



MiTRAS

COMPOSITES SYSTEMS



... successful composite solutions



Company profile

Since more than 40 years, committed employees produce sophisticated parts from fibre-reinforced plastic using compression and injection moulding.

Continuous investments in modern equipment and technologies as well as intensive research and development activities make us a reliable partner.

We have the strength and flexibility to realize large and challenging projects.



Material

We're using sheet or bulk moulding compounds (SMC/BMC) selected depending on the individual requirements of the product.

These high-performance-materials are an alternative to traditional construction materials.

The integrated reinforcing fibers (i.e. glass, carbon or natural fibers) gives the product not only excellent mechanical properties but also results in a much lighter construction.

By using the appropriate selection of fillers and additives, both the media- as well as the UV-resistance are optimized and highest fire protection classification can be achieved.



Production Flexibility

Our machinery consists of more than 20 modern presses and injection moulding machines. Optimized processes as well as appropriate automation solutions enable us to economically produce even large parts in any batch size. Three CNC- machining centers are available for complex milling operations.



Research & Development

We support our customers from the initial idea until the final component has been delivered. Our expertise in materials and process-orientated product design ensures a successful product development. Our customers benefit from short development periods and economic processes. Based on partnerships with the Universities of Dresden and Chemnitz as well as renowned research institutes, the latest scientific results are directly incorporated into our daily work. As an active member of the CC Ost, part of Carbon Composites e.V., as well as the participation in various national research projects, we are part of a network of innovative companies.



Certification

We provide our clients with high quality products. Customer satisfaction is our highest ambition. Since many years we are ISO 9001:2008 and DIN EN ISO 50001:2011 certified.





Compression Moulding

The compression moulding is preferred for the production of mainly two-dimensional parts made of SMC. The material is cured in steel tools under high pressure and at temperatures of about 150 °C. The parts are characterized by their superior strength and excellent surface quality.

For compression moulding we use modern, hydraulic presses with press forces up to 10,000 kN. In these machines tools with a maximum size of 2.7 x 1.5 m can be used.

Our facilities enable:

- short cycle times
- repeatable, precise conditions
- highest quality

The compression moulding is particularly suitable for small to medium sized production series. Next to the SMC, in individual cases, BMC can also be processed. By adding inserts, local reinforcements and coatings special functionalities can be provided to the parts.



Injection moulding

The injection moulding is used for compact structured components, whereas injection compression is used for thin-walled components. Parts made with these technologies have very good mechanical properties and overwhelming surface qualities.

Our injection moulding machines with clamping forces of up to 13,000 kN can produce parts with a weight of up to 6.2 kg. Machines and environment are characterized by:

- automatised handling, deburring and stacking
- high productivity
- possible use of modified SMC's

The injection moulding and injection compression moulding is preferred for large quantities. But also small production series can economically and efficiently be realized, if special characteristics such as high-gloss surfaces are needed.





Machining

The additional machining of moulded parts allows to economically produce complex and detailed geometric shapes even for smaller quantities, without the risk of large investments in tools.

We own three CNC machining centers which can process components up to a volume of 2.5 x 1.5 x 0.8 m. By using 5-axis simultaneous machining and an advanced CAM software, almost any geometrical shape can be offered short-term.

The necessary machining jigs are developed on-site and can therefore meet the highest quality requirements.



Assembly and Refinement

The components we produce are usually part of complex technical systems and require further refinement, which we offer to our customers.

We have a large variety of refinement technologies on-site:

- dosing and mixing system for structural adhesives (1K/2K)
- automatised CNC dosing and mixing system for polyurethane seals
- industrial coatings in standard RAL colors
- assembly according bill of material
- general mechanical finishing

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Distances

Dresden via A13/A4:

• to the airport 15 km • to the center of the city 22 km

Berlin via A13:

• to the airport 155 km • to the center of the city 176 km

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