

# Polygon Shelter GmbH & Co. KG

## About this organisation

### Machine translation

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

Polygon Shelter GmbH & Co. KG is a manufacturing company in Saxony-Anhalt that specialises in the small-series production of innovative drop-off cabins in combination with a suitable carrier vehicle as a system solution for long-distance and expedition trips. The company was founded in 2019 and started in 2016 as the "Polygon Shelter" project at the Transfer and Start-up Centre of Otto von Guericke University Magdeburg.

Polygon Shelter GmbH & Co. KG optimises proven manufacturing principles in vehicle wood and metal construction in line with lightweight construction. As a GRP monocoque, the polygonal design of the drop-off cabins combines a sophisticated integration of form and function, whereby enormous stability meets efficient space utilisation. An integrative, adaptive intermediate frame construction serves as the basis for the set-down function. Based on the load and material-optimised design, the use of semi-finished products and standardised joining techniques enables the core properties of stability, robustness and lightweight construction to be combined in (cost) efficient production processes. By networking with industrial partners in the field of research and development, the innovation potential of lightweight construction is continuously reflected - with the aim of optimising lightweight structures and associated manufacturing processes for vehicle and cabin construction in the long term.

Lorenzweg 37  
39124 Magdeburg  
Saxony-Anhalt  
Germany  
[www.polygon-shelter.de](http://www.polygon-shelter.de)



### Organisation type

Small or medium-sized enterprise

### Sectors



### Employees

Up to 9

### Turnover

Up to €2m

### Funding

n/a



# Polygon Shelter GmbH & Co. KG

## About this organisation

**Main areas covered** Skip cabins, small series production, Special vehicle construction, Fibre composites, Lightweight wood and metal construction, Monocoque construction

**Infrastructure** Manufacturing plant

### Certifications

**Keywords** Drop-off cabins, Vehicle construction, Lightweight wood and metal construction, GRP, Monocoque

### Memberships

## Overview of lightweighting expertise

### Machine translation

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

	Research	Development	Manufacturing & Supply
<b>Offer</b>			
<b>Products</b> Parts and components, Systems and end products	✓	✓	✓
<b>Services &amp; consulting</b> Engineering, Prototyping, Simulation, Technology transfer, Maintenance and repair	✓	✓	✓

# Polygon Shelter GmbH & Co. KG

## Overview of lightweighting expertise

### Machine translation

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

	Research	Development	Manufacturing & Supply
<b>Field of technology</b>			
<b>Design &amp; layout</b> Lightweight manufacturing, Lightweight design, Lightweight construction concepts	✓	✓	✓
<b>Functional integration</b> Material functionalisation	✓	✓	✓
<i>Measuring and testing technology</i>			
<b>Modelling and simulation</b> Loads & stress, Optimisation, Processes, Materials		✓	✓
<i>Plant construction &amp; automation</i>			
<i>Recycling technologies</i>			

# Polygon Shelter GmbH & Co. KG

## Overview of lightweighting expertise

### Machine translation

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

	Research	Development	Manufacturing & Supply
<b>Manufacturing process</b>			
<i>Additive manufacturing</i>			
<i>Coating (surface engineering)</i>			
<b>Fibre composite technology</b> Manual lamination, Resin infusion process, Resin transfer moulding, Pre-preg processing		✓	✓
<i>Forming</i>			
<b>Joining</b> Hybrid joining, Adhesive bonding, Riveting, Screwing, Welding		✓	✓
<i>Material property alteration</i>			
<i>Primary forming</i>			
<b>Processing and separating</b> Drilling, Turning, Milling, Sawing, Shearing/ punching, Grinding, Cutting		✓	✓
<i>Textile technology</i>			

# Polygon Shelter GmbH & Co. KG

## Overview of lightweighting expertise

### Machine translation

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

	Research	Development	Manufacturing & Supply
<b>Material</b>			
<b>Biogenic materials</b> Wood		✓	✓
<i>Cellular materials (foam materials)</i>			
<b>Composites</b> Glass-fiber reinforced plastics (GFRP), Laminates		✓	✓
<b>Fibres</b> Glass fibres		✓	✓
<i>Functional materials</i>			
<b>Metals</b> Aluminium, Steel		✓	✓
<i>Plastics</i>			
<i>Structural ceramics</i>			
<i>(Technical) textiles</i>			

## Contacts

### Machine translation

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

# Polygon Shelter GmbH & Co. KG

## Contacts

Mr Dr.-Ing. Sascha Reiche

*Managing Director*

[sascha.reiche@polygon-shelter.de](mailto:sascha.reiche@polygon-shelter.de)