

Groz-Beckert encounters the future

For many years now, the Techtexsil offers exhibitors and visitors a dynamic international meeting place for the high tech industry. Groz-Beckert presented its product diversity for knitting, weaving, felting and sewing to the international experts. Technical textiles, in particular, are becoming increasingly important. In 1985 they accounted for a mere 5 to 8 percent share of global production; today that figure is 40 percent and Groz-Beckert is going to be making an intense commitment to this future sector.



Technology and Development Centre at Albstadt, Germany.

The main focus of this Group is continuing to develop its position as a comprehensive systems supplier along the value-added chain – and thus to become a motor of progress in the textile industry and beyond it. One important cornerstone here is the construction of the Technology and Development Centre in Albstadt, Germany and another is further intensification of customer relations.

The Technology and Development Centre utilizes sound scientific methods, and is both neutral and independent in its activities. Across a 25,000-square-metre area, the future of the textile industry is being given a unique environment. Economic aspects are emphasized – the overriding aim being to develop economically viable solutions that are distinctive for a fast return on investment.

The Technology and Development Centre has thus become synonymous with a new way of thinking. This is where innovative ideas are turned into products that truly convince.

HyTec® GEBEDUR® - Groz-Beckert Jet strips with long service life

GEBEDUR® products from Groz-Beckert represent consistent further development that is far above standard. HyTec® GEBEDUR® jet strips offer a combination of long service life plus the highest quality

demands on finished textile products, throughout the entire lifetime of the jet strip.

Groz-Beckert HyTec® GEBEDUR® jet strips have resistant surfaces in the region of the capillaries. The long service life resulting from this enables the manufacturer of spunlace products to achieve homogenous product features over a long period.

HyTec® - Process water analysis from Groz-Beckert for water jet hydroentanglement systems

The quality of process water used is decisive to the manufacture of spunlace products. The properties of the water influence the service life of various machine components and of the jet strips. The process water is also instrumental in determining the quality of the end product, not only when manufacturing hygiene products.

Ensuring hygienically sound water quality is therefore essential. Water is a highly versatile medium and can occur in varying levels of acidity or alkalinity as well as in partially or fully deionized form. It can also contain micro organisms, metal particles and other inorganic substances in varying concentrations. Alongside pH value, water hardness and chloride content, there are also a large number of other characteristics that determine water quality.

Groz-Beckert can provide precise information about the process water. By performing a comprehensive laboratory

analysis at Groz-Beckert, we examine your process water in respect of important hydrochemical parameters.

HyTec® - Cleaning instructions from Groz-Beckert for jet strips

The manufacture of spun lace products involves forcing water at high pressure through openings in the jet strip measuring only hundredths of a millimeter across.

The process entails large quantities of process water flowing through the individual jets. Contamination of the process water leaves deposits which clog up the jet area. Potential pollutants can include fibre residues, rust, metal particles, limescale particles and chemicals added to the process water.

With time, the resulting deposits left adhering inside the jets gradually diminish the diameter, so impeding the flow of water. Contaminants in the entrance area of the jet opening exert a detrimental effect on the formation of the water jet and consequently on the shape of the water curtain.

This impacts negatively on the physical characteristics of the spun lace product. Consequently, jet strips require professional cleaning at regular intervals to remove deposits, while taking care to protect the sensitive structure of the jet strip. Aspects such as working safety and environmental protection also play an important role.



HyTec Jet Strip 2



Felting HyTec process water analysis.



HyTec Jet Strip Cleaning instructions.



Groz-Beckert SAN® 5 needle

Sewing needle applications for Technical textiles

Special application Needle San® 5 – developed for the sewing process of technical textiles

More often technical textiles require a varied combination of different materials (frequently coated or bonded with foam material). The requirement for durable and accurate seams places high demands on the sewing machine needle. The Groz-Beckert SAN® 5 needle was developed to eliminate the known application problems – Needle deflection, stitch hole sticking and irregular seam appearance - related to the processing of such materials.

LPC - Loop Position Control - innovative technology for the perfect loop

Using an improved shank and groove geometry, with Groz-Beckert needles LPC technology, this brings marked improvements by ensuring greater thread protection and reducing thread load during thread run-in over the edges of the longitudinal groove.

The result: Improved protection of threads, and substantially better and more stable loop formation in critical applications. Skipped stitches and thread breakage due to poor loop formation are consequently reduced when working in difficult conditions.



LPC - Loop Position Control.



Groz-Beckert - LR San® 12.

Special needle LR San® 12 - perfect twin decorative seams with slanted stitch formation

Twin lockstitch is used in the fields of automotive engineering, upholstered furniture and accessories. To achieve top quality results, the aim must be to produce seams with an even appearance that run completely parallel. It was to guarantee this high standard of seam quality, this cutting point needle LR SAN® 12 is developed.

Gebeswitch® - from 80 to 200 in just 10 seconds!

No-compromise adjustment of medium-duty lockstitch machines to work with different materials entails the use of needles of different sizes. This not only involves a substantial amount of adjustment work, particularly in machines with vertical hooks, but also means losing the original machine setting.

The Gebeswitch

Constant scarf / hook orientation over a size range of Nm 80 – Nm 200 by displacement of the needle axis.

Solutions for circular knitting machines

Groz-Beckert is also active in production and the sales of cylinders, sinker rings and dials of high quality for circular knitting machines under the brand name Groz-Beckert.

Often individual solutions are necessary for the production of technical textiles, which are developed and designed to the customers' needs by experienced and qualified Groz-Beckert personnel.

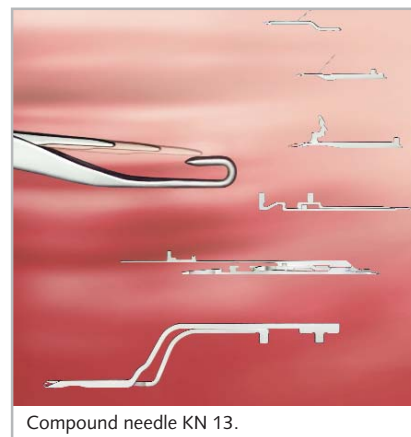
With the help of state-of-the-art and well-matched components, the production of these developments is implemented quickest possible.

Examples for this are the circular knitting cylinders as well as litespeed and compound needles which are more and more used in the technical field.

For the processing of carbon, glass and high-strength fibers as well as copper, silver, steel wire the compound needle appeared to be an indispensable tool.

It would not be possible to fulfill the demand on high velocities and long running times to produce technical textiles without the compound needle today. The compound needle technology allows to economically produce numerous products.

Examples are rotor blades made of glass fiber reinforced plastic for wind power stations as well as carbon fiber reinforced plastic which is used in aircraft construction.



Compound needle KN 13.

Innovation for the Weaving Industry

PosiLeno® - New Leno Binding System

The revolutionary development for the manufacture of leno fabrics, this positively controlled leno device for riderless heald frames, enabling production speed to be doubled. Its characteristics include:

- ❖ 100% higher production speeds on existing weaving machines.
- ❖ Infinite patterning possibilities with leno binding over a wide range of different warp yarns.
- ❖ Reliable binding through positively controlled doup frame.
- ❖ Simple, fast, and cost-effective article change.
- ❖ Optimized shed formation movements insure highest fabric quality while minimizing stresses on warp yarns, heald frames and leno healds.

Technical fabrics

GROB offers modern weaving accessories available for the successful manufacture of technical fabrics. GROB heald frames and healds are designed for production of quality, defect-free fabrics with maximum efficiency. The continuing GROB commitment to innovation assures weavers of even further design solutions in the future.◆