

Process belts

# We get processes moving

Belts made of woven mesh and spirals

Belts and tapes by GKD

# **GKD -Innovator** and global market leader

As a privately owned technical weaving mill, GKD -Gebr. Kufferath AG is the global market leader for metallic mesh, synthetic mesh, and spiral mesh solutions. Three independent business divisions bundle their expertise under one roof: **Industrial** Mesh (woven metal mash and filter solutions), **Process** Belts (belts made of woven mesh and spirals), **Metal**fabrics (façades, safety and interior design made of metallic fabrics) and **Media**mesh<sup>®</sup> (transparent media façades). GKD continuously develops new fields of application through manufacturing technology and process expertise. We use GKD meshes to create efficient systems, equipment, and components that are perfectly integrated into our customers' processes across all industrial sectors. Although its HQ is in Germany, GKD is a player on the international stage with six other production sites in the USA, South Africa, China, India, and Chile, branches in France, Spain as well as representatives all over the world.



## Industry

Industrial mesh stands for state-of-the-art mesh and filter solutions made of metal and synthetic wires, as well as technical fibers - for industrial use in all sectors. With innovative weaving technologies and the latest simulation methods, we develop and produce efficient technical weaves, semi-finished products, components and filter equipment – optimally matched to the most diverse mechanical process engineering requirements. We use our high-level laboratory expertise to continually refine and further optimize our products. Leading manufacturing standards, certified processes and comprehensive testing procedures secure end-to-end high quality in all GKD filter media. This approach allows us to produce some of the most reliable, high-performance filter media in the world. Our innovative capacity, many years of experience with application processes and customer proximity, coupled with our cost-focused and user-centered approach, have made GKD the first choice international partner for industrial mesh.

## Architecture

In the Architectural fabric and Mediamesh® divisions, GKD combines aesthetics, function, experience, and innovation in its high-quality architectural and design fabrics. Whether custom metal fabrics or standardized system components, planners and architects have been benefiting from our creative impulses and technical innovations for more than 20 years - also in internationally outstanding architectural projects. The design options in terms of shapes, colors, and surfaces ensure unique façade designs. Building shells become energy-efficient solar protection systems that can be adjusted for different times of the day. Bright LED media façades display high resolution content. Soundabsorbing ceiling systems improve room acoustics, while semi-transparent room dividers help structure interior designs. Roll-up doors offer effective burglary protection. GKD's diverse product portfolio offers the right solution for a very wide range of architectural applications.

Process belts from GKD

# Strong all-rounders and individual specialists

We are open to the challenges of our customers. Thanks to our dedicated R&D department with laboratory, we not only continuously develop our own GKD range of standard products, but also create individual solutions for our customers' applications. This helps GKD produce efficient, cross-industry products that are optimally integrated into the customer process. Our manufacturing expertise enables us to meet our customers' wishes. Large web widths and special mesh designs offer the right solution for all system dimensions and process requirements. Individual material combinations, known as hybrid belts, allow the positive characteristics of individual materials to be combined in a single product. Our synthetic mesh is generally supplied as preassembled stock goods.

100.00



We identify the ideal mesh for your application from a broad range of permanently available products. If necessary, these are then adjusted to your requirements. GKD belts made of **metallic mesh** are typically applicationspecific one-offs which are custom produced for the processes of our customers. On request we also take care of storage in order to ensure fast replacement when needed. Complementing our woven products, we use the latest machines and work to the highest quality standards in our synthetic spiral fabric belt production operations for a wide range of customer applications. Moreover, our customers can also rely on us when it comes to further processing steps such as edge configuration, drawing or thermosetting. A large number of woven seams rounds off

our diverse product portfolio. The wide range of industrial applications covered by GKD process belts underlines our many years of experience as well as our expertise in development and manufacturing. With seven plants and a large number of branches across four continents, GKD is close to the markets all over the world.



## Forming

## Nonwovens

GKD offers antistatic synthetic mesh belts from the Conductive and Conducto® product lines for the forming of nonwovens. The manufacturing process of nonwovens starts with the forming of fibers on synthetic mesh belts. These antistatic belt types, also referred to as forming fabrics, are designed specially for the high-speed production systems. They are used in many different nonwoven forming applications, including airlaid, spunlaid, wetlaid and drylaid. GKD's Conductive and Conducto® conveyor belts are available with either an endless woven seam or a non-marking woven pin seam.

### Properties

- Exact tracking thanks to high dimensional and form stability
- Electrostatic discharge as per the Atex standard
- Non-marking pin seam
- Safely closable on site
- · Stable edge coating on synthetic mesh belts

Do you have questions? Simply send us an e-mail or call us: forming@gkd-group.com | T +49 2421 803 168



### Drying | bonding

## Nonwovens

Process belts from GKD are an important component in thermobonding processes in the nonwoven industry. GKD supplies temperatureresistant mesh belt types for these processes in single- and double-belt ovens in a number of different materials: we offer bronze, steel, stainless steel, PPS or PEEK meshes depending on the a pplication. Our hybrid belts employ a glass fiber/ steel or glass fiber/stainless steel material combination and are completely coated in PTFE. At GKD we use a flat and easily closable loop pin seam for this purpose, which our engineers always adapt in accordance with the respective process. What is more, our smooth and stable edge welding on the belt edges ensures that the production speeds required in the sector are achieved safely and reliably.

## Properties

- Exact tracking thanks to high dimensional and form stability
- Pin seam closable on site by the customer
- · Stable edge welding on metal belts
- Smooth edge coating on Duofil<sup>®</sup> and hybrid belts

Do you have questions? Simply send us an e-mail or call us: bonding@gkd-group.com | T +49 2421 803 125

## Applications

- Forming
- Pressing

## Materials

- Synthetic
- Metal

#### Products

- Conductive
- Conducto<sup>®</sup>
- Linear Screen
- Trackmatic<sup>™</sup> belts

## Forming | pressing

## Hygiene

GKD offers individually adapted mesh belts for the production of incontinence and hygiene

**products.** These belts are available in synthetic and metal meshes, as well as material combinations, known as hybrid meshes. This ensures that they are always individually matched to the respective production systems. All GKD process belts are supplied with an endless woven seam and are nonmarking in the seam area. The complex manufacturing process also ensures stable, precisely trimmed longitudinal edges. These guarantee reliable and precise directional stability, even at high rotational speeds.

### Properties

- Exact tracking thanks to high dimensional and form stability
- Electrostatic discharge
- Broad edge coating and exact edge cutting
- Endless woven seam absolutely non-marking

Do you have questions? Simply send us an e-mail or call us: hygiene@gkd-group.com | T +49 2421 803 345

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### Drying | hardening

## **Corrugated board**

Process belts from GKD are an important component in the production of corrugated board.

For more than 20 years now, metal pressure belts have been used to glue corrugated sections to the inner liner in the module facer produced by our partner company BHS Corrugated. Further along in the process, in the heated section of the corrugated board system, one or more "single-faced corrugated boards" are glued together using heat and pressure with what will later be the outer layer of the raw cardboard packages. GKD also offers individual solutions made from hybrid synthetic-metal combinations for this process. Regardless of the manufacturer of the corrugated board system, heating belts from GKD guarantee the best product features throughout the entire service life.

## Properties

- High degree of lateral stability and smooth running
- Individual designs for customer solutions
- Various coatings
- Top-level seam technology
- Good steam extraction

Do you have questions? Simply send us an e-mail or call us: corrugatedboard@gkd-group.com | T +49 2421 803 133

#### Applications

- Baking
- Freezing
- Cooling
- Washing

## Materials

- Synthetic
- Metal

## Products

- Linear Screen
- Trackmatic<sup>™</sup> belts
- Process belts

Baking | dewatering | freezing | cooling | drying | washing

## Food

Process belts made of woven metal or synthetic are used in many processes in the foodstuffs

industry. For example, they are employed for shock freezing, coffee roasting, soup drying, steaming noodles or washing salad. This variety of processes necessitates versatile meshes that are precisely aligned with the respective process both thermally and mechanically. To fulfill this goal, our GKD engineers always individually combine the mesh type with the appropriate material. This results in a broad product portfolio, ranging from synthetic Linear Screen meshes, through semi-twisted stainless steel meshes, all the way up to self-guiding Trackmatic<sup>™</sup> belts.

## Properties

- FDA-certified
- Process-optimized belt solutions
- Belts with high heat resistance
- Durable conveyor belts
- Material selection conforming to food processing standards

Do you have questions? Simply send us an e-mail or call us: foodstuffs@gkd-group.com | T +49 2421 803 247



## Dewatering | pressing

## Fruit juice

The juice is extracted from berries, fruit, and vegetables quickly and efficiently in belt presses equipped with GKD filter belts. GKD supplies robust polyester mesh belts and spiral belts for both single-belt and double-belt presses. Like all our products, the filter belts used here are always matched to the respective product - in this case the respective fruit or vegetable. This guarantees an optimum juice yield or dewatering result. To ensure long service lives and smooth running properties, GKD equips the belts with the unique PAD hook seam connection.

### Properties

- FDA-certified
- Robust mesh for high elasticity
- Integrated wear indicator
- Easy cleaning of the mesh
- · Good pomace release
- High lateral stability of the filter belt
- Mesh opening of 300 μm to 500 μm

Do you have questions? Simply send us an e-mail or call us: fruit-juice@gkd-group.com | T +49 2421 803 131

## Applications

- Ventilation
- Dewatering
- Embossing
- Pressing

#### Materials

- Synthetic
- Metal

### Products

- Conducto®
- Flexoplan<sup>®</sup>
- Linear Screen
- Square Weave
- Tela Microdur

Ventilation | dewatering | pressing | embossing | drying

## Wood processing

In the wood-processing industry, meshes from GKD are used as ventilation belts, dryer belts, and caul screens. Our close cooperation with plant manufacturers mean that we are able to adapt all meshes to the respective area of application: for example, Atex-compliant Conducto<sup>®</sup> ventilation belts permanently prevent electrostatic charges thanks to their interwoven bronze wires. Thanks to their fine pores and high level of air permeability, our process belts support the effective drying of wood shavings, digestates, or biomasses, while the special mesh construction provides reliable protection from dust. For the production of wooden panels we offer caul screens and press draining meshes, which lend the products their characteristic surface properties through a defined surface coarseness.

### Properties

- Robust mesh constructions
- Resistant to high mechanical loads

Do you have questions? Simply send us an e-mail or call us: wood@gkd-group.com | T +49 2421 803 185



## Drying

## **Biomass**

GKD sets a worldwide standard with its process belts for drying wood shavings, digestates, or other biomass in low-temperature dryers. With its high air permeability and low mesh opening, the highly successful "Conducto® 5065" contributes to an effective drying process and, at the same time, low dust load values. The highest dimensional and form stability is achieved through the use of modern production technology. This is reflected in the excellent directional stability. Interwoven bronze wires permanently prevent electrostatic charges and are therefore of elementary importance for Atex certification. Our rugged Conducto® 5065 process belt is available in widths of up to 8.2 meters and lengths of up to 200 meters.

### Properties

- Exact tracking thanks to high dimensional and form stability
- Electrostatic discharge
- Edge coating and precise edge trim
- PAD seam
- · Laterally stable, tensile, and rugged

Do you have questions? Simply send us an e-mail or call us: biomassdrying@gkd-group.com | T +49 2421 803 185



## Drying

## **Floor covering**

GKD conveyor belts made of metal mesh have been proving their value in the manufacturing of PVC floor coverings and carpets for decades.

Potential applications range from drying PVC to fixing dyes in carpet manufacturing. In all of these processes the conveyor belts must be designed to cope with ever shorter production times, higher temperatures and the use of chemical substances such as plasticizers. The GKD engineers achieve this by selecting the appropriate alloys and individual coatings. As such, all of our customers benefit from GKD conveyor belts that are always individually tailored to the respective production requirements.

### Properties

- Suitable material quality (stainless steel, crude steel)
- High lateral stability
- Optimum flatness
- Durable
- Easy belt control
- · Optimized for easy cleaning
- High temperature resistance for extremely efficient drying

Do you have questions? Simply send us an e-mail or call us: floor-covering@gkd-group.com | T +49 2421 803 345



## Forming | drying

## Insulation

Conveyor belts made of metal and synthetic meshes assist the process for manufacturing insulation materials. Whether sheep wool, cellulose fibers, organic artificial materials such as polystyrene or mineral fibers – GKD delivers the right fiber belt for the forming and bonding of all conventional insulation materials. Both single- and doublebelt air-through ovens can be equipped with these belts. The spectrum of solutions offered ranges from antistatic synthetic fabric belts for forming applications to metallic fabric belts for various bonding processes. GKD's portfolio also includes belts consisting of material combinations, such as Trackmatic<sup>™</sup> belts or PPS-Duofil<sup>®</sup> belts.

## Properties

- Exact tracking thanks to high dimensional and form stability
- Optimum belt solutions for forming and solidification processes
- Electrostatic discharge as per the ATEX standard
- Pin seam closable on site by the customer
- Stable edge coating on synthetic mesh belts
- Welded edges on metal mesh belts

Do you have questions? Simply send us an e-mail or call us: insulation@gkd-group.com | T +49 2421 803 345



## Dewatering | pressing | drying

## Sludge treatment

**Press and dryer belts from GKD dewater, press, and dry sludge safely and reliably.** The combination of the right synthetic monofilament, weave type and aperture size makes our mesh particularly effective and robust while guaranteeing resistance to abrasion and chemical influences. Since they are manufactured on heavy-duty looms for metal mesh and reinforced through a thermal fixing process, GKD process belts also boast a particularly high level of mechanical stability. In addition, the PAD seam developed by GKD ensures a long life and improved belt running properties. Fast delivery is generally possible thanks to our wide range of goods kept in stock. Our filter and spiral belt types support good dewatering in sludge treatment operations.

## Properties

- High dimensional and form stability but also offering the necessary fabric flexibility
- Integrated wear indicator
- No fraying of the synthetic mesh
- Additional protection of the seam against mechanical influences
- pH values 1–14, temperatures up to 180°C

Do you have questions? Simply send us an e-mail or call us: sludge@gkd-group.com | T +49 2421 803 201



Washing | filtering and separating

## Mining / raw materials

Synthetic filter belts from GKD support washing of raw materials, salts, and minerals in belt filter systems. Applications range from sodium chloride, potassium chloride, and kieserite, through Trackmatic<sup>™</sup> belts for oil sand, all the way up to the filter belt for coal preparation. Because the montane processes around the world differ in accordance with local conditions, we always adapt the selection of belts accordingly. In doing so, we can choose from a variety of standard solutions, as well as custom products manufactured on our looms. The result: belts that always perfectly meet requirements.

### Properties

- Custom-built products
- Stock goods
- Own R&D

Do you have questions? Simply send us an e-mail or call us: mining@gkd-group.com | T +49 2421 803 131



Maturing | cooling | drying | vulcanizing

## **Chemical industry**

## GKD offers a multitude of conveyor belts made of metal, synthetic and other material combinations for the chemical industry.

Applications in this field include drying PTFE, foaming synthetics, vulcanizing door profiles, drying granulates, or drying aluminum hydroxide. Processes such as these always require individual belt specifications. As such, these can be made temperaturestable up to 1,050°C, impervious to chemical influences or resistant to abrasion and other physical effects. Alongside the right choice of material, the mesh structure also plays an important role. Our GKD engineers are glad to advise you.

### Properties

High temperature resistance

- Resistant to chemical and physical influences
- Durable conveyor belts
- Application-specific properties

Do you have questions? Simply send us an e-mail or call us: chemical@gkd-group.com | T +49 2421 803 247



### Dewatering | filtering and separating

## **Fertilizers**

Filter belts made of GKD synthetic meshes are used in vacuum belt filters to dewater the gypsum that accumulates during fertilizer production. GKD developed the Vacubelt<sup>®</sup> series for this application. These belts deliver optimal belt running properties and a long service life thanks to their high lateral stability. The belts manufactured from singleply polyester fabrics are highly robust and ensure fast and efficient dewatering of the phosphogypsum. Vacubelt<sup>®</sup> belts from GKD come with a flat hook seam and can be supplied as both stock goods and custom-manufactured products.

### Properties

- Single-ply fabric without multifilament weft wires
- Easy cleaning of the mesh
- Good filter cake release
- · High lateral stability of the filter belt
- Mesh opening of 150 µm to 220 µm



### Filtering and separating

## **Cooling lubricants**

Synthetic and metal meshes from GKD are used in belt filter systems to remove impurities from cooling lubricants. GKD engineers have developed Vacubelt<sup>®</sup> filter belts for deployment in vacuum belt filters and gravity belt filters. These have extremely fine pores, and as a result they do not require any additional filtration aids, even when working with low filter cake volumes. Vacubelt<sup>®</sup> filter belts are available as single-ply polyester fabrics and stainless steel meshes, with both versions generally being provided with a flat hook seam connection. Metal belts can optionally be equipped with a welded seam.

### Properties

- Single-ply fabric without filtration aids
- Easy cleaning of the mesh
- Good filter cake release
- High lateral stability of the filter belt

Do you have questions? Simply send us an e-mail or call us: coolant@gkd-group.com | T +49 2421 803 131



Dewatering | filtering and separating

## Flue gas desulfurization

Synthetic mesh is used in vacuum belt filters to dewater the gypsum that accumulates in coal-fired power stations. GKD developed the GKD Vacubelt<sup>®</sup> brand specifically for this application using computer-aided simulation. This robust mesh ensures significantly greater air and water permeability with its large number of openings, resulting in filter cake with low residual moisture. Vacubelt<sup>®</sup> filter belts for flue gas desulfurization are manufactured from single-ply polyester fabrics and closed with a flat hook seam.

## Properties

- Single-ply fabric without multifilament weft wires
- Easy cleaning of the mesh
- Good filter cake release
- High lateral stability of the filter belt
- Mesh opening of 50 µm
- Type 2015 worldwide standard

Do you have questions? Simply send us an e-mail or call us: fgd@gkd-group.com | T +49 2421 803 131



## Research and development

# **New solutions** for special challenges

Alongside the large range of standard GKD products, we also develop custom conveyor and process belts in partnership with our customers. We always use detailed analyses of existing or planned applications as the basis for the development of innovative and efficient solutions. Our engineers combine their expertise in production, materials, and plants with extensive practical knowledge of process technologies. These processes are supported by digital simulations. This all results in custom-built process belts that are ideally suited to the requirements of the market and in characteristic GKD quality. In addition to the worldwide production of individual process belts, we also help our customers achieve longterm production stability. With both standard and automatic make-



and-hold orders, as well as continuous warehousing, we ensure that spare parts can be supplied quickly.



## Seams and edges









## 24/7 Service hotline

## **Always available** +49 2421 803 308

Alongside individual customer advice, we at GKD attach great importance to perfect and individualized technical service. Whether for belt installation, troubleshooting or other challenges in production, a large team of service technicians and engineers is always ready to assist our customers all over the world. After all, we believe that only a combination of sales and service will allow us to successfully support our customers in the long term.

Hotlines worldwide	
Europe	+49 2421 803 308
USA	+1 443 477 4119
China	+86 105 165 9618
South Africa	+27 82 445 6827
Chile	+56 2 2929 7159
For all other countries	+49 2421 803 308





Thermo sealing



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Edge adhesion

Foil sealing

Edge joint welding

Trackmatic™ belt 3/2





Woven spiral seam





Trackmatic™ spliced loop pin seam

#### Seams

Customized seam solutions for optimum process integration. Like our meshes, our seams also have to withstand tough conditions. Depending on the application, we combine one of our many seam variants with the optimum mesh for our customers. We are happy to support and advise you in selecting the right seam for your individual requirements. The patented and particularly flat PAD seam is exclusively available from GKD. In a hot melting procedure, a special pad is melted into the belt mesh and compressed with staples.









Duofil with edge coating

## Edges

Cleanly deburred, welded or coated edges guarantee the fixing of the weft wires and avoid residue clinging on to product media. An edge with even straightness and thickness is essential for the belt control system to scan cleanly and ensure directional stability at high production speeds.

# GKD's **Employees**

## GKD – Gebr. Kufferath AG

Metallweberstraße 46 52353 Düren Germany

T +49 2421 803 0 F +49 2421 803 182 processbelts@gkd-group.com gkd-group.com

### GKD-USA, INC.

825 Chesapeake Drive Cambridge, MD 21613 USA T +1 410 221 0542 sales@gkdusa.com gkd-group.com

#### GKD LatAm S.A.

José Joaquín Aguirre Luco 1455 8590677 Huechuraba Santiago Chile T +56 2 2929 7157 info@gkd-latam.com gkd-group.com

## GKD India Ltd.

52, Industrial Area Jhotwara Jaipur – 302012, Rajasthan India T +91 141 710 5100 F +91 141 710 5199 query@gkd-india.com gkd-group.com

## GKD Africa (PTY) LTD.

18 Fiat Street Aureus 1759 Randfontein South Africa PO Box 6175 1767 Greenhills South Africa T +27 11 696 8000 F +27 11 412 4823 gkdrsa@gkd.co.za gkd-group.com

## GKD (Qufu) Ind. Technologies Co., Ltd.

West end of Changchun Road West Economic Development Zone Qufu, Jining, Shandong Province, 273100 China T +86 537 4530568 gkd@gkd-china.com gkd-group.com

## **GKD Nordic**

Mikael Krantz Remnavägen 45 641 35 Katrineholm Sweden T +46 70 6801233 nordic@gkd-group.com gkd-group.com

## **GKD** France

Office Croisilles (near Paris) Sophie Gautier 28210 Croisilles France T +33 672 18 40 75 france@gkd-group.com gkd-group.com