



GROZ-BECKERT

TEZ

Technology and Development Center



## The TEZ – an overview

**Objectives: Market-ready innovations/new potential and enhanced efficiency**

**Option 1:  
Knowledge transfer and training**



**Option 2:  
Services and experiments**



**Option 3:  
Co-development**



**Option 4:  
Co-innovation**



**Competence centers for textile production and joining methods**

**Competencies of the Groz-Beckert Group**



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## Groz-Beckert – systematic diversity

**Groz-Beckert was founded in 1852 and is active in over 150 countries with around 7,700 employees today. Whether for knitting, weaving, felting, tufting, carding or sewing; our total product portfolio contains over 70,000 products. As a leading supplier of industrial machine needles, precision parts, precision tools, systems and services for a wide range of textile production and joining methods, Groz-Beckert supports its customers and partners within the textile value chain, and beyond. The Technology and Development Center (TEZ) is a pioneering platform, with which Groz-Beckert has been shaping the future of the textile industry together with machine manufacturers, end users, textile producers and institutes since July 2010.**

### A unique platform

Committed textile experts, machines and equipment close to production, many years of experience and comprehensive know-how; the TEZ brings together the very best. Expertise in the most diverse textile production and joining methods is concentrated here, creating unique synergies. In addition to the technical centers, Groz-Beckert also has a central laboratory including material, chemical and textile analysis.

Immediate access is available to the comprehensive product portfolio as well as to extensive mechanical engineering know-how, simplifying the execution of tests and experiments and facilitating the adaption of existing products for new fields of application.



## Market-ready innovations and enhanced efficiency – the objectives of the TEZ

**The TEZ unites a scientific orientation and state-of-the-art equipment with the economic drive of a successful industrial enterprise in an area of around 25,000 square meters. On a scientifically sound basis, the central objective is to derive specific economic benefits from every project. The routes taken to achieve added value can vary.**

### Innovative products

One approach is the development of innovative market-ready products with a textile relevance. Alongside precision components and systems for textile production, this also involves the development of innovative textiles and fabrics in close cooperation with customers and partners.

### Leveraging potential and improving efficiency

Another approach taken by the TEZ lies in uncovering new potential and improving efficiency within the textile value chain. The interfaces between tools and machines and between tools and textiles in particular offer enormous potential which Groz-Beckert aims to leverage at the TEZ hand in hand with its partners.

### Four options for countless possibilities

Depending on the individual demands of its customers and partners Groz-Beckert decides, together with them, how and to what extent the support in the TEZ will be rendered. Essentially, the services offered by the TEZ are targeted at machine manufacturers, machine users, textile producers, institutes, universities and partners, all of whom have highly varied requirements. However, all the services and joint activities pursue one objective: to shape the textile future together – with market-ready innovations, new potential and greater efficiency within the textile value chain. Impetus and project ideas can come from outside as well as from Groz-Beckert.

### The TEZ in brief

- Joint development of market-ready products and textile-related applications
- New potential and improved efficiency within the textile value chain
- What's on offer: Knowledge transfer and training, services and experiments, co-development and co-innovation
- Competence centers for textile production and joining methods, fast tracking from the concept through to readiness for series production
- Concentrating the competencies of the Groz-Beckert Group: Analytics, needle and tool production, mechanical engineering



## Knowledge transfer and training

### Extending expertise, gaining experience

With the TEZ, Groz-Beckert has also established a future-oriented platform for training and further qualification. Within the Groz-Beckert Academy, the company offers a range of practice-based training courses for the most diverse textile production and joining methods, starting with basic tuition and moving on to advanced and specialized courses. Essentially, these all take place in the TEZ, but on request, the courses can also be held at the customer's site.

The success of this extensive training schedule

for the textile industry is founded on the broad-based knowledge and the presence of competent experts to advise on any questions that may arise. This means that the whole range of competencies and resources needed for successful training is all concentrated right here in the TEZ. For more detailed information, go to [www.groz-beckert.com](http://www.groz-beckert.com).

Direct registration is also possible online. In addition to the Groz-Beckert Academy, the company supports its customers and partners in co-development projects, also with special application training courses.



## Services and experiments

### Specific tasks, individual approaches

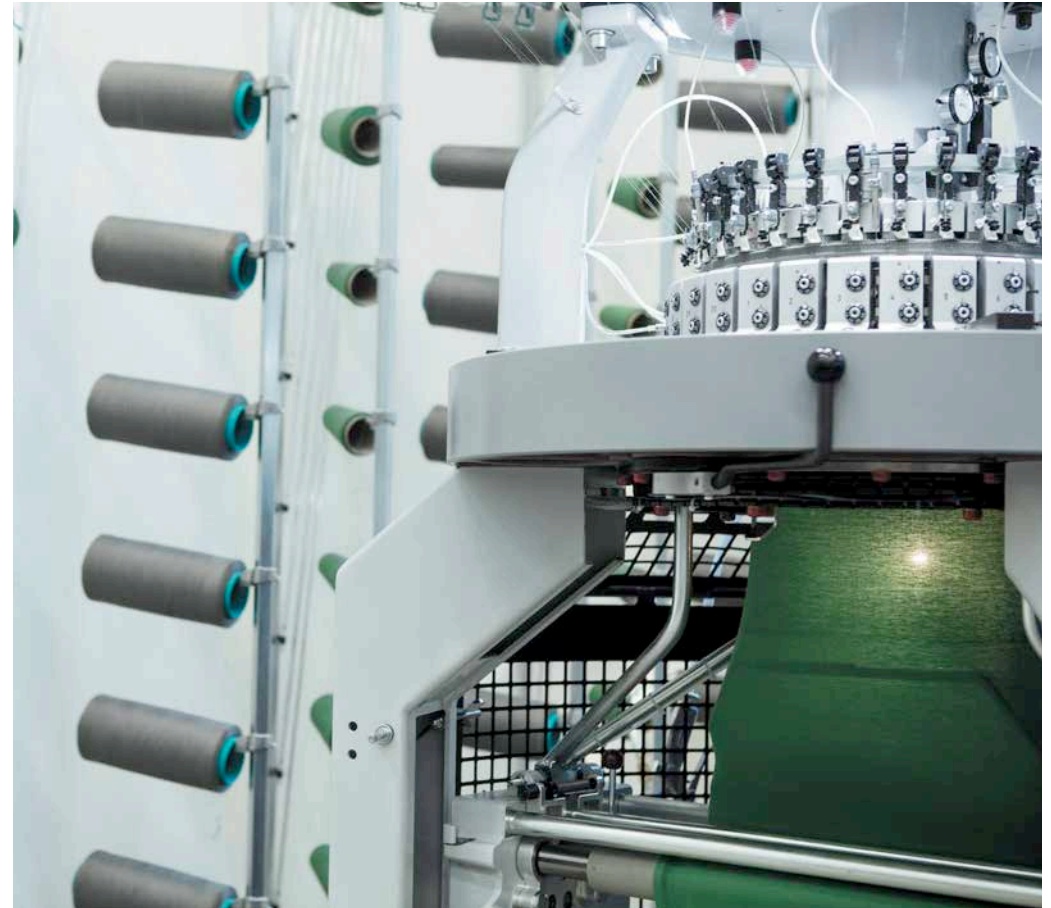
Gain time, take the burden off your own resources, and take advantage of added expertise and state-of-the-art technical equipment, what is on offer can be scaled to suit you. The machines, plants and facilities of the TEZ are fully at your disposal. For individual requirements Groz-Beckert produces prototypes, provides consulting services and recommendations about processes and products, and runs feasibility analyses. Groz-Beckert also offers damage and chemical analyses, physical textile testing, material-related advice and development services. When it comes to the analysis, co-development and improvement of needles and system components, the available expertise on hand is second to none. This option involves taking the concrete terms of reference as a basis for Groz-Beckert to develop individual problem-solving approaches for its customers.



## Co-development

### Hands-on development, joint action

The best ideas are born from the market. To ensure these ideas pay off quickly in practice, Groz-Beckert supports machine manufacturers, machine users, textile producers and partners by means of co-development. Put your specific product ideas and market requirements to the experts at the TEZ, and together with you, Groz-Beckert will work out an efficient solution. Saving energy in production? New products for fiber-reinforced composites? The scope and opportunities are as diverse as the textile industry itself. During project implementation, different models can be adopted in terms of organization, financing and other aspects – in line with individual customer and partner requirements.





## Co-innovation

### Realizing visions, implementing new ideas

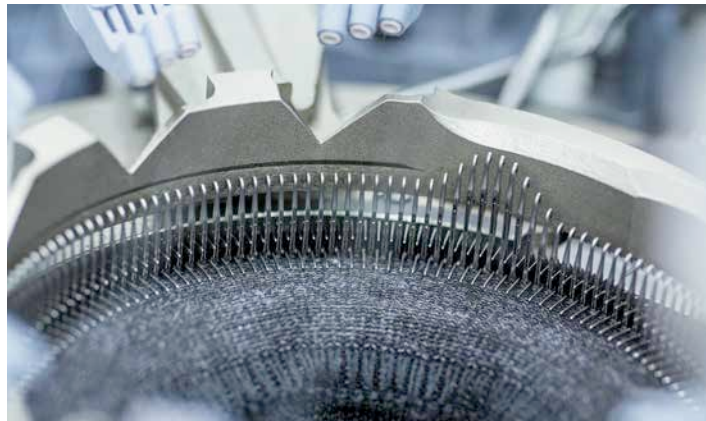
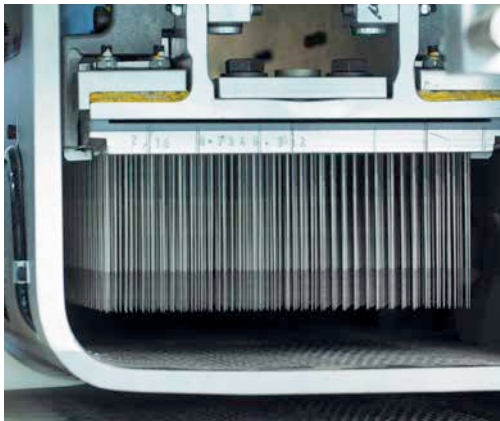
Working on its own initiative, Groz-Beckert is developing solutions to some of the central challenges facing the textile industry. Systematic trend and market analyses, as well as findings from basic research are all taken into consideration. This takes the achievements of the TEZ well beyond options 1 to 3.

In the TEZ, Groz-Beckert is heavily involved in researching new fields of application for textiles. A particularly promising area of research is that of material substitution, for instance in the form of composites or the textile reinforcement of concrete. This approach enables Groz-Beckert to develop solutions for products and applications in the TEZ which have not yet been successfully implemented using textile fabrics. Working hand in hand with partners, different approaches are explored and developed into marketable

products. Here, the TEZ acts as an interface between the textile value chain and whole new groups of customers. Everyone involved in these projects gains an overall benefit from new market potential. Groz-Beckert contributes in the upfront development input investment, leaving partners to take over the manufacture and marketing of newly developed innovative products.



## Competencies – concentrating synergies



The TEZ concentrates expertise and experience, development resources and testing machinery in a single location. The direct access to the tools of the Groz-Beckert portfolio, the use of the Groz-Beckert central laboratory and mechanical engineering open up a unique range of opportunities. These provide the condition for maximum flexibility and efficiency, whether in the conduction of experiments or for co-development and co-innovation projects.

The combined expertise of the company group and the TEZ provides the ideal conditions. They form the basis for market-ready innovations and improved efficiency within the textile value chain. The competence centers combine the knowledge of leading experts, machinery and equipment from the technical centers and the facilities needed for effective project work. Currently the competence centers encompass various textile surface production and joining methods. As the textile industry continues to evolve and develop, further competence centers can be added in response to demand.

## Competencies – foundation stones of the TEZ options

### Competence centers for textile surface production and joining methods

1

#### Experts

Over 2,000 highly motivated and qualified employees are currently employed by Groz-Beckert at the company headquarters in Albstadt. Experts in wide-ranging different textile production and joining techniques make their extensive know-how available.

2

#### Technical Centers

At the heart of the TEZ are the technical centers. These are furnished with machinery and equipment for textile surface production and joining methods. Groz-Beckert is heavily committed to adapting them to new customer requirements on a continual basis. You can obtain more information from the data sheet "TEZ machinery" or the adjacent QR code.



3

#### Project rooms

Rooms for trainings, development work, tests, experiments and targeted project work; with its generous amount of space and advanced facilities, the TEZ offers scope for ideas and potential to unfold with the utmost discretion.

### Groz-Beckert Group competencies

4

#### Analytics

In its central laboratory, Groz-Beckert is able to access an extensive array of high-tech equipment. A variety of physical and chemical textile testing facilities enables the detailed analysis of products, tools and materials as an effective back-up to our testing and other services.

5

#### Needle and tool production

Groz-Beckert has been gathering expertise in needle production for over 160 years, and offers a portfolio encompassing some 70,000 product types. Because everything is located in close proximity, the majority of product types can be made available for experiments and projects in the TEZ without loss of time. This simplifies the execution of tests and experiments and enables production process optimization, another guarantor of flexibility and speed. Where joint development processes are performed, tools can also be adapted on a customer-specific basis.

6

#### Engineering expertise

Groz-Beckert has a flexible, effective in-house machine production, where machines can be manufactured or modified for the company's own use. Groz-Beckert also offers its customers machines for the weaving preparation, like the KnotMaster, an efficient knotting machine for various fields of application. Groz-Beckert makes use of existing expertise for its customers at the TEZ, in order to fully optimize the interface between tool and machine.



## Added value across the board

**Experience, committed textile experts, machines and equipment close to production; the TEZ combines wide-ranging competencies covering textile production and joining methods as well as special applications, creating unique synergies.**

### Added value for Groz-Beckert

For Groz-Beckert, added value consists primarily in stronger customer relationship through joint development. The TEZ also provides support in the further development of its products through the build-up of market and technology-related knowledge and offers the perfect infrastructure for training, experimentation and development. With the TEZ, Groz-Beckert is also pursuing the goal of utilizing its comprehensive expertise within the textile value chain to drive forward innovation and leverage new potential.



### Added value for customers and partners

- TEZ options: A suitable solution to almost every requirement
- More efficient manufacture of textile products
- Development of new textile applications
- Focus on market-ready products and rapid return on investment
- Reduced costs and new business opportunities

## Textile community network



At the TEZ, Groz-Beckert is already working on the products and applications of tomorrow. At a place where innovations are omnipresent, universities and institutes are also welcome. This is why, alongside partnerships with industry, Groz-Beckert relies on broad-based scientific cooperation. Groz-Beckert also cultivates partnerships in the TEZ with other leading universities and institutes. Groz-Beckert aims to use the TEZ to continue with the co-development of findings gained from basic research.

Experts from all specializations and sectors of the textile value chain meet at the TEZ. Shared approaches by different target groups create new possibilities for cooperation. The TEZ Auditorium is a platform for different specialist events and symposia.

### You are warmly invited

Leading international companies and institutes are already benefiting from Groz-Beckert and the TEZ, with great success. You too can shape the textile future together with us! Would you like to stay up-to-date on everything involving the TEZ and experience the latest developments? Then the best thing to do is register for the Groz-Beckert newsletter directly at [www.groz-beckert.com](http://www.groz-beckert.com)

Groz-Beckert looks forward to your interest and a dialog in partnership.



Registration for the  
Groz-Beckert Newsletter





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