

AFS Advanced Fastening Solutions GmbH

About this organisation

Machine translation

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

We optimise your connections for more value. Our expertise lies particularly in the analysis, design and calculation of bolted connections, so that your bolted connections and the bolting environment have the lowest possible weight with complete robustness during realisation.

We offer: - System engineering: Experimental analyses of load-deformation behaviour, assembly behaviour and preload force development (e.g. with self-developed strain gauge screws). - Complex simulations: with various FEM packages (e.g. ABAQUS) it is possible to numerically map the load-deformation behaviour, self-unscrewing and, more recently, the screw-in behaviour of self-tapping screws. - Software engineering: Development of unique software tools for screw calculation. From the free mobile app 'Screw-Designer basic', to the comprehensive non-linear programme package 'Screw-Designer v2.0' for calculation experts, to customised solutions for integration into your company environment. - Active seminars: Training and further education in the field of screw design and calculation.

Am Gambachswieher 43
57258 Freudenberg
North Rhine-Westphalia
Germany
www.afs-engineering.de



Organisation type

Small or medium-sized enterprise

Sector



Others: Verbindungstechnik;
Schraubenverbindungen

Employees

Up to 9

Turnover

Up to €2m

Funding

n/a



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Main areas covered	Screw connections, General connection technology, Components and structures
Infrastructure	Experimental testing technology, FEM licences and computer capacity, Software for screw calculation
Certifications	
Keywords	Screw connections, Connection technology, Experimental trials, Software, Finite element method (FEM)
Memberships	

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products			
Software & databases, Others (Sensorically measuring (DMS) screws)	✓	✓	✓
<i>Services & consulting</i>			

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout Lightweight construction concepts, Lightweight material construction	✓	✓	
Functional integration Sensor technology	✓	✓	✓
Measuring and testing technology Component and part analysis, Visual analysis (e.g. microscopy, metallography), System analysis	✓	✓	
Modelling and simulation Loads & stress, Life-cycle analysis, Optimisation, Structural mechanics, Reliability validation, Others (Tools for screw calculation, FE simulations)	✓	✓	✓
<i>Plant construction & automation</i>			
<i>Recycling technologies</i>			

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing			
Coating (surface engineering)			
Fibre composite technology			
Forming			
Joining			
Screwing	✓	✓	
Material property alteration			
Primary forming			
Processing and separating			
Textile technology			

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
<i>Biogenic materials</i>			
<i>Cellular materials (foam materials)</i>			
Composites			
Carbon-fiber reinforced plastics (CFRP)	✓		
<i>Fibres</i>			
<i>Functional materials</i>			
Metals			
Aluminium, Magnesium, Steel, Titanium	✓		
<i>Plastics</i>			
<i>Structural ceramics</i>			
<i>(Technical) textiles</i>			

Contacts

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Contacts

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