



Technical mesh for clean air

Woven metal mesh and filter solutions

Expertise

Mesh solutions from the technological leader

GKD: Made-to-measure innovations

GKD is the global technological leader in advanced industrial mesh and filtration solutions made from metal, synthetic wires, and 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 – optimally matched to the most diverse mechanical process engineering requirements. GKD produces technical mesh solutions for carbon capture systems.

The company brings considerable expertise in support of transforming industry for sustainability goals. Our customers benefit from tailor-made solutions, hands-on consulting, and worldwide service partnerships.

GKD is continuously developing 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 ISO certifications, our customers can rely on certified quality worldwide.



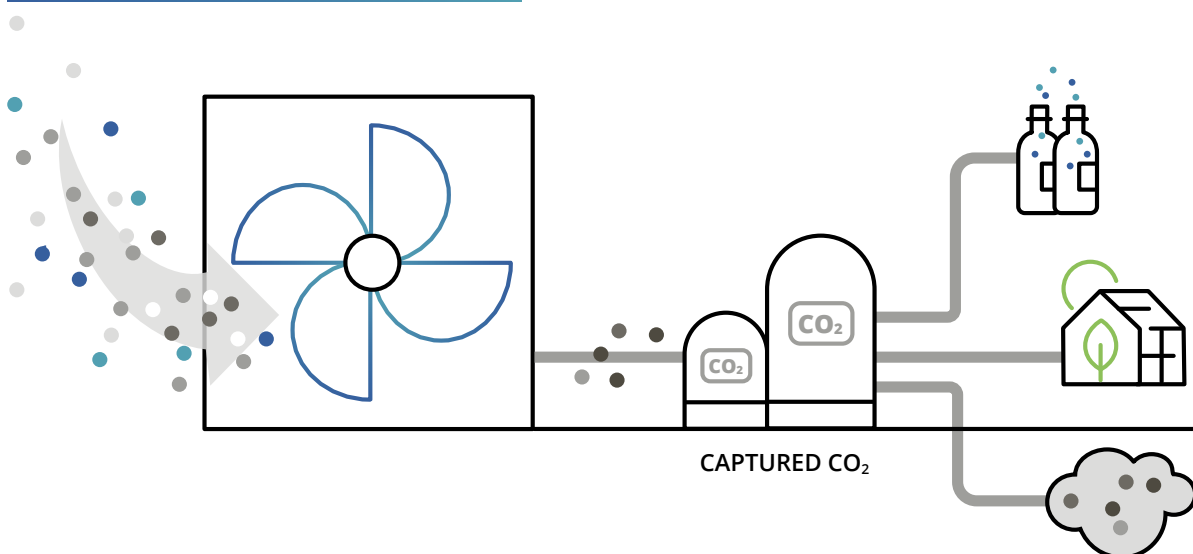


The challenge: **Cleaner air, healthier climate**

Less carbon dioxide for cleaner air: Humanity is facing the immense task of limiting global warming to 1.5 °C above pre-industrial levels by 2100, thereby limiting the greenhouse effect. This will primarily be achieved by all countries throughout the world significantly reducing their carbon emissions. Efforts are also being made to capture and store climate-damaging carbon dioxide from the air. **Direct Air Capture (DAC)** involves permanently storing the

carbon dioxide (Carbon Capture & Storage) or reusing it (Carbon Capture Utilization) – for everything from plant nurseries and carbonated drinks to synthetic fuels. CO₂ is removed from air using chemical sorbent media like aqueous alkaline solvents or adsorbents. These non-soluble materials absorb and hold liquids. The CO₂ is then extracted through application of thermal energy, and the media can be reused. GKD supports DAC with filter solutions.

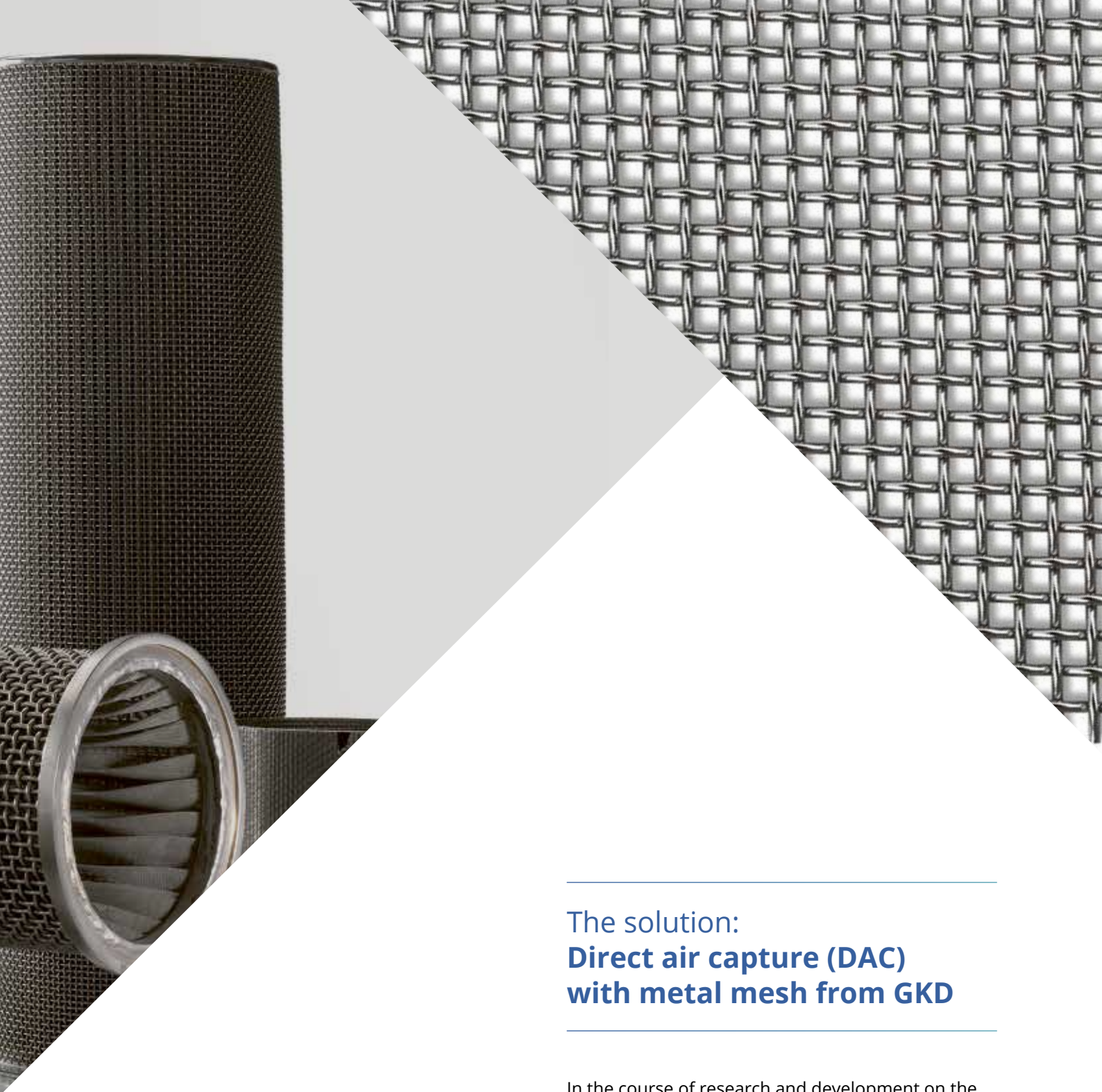
Direct Air Capture



The image features a collection of technical mesh components, including cylindrical filters and mesh sheets, arranged on a reflective surface. A large blue diamond shape is overlaid on the left side, containing text. The background is a light, neutral color.

Clean air

Technical weave for **Direct Air Capture**



The solution: **Direct air capture (DAC) with metal mesh from GKD**

In the course of research and development on the DAC process, various approaches have proven their value. All of these blow air through an air contactor, where it reacts with an adsorbent and the carbon dioxide is then adsorbed. To release the CO₂, the adsorbent is subjected to heat. It is then cooled before being reused.

For the adsorption process, GKD provides high-performance metal mesh with low pressure loss that reliably holds the adsorbent in the correct position – providing a solution for the challenges of tomorrow.

Would you like to learn more about our solutions? Call us or send an email:

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industrialmesh@gkd-group.com



Production

Manufacture: Highest standards

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 produced to the highest standards – all the way up to production for clean room standards.

Manufacturing: From weaving to finishing

Weaving, cutting, cleaning, rolling, punching, finishing, and much more. With the latest looms and manufacturing equipment, GKD produces the full range of industrial meshes and systems made from metal, synthetics, and technical fibers. Always leading with the individual requirements of customers in mind. Step by step, we analyze the demands on the material and the type of application, and we also optimize processes and services. This eye for detail,

Our services

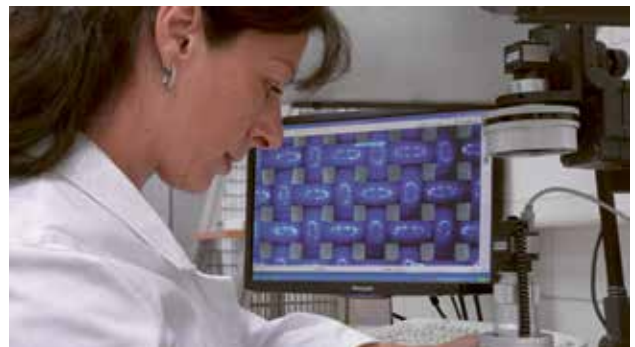
- ◆ Process and requirements analyses with material simulation tools (GeoDict/OpenFOAM)
 - ◆ Consultation on the choice of material
 - ◆ Application optimization and customized component design
 - ◆ Continuous analysis and further development
 - ◆ The latest manufacturing procedures and leading production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

GKD doesn't just excel at production – we also have our own laboratory where we thoroughly inspect all of our meshes and associated components. 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**
- ◆ **First sample inspection**
- ◆ **Inspection in the event of damage**
- ◆ **Inspection in the event of a complaint**
- ◆ **Customer-specific tests**
- ◆ **Production-related quality assurance**



The benefit of the customer is at the heart of all testing scenarios. Our staff members 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. The laboratory experts supervise the entire lifecycle of GKD products.

Inspection procedures (selection)

- ◆ **Mechanical and physical testing**
 - ◆ **Chemical testing**
 - ◆ **Quality-assurance mesh testing**
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