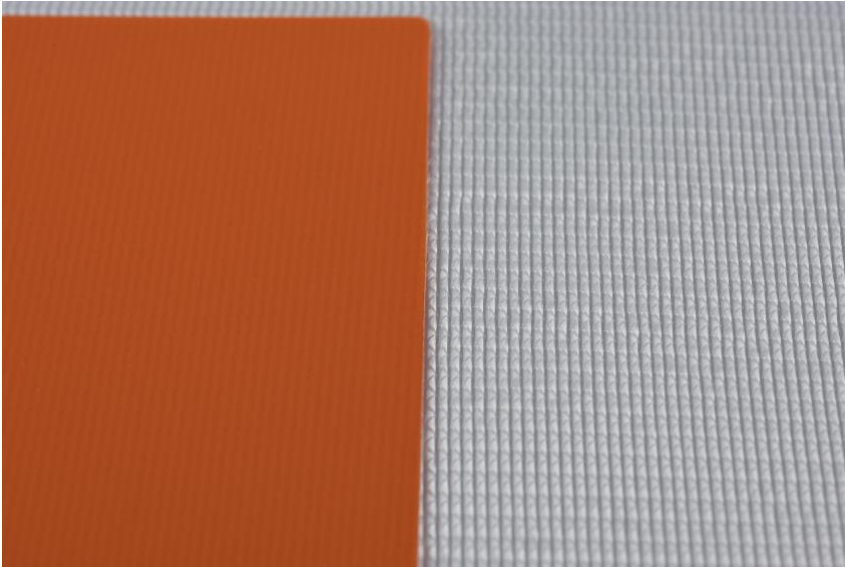
In the construction and renovation of concrete structures, open grids made of carbon or AR glass are increasingly replacing steel as the reinforcement material of choice. Textile concrete solutions, e.g. for curtain walls, are lightweight and easy to handle, require fewer resources, produce minimal emissions and are extremely durable.

High-performance warp knitted fabrics with weft-insertion also offer advantages when renovating pipes. These dense textiles enable engineers to repair defective sections of pipe, rather than replacing them completely. This avoids costly excavation work that destroys natural environments. In addition to this, the pipe system can be returned to use within a very short time.

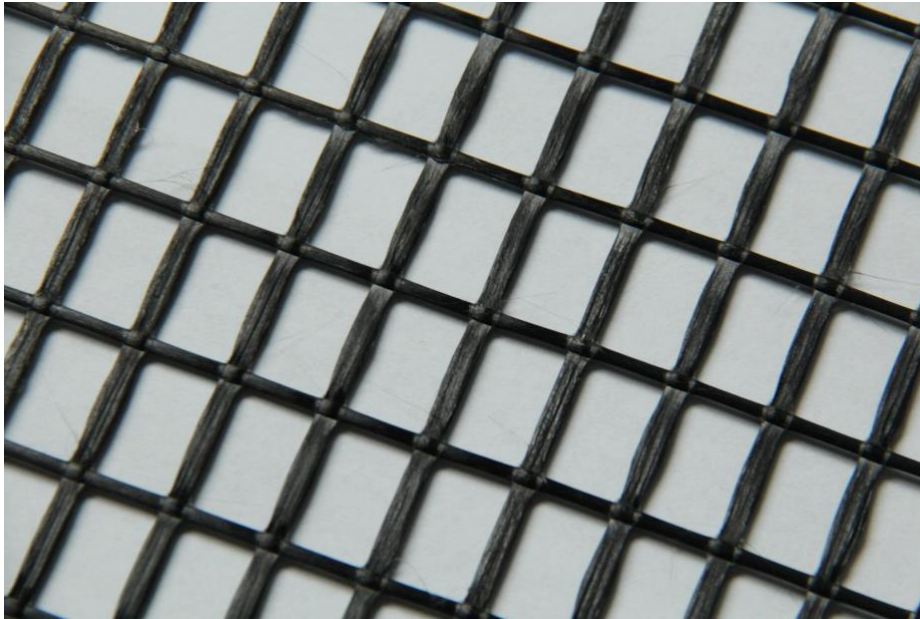
The warp knitted products aimed at the construction industry were a real highlight at the KARL MAYER exhibition booth at ITMA ASIA + CITME in Shanghai in June 2021. In order to reach customers on a more global scale, the products are currently being presented as part of the world market leader's own hybrid exhibition.



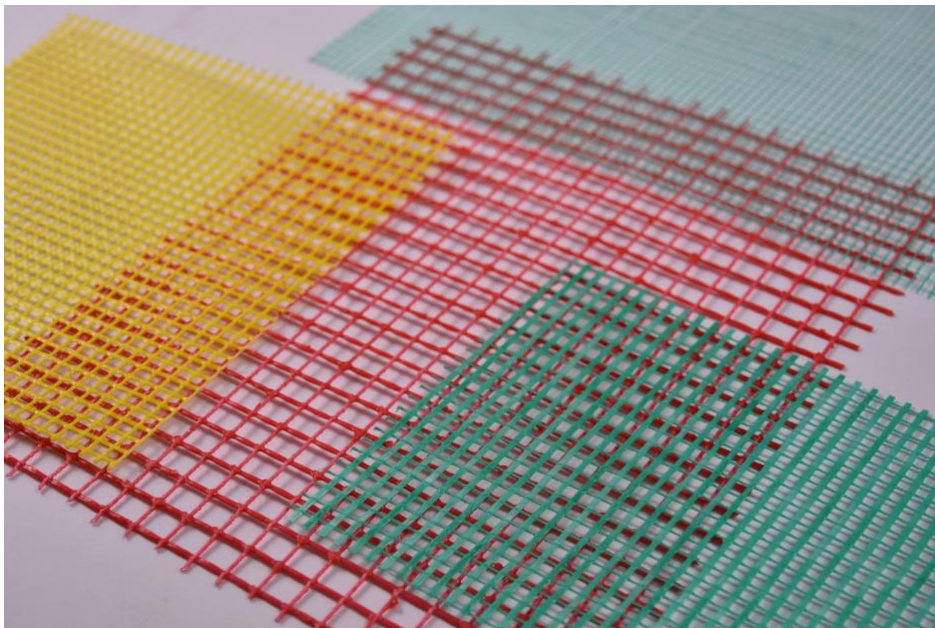
*Fig. 1: Geogrid for subsoil reinforcement*



*Fig. 2: Coated warp knitted fabric for roofing*



*Fig. 3: Reinforcement grids for building renovation*



*Fig. 4: Warp knitted plaster grid*

#### **A machine with good sales and business prospects**

WEFTTRONIC® II G is used to produce most textile solutions for the construction industry. "The high-performance raschel machine with course-oriented weft-insertion is our key machine for this application," says Hagen Lotzmann, Sales Director at KARL MAYER Technische Textilien. It was developed as an efficient means of producing light to medium-weight grid structures made of glass and polyester fibres, and has long since guaranteed continuous customer sales. It also offers great potential for growth in the future.

In particular, the geo and road grids produced on the weft-insertion machines from KARL MAYER Technische Textilien provide a stable source of business. The company serves a broad customer base, especially in China. Other important sales regions include India, which manufactures for the domestic market but also for export – mostly to the USA – and much of Eastern Europe.

WEFTTRONIC® II G warp knitted plaster grids are also booming in countries such as Belarus, Serbia and Hungary, as well as in China. Buyers include numerous weaving mills that have been impressed by the efficiency advantages afforded by this innovative machine. One WEFTTRONIC® II G can replace up to 20 weaving looms, depending on the opening width of the grids produced. Fewer machines also mean lower operating costs.

The WEFTTRONIC® II G can cut personnel costs by up to 60%, not to mention needing less hall space.

Although it was not on show in Shanghai, the WEFTTRONIC® II G was the subject of many discussions at the KARL MAYER booth at ITMA ASIA+ CITME in June 2021. The sale of one machine was negotiated and concluded during the exhibition, and a framework agreement was also signed for further deliveries.

Regional Sales Director Jan Stahr is pleased with the success of the WEFTTRONIC® II G, saying that a repeat order has also been received from the buyer of the prototype. The consensus within the industry is that the machine will result in a shift in technology, says the sales professional – a summary based on opinions shared by exhibition visitors. He was even approached by a manufacturer of textile glass fibres, who wanted to optimise their products with regard to the processability with the warp knitting technology in order to stay in business.

### **Come, see and try it out**

Anyone who wants to witness the performance of the WEFTTRONIC® II G for themselves can visit the KARL MAYER Technische Textilien customer centres in Chemnitz and, as of August 2021, Changzhou. What's more, both sites also offer visitors the chance to try out the system's processing performance themselves. A visit is always worthwhile, especially for manufacturers of woven plaster grids. But Hagen Lotzmann also expects to see great interest from Chinese warp knitting customers. Manufacturers often make their own textile glass fibre material, and can run tests to see for themselves that their yarns run smoothly on the machine.