

F

**FARMINGTONS
AUTOMOTIVE**



Automotive Systems

Automotive development with Passion

For more than 30 years, the automotive industry looked to Georgsmarienhütte to provide engineering innovations combined with quality products and services.

Employing over 200 personnel, Farmingtons Automotive GmbH stands side by side with its customers in the provision of engineering and manufacturing solutions. We cover all key developmental stages from the early concept design to volume production.

A highly skilled project management team oversees the whole development process in-house including Concept development, Prototype design and manufacture, Measurement, Tools design and validation, System verification, High volume customer production integration and manufacture for small or medium sized production runs. A particular strength of Farmingtons Automotive GmbH is its polymer division. Adjacent to a modern die-casting mould construction unit we assemble plastic parts in small and middle sized production runs.

Our range of activities has been complemented by an armoured vehicle division. Based on the manufacturing standards of the automobile industry, armoured vehicles of the highest quality and ballistic integrity are developed and manufactured by Farmingtons.

We use SAP as an ERP system to monitor each programme performance. Direct data links between Farmingtons and its customers provides for a harmonized design through to production process.



Know-how and High-Tech – the basis of our development work

Our core competences are in the development of thin walled section sheet metal and complex plastic components for the interior and exterior of vehicles. Mechanical and mecha-electronic functional parts and the development of complex interior designs, in and around vehicles, are also part of our range of activities.

From concept to volume product readiness our Project Manager are committed to supporting both the product and the customer. Professional project management, experienced design engineers and modern work stations guarantee optimal progress during all phases of each project.

Competences and Skills

Interior

- Dashboard, centre console
- Door trim panels
- Pillar, roof and boot trim panels
- Floor covering, insulation

Exterior

- Bumper systems
- Headlamps/taillight
- Doors, bonnet and boot lids

CAE and simulation

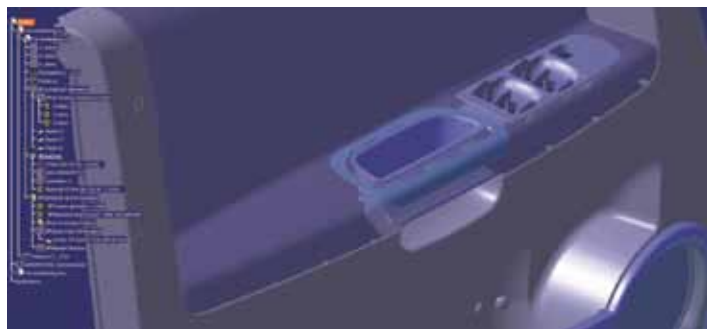
- Air conditioning CFD
- Calculation of strength
- Vibration analysis NVH
- Tolerance analysis

Studies and analysis

- Concept studies
- Feasibility studies
- Ergonomic studies

Technical Infrastructure

- CATIA V5 Certified Workstations
- ENX-data link
- CAE-laboratories



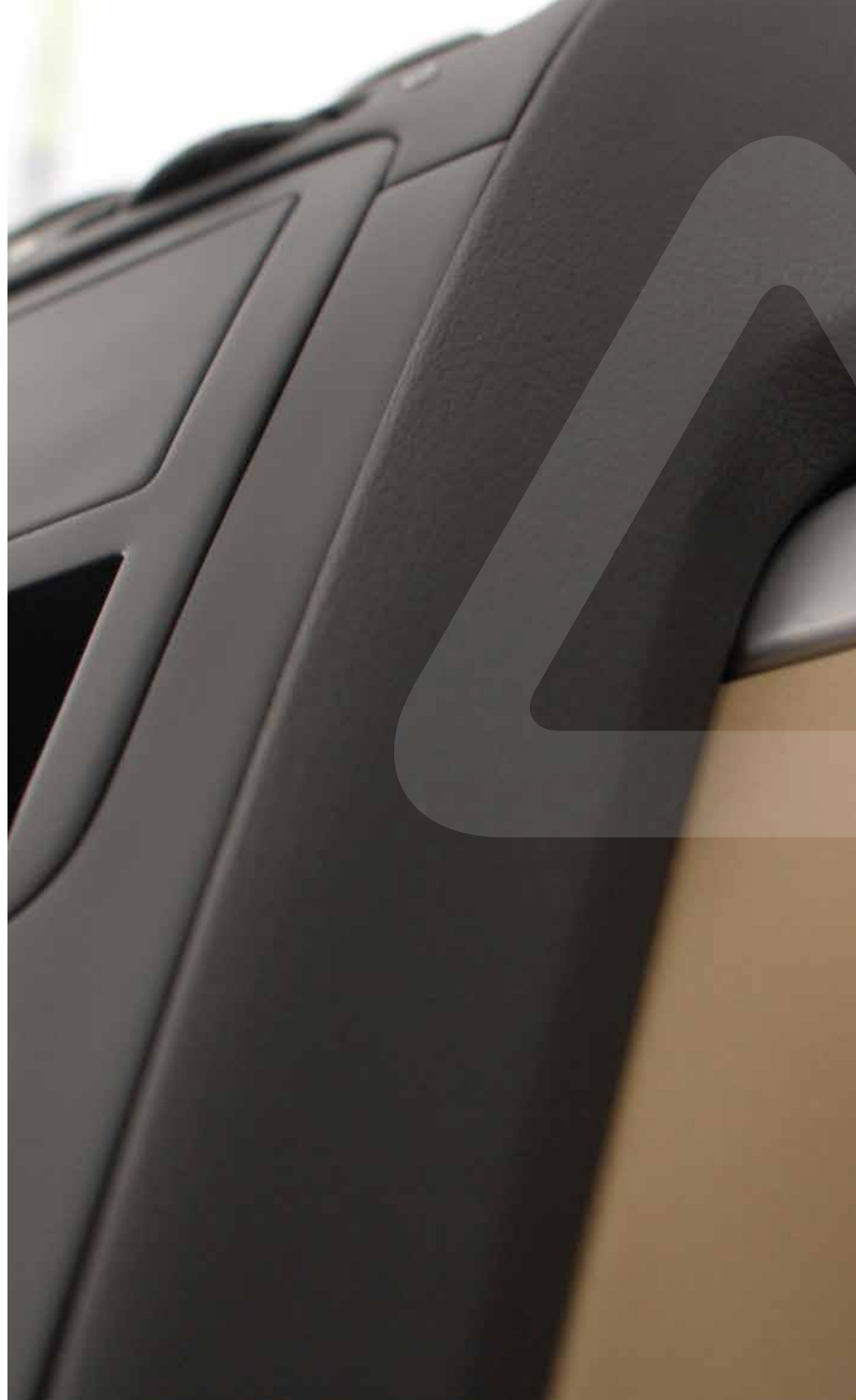
An indispensable precursor for volume production readiness – prototyping

Modern CAD systems are useful in assisting the evolution of early designs to provide early prototypes for test and validation. This is now an elementary part of the journey towards volume production and provides confidence in the final product. Prototype parts and functional models are generated from the designs as part of the design verification process prior to final design release volume production.

Tolerance calibration and alignment between the virtual model and the final product is achieved by our in-house measurement instrumentation capabilities.

Prototyping Competencies and Skills

- Rapid Prototyping
- Stereolithography
- Selective Laser Sintering (SLS)
- Fused Deposition Modeling (FDM)
- Vacuum Technology
- Reaction Injection Moulding (RIM)
- Laminates from carbon fibre reinforced plastic (CFRP) and glass-fibre reinforced plastic (GRP)



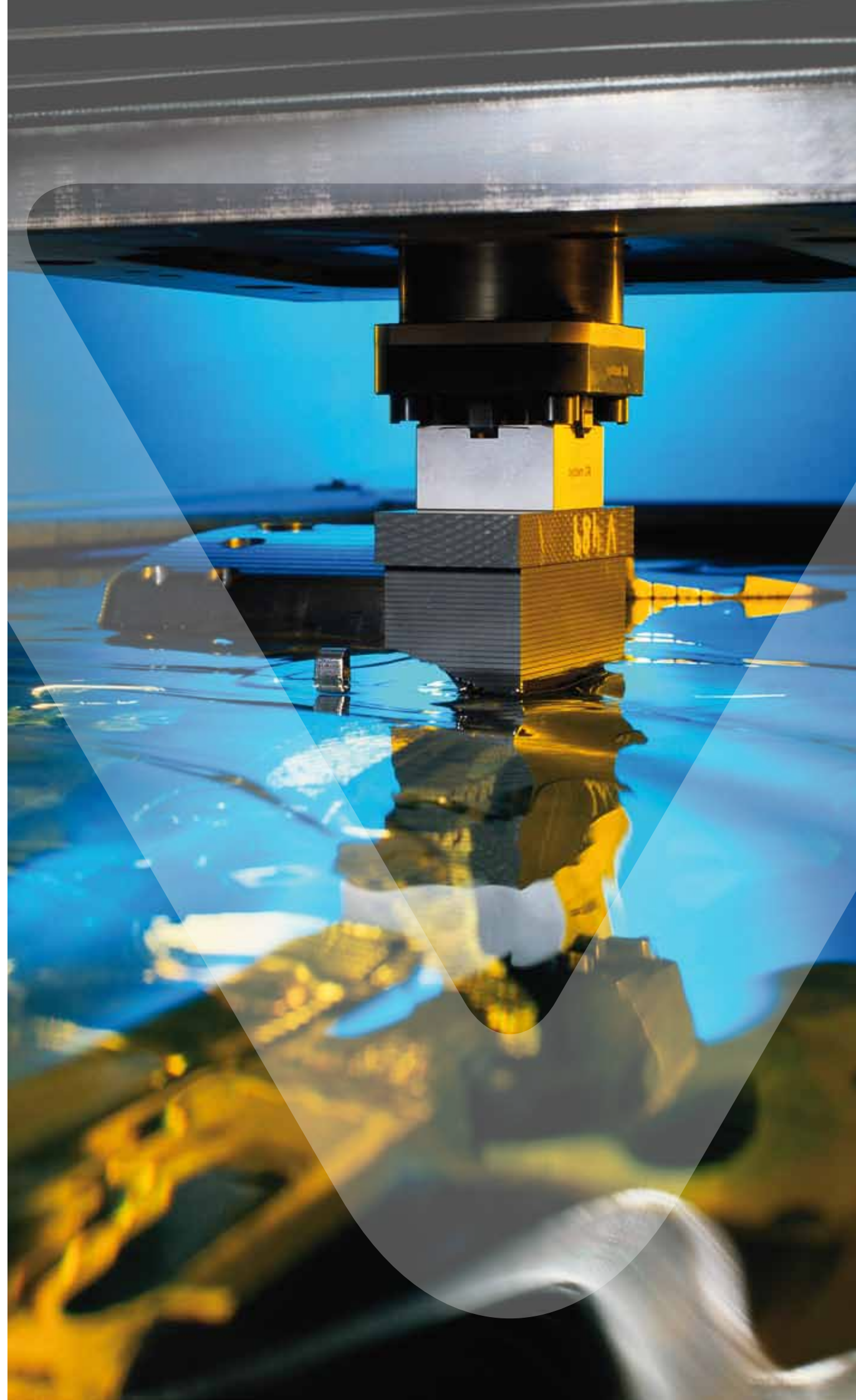
Accurate and Functional – Tool-making

Our technology park comprises state of the art 3-, 4-, and 5-axis machining centres for milling, drilling, grinding and eroding, as well as a plastics technical centre. Experienced tool makers interpret tool design data and develop tools for operation in both prototype and volume production.

Given that Farmington's technical centre, has at its disposal its own injection moulding machine, fully tested and optimized tools can be delivered. Thereby the customer's volume production start-up period can be reduced.

Competencies and Skills

- Feasibility study and tool consulting
- Moldflow
- Product optimization (in CATIA V5)
- Tool design (in CATIA V5)
- CNC-programming (Tebis)
- Tool manufacturing
- Compact and 2-component injection moulding, back-injection and gas injection technologies
- Tool dimensions till 3000 x 2000 mm and 40 to total weight
- Test, adjustment and optimization
- Start-up of tools (till 3200 to clamping force)
- Manufacture of pilot and small series
- Maintenance and repair of tools



“Just-in-Time” Volume Production, Assembly and Logistics

Our volume production capability enables us to manufacture vehicle components in small and medium sized production runs for, both parts and sub systems. Our assembly plant manufactures parts and assembles sub-assemblies and, thanks to perfectly tuned logistics, they can be delivered, on time to our customers production lines. Our particular strength lays in the manufacture, processing and assembly of high quality plastic parts.

Production Technology

- Die-casting
- Vibration welding
- Ultrasonic welding
- Splicing
- 5-axis mill cutting



Security made by Farmingtons – Armoured Vehicles

Based on the exacting development and manufacturing standards of the automobile industry, armoured vehicles, of the highest quality and ballistic integrity are produced at Farmingtons. The foundation for this development is the high performance characteristics of the design tool CATIA V5.

The production of these vehicles takes place under strict manufacturing conditions and with the application of certified and traceable high quality ballistic materials. Farmingtons is a certified OEM for armoured vehicles up to the highest civilian ballistics class VR 7.

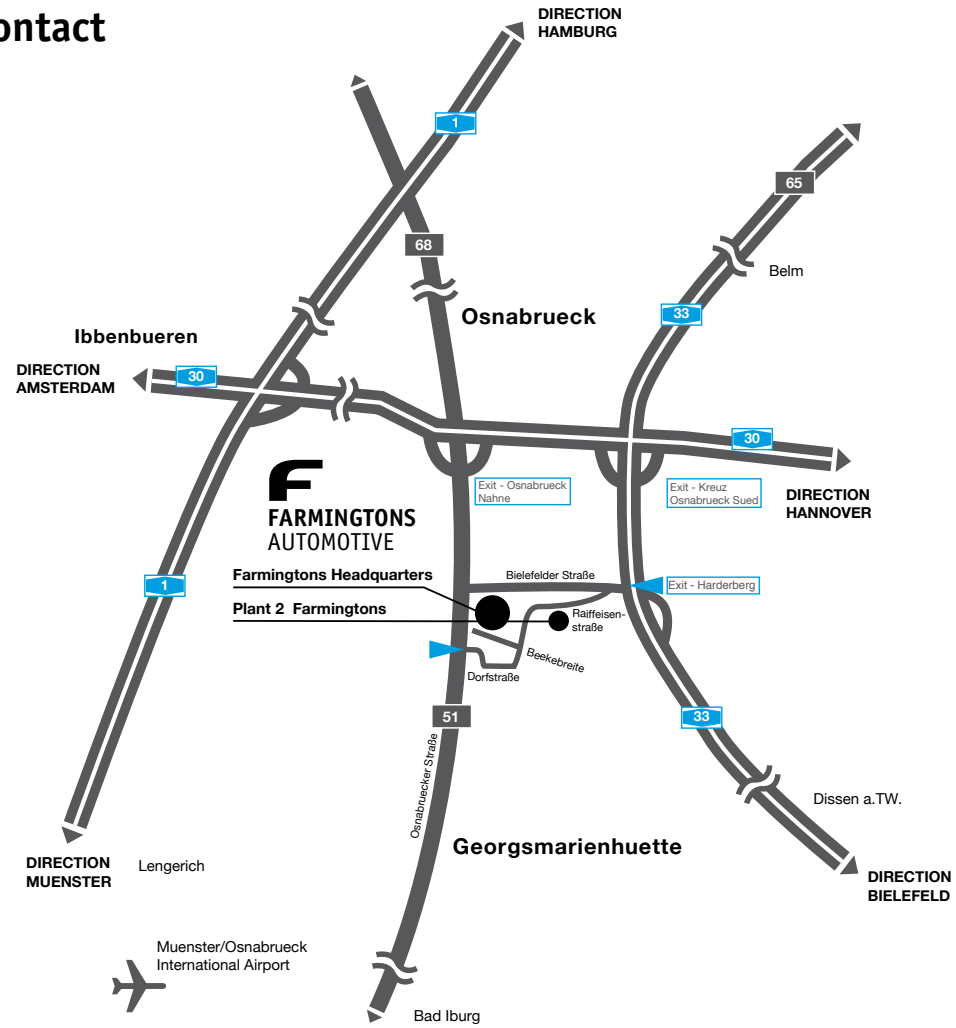
The vehicles are tested under the toughest conditions in accordance with the BRV 1999 code laid down by the State's Ballistics Department. Our infrastructure is high-powered and our processes fully optimized. Up to 250 armoured vehicles leave our assembly and production lines annually, which is able to be extended, at relatively short notice, up to 450 vehicles.

Competencies and Skills

- Development and manufacture of armouring solutions up to ballistics class VR7 and Stanag 3.
- Development and manufacture of armoured vehicles in runs of low numbers (factory produced).
- Development and manufacture of prototypes and models.
- Development and manufacture of armouring components and modules, for example, fully finished doors, armouring kits, mine protection solutions.
- Quality assurance with modern measurement technology.



Contact



Farmingtons Automotive GmbH

Beekebreite 18-20
49124 Georgsmarienhütte
Germany

Tel: +49 (0) 5401 / 490-0
Fax: +49 (0) 5401 / 42705



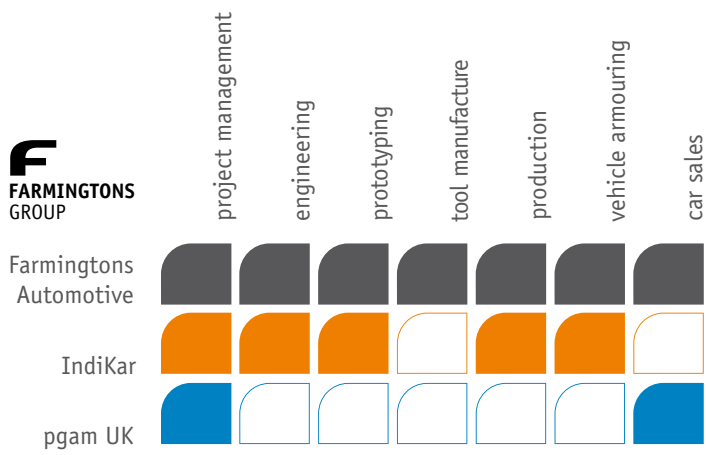
Farmingtons Automotive GmbH Branch Wolfsburg

Heinenkamp 28
38444 Wolfsburg
Germany

Tel: +49 (0) 5308 / 70795-0
Fax: +49 (0) 5308 / 70795-299

info@farmingtons-automotive.com
www.farmingtons-automotive.com





www.farmingtons-automotive.com

www.farmingtons-group.com

© Farmingtons Automotive GmbH 8/2011/en.