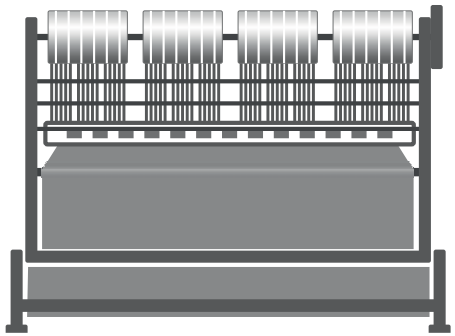
GROZ-BECKERT

Knitting

Products and services for the warp knitting industry

Warp knitting technology

Groz-Beckert develops, produces and sells machine needles, precision parts, precision tools and systems for different textile production and joining methods. The product portfolio serves the knitting and weaving sectors, felting, tufting, carding and sewing. Specifically for the warp knitting industry, Groz-Beckert offers more than 800 high-performance needles and system parts for the manufacture of warp knit fabrics.



In warp knitting machines, all the needles move jointly on needle bars. Warp knitted fabrics can be recognized by the predominantly vertical course of the thread, whereby the threads are usually fed from warp beams and/or creels. The wide application range generates a large number of very different machines which vary markedly in terms of the arrangement and number of required knitting elements and yarn feed systems. Groz-Beckert offers a large variety of products and services for the following application fields.

Shoe and apparel textiles

- Outerwear
- Underwear
- Sports textiles
- Shoe fabrics

Home and furnishing textiles

- Decor textiles
- Bedding fabrics

Technical textiles

- Agricultural and packaging textiles
- Mobile textiles
- Industrial textiles
- Geotextiles
- Medical textiles
- Construction textiles
- Protective textiles
- Sports equipment

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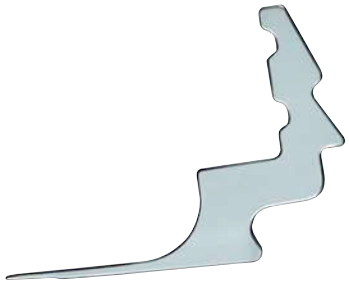
Products and services

Over 160 years of experience and a worldwide company network

Groz-Beckert stands for outstanding customer service with individually tailored systems and solutions. Alongside warp knitting machine needles, system parts and warp knitting modules, the Groz-Beckert performance spectrum encompasses wide-ranging services.



Product portfolio

At Groz-Beckert, all the components of warp knitting systems are precisely inter-coordinated. The perfect interaction of warp knitting machine needles and system parts guarantees a uniform, trouble-free warp knitting process. Machine manufacturers the world over place their trust in Groz-Beckert as a development partner and quality supplier. We continue the further development of our product spectrum on the basis of this broad fund of expertise.

More information is available in the „System parts“ data sheet

Warp knitting machine needles

- Compound and springbeard needles for warp knitting machines
- Patent and compound needles for galloon crochet machines
- Latch and compound needles for raschel machines
- Threading and drawing-in needles

Compound needle Spec. 51.50 G 104
and closing element Spec. 17.21 G 502

Compound needle Spec. 47.89 G 101
and closing element Spec. 33.44 G 101

Raschel needle
Raschel Spec. 26.60 G 05

Patent needle
Patent 73.71 G 23

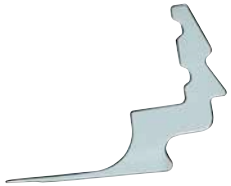
Springbeard needle
C 56.102 G 1

System parts

- Closing elements
- Guide needles
- Warp sinkers
- Reed parts
- Holding-down parts
- Loop forming parts

Guide needle
LN-OL 17.43-20 G 101

Warp sinker
SNK-OL 31.14 G 101



Closing element
Spec. 17.21 G 502

Modules for warp knitting machines

- Guide needle modules
- Warp sinker modules
- Closing element modules

Guide needle module
LN-OLM01/ 17.43-20 G 101

Warp sinker module
SNK-OLM01/ 31.14 G 101

Closing element module
Spec.M01/ 17.21 G 502

Product designations

What information does the product designation contain?

Spec. 43.45 G 105

1 2 3 4 5

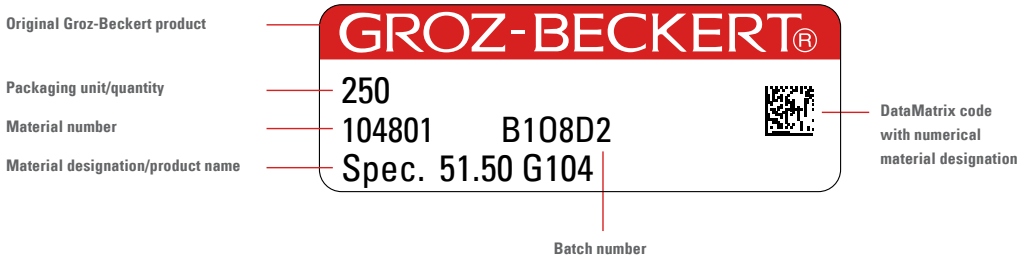
1. Compound needle
2. Total length in mm
3. Thickness in 1/100 mm
4. Groz-Beckert
5. Special protection against wear and variant from Groz-Beckert

Spec. 15.18 G 505

1 2 3 4 5

1. Closing element
2. Total length in mm
3. Thickness in 1/100 mm
4. Groz-Beckert
5. Rustproof base material and variant from Groz-Beckert

What information will I find on the product labels?



Patent 73.71 G 23

1 2 3 4 5

1. Patent needle
2. Total length in mm
3. Thickness in 1/100 mm
4. Groz-Beckert
5. Variant from Groz-Beckert

Raschel Spec. 26.60 G 05

1 2 3 4 5

1. Raschel needle
2. Total length in mm
3. Thickness in 1/100 mm
4. Groz-Beckert
5. Variant from Groz-Beckert

LN-OLM01/ 17.43-20 G 101

1 2 3 4 5 6 7 8

1. Guide needle
2. OPTILOOP®: Special protection against wear
3. Module variant
4. Total length in mm
5. Thickness 1 in 1/100 mm
6. Thickness 2 in 1/100 mm
7. Groz-Beckert
8. Special protection against wear and variant from Groz-Beckert

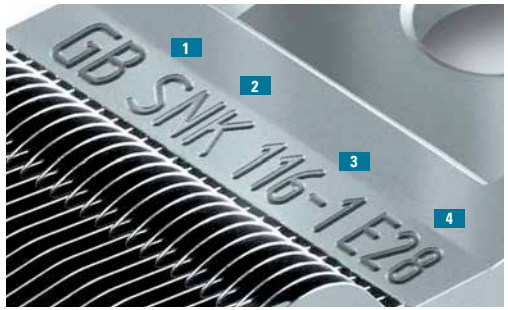
SNK-OL 24.11 G 103

1 2 3 4 5 6

1. Warp sinker
2. OPTILOOP®: Special protection against wear
3. Total length in mm
4. Thickness in 1/100 mm
5. Groz-Beckert
6. Special protection against wear and variant from Groz-Beckert

Glossary

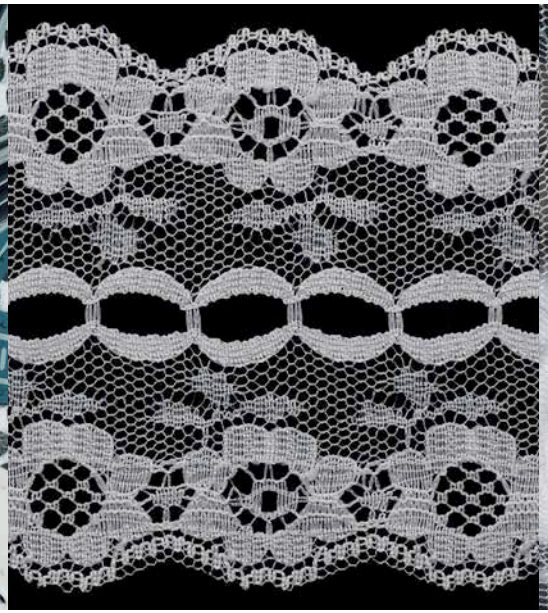
What information does the product designation contain?

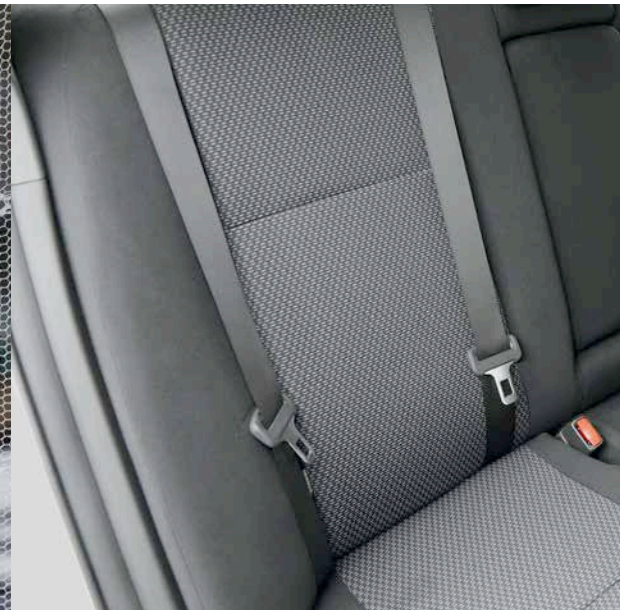


1 Original Groz-Beckert product
2 Warp sinker
3 Single parts and consecutive module number
4 Gauge E 28

Warp knitting machine needle	
Spec.	Needle for warp knitting machines and raschel machines
Raschel and raschel-Spec.	Latch needle for raschel machines
Patent	Patent / carbine needle for galloon crochet machines
KFPS	Springbeard needle for warp knitting machines
EI	Threading or drawing-in needle
System parts	
Spec.	Closing element for warp knitting machines and raschel machines
LN	Guide needle
SNK	Warp sinker
RT	Reed part
NT	Holding-down part
MB	Loop forming part
Mounted warp knitting components	
SN-N	Compound needle – individual needle
SN-S	Compound needle – individual closing element
Warp knitting modules	
M01	Module with consecutive number (here: 01)
Special features	
OL	OPTILOOP®: Special protection against wear
G 01 to G 099	Latch needle, including 01 to 99 as consecutive number for different versions
G 101 to G 199	Special protection against wear, including 01 to 99 as consecutive number for different versions
G 501 to G 599	Rustproof base material, 01 to 99 as consecutive number for different versions

Topics taken from practice



Every customer has individual needs. By providing experience, expertise and available capacity, Groz-Beckert can help its customers on the road to success as a supplier of systems and solutions. What are your aims?

- Do you want to squeeze the very most out of your producing facilities?
- Are you in the business of producing flawless fabric to a premium standard of quality?
- Are you seeking new market fields and applications?
- Do you want your production to be sustainable and gentle on resources?

Talk to Groz-Beckert to discover ways of achieving your goals with maximum efficiency.

Fine gauges and elastic fabrics

The manufacture of exceptionally fine, elastic warp knit fabrics places stringent demands on the warp knitting machine needles. Depending on the fabric, stripes may only become evident after finishing – often after large quantities of fabric have already been produced. The use of Groz-Beckert products helps to minimize this risk.

Compound needle Spec. 51/ 43.36 G 101 for fine gages from E 40

Lateral thickened plastic part for stable loop formation

For gauges from E 40, Groz-Beckert has developed and patented a special compound needle with thickened plastic part. The special feature of needle Spec. 51/ 43.36 G 101 is that its lateral thickened plastic part lends the fine needle adequate stability during loop formation.

Quality
Even, flawless fabric quality, due to minimal tolerances and expectional uniformity

Groz-Beckert patent

EP 2045384 B1, US 7,624,599 B2, JP 4829283 B, CN 101413181 B and KR 101050973 B

Wear and rust protection

Extreme loads in the loop forming process due to mechanical and chemical influences cause premature wear and rust. The causal factor of particularly pronounced forms of wear are usually abrasive yarns. In the case of natural fiber yarns, these are usually contaminants which are harder than steel, and in chemical fiber yarns which are treated to induce matting, the culprits are titanium dioxide crystals which protrude from the yarn surface and literally saw into the steel.

Hook wear

Patent needle with special protection against wear

Compound needle with special protection against wear

The effect is exacerbated by extreme loads at high speeds and high thread tension. The root cause of rust is usually finishing agents used in yarn production, therefore specific attention to yarn quality would greatly assist trouble free production. The high level of fitting accuracy of all system components, narrow production tolerance due to ISO certified processing standards and exceptional surface quality, all act together in Groz-Beckert warp knitting products to minimize wear, ensuring a uniform stitch appearance for longer than any competitor product.
For high performance production, in addition to the use of first class raw materials, the parts of warp knitting products coming into contact with yarn are provided with a special protection against wear.
Warp knitting needles and system parts with special wear and rust protection are identified within the product description by the following abbreviations:

G 101 to G 199	Special protection against wear
G 201 to G 299	Rust protection
G 501 to G 599	Rust-proof base material
OPTILOOP®	Special protection against wear

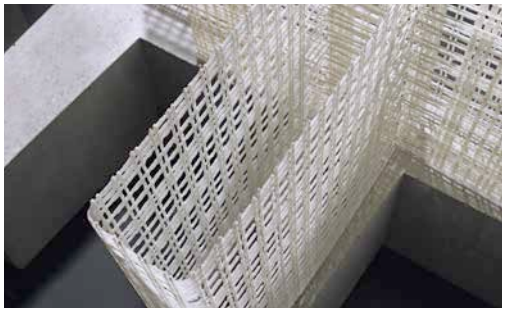
Profitability/productivity
Reduced needle consumption and improved process reliability due to long-life warp knitting elements

Quality
Uniform, flawless fabric quality

Fiber composites

Fiber composites are on the advance, and are suitable for wide ranging fields of application in lightweight construction. They are frequently made of reinforcing textiles based on glass, carbon, aramid fibers. Warp knitting technology plays a major role in the production of fiber composites.

Composites used in construction and civil engineering



Bridge construction with textile reinforcement

Aircraft components made of composites

Use of fiber composites in lightweight construction

So-called composites are produced on raschel and stitch bonding machines with pointed head and compound needles, and have the benefit that they achieve minimal material weight coupled with material stability. To achieve the full potential of the promising future market of fiber composites and to optimize processes used in the manufacture of reinforcement textiles for its customers and partners, Groz-Beckert has established its own fully equipped Technical Knitting and Warp Knitting Centers within the Technology and Development Center (TEZ).

Innovation

Thanks to their verifiable reduced weight, fiber composites are suitable for new and innovative fields of business, such as textile construction.

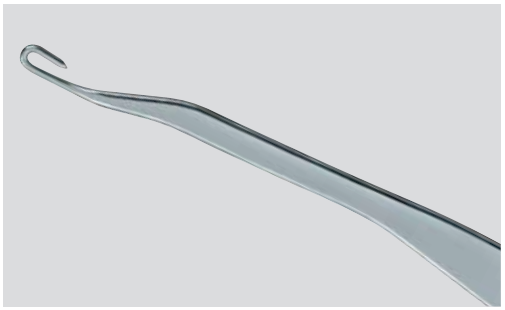
The competence centers

With its own in-house Technical Knitting and Warp Knitting Centers, Groz-Beckert is setting whole new standards in terms of customer focus. Users benefit from a fast solution to their knitting application problems. Our experts working within these Technical Centers are able to draw on comprehensive competence across every field of the knitting and warp knitting industry, from apparel through to technical textiles.

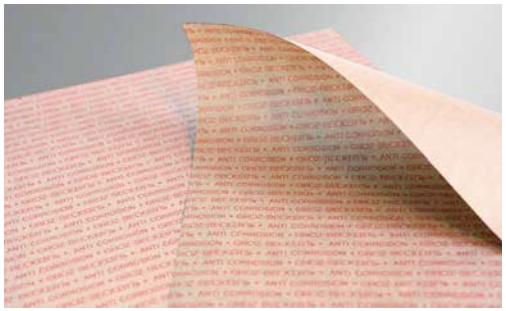
Packaging, handling and storage

Groz-Beckert's smart packaging solutions provide active support to customers in improving their cost efficiency. Minimizing the work involved helps directly reduce set-up times. The effect: Reduced production costs compared to competitors.

Protective film with corrosion protection oil



Corrosion protection paper



Packaging made of break-resistant material

Simple handling thanks to removable organization system

Packaging solution for needles and system parts

Climate-related influences such as humidity and temperature fluctuations have a permanent effect on warp knitting machine parts and can impair their quality as a result of corrosion. To prevent this type of deterioration, Groz-Beckert developed systems for packaging its products which can comprise up to three components:

- Corrosion protection oil surrounds the product with an active anti-corrosion protection.
- Corrosion protection paper reduces the influence of oxygen and water on the product.
- Plastic packaging prevents damage during handling and storage.

Packaging solution for warp knitting modules

- Protection of warp knitting modules against damage, environmental influences and dirt
- Handy removable organization system using the proven Groz-Beckert packaging concept – for shorter setting times

Groz-Beckert Academy and myGrozBeckert App

GET IT ON Google Play

Download on the App Store

Academy – Your textile training program

The Groz-Beckert Academy has made it its mission to pass on knowledge, to share experiences and to make know-how and expertise accessible.

The range of courses includes basic, continuing and specialized training, all of which are held in the Technology and Development Center (TEZ) in Albstadt. The Groz-Beckert Academy also offers individual training on-site at the customer.

All courses are offered in both German and English. Selected courses are also available in other languages, such as Chinese and Spanish.

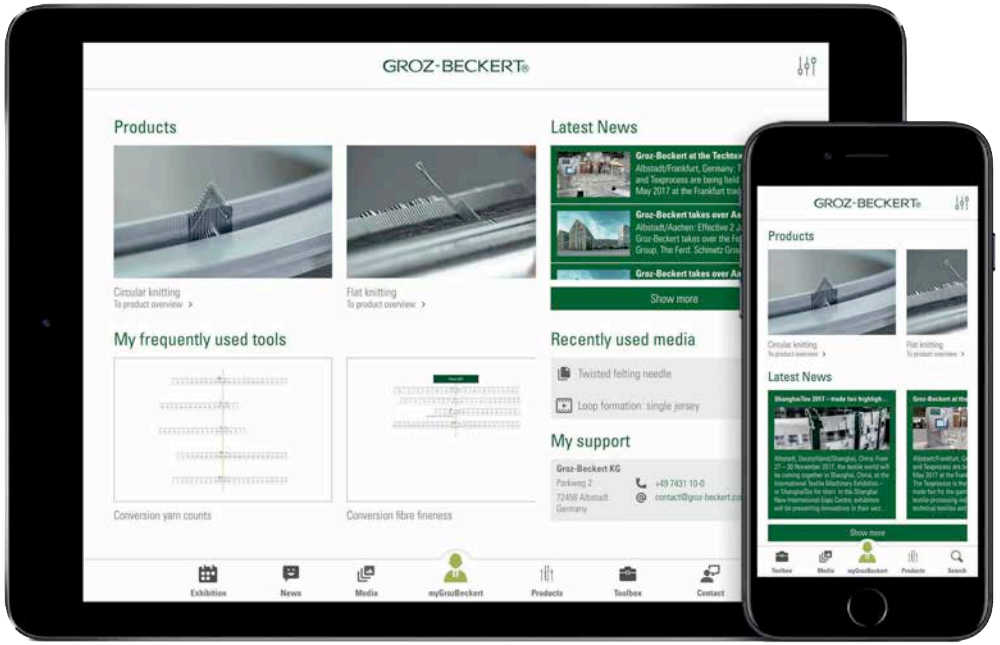
More information on the Groz-Beckert Academy is available on the website and in the training program

App – Your personal work tool

myGrozBeckert has brought the textile world together in one app since 2011. Providing information on Groz-Beckert products as well as the company itself. The highlight of the app is the Toolbox, which provides the user with useful conversion and calculation tools. The app also informs you of any news and events relating to Groz-Beckert.

The newest version of the app was released to app stores in 2017 with fully customizable navigation. This enables users to define favourites and preferred topics themselves and to change them at any time as required.

myGrozBeckert works with all iOS and Android smartphones and tablets, and is available in German, English, and Chinese. You can download the free app through the Google Play Store, the Apple App Store or through various Chinese app stores.



Groz-Beckert KG
Parkweg 2
72458 Albstadt, Germany
Phone +49 7431 10-0
Fax +49 7431 10-2777
contact-knitting@groz-beckert.com
www.groz-beckert.com

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