Vacubelt®

Process belts for belt filter systems

Belts made of woven mesh and spirals

Belts and tapes from GKD

Vacubelt® Process belts

GKD production operations, Düren

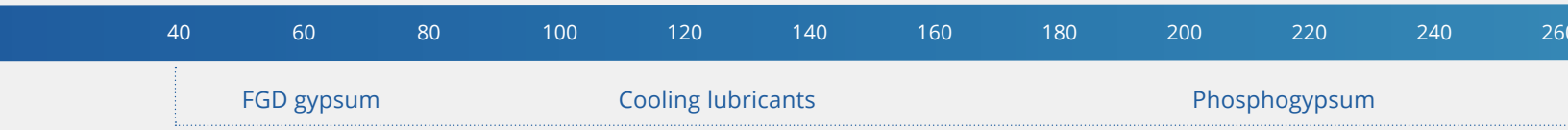
Vacubelt® process belts from GKD are the #1 choice for fast, effective and low-maintenane vacuum filtration. The broad scope of industrial fields of application ranges from the chemimicals industry, through the engineering industry, all the way up to the coal and steel industry. Intensive and continuous exchange with our customers also helps us develop new applications and techni-cal innovations, which are also incorporated in the production processes of other GKD process belts. We generally use monofilament polyester as mesh wire for our Vacubelt® process belts.

Our woven polyester fabrics offer high lateral stability, as well as excellent crease resistance – even in large widths. Other materials are also used in special cases. Thanks to our international web expertise and use of ultra-modern looms, we are also capable of producing single-layer fine-pored woven mesh fabrics. These allow us to achieve optimised cleaning results and significantly lower clogging, which significantly increase the useful life of our Vacubelt® process belts. In addition to this, the smooth surface improves cake discharge.

Applications

- Flue gas desulfurization (FGD)
- Fertilizer production
- Filtration of cooling lubricants
- Treatment of salts and minerals

Application for particle sizes [values in µm]



Flue gas desulphurisation plants

GKD manufactures robust and efficient Vacubelt® filter belts for dewatering FGD gypsum. Our Vacubelt® 2015, a type of fabric mesh developed specifically for this application, ensures significantly greater air / water permeability thanks to its large number of openings. This results in faster dewatering in vacuum belt filter systems, as well as filter cake with a lower residual moisture content. The single-layer woven fabric structure also makes the belts easier to clean.This significantly reduces the risk of clogging. Thanks to the high degree of lateral stability, we are also able to achieve excellent anticrease characteristics, even in wide belts.

Cooling lubricant

We have developed Vacubelt® filter belts with extremely fine pores for filtering cooling lubricants. When working with low filter cake volumes, these belts also do not require any additional filtration aids. This results in lower costs, as it simplifies disposal of the particulate material filtered out and generally leads to lower waste volumes. It also protects the environment.
In addition to this, the service life is significantly improved. Vacubelt® filter belts can be used in vacuum and gravity filtration systems. We produce belts from both polyester and stainless steel wires, based on the requirements of our customers.

260 280 300 320 340 360 380 400 420 440 460

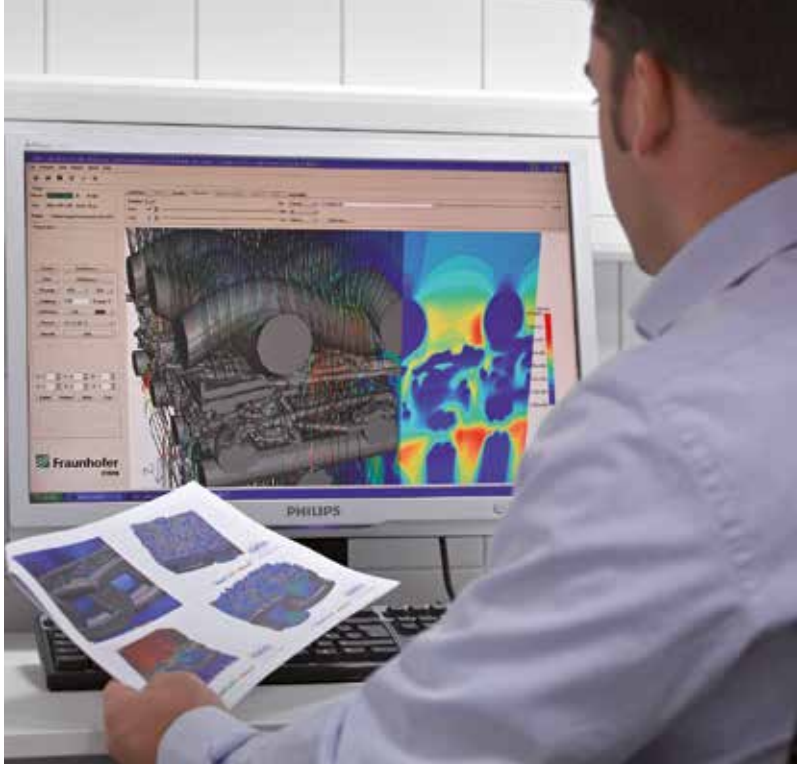
Salts and minerals

Phosphoric acid

When producing Vacubelt® filter belts for dewatering phosphogypsum, we always adapt the filter fineness to the individual local requirements at our customers' production sites. After all, local conditions of the minerals used for phosphate extraction mean that this gypsum is rarely the same at any two locations across the globe. We use single-layer polyester fabric mesh for all Vacubelt® filter belts intended for dewatering phosphogypsum. Alongside a long service life, this material also offers optimum lateral web stability up to widths of at least 4.5 metres, as well as excellent cleaning properties.

Salts and minerals

Vacubelt® filter belts are an important component in the process chain for the treatment of salts and minerals. Not only are they used to dewater sodium chloride, they also support efficient dewatering of potassium chloride or kieserite, which is used in the production of fertilisers. At GKD, we always match belt selections individually to local circumstances. This helps us ensure optimum belt filter system results anywhere in the world. The single-layer meshes used offer a high degree of lateral stability and thereby facilitate both a long service life and optimum dewatering results.



1. PAD seam 2. Computer simulation

Seam solutions

Tailor-made **Seam solutions** for optimum process integration.

Like our meshes, the seams also have to withstand extremely 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 choosing 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 pressed together with staples. This special seam is therefore highly strong and durable while offering improved belt running properties. Furthermore, the risk of damage to the seams is reduced significantly, the seam area is closed more tightly and product penetration is reduced.

Technical expertise

Continuous innovation for efficient meshes in the familiar GKD quality.

GKD's guiding principle for all process meshes used in filtration plants. Alongside our existing product portfolio, we are constantly developing efficient new meshes – always focusing on the wishes and requirements of our customers. Our engineers and technicians combine their expertise in production, materials and plants with extensive practical knowledge. Computer simulations complement these processes. This results in innovative, efficient meshes in the familiar GKD quality. We deliver this standard by using the latest manufacturing processes that are subject to constant further development – just like our products themselves.

FOR A HEALTHIER, CLEANER, SAFER WORLD

Technical weavers for industry and architecture

GKD is the world's leading developer and manufacturer of solutions produced from metal, hybrid, and synthetic mesh and spirals. The products are used around the world, both in industrial settings and the field of architecture.

Industrial meshes and highly efficient filtration solutions from GKD are used to filter exhaust gases, microplastics, and much more. Among other things, they also serve as strike protection on airplanes and are used as conveyor and process belts.

GKD **architectural fabrics** combine aesthetics and function in a vast range of building applications – including outstanding international projects by renowned architects and planners.

With innovative weaving technologies and simulation procedures, GKD generates technical weaves, semi-finished products, components, and filter equipment – precisely tailored to an enormous variety of requirements.

Constant innovation and certified production process ensure great performance and reliability.

Solutions from GKD make the world healthier, safer, and cleaner.

GKD – products and service close to customers, worldwide.

01 **GKD Germany** Düren
02 **GKD USA** Cambridge (MD)
03 **GKD USA** Star City (AR)
04 **GKD Chile** Santiago de Chile
05 **GKD South Africa** Johannesburg
06 **GKD India** Jaipur
07 **GKD China** Qufu

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