Alpha Sigma GmbH

About this organisation

Machine translation

This organisation has been machine-translated based on data provided in German.

The company Alpha Sigma GmbH was born out of an idea to produce inexpensive and environmentally friendly fibre composite components without having to compromise on weight or rigidity.

We offer our customers both the manufacture of fibre composite components and advice as a partner at your side when it comes to implementing a project. As early as the development phase, we work together with your or our designer to technologically realise your wishes. In doing so, we focus on rational and cost-saving production methods that are in balance with the required boundary conditions. The right material for the components and the moulding tools are adapted to the customer's requirements. Moulding tools made of PU foam are used, as well as aluminium, steel or casting resins. The components are produced by trained personnel and high quality standards in individual or series production. This leads to high reproducibility of the results. It is also easy to use different resins and/or fibres in the process.

Am Hammerwald 19-23
08064 Zwickau
Saxony
Germany
www.alpha-sigma.eu

Organisation type
Small or medium-sized enterprise

Sectors

Employees
10 up to 49

Turnover
Up to €2m

Funding
n/a

Main areas covered	Special vehicle construction, Prototypes and small series, Development service, from sketch to finished component
Infrastructure	
Certifications	DIN EN ISO 9001:2015
Keywords	Basalt, BFK, Aramid, Armour, Natural fibres
Memberships	

Alpha Sigma GmbH

Overview of lightweighting expertise

Machine translation

This organisation has been machine-translated based on data provided in German.

	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Systems and end products, Tools and moulds		✓	✓
Services & consulting Training, Consulting, Distribution, Testing and trials, Engineering, Prototyping, Validation, Simulation, Technology transfer	✓	✓	✓
Field of technology			
Design & layout Lightweight manufacturing, Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction	✓	✓	✓
Functional integration Actuator technology, Media conductivity, Sensor technology, Material functionalisation			✓
Measuring and testing technology Component and part analysis			✓
Modelling and simulation Loads & stress, Life-cycle analysis, Optimisation, Processes, Structural mechanics, Materials, Reliability validation		✓	✓
Plant construction & automation			
Recycling technologies			

Alpha Sigma GmbH

Overview of lightweighting expertise

Machine translation

This organisation has been machine-translated based on data provided in German.

	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Stereolithography			✓
Coating (surface engineering)			
Fibre composite technology Manual lamination, Resin infusion process, Vacuum infusion	✓	✓	✓
Forming			
Joining Adhesive bonding, Riveting, Screwing			✓
Material property alteration			
Primary forming			
Processing and separating Drilling, Turning, Milling, Electrical discharge machining, Sawing, Shearing/punching, Grinding, Cutting			✓
Textile technology Others (Embroidery)	✓	✓	✓

Alpha Sigma GmbH

Overview of lightweighting expertise

Machine translation

This organisation has been machine-translated based on data provided in German.

	Research	Development	Manufacturing & Supply
Material			
Biogenic materials Bioplastics, Biocomposites			✓
Cellular materials (foam materials) Closed-pore, Open-pore		✓	✓
Composites Aramid fibre composites, Basalt fibre-reinforced plastic, Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Natural fibre reinforced plastics (NFRP), Textile-reinforced concrete		✓	✓
Fibres Aramid fibres, Basalt fibres, Glass fibres, Carbon fibres, Metal fibres, Natural fibres	✓	✓	✓
Functional materials			
Metals Aluminium, Steel			✓
Plastics Thermoset plastics, Elastomers, Thermoplastics		✓	✓
Structural ceramics			
(Technical) textiles Others (Embroidery)	✓	✓	✓

Contacts

Machine translation

Alpha Sigma GmbH

Contacts

This organisation has been machine-translated based on data provided in German.

Mr Dipl. Ing. Fabian Liesch *CEO*	Mr Dipl. Ing Michael Jakob *CTO*
fabian.liesch@alpha-sigma.eu	michael.jakob@alpha-sigma.eu