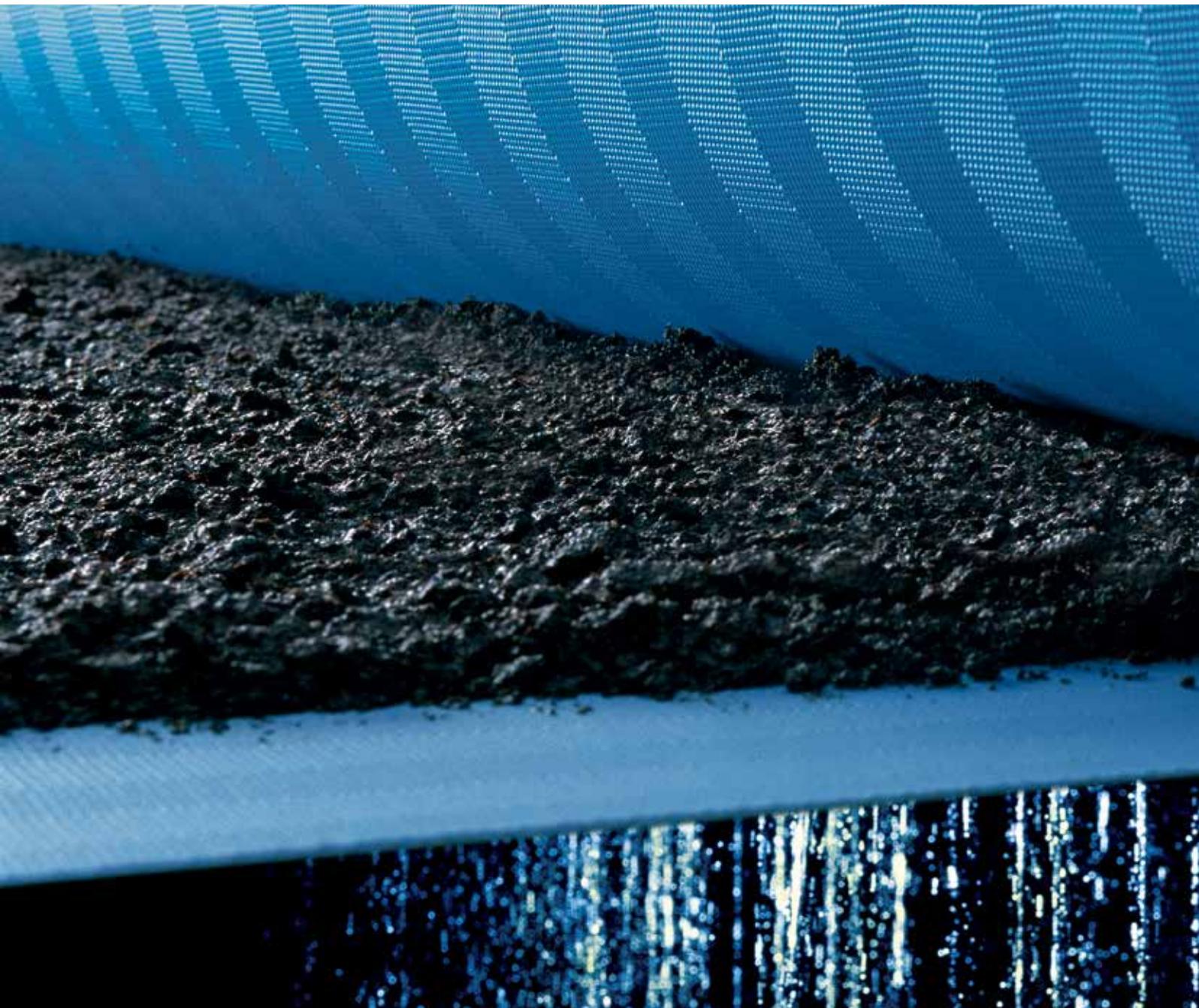


PROCESS BELTS FOR SLUDGE DEWATERING AND DRYING





EFFICIENT **SLUDGE DEWATERING** WITH PLASTIC MESH PROCESS BELTS

Whether for industrial sludge, product and chemical sludge or in municipal sewage plants – process belts from GKD dewater sludge reliably and effectively. The combination of the right plastic monofilament, weave type and mesh size makes our mesh particularly effective and robust while guaranteeing resistance to abrasion and chemical influences. Because they are manufactured on heavy-duty looms for metallic mesh and reinforced through a thermal fixing process, GKD process belts also boast a particularly high level of mechanical stability.

Belt presses and belt dryers significantly reduce the sludge volume, thus lowering costs associated with transport, disposal and recycling – for efficient and environmentally friendly reprocessing. **WEAVE IN MOTION** process belts are therefore the perfect solution.

ADVANTAGES OF SLUDGE DEWATERING WITH GKD PROCESS BELTS

- VARIED FIELDS OF APPLICATION
 - OPTIMAL CAKE BUILDUP AND CAKE DISCHARGE
 - EXTREMELY STRONG AND WARP-RESISTANT MESH MINIMISES RISK OF DEFORMATION AND WRINKLE FORMATION, THANKS TO PRODUCTION ON SPECIAL LOOMS FOR METALLIC MESH
 - HIGH ROBUSTNESS AND LATERAL STABILITY
 - HIGH RESISTANCE TO ABRASION AND CHEMICAL INFLUENCES
 - OPTIMAL THROUGHPUT RATE
 - QUICK AND EASY TO CLEAN
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THE RIGHT PROCESS BELT FOR EVERY **SLUDGE DEWATERING** PROCESS

Thanks to many years working together with leading manufacturers of belt presses, we at GKD know what is important when it comes to process belts.

With our wide range of standard as well as custom-built products, we always offer customers the ideal solution for dewatering all types of sludge. As such, today we manufacture individual process belts made of polyester (PES), polyamide (PA) or polyphenylene sulphide (PPS) with widths of up to 8 metres. These hold-down belts, drainage belts and dryer belts are continuously temperature-stable at up to 200°C and deployable in a pH range of 1 to 14.

For individual solutions, GKD technical and sales staff are always happy to help.

ADVANTAGES OF INDIVIDUAL GKD PROCESS BELT SOLUTIONS

- ROBUST PLASTICS FOR EVEN THE MOST DEMANDING PROCESS REQUIREMENTS
 - UP TO EIGHT METRES WIDE
 - TEMPERATURE-STABLE UP TO 200°C
 - CAN BE USED UNDER VIRTUALLY ANY MECHANICAL AND CHEMICAL CONDITIONS
 - FOR SLUDGES WITH PH VALUES FROM 1 TO 14
 - INDIVIDUAL ADAPTATION AND DEVELOPMENT
 - TURNKEY PROCESS BELTS WITH INSTRUCTIONS
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LONG SERVICE LIVES WITH FLAT **PAD SEAM**

Like the WEAVE IN MOTION process belts themselves, seams have to withstand a lot: blades, sludge distribution elements and uneven sludge feeding put the seams under enormous stress. This is why our engineers developed the particularly flat PAD seam, which is exclusively available from GKD and its partners.

Not only is it technically superior to other seams, it also offers constantly reproducible quality results worldwide. A special pad is melted into the belt using a hot melting procedure and pressed together with the staples. Compared to conventional hook seams, blades and sludge distributors can glide over the seam area far more easily. The special seam is therefore highly strong and durable as well as offering better belt running characteristics. Furthermore, the risk of seam damage is reduced to a minimum, the seam area is more tightly closed leading to a reduction in product penetration.

ADVANTAGES OF THE EXTREMELY FLAT GKD SPECIAL PAD SEAM*¹

- HIGH STRENGTH AND DURABILITY
- PAD SEAM SIZES ARE INDIVIDUALLY ADAPTED TO THE PROCESS BELT MESH
- OPTIMISED BELT RUNNING PROPERTIES
- EXACTLY REPRODUCIBLE QUALITY COMPARED TO CONVENTIONAL SEAMS
- SIMPLE HANDLING
- CAN BE PRINTED INDIVIDUALLY WITH COMPANY LOGO
- PARTICULARLY FLAT DESIGN

*¹ Alongside the PAD seam, we of course offer other seam solutions for individual applications, including woven-on pin seams, woven-on spiral seams, endless woven seams and (glue-compressed) hook seams.



EFFICIENT **SLUDGE DRYING** WITH PLASTIC MESH PROCESS BELTS

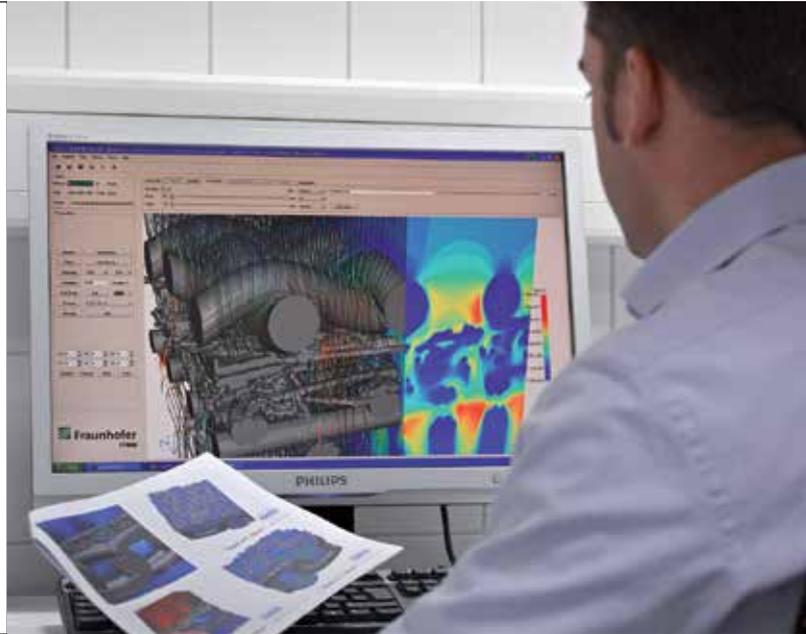
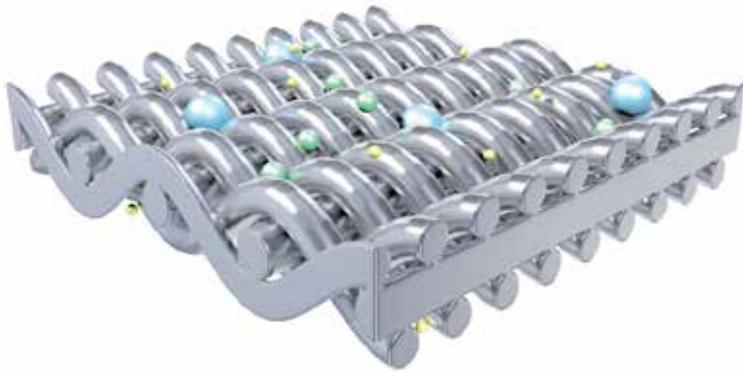
Sludge drying plants reduce the weight and volume of sludge and increase the dry substance content to up to 98%. Using GKD special belts made of polyester (PES) or polyphenylene sulphide (PPS), drying plants optimally reduce residual moisture. This in turn reduces energy consumption and disposal costs and thus raises efficiency.

Our synthetic mesh belts can be used for a range of applications. They cover the low and high-temperature areas in a range from 80 to 200°C and a pH range of 1 to 14. Moreover, the extensively refined belts woven from robust synthetic monofilaments also withstand particularly high surface loads.

After the drying process, thanks to the special mesh structure on the underside, the belts are easy to clean, using a small amount of water making them environmentally efficient.

ADVANTAGES OF GKD DRYER BELTS

- ROBUST SYNTHETIC MONOFILAMENTS FOR EVEN THE MOST DEMANDING PROCESS REQUIREMENTS
 - OPTIMAL DIRECTIONAL STABILITY
 - UP TO EIGHT METRES WIDE
 - UP TO 200 METRES LONG
 - FOR LOW AND HIGH-TEMPERATURE APPLICATIONS BETWEEN 80 AND 200°C
 - FOR SLUDGES WITH PH VALUES FROM 1 TO 14
 - OPTIMAL MESH OPENING FOR HIGH AIR PERMEABILITY AND DUST REDUCTION
 - INDIVIDUAL ADAPTATION AND DEVELOPMENT
 - TURNKEY PROCESS BELTS WITH INSTRUCTIONS
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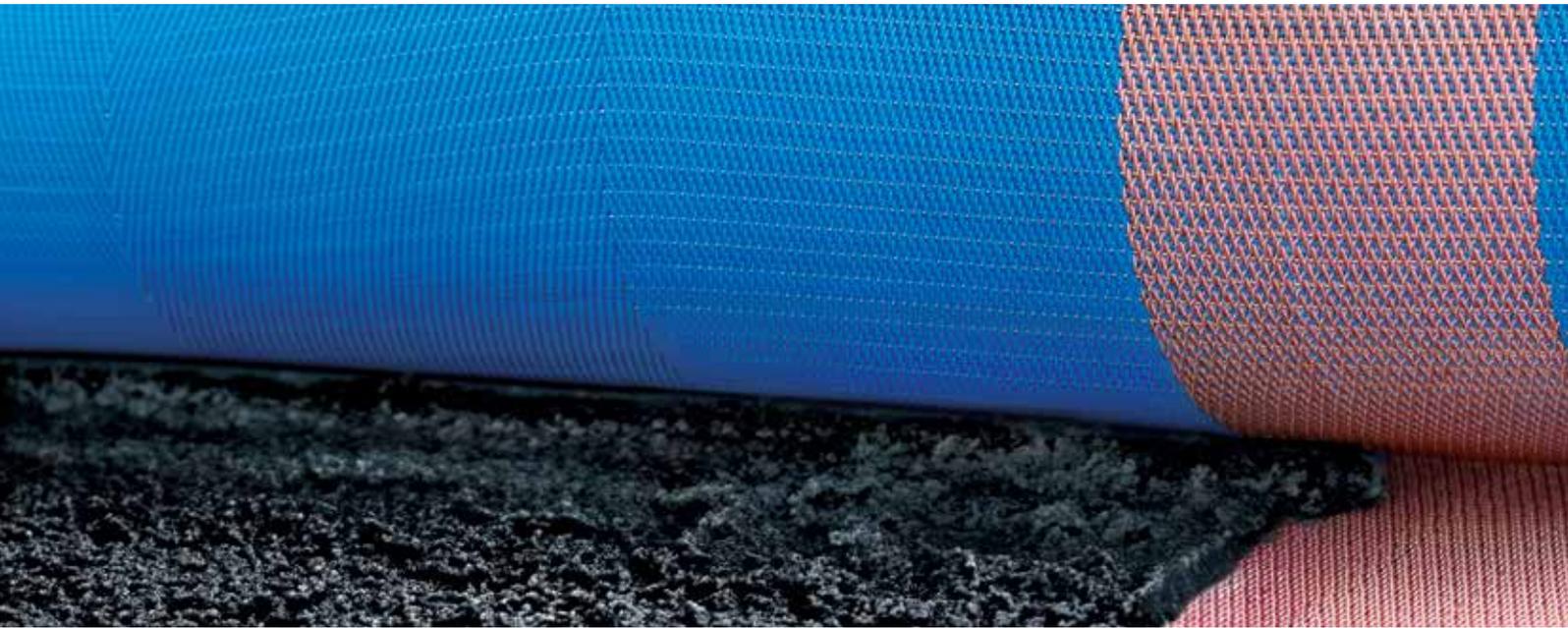
RESEARCH, DEVELOPMENT AND CONSULTING

Technical expertise and optimum customer service – this is what GKD aims for with WEAVE IN MOTION. That is why we focus on the development of new process belts alongside our existing product portfolio. While doing so, 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 technology. These processes are supported by computer simulations.

This all results in process belts that are ideally suited to the requirements of the market and in characteristic GKD quality. We deliver this standard by using the latest manufacturing processes that are subject to constant development – just like our products themselves.

ADVANTAGES FOR OUR CUSTOMERS

- VIRTUAL MESH DEVELOPMENT AND PROCESS OPTIMISATION THROUGH GEODICT®
 - COMPUTER-BASED FLOW SIMULATIONS (CFD) FOR PREDICTING PERMEABILITY, FILTER EFFICIENCY, PARTICLE PENETRATION AND DIRT PENETRATION
 - STRENGTH CALCULATIONS USING THE FINITE ELEMENT METHOD (FEM)
 - INCREASED SERVICE LIFE THANKS TO OPTIMISED MANUFACTURING PROCESS AND PROCESS PARAMETERS
 - LABORATORY TESTS FOR DETERMINING RESIDUAL CAKE MOISTURE
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NEW SOLUTIONS FOR SPECIAL CHALLENGES

As a partner of our customers, alongside the large range of standard GKD products, we also develop custom-built process belt solutions for all kinds of municipal and industrial sludge. As such, we develop process belts with individual properties made of polyester (PES), polyamide (PA), polyphenylene sulphide (PPS) or other raw material combinations. In addition, if the customer wishes we equip our belts with edge coating based on polyurethane, polyamide or silicone or with individual belt feeders/installation aids.

Next to worldwide manufacturing of individual process belts, we also cater for a reliable production process with a dedicated customer service package. With make-and-hold orders and automatic make-and-hold orders as well as continuous stock-keeping, we ensure that spare parts can be supplied quickly.

INDIVIDUAL SOLUTIONS

- CUSTOMISED SELECTION AND COMBINATION OF MATERIALS
 - PROCESS-ORIENTED THERMAL TREATMENT
 - OPTIMAL SEAM-BELT COMBINATION
 - INDIVIDUAL PRINTING WITH OWN LOGO
 - FURTHER FINISHING ON REQUEST (E.G. THERMALLY PUNCHED HOLES, CAMS OR GUIDE RAILS)
 - CUSTOM-BUILT SOLUTIONS SUCH AS MESH IN A COMBINATION OF PLASTIC AND METAL
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GKD – GEBR. KUFFERATH AG

As a privately owned technical weaving mill, we are the world market leader in woven solutions made of metal and plastic. Under the slogan GKD – WORLD WIDE WEAVE, our company groups four independent business divisions: **SOLIDWEAVE** (industrial mesh), **WEAVE IN MOTION** (process belt mesh), **CREATIVEWEAVE** (architectural mesh) and **COMPACTFILTRATION** (compact filtration systems). GKD continuously develops new fields of applications with manufacturing technology and process expertise. We use GKD meshes to create efficient systems, equipment and components integrated perfectly in the customer's process across all industry sectors. With seven plants in Germany (headquarters), the USA, United Kingdom, South Africa, China, India and Chile, GKD is close to the markets all over the world. More subsidiaries and worldwide representatives are also available to our customers in France, Spain, Dubai, Qatar and elsewhere.

BUSINESS UNIT: WEAVE IN MOTION

As a technological leader, GKD offers a range of versatile, woven process belts for demanding applications under the **WEAVE IN MOTION** brand. Customers all over the world use our range of products and custom-built solutions to dewater, press, filter, separate, dry, cool or freeze products. In addition, the process belts are deployed in applications including the embossing of wood, heat treatment and applications in the textile and non-woven industry. Thanks to production on state-of-the-art heavy-duty weaving machines, our meshes made of plastic, metal or a combination of materials are highly stable and at the same time flexible. Moreover, the ultra-flat PAD seam developed by GKD engineers demonstrates our innovative capacity. We are a reliable partner for all projects right from the beginning: from consulting and individual development, right up to procurement and assembly.

GKD – PRODUCTS AND SERVICE CLOSE TO OUR CUSTOMERS, WORLDWIDE.

- 01 GKD GERMANY, Düren (Headquarter)
- 02 GKD UK, Sherburn in Elmet
- 03 GKD FRANCE, La Roque d'Anthéron
- 04 GKD SPAIN, Barcelona
- 05 GKD USA, Cambridge, MD
- 06 GKD LATIN AMERICA, Santiago de Chile
- 07 GKD SOUTH AFRICA, Randfontein
- 08 GKD INDIA, Jaipur
- 09 GKD CHINA, Beijing
- 10 GKD MIDDLE EAST, Dubai
- 11 GKD MIDDLE EAST, Doha

