

About this organisation

Machine translation

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

We are developing the cars of the day after tomorrow! We are a recognised development partner to the automotive industry. We develop components and assemblies for our customers in the areas of interior, exterior, body, powertrain and calculation. Our project management guarantees smooth co-operation.

csi entwicklungstechnik GmbH's strengths lie in the pre-development and development, design, layout and calculation of vehicle assemblies, structural parts and surface parts (Class A, Class B) made of any plastics and metals, from concept to series production, with a focus on lightweight construction and sustainability. Due to the large number of materials and manufacturing processes, but also due to the ambitious lightweight construction targets of car manufacturers, with which we are confronted on a daily basis, we have a large pool of knowledge with regard to geometric, conceptual and material lightweight construction as well as sustainable material use (Cradle 2 Cradle, C2C). As part of our development projects, we carry out comparisons and selections of application-appropriate materials with regard to lightweight construction and sustainability. We are also skilled in structural analyses, topology optimisation, fibre composites, foaming, 3D printing, multi-material mix (...)

Robert-Mayer-Str. 10
74172 Neckarsulm
Baden-Württemberg
Germany

csi-online.de



Organisation type

Large enterprises

Sector



Employees

500 and more

Turnover

n/a

Funding



csi entwicklungstechnik GmbH

About this organisation

Main areas covered	FEM, CAD, FVK, CFK, FGL, Design, topology optimisation, 3D printing, bionics, lattice structure, Multi-material mix, new materials, Material substitution, shape memory
Infrastructure	FEM, Optistruct, Hyperworks, Crash, CAD, CATIA, NX, FGL, vehicle conversion, Concept workshop, rapid prototyping, Topology, bionics, 3D printing, Network, construction, design
Certifications	ISO 9001-2008
Keywords	FEM, CAD, development, design, Topology optimisation, FRP, CFRP, GFRP, 3D printing, rapid prototyping, SMA, Multi-material mix, construction, NX, CATIA, shape memory, Optistruct
Memberships	

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Offer			
Products Parts and components, Software & databases, Systems and end products, Others (Prototypes, vehicle conversions, concepts, software for CATIA (macros), stand-alone software)	✓	✓	✓
Services & consulting Consulting, Testing and trials, Engineering, Prototyping, Simulation, Technology transfer, Others (Design, development, layout, calculation of vehicle assemblies (interior, exterior, body), structural parts, surface parts (Class A, Class B) made of any plastics and metals with regard to lightweight construction and sustainability.)	✓	✓	✓

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Field of technology			
Design & layout			
Lightweight design, Hybrid structures, Lightweight construction concepts, Lightweight material construction, Others (Design, development, pre-development of vehicle assemblies (interior, exterior, body), structural parts, surface parts (Class A, Class B) made of any plastics and metals with regard to lightweight construction and sustainability.)	✓	✓	✓
Functional integration			
Actuator technology, Sensor technology, Thermal activation, Material functionalisation, Others (Shape memory alloys, SMA, SMA, packaging and installation space analyses in relation to sensors and actuators)	✓	✓	✓
<i>Measuring and testing technology</i>			
Modelling and simulation			
Crash behaviour, Loads & stress, Optimisation, Processes, Structural mechanics, Materials, Reliability validation, Others (FEM, calculation, topology optimisation, shape optimisation, topography optimisation, Optistruct, Altair Hyperworks, plastic injection moulding, simulation, injection moulding, Moldex 3D, crash, head impact, pedestrian protection, PamCrash)	✓	✓	✓
<i>Plant construction & automation</i>			
Recycling technologies			
Recycling, Upcycling, Others (Projects in the field of Cradle 2 Cradle, C2C, circular processes, technical cycle, biological cycle, development with sustainable materials, bioplastics, sustainability, compostable materials, biocovers, renewable raw materials)	✓	✓	

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	Research	Development	Manufacturing & Supply
Manufacturing process			
Additive manufacturing 3D printing, Selective laser melting (SLM, LPBF, ...), Selective laser sintering (SLS), Stereolithography, Others (Design, development, layout, calculation of 3D printed components, in-house 3D printers for prototypes, samples, printing of results from topology optimisation, lattice structures)	✓	✓	✓
Coating (surface engineering) Galvanising, Painting, Others (Construction, development and design with galvanised and painted plastic components. Expertise in the area of trim panels.)		✓	
Fibre composite technology Fibre spraying, Filament winding, Manual lamination, Resin infusion process, Resin transfer moulding, Pre-preg processing, Vacuum infusion, Others (Design, development, layout, calculation of fibre composite components, monocoque, structural parts, surface parts (Class A, Class B), draping analysis, fabric, scrims, prepreg, RTM, organosheet, SMC)	✓	✓	
Forming Others (Design, development, layout and calculation of complete vehicle bodies, sheet metal parts)		✓	
Joining Others (Workshop for prototypes, vehicle conversions, concepts, samples, construction, development, design and calculation with a wide range of joining materials (screws, rivets, snap nuts, ...))		✓	✓
<i>Material property alteration</i>			
Primary forming Injection moulding, Others (Design, development, layout and calculation of injection moulded and blow moulded components)	✓	✓	

Overview of lightweighting expertise

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	Research	Development	Manufacturing & Supply
Material			
Biogenic materials Bioplastics, Biocomposites, Wood, Others (Construction, development and design with bioplastics, biocomposites and evaluation or comparison of these with regard to Cradle 2 Cradle, C2C. Expertise in the area of decorative panels veneered with wood.)	✓	✓	
Cellular materials (foam materials) Others (Construction, development, design and calculation of EPP components, XLPE air ducts)		✓	
Composites Basalt fibre-reinforced plastic, Glass-fiber reinforced plastics (GFRP), Carbon-fiber reinforced plastics (CFRP), Natural fibre reinforced plastics (NFRP), Others	✓	✓	
<i>Fibres</i>			
Functional materials Shape memory materials, Others (Intensive application research in the field of shape memory alloys, SMA including development and production of prototypes in house.)	✓	✓	✓
Metals Aluminium, Magnesium, Steel, Others		✓	
Plastics Thermoset plastics, Elastomers, Thermoplastics, Others (Construction, development, design of vehicle components, structural parts, surface parts (Class A, Class B) made of plastics of all kinds.)	✓	✓	
<i>Structural ceramics</i>			
<i>(Technical) textiles</i>			

Contacts

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