



SCHÜTZ
COMPOSITES

SCHÜTZ CORMASTER®

**THE HIGH-TECH LIGHTWEIGHT
COMPOSITE**



CORMASTER
ADVANCED COMPOSITES

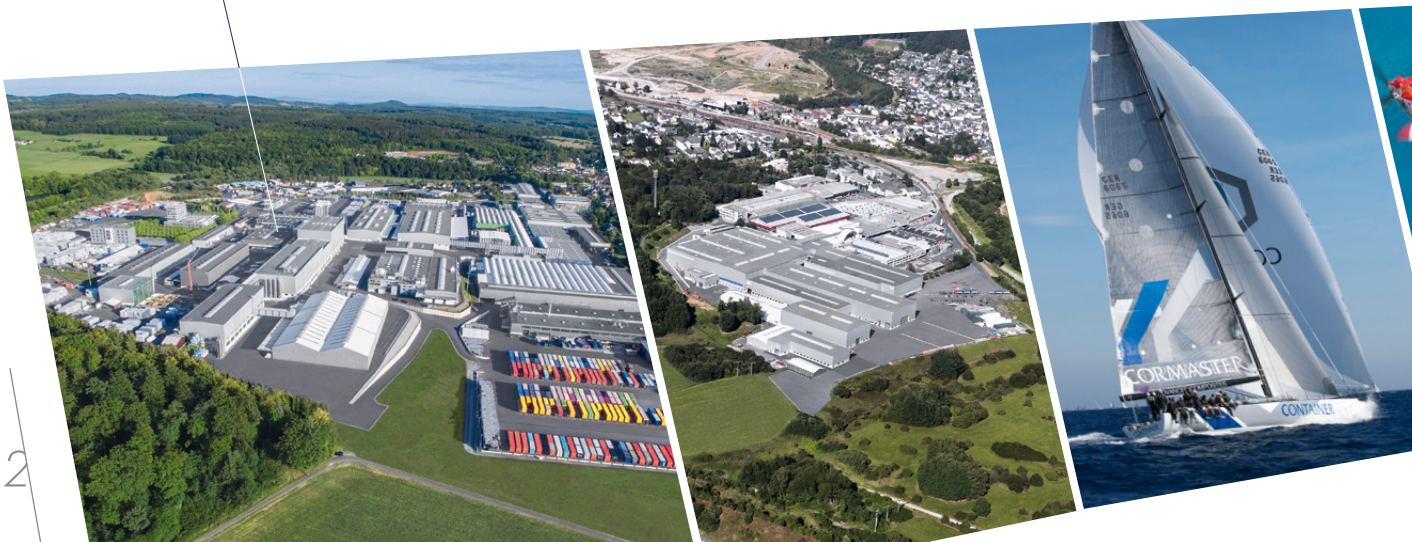


WE UNITE **TRADITION WITH VISIONARY POWER.**

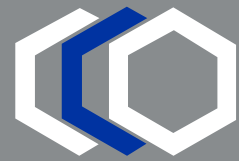
The SCHÜTZ Group was founded in 1958 by Udo Schütz and presently employs over 7,000 people at more than 70 locations worldwide. As a leading technology company, SCHÜTZ's core competence lies in metal and plastic processing.

At our headquarters in Selters and at the Siersshahn factory we are committed to the development, production and sale of innovative products and advanced manufacturing methods. Our strategy is to master the technologies we use ourselves in depth and down to the finest detail. The know-how we gain from the close integration of product and production competence is the basis for our ability to continually inspire with new solutions made of steel, plastic and innovative materials.

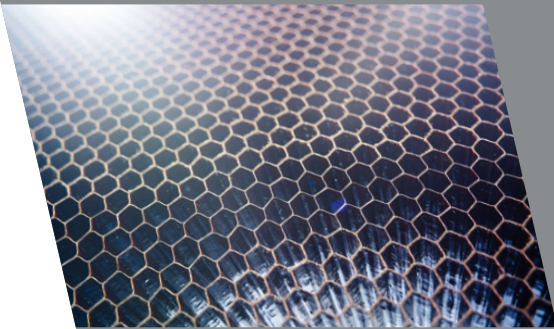
The business activities of the SCHÜTZ Group are grouped into the four divisions **PACKAGING SYSTEMS, ENERGY SYSTEMS, INDUSTRIAL SERVICES** and **COMPOSITES**.



COMPOSITE MATERIALS MADE OF **HONEYCOMB STRUCTURES.**



CORMASTER
ADVANCED COMPOSITES



In the COMPOSITES division, SCHÜTZ has been manufacturing lightweight materials since 1985. With CORMASTER®, we have developed an innovative honeycomb material that offers outstanding material properties and uncompromising quality, as well as exceptional formability and processability.

This makes CORMASTER® the ideal solution for a broad range of uses and applications. It has been employed in the aviation industry for many years, where it is used for structural components and in cabin construction due to its high stability and durability combined with low weight and absolute corrosion resistance.

CORMASTER® is also successfully used in many other areas, where every single gram can make all the difference, such as motor racing, automotive and marine construction, sports equipment and many other high-tech products.

From development to production, CORMASTER® complies with a rigorous quality management system that is certified in accordance with the **EN ISO 9001** and **EN ISO 9100** standards which apply specially to the aviation, aerospace and defence industries.

As a pioneer in the production and use of honeycomb in high-tech lightweight construction, we are committed to continually refining our materials and processes, and we develop all equipment and tools in-house in order to offer the very best solution for your specific application.



THE HIGH-PERFORMANCE MATERIAL **YOU CAN DEPEND ON.**

CORMASTER® honeycomb is made of NOMEX® or KEVLAR® paper that is shaped in a hexagonal or hexagonal overexpanded configuration in a multi-stage process and is then reinforced with resin. The honeycomb parts can be easily processed by milling, forming or laminating, making them exceptionally versatile.





CORMASTER® CN1 PRODUCT FAMILY – THE HIGH-TECH MATERIAL MADE OF KEVLAR® N636 PAPER FOR SUPREME LIGHTNESS

CORMASTER® CN1 honeycombs are ideally suited for aerospace applications and all other areas where maximum performance combined with low weight are the main requirements. Excellent stability and rigidity combined with the lowest density make this material suitable for use in structural and sandwich applications.

FEATURES & BENEFITS

Extremely high shear modulus, 1.5 to 3 times higher than NOMEX® honeycomb at the same density

Excellent compressive strength, 20 % higher than NOMEX® honeycombs in terms of density



CORMASTER® C1 PRODUCT FAMILY – DESIGNED FOR THE COMMERCIAL AND MILITARY AVIATION INDUSTRIES

These honeycomb types made of NOMEX® T412 paper meet the requirements of aviation specifications and are suitable for many important structural and cabin applications in the aviation industry.

FEATURES & BENEFITS

Self-extinguishing and low fume toxicity

Corrosion resistance against water, oils and fuel



CORMASTER® C2 PRODUCT FAMILY – THE STANDARD FOR INDUSTRIAL LIGHTWEIGHT CONSTRUCTION

Special honeycombs made of NOMEX® T722 paper for use in many important industrial structural sandwich applications, including motor vehicles, trains, ships and sports equipment.

FEATURES & BENEFITS

Excellent value for money

Superior mechanical properties with a high strength to weight ratio

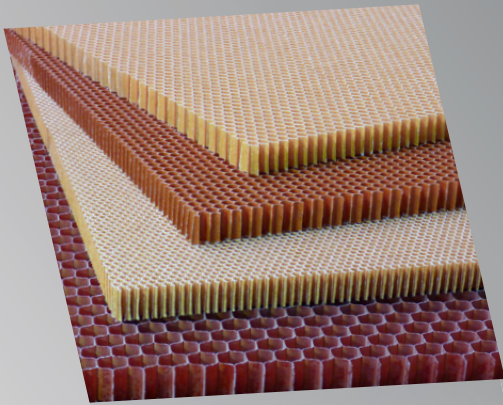
WE GET

CORMASTER® INTO EXCELLENT SHAPE FOR YOU.

In accordance with your exact individual specifications we shape CORMASTER® honeycomb blocks using various certified processes, including milling and heat-shaping. You get the honeycombs in precisely the shape you need.

SLICES

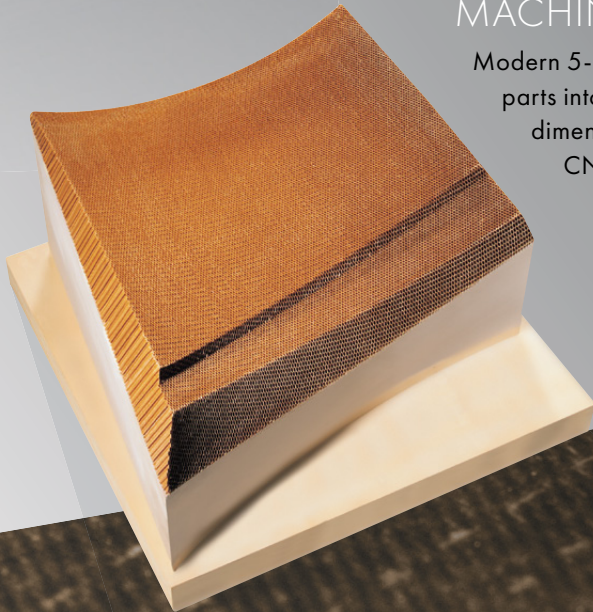
Using horizontal saws, the CORMASTER® blocks are cut into highly precise slices as thin as 1.5 mm.

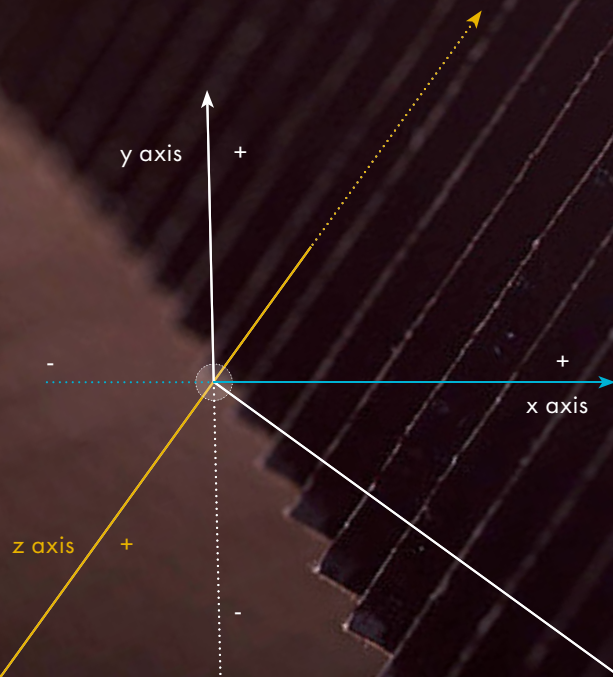


MACHINED PARTS

Modern 5-axis machining is used to shape the machined parts into the form you need, up to the maximum dimensions of 2,200 mm x 6,500 mm x 1,140 mm.

CNC-controlled machines ensure precise edges and holes, even on curved surfaces.





BONDED COMPOSITE PARTS

In order to be able to specifically adjust the properties of the honeycomb structure in different areas of a component, we can combine different types of honeycombs. For example, zones with overexpanded honeycombs allow flexible curvatures in otherwise rigid structures.



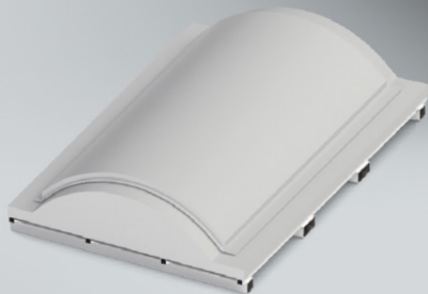
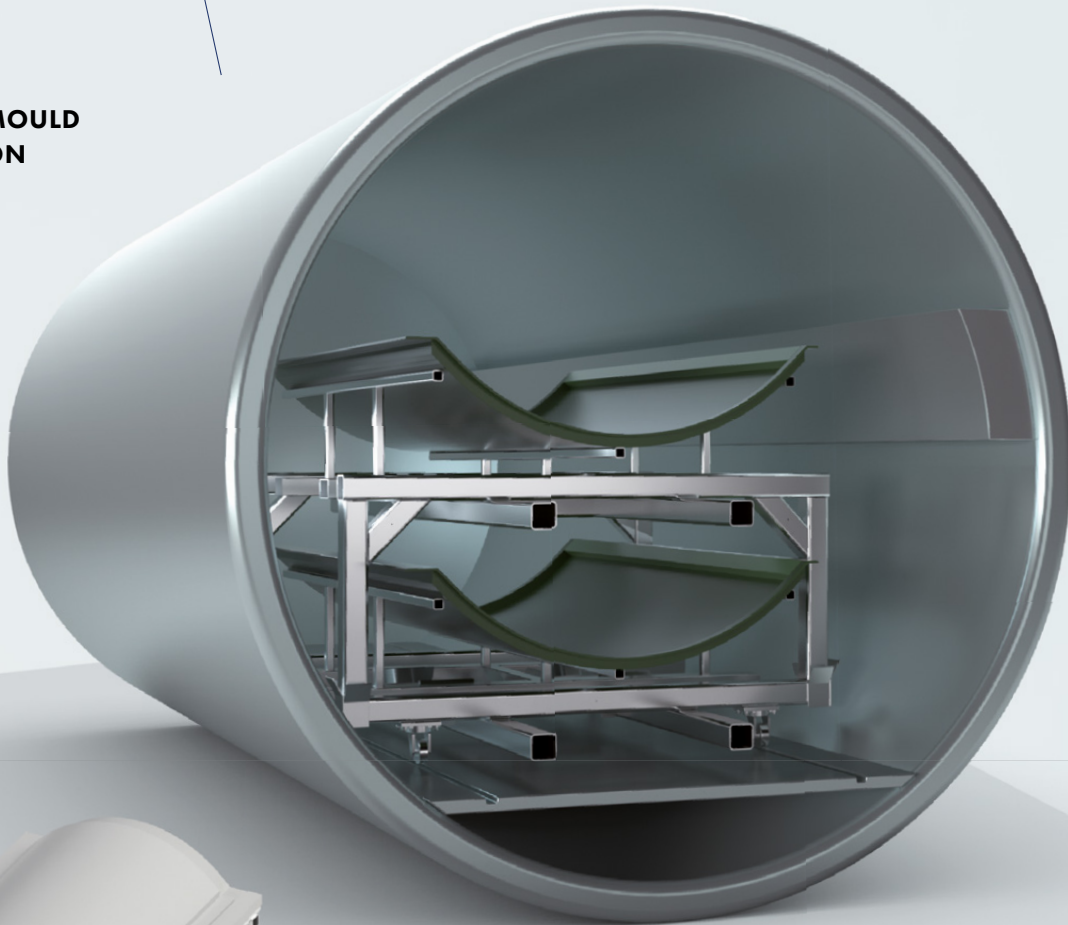
FORMED PARTS

We use in-house produced tools and special furnaces for cold and hot forming; we can produce moulded parts measuring up to 4,000 mm x 2,500 mm x 2,500 mm.

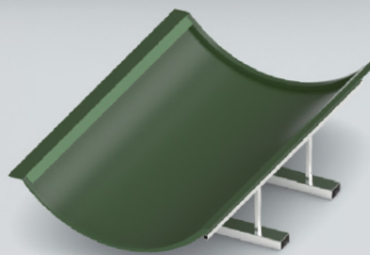
PERFECT SERVICE FROM A SINGLE SOURCE – **INCLUDING MODEL AND MOULD CONSTRUCTION**

We offer our customers three-dimensional, autoclave-cured sandwich panels as well as the equipment required for the production of autoclave panels and formed parts. We manufacture all the necessary moulds for your products in our own model and mould-making department, based on the geometric data of the components you need.

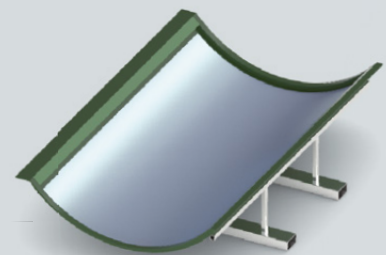
MODEL AND MOULD CONSTRUCTION



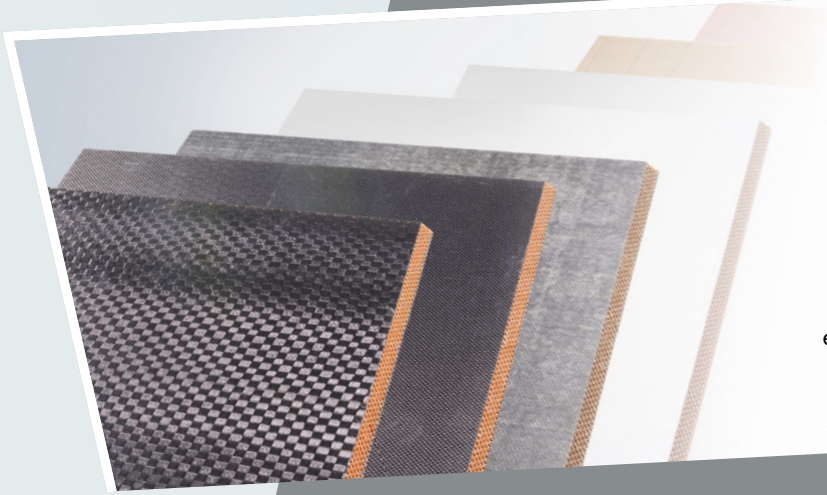
1 CNC MILLED MASTER MODEL –
corresponds to the geometry of
the panel surface



2 NEGATIVE MOULD –
is demoulded from the master model

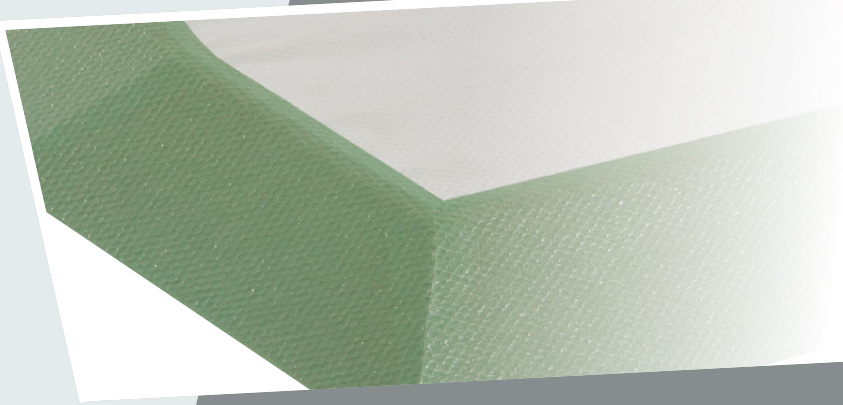


3 PANEL LAY UP –
the panel is cured in the autoclave



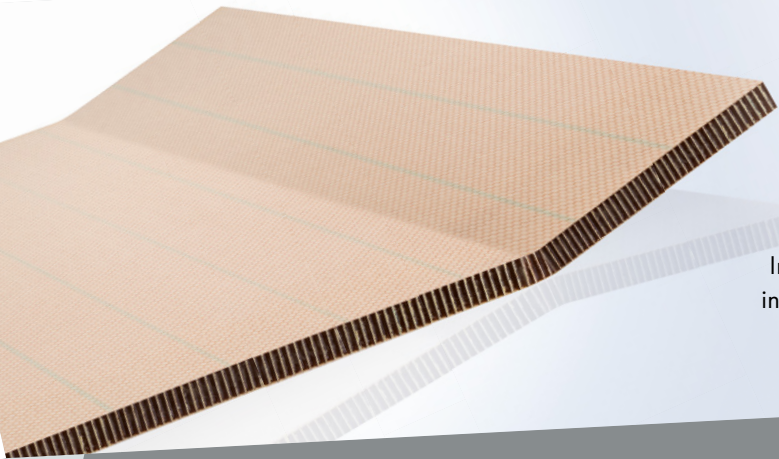
SANDWICH PANELS

CORMASTER® is combined with pre-impregnated fibre mats (pre-pregs) in a variety of different materials, which are bonded with the honeycomb core to form sandwich panels that are strong and robust enough to comply even with the exacting standards of the aviation industry.



STABILISED HONEYCOMBS

To obtain special characteristics, the honeycomb structures can be filled with a variety of different materials in a fully automatic process.



AUTOCLAVE PANELS

For the production and curing of fibre-plastic composites, we have a large-capacity autoclave measuring 6,500 mm x 2,500 mm x 1,800 mm. It can generate pressures up to 10 bar and temperatures up to max. 230 °C as processing parameters. In addition, the components can be exposed to negative pressure in order to further enhance component quality.

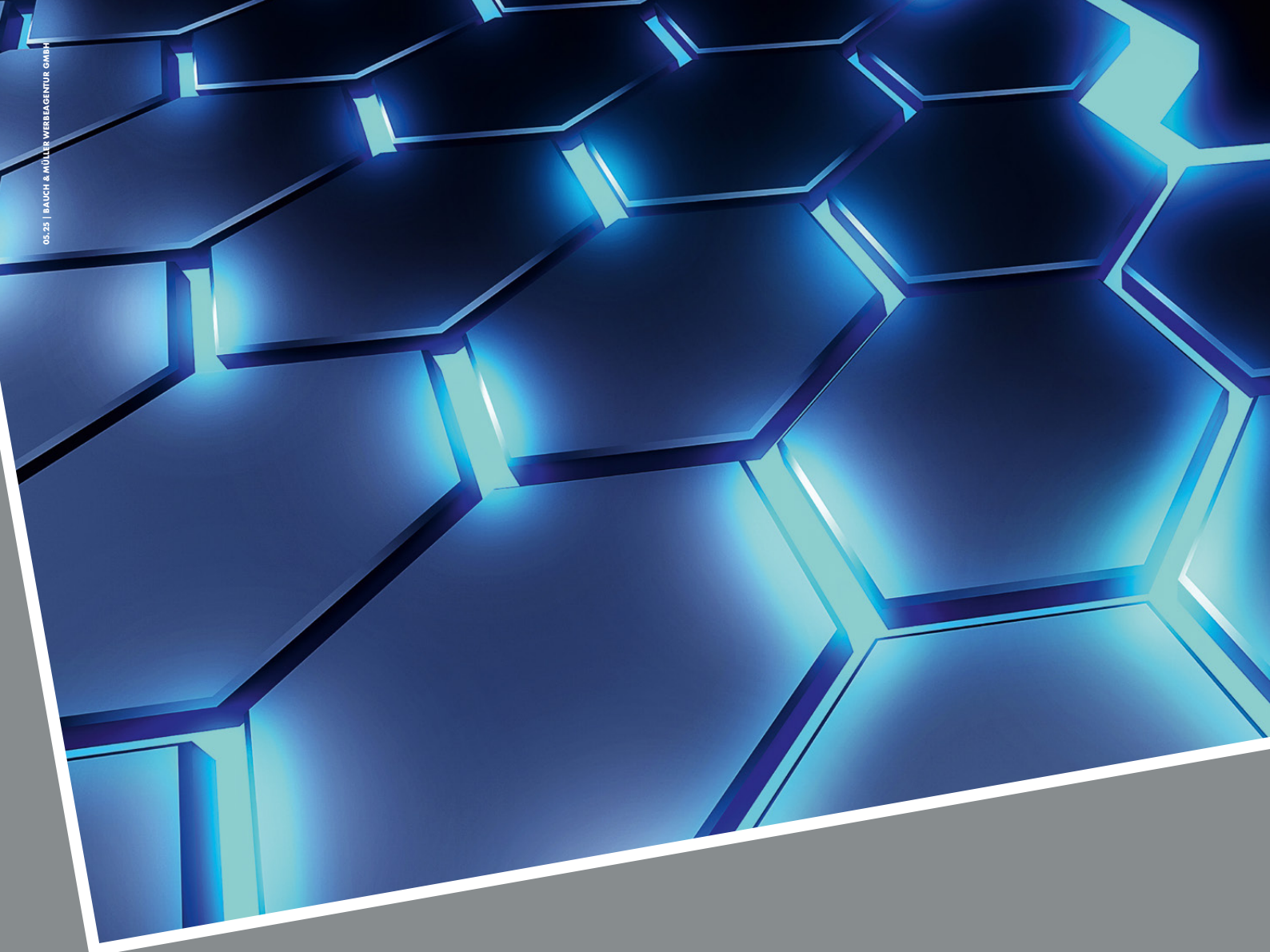
YOUR PROJECT IS OUR PROJECT.

The application potential for CORMASTER® is almost unlimited. Tell us about your individual requirements and product specifications. Our experienced engineers will advise you and work with you to identify the ideal CORMASTER® solution.

We look forward to your project.







Do you have further questions about CORMASTER® and its applications?

We will be happy to help: +49 262 77 4096



If you would like to learn more about our company and our products please contact:

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