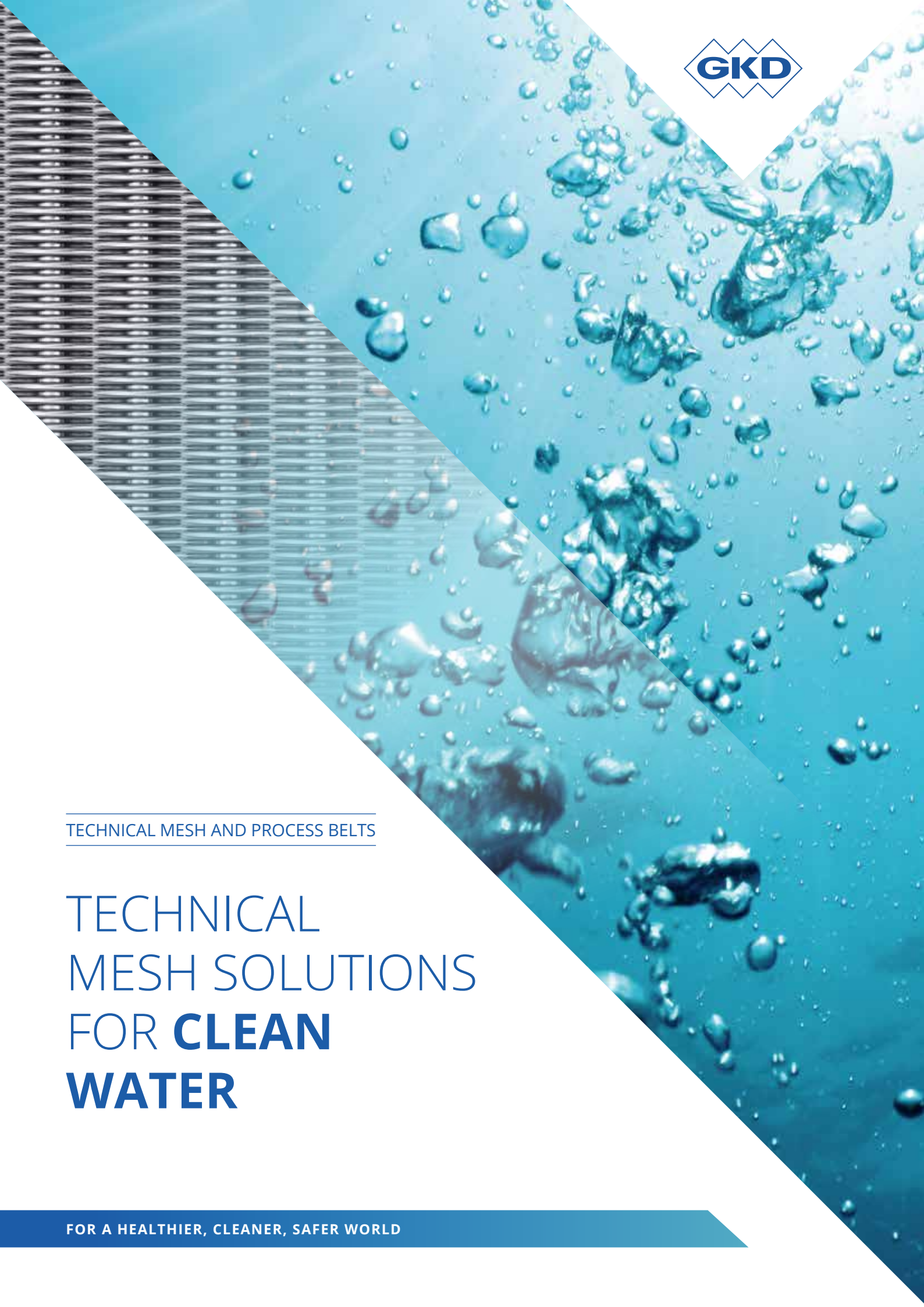


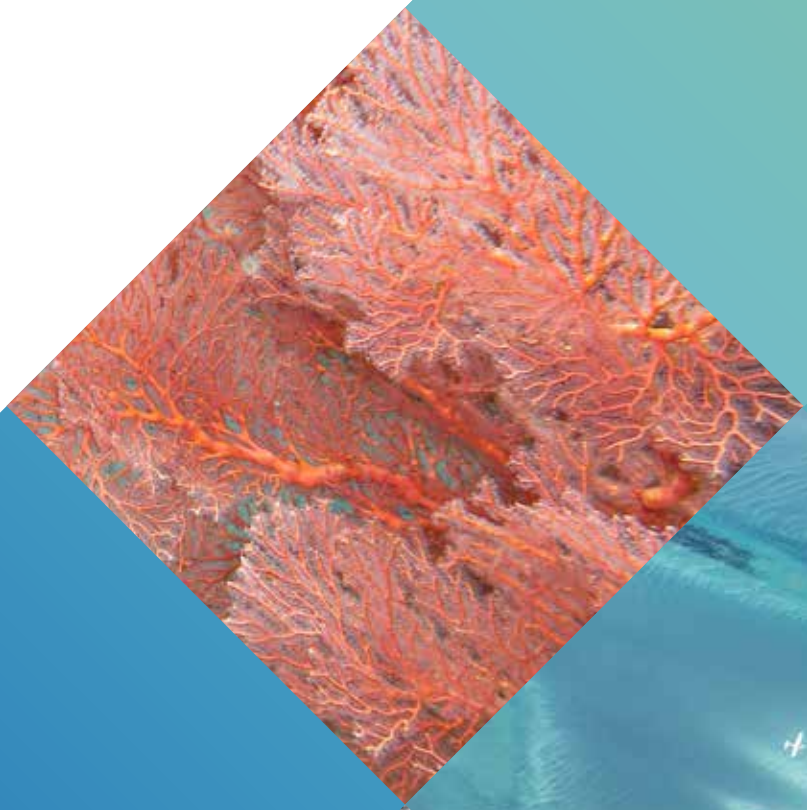
TECHNICAL MESH AND PROCESS BELTS

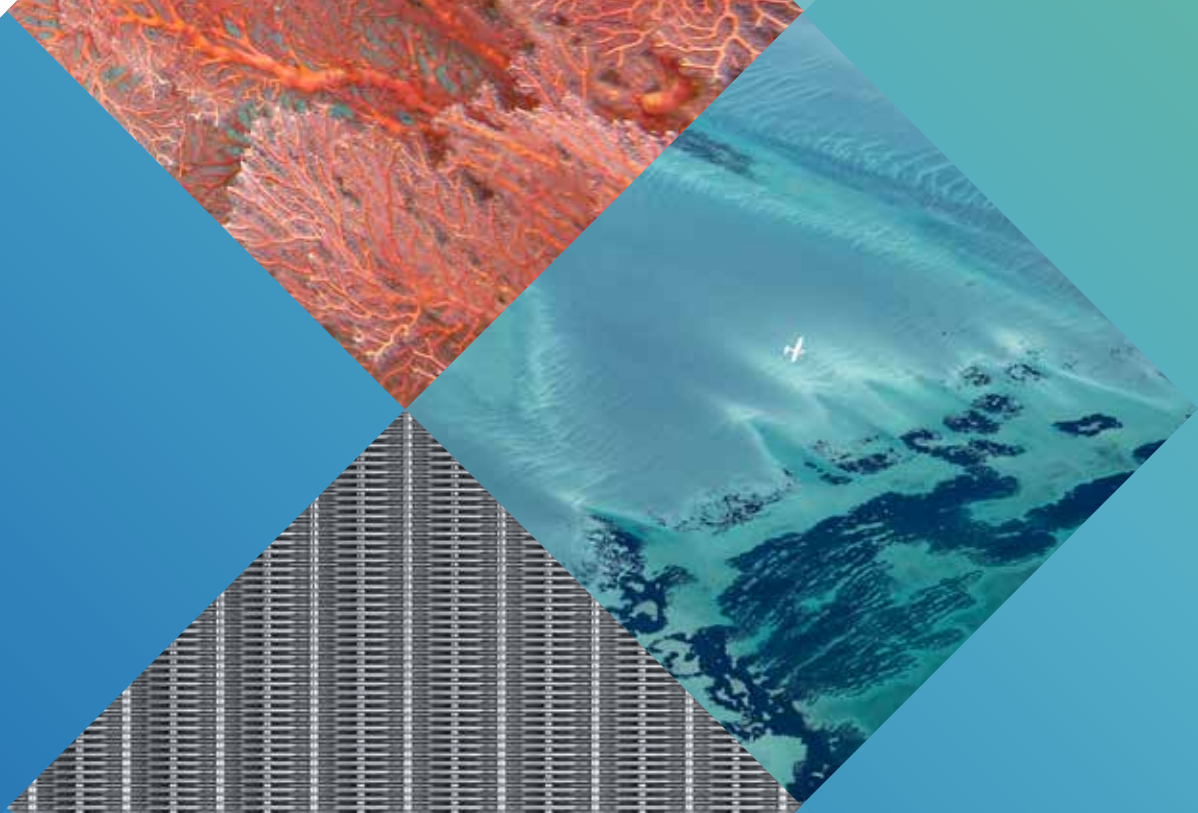
TECHNICAL MESH SOLUTIONS FOR **CLEAN WATER**

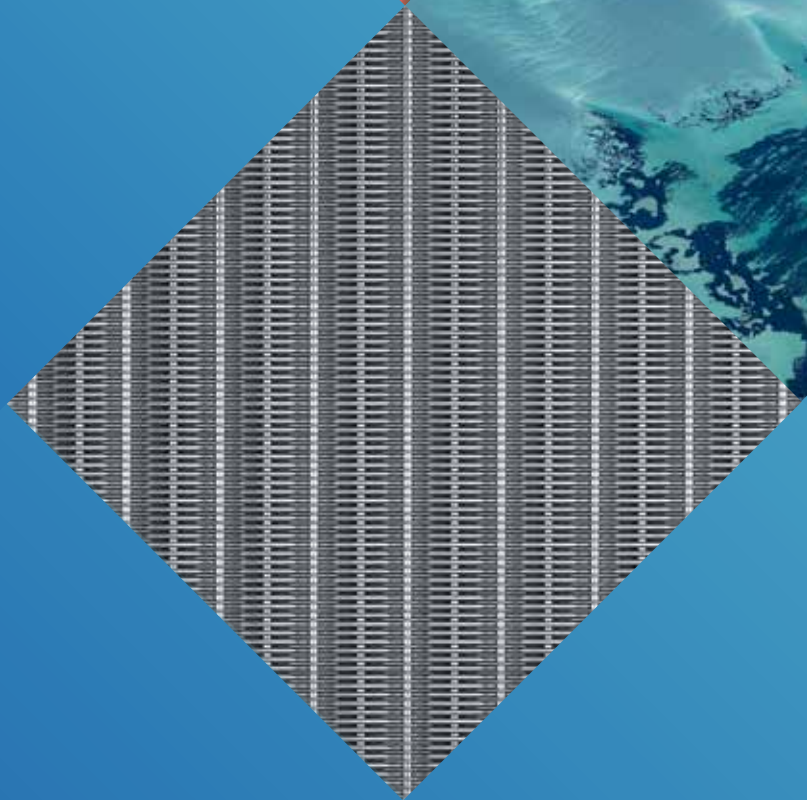
FOR A HEALTHIER, CLEANER, SAFER WORLD

EXPERTISE FOR SUSTAINABILITY

MESH SOLUTIONS FROM THE TECHNOLOGICAL LEADER







Customized **innovations**

GKD is the global technological leader for cutting-edge industrial weave and filtration solutions produced from both metal and synthetic wires, as well as technical fibers – for all industrial applications. With innovative weaving technologies and the latest material simulation methods, we create efficient technical weaves, semi-finished products, components, and filter equipment that are optimally matched to the most diverse mechanical process engineering requirements. GKD manufactures technical weave solutions for a wide range of applications in the field of water processing.

The company leverages its extensive expertise to support the sustainable transformation of industry while optimizing existing technologies. Our customers benefit from tailor-made solutions, hands-on consulting, and worldwide service partnerships. GKD continuously develops new fields of application through manufacturing technology and process expertise. We use GKD mesh to create efficient systems, equipment, and components that are perfectly integrated into our customers' processes across all industrial sectors. Thanks to our IATF and ISO certifications, our customers can also rely on approved quality worldwide.

Commitment to sustainability

At GKD, we firmly believe that companies should strive to give back more to society, the environment, and the economy than they take out. That is why we support the net-positive concept, which we are implementing gradually and resolutely. This has given the inherent responsibility of the family business GKD a new and strategic dimension in the face of global challenges.

In order to drive forward the transformation processes required worldwide, GKD is focusing primarily on global needs such as CO2 reduction, alternative drive technologies, green hydrogen; and clean water. In collaboration with our own and external research and development departments, we develop solutions that help to reconcile progress and growth with the goals of sustainability.

We also optimize our production processes and ensure compliance with statutory CSRD requirements. We are committed to our social responsibility at all our sites and to compliance with ethical standards within the company and in our dealings with customers and partners. With its sustainability strategy, GKD is following its corporate vision worldwide: **FOR A HEALTHIER, CLEANER, SAFER WORLD.**

SOLUTIONS FOR SUSTAINABLE WATER MANAGEMENT

Water is one of the most important building blocks for life on Earth, yet is a finite resource. It is therefore essential to handle and use it carefully. GKD high-performance meshes are used in a wide range of cleaning and filtration processes, where they ensure that water can be reused, is healthy for consumption, protects the technology used in the household, is free of microplastics or does not even get contaminated in the first place.

Whether process water, domestic water supply, or municipal wastewater: GKD filter meshes and elements as well as process belts are used in a wide variety of process stages and applications: for filtering, screening, separating, drying, pressing, and dewatering.

GKD regularly develops solutions for new customer and industry-specific requirements.This underlines our commitment to fulfilling individual needs and pursuing innovative approaches. In addition to manufacturing, we also take on repair orders. This service is not only cost and benefit-oriented, but also makes an important contribution to environmentally conscious handling of resources.

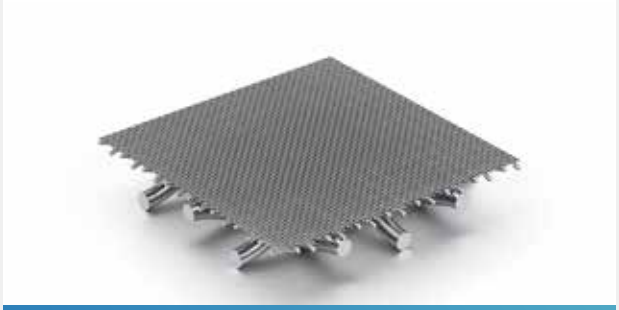
The areas of expertise held by GKD for a very wide range of segments in the field of water processing help customers across the globe achieve greater cost-effectiveness in their processes, as well as the best possible work results – making our world healthier, cleaner, and safer.

Microplastics filtering and separating

Microplastics are a global challenge. The largest proportion of plastic particles with a diameter of less than five millimeters can be found in water. Around ten million tons of microplastics end up in our oceans every year – and that's not even counting lakes, rivers and ponds. That's why GKD took up the issue years ago and provides solutions for reducing the amount of microplastics in numerous areas of water management. GKD also engages in scientific dialog with research institutes, industries, cities, and municipalities in order to promote innovative concepts and new developments.

AGRICULTURE

FILTERS FOR **IRRIGATION SYSTEMS**



GEKUPLATE mesh

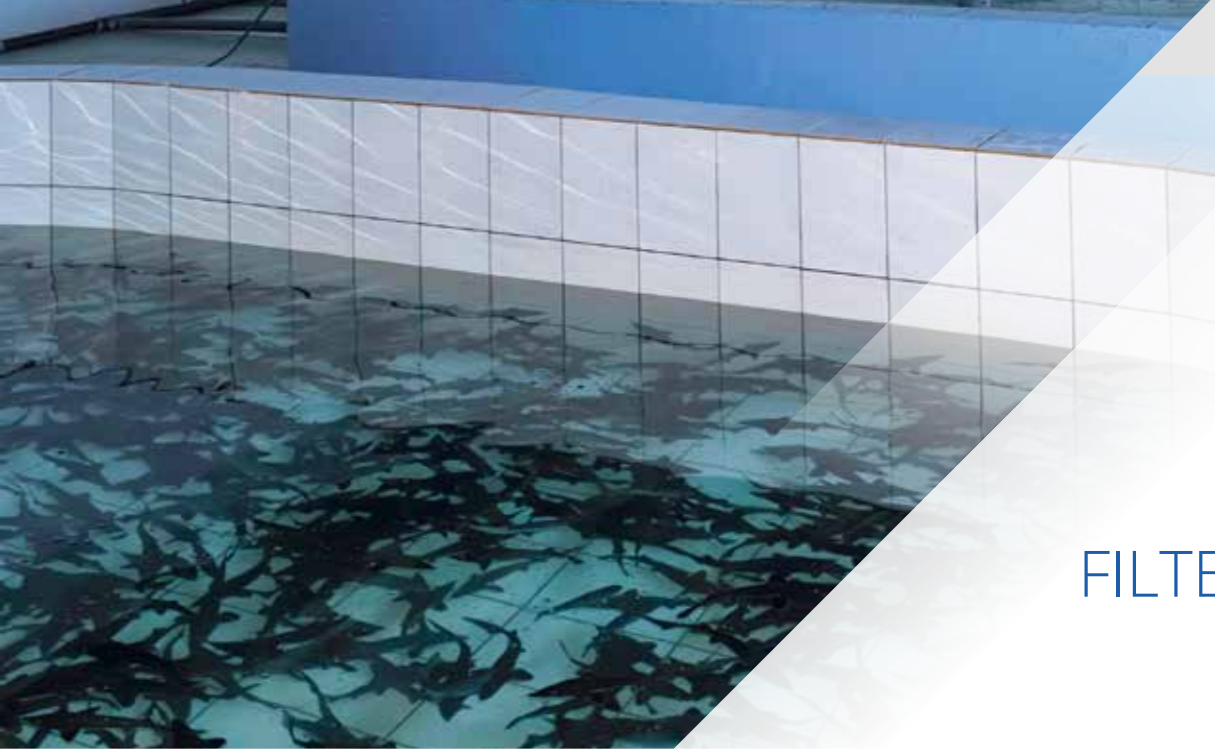
Benefits

- Extremely strong structures
- Suitable for high mechanical loads
- Variable combination of several meshes

Greater performance for **agriculture**

Both organic and inorganic particulate can clog irrigation sprayers during the irrigation of agricultural products. This can severely compromise the performance of an irrigation system, increase maintenance costs, and negatively impact harvests. GKD filtration mesh and elements are the solution and ensure longer maintenance intervals and increased performance and efficiency in filter systems.

The GKD wire mesh laminate GEKUPLATE has extremely strong structures thanks to the sintering of several mesh layers. It is more stable than a single mesh layer and can therefore be subjected to higher mechanical loads. Despite this, the surface filtration properties remain the same. What is more, GEKUPLATE can be used to combine several layers of mesh.



AQUACULTURE

FILTERS FOR **FISH FARMS**

Mesh solutions for **circulatory systems**

Aquacultures enable the controlled farming of plants and animals that live in water, such as fish, seafood, and shrimp. In the large tanks of recirculating aquaculture systems (RAS), drum and disk filters are used to clean the water of feed residue and excrement so that it can be reused.

GKD offers various metal meshes for filtration applications in aquaculture. POROMETRIC mesh has filtration rates of 20-100 µm and an optimized weave structure that enables almost 90 percent porosity and unsurpassed flow rates. In comparative tests conducted by the Karlsruhe Institute of Technology (KIT), it also demonstrated the best cleaning behavior – with the same low backwashing rate.

Since POROMETRIC is woven from metal and not plastic, no microplastics can make their way into the ecosystem – a win in terms of quality, health, and the environment.

Drum filters

Benefits

- Increased permeability
- High porosity
- High dirt-holding capacity
- Good backwashing properties
- Metal material

WASHING MACHINES

FILTERS FOR **WASHING WATER**

POROMETRIC mesh

Benefits

- Device-specific screening and filter segments
- Separation rates starting from 6 µm
- High flow rates

Less microplastic from textiles

Every time synthetic fabrics are washed, thousands of microsplastic particles are released. Fiber abrasion is responsible for 35 percent of global marine pollution caused by microplastics. GKD has developed a mesh for microplastic filters designed for washing machines to combat this problem. The filter removes up to 90 percent of microplastic fibers with a size of up to 50 µm from washing machine wastewater by combining vortex technology and POROMETRIC mesh.

The mesh of the innovative vortx unit is specially optimized for the challenges of microplastic filtration and offers outstanding filtration performance, long service life, and efficiency. The microplastic filters with the GKD mesh can be integrated into modern washing machines or used as a retrofit option for existing models.

DISHWASHERS

MESH FOR **WASHING-UP WATER**

Pump protection and **efficiency**

Dishwasher filters need to withstand a lot to prevent food residue, grease, and foreign bodies from clogging pipes, valves, and pumps. They are an indispensable component of the appliance. GKD manufactures specially developed metal mesh for dishwasher filters that is characterized by durable corrosion resistance, excellent workmanship, and easy maintenance. GKD's stainless steel square mesh offers a solution to the specific challenges of appliance filters.

The precision of the mesh pattern of the stainless steel square mesh is ensured through the use of optical measuring methods. This allows even minimal deviations to be detected. GKD attaches great importance to ensuring that the precision and quality of the mesh meet the specific requirements of the customers. This strict focus on customer requirements ensures that dishwasher meshes contribute significantly to the longevity and efficiency of the appliances.

Square weave

Benefits

- Precise mesh accuracy with minimum tolerance
- Corrosion resistance according to DIN EN ISO 9227
- Checked using optical measuring methods
- Long-lasting quality

DOMESTIC WATER SUPPLY

TREATMENT OF **DRINKING WATER**

Optimized dutch weave

Benefits

- Reduces microplastics, metal particles, sediments and solids
- Improves the quality of drinking water
- Protects against pitting and corrosion
- Reduces wear and tear

Health and **installation protection**

Microplastic particles can enter our ecosystem in a variety of ways and ultimately end up in the domestic water supply. To prevent contamination with these tiny plastic particles, solids and sediments, the use of special filter solutions is recommended. The metal filter media developed by GKD are characterized by their extremely fine mesh pores, which are four times thinner than human hair.

In addition to microplastics, grains of sand and rust particles also pose a risk to drinking water, as they can damage water systems, pipes, and appliances. To avoid this, water pre-filters specially designed for drinking water systems are used. To this end, GKD offers solutions made of high-quality stainless steel, such as the optimized dutch weave. Such filters provide additional protection against contamination with microparticles smaller than 10 µm.

TUMBLE DRYERS

VORTX UNIT FOR **DRYERS**

Improved air circulation, **fewer particles**

Measurements show that around 500,000 microfibers are released within 15 minutes of operating a tumble dryer. Most of these enter the environment unfiltered through the air vent. To reduce the environmental impact of microparticles, GKD has developed an innovative separation unit. This takes the elementary function of a lint filter and optimizes it, resulting in improved energy efficiency and reduced particle pollution.

The vortex-based separation unit from GKD effectively captures fluff and particles and optimizes air circulation in the dryer. Improved airflow distributes the heat more evenly and reduces the drying time of the laundry. This reduces energy consumption and operating costs. At the same time, our technology minimizes the risk of dryer fires by preventing the accumulation of flammable lint.

POROMETRIC mesh

Benefits

- Shortens the drying time
- Saves energy
- Improves air circulation and heat distribution
- Separates particles effectively
- Minimizes the risk of dryer fires

DOMESTIC WATER SUPPLY

UNIT FOR **HOUSEHOLD CONNECTIONS**

POROMETRIC mesh

Benefits

- Removes particles efficiently
- Protects pipes and appliances
- Improves the quality of drinking water
- Cleans itself
- Simple backwashing process

Clean water, **protected appliances**

Without appropriate filtration, particles such as sand, rust and other suspended matter can enter our drinking water via our household connections. In the long term, this can cause damage to the water pipes or the domestic appliances connected to them. Contaminated drinking water can also lead to health problems. To counteract this, GKD has developed a vortex separation unit with POROMETRIC mesh, which is installed at the domestic water connection.

By using vortex flows, the innovative system effectively separates dirt and deposits from the domestic water supply. The filter's self-cleaning mechanism is unique: a simple backwash process, which can be triggered both manually and automatically, removes and drains impurities from the filter without having to replace the filter element.

ROAD TRAFFIC

FILTER SYSTEM FOR **TIRE ABRASION**

Less microplastic for **minimal effort**

Tire abrasion in road traffic is one of the main causes of microplastic. The tiny particles detach from the tires with every journey and are washed into the road runoff by surface water. Depending on the type of sewer system, the particles can enter waterways and soil unhindered. GKD has developed a new filter system that is proven to capture up to 97 percent of all solid particles (TSS). The year-round filter system can be integrated into existing road drainage systems.

The patent-pending road runoff filter specifically combats microplastic pollution at municipal hotspots, such as major road junctions. GKD took the particular requirements of local authorities into account when developing the filter. Due to the construction and mesh properties, the filters have a high dirt holding capacity, which makes them usually compatible with the standard maintenance of road gullies.

Filter system

Benefits

- Requirement-specific metal mesh
- Retains up to 97 % of all suspended substances (TSS)
- Improves the protection of waterways and soil
- High dirt-holding capacity
- Cleaning usually takes place as part of standard maintenance work
- Robust and easy to clean

SEWAGE PLANTS

FILTERS FOR **MICRO SIEVING**

Optimized dutch weave

Benefits

- Precise filtration rate
- Device-specific screening and filter segments
- Separation rates starting from 6 µm
- Highly permeable
- Good regenerability

Effective sewage treatment

Unfiltered wastewater carries countless solids and bacteria. That's why filtration in municipal sewage plants plays a crucial role in the purification of wastewater before it is returned to the environment. Screen and filtration meshes from GKD are used in many areas of mechanical microfiltration of wastewater and significantly reduce water pollution.

For example, our optimized dutch weaves can be found in drum or disk filters in sewage treatment plants. They significantly improve the effluent quality of the water when appropriate treatment stages are incorporated downstream. In addition, GKD meshes are used for micro sieving in order to remove any suspended solids after the biological purification of water in wastewater treatment plants before discharge into seas and larger rivers.

SEWAGE PLANTS

PROCESS BELTS FOR **SLUDGE TREATMENT**

Reliable **dewatering, drying, and pressing**

Process belts from GKD are the ideal solution for dewatering and drying industrial or municipal sewage sludge as well as product or chemical sludge. Belt presses and belt dryers significantly reduce the volume of sludge and thus lower transportation and disposal costs. Dried sewage sludge can also be used as a carbon-neutral energy source.

GKD draws on its decades of experience in cooperation with leading machine manufacturers in the development and manufacture of belt presses, dewatering belts, and dryer belts. Application-specific requirements are met by optimally combining plastic monofilament, weave type and mesh size. The process belts are manufactured on heavy-duty looms for metal mesh. The high-quality finishing as well as the PAD seam developed by GKD give the belts great mechanical stability. This makes a key contribution to fault-free operation.

Synthetic mesh

Benefits

- Laterally stable and mechanically strong
- Optimum throughput rate
- Easy to clean
- Resistant to high temperatures
- Resistant to chemical influences
- Matched to the process and individually manufactured

PRODUCTION

HIGHEST STANDARDS

Benefits

- Process and requirements analyses with material simulation tools (GeoDict/OpenFOAM)
- Consultation on the choice of material
- Application optimization and customized component design
- Continuous analysis and further development
- The latest manufacturing methods and leading production standards
- Certified know-how and decades of expertise

From weaving to **finishing**

Weaving, cutting, cleaning, rolling, punching, finishing, and much more. With the latest looms and manufacturing machines, GKD produces the full range of industrial meshes and systems made of metal, synthetics, and technical fibers. Always leading with the individual requirements of customers in mind. Adopting a step-by-step approach, we first analyze the demands on the material and the type of application, and then optimize processes and services for greater efficiency and sustainability in production.

This eye for detail, many years of development excellence and process expertise as well as our consistent cost-benefit orientation are what make GKD a sought-after partner around the world. What's more, products from GKD are manufactured to the highest standards – all the way up to the production in line with clean room standards.

Guaranteed and **proven quality**

GKD doesn't just excel at production – we thoroughly inspect all of our meshes and associated components in our own laboratory. It's vital that quality products from GKD precisely meet the customer's desired specifications. That's why our physical and technical laboratory conducts tests in the following areas:

- Product development
- Initial sample inspection
- Inspection in the event of damage
- Inspection in the event of a complaint
- Customer-specific tests
- Quality assurance during the production process

The focus of all testing scenarios is on securing benefits for the customer. Our laboratory experts possess the best material and testing expertise, work with the latest laboratory technology, and network constantly with professionals from the fields of inspection technology and science. Our laboratory experts monitor the entire lifecycle of GKD products.

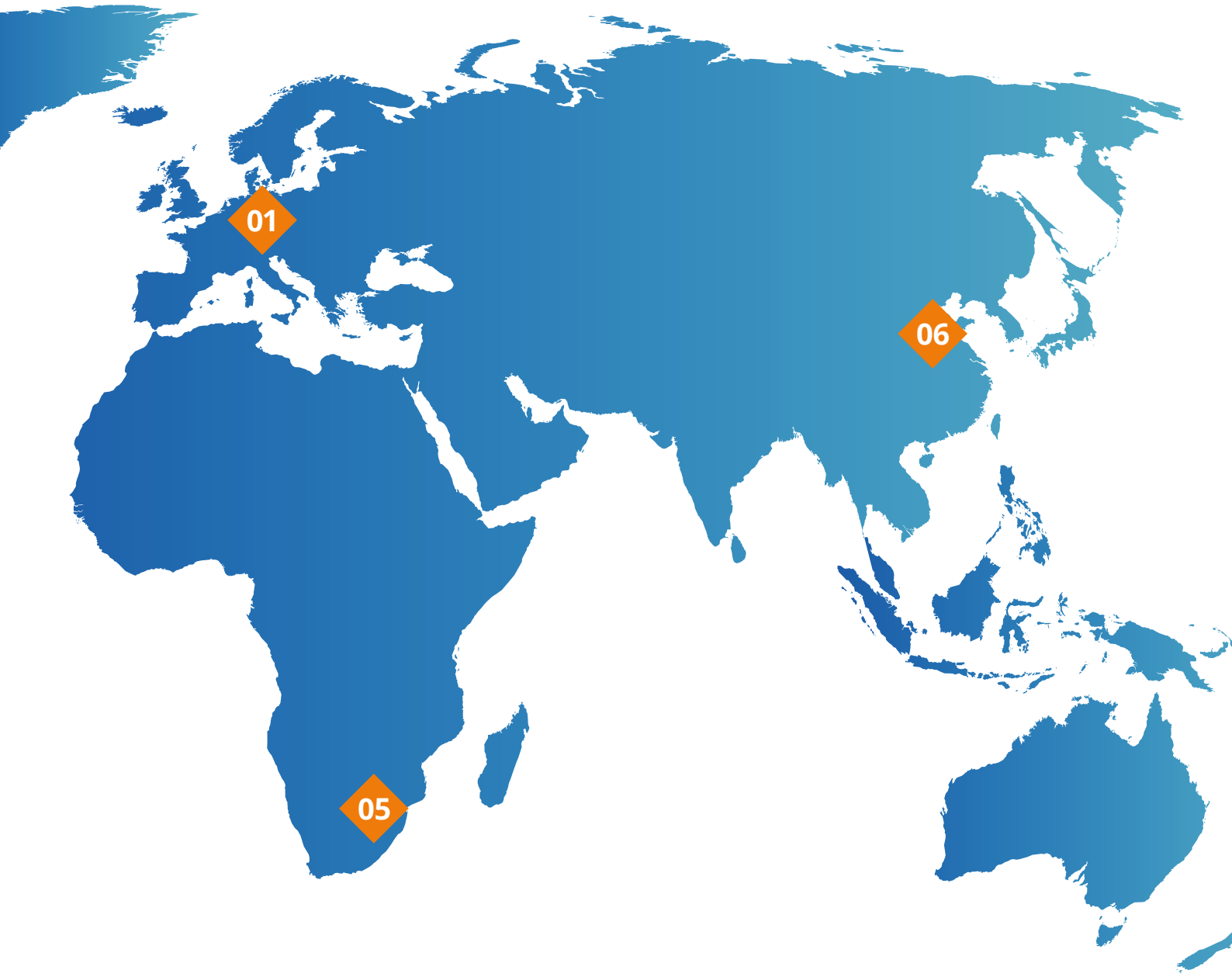
- **Inspection procedures (selection):**
  - Mechanical and physical testing
  - Chemical testing
  - Quality-assurance mesh testing

INTERNATIONAL

GLOBALIZED SUPPLY CHAINS AND MANUFACTURING

With more than 800 employees worldwide, the GKD Group is a leading international technology and service company. The company's headquarters are located in Düren, Germany. GKD also operates sites in the USA, Chile, South Africa and China. Sales offices in France and Spain as well as worldwide representatives ensure that we are close to the customer all over the world. Our understanding of service includes developing individual solutions for every single customer. GKD produces around the world but relies locally on short distances. Globalized supply chains and production platforms ensure delivery reliability, enabling us to respond promptly and flexibly to customer needs. Thanks to precise logistics, the use of recycled materials, resource-efficient production processes, and the development of solutions that help customers achieve their sustainability goals, GKD is expediting the sustainable transformation in keeping with our own guiding principle:

FOR A HEALTHIER, CLEANER, SAFER WORLD



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