Product Lines

SIMUFACT SOLUTIONS FOR MANUFACTURING PROCESS SIMULATION



simufact forming
Forming Simulation

simufact welding
Welding Simulation

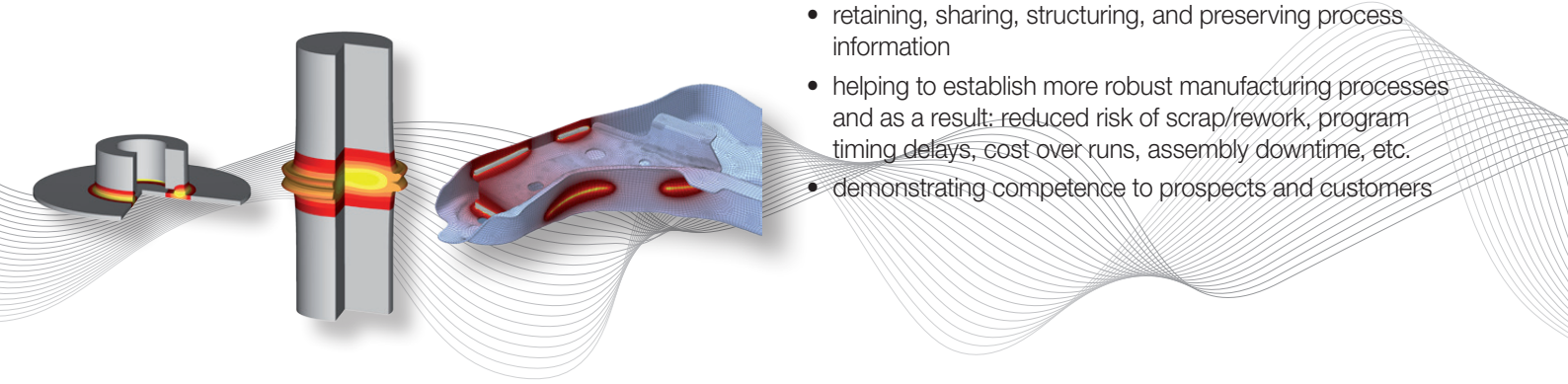
simufact additive
Additive Manufacturing Simulation

simufact
Simulating Manufacturing
MSC Software Company

Product Lines

Your challenges

- Inefficient manufacturing processes
- Finding the right manufacturing process chain depending on production type, batch sizes, existing equipment
- Too long process development (time-to-market issue)
- Too high costs, cost competition from alternative manufacturing processes
- Lack of knowledge about the processes at an early design phase
- Poor knowledge management (related to personnel fluctuation and retirement)
- Meet the quality and performance requirements of your customer's specification



Our solution approach

Shift time- and cost-consuming shop floor try-outs into more efficient virtual try-outs.

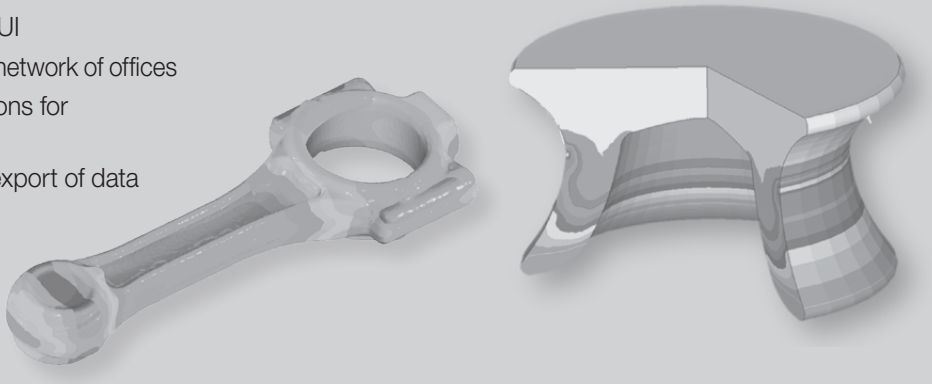
Manufacturing simulation helps you determine the best manufacturing concept (optimization with regards to costs, quality, etc.) by …

- reducing process development costs / manufacturing costs
- reducing development times = shorter time-to-market, higher on-time delivery rate
- helping to achieve the profitability (cost estimation)
- providing early understanding and deeper knowledge about manufacturing processes
- retaining, sharing, structuring, and preserving process information
- helping to establish more robust manufacturing processes and as a result: reduced risk of scrap/rework, program timing delays, cost over runs, assembly downtime, etc.
- demonstrating competence to prospects and customers

Why Simufact?

Simufact provides …

- the largest team of manufacturing experts dedicated to process simulation
- most accurate results with an easy-to-use GUI
- local support based on the largest worldwide network of offices
- easy-to-use, dedicated and integrated solutions for widest fields of application
- unique process chain capabilities including export of data into third-party systems





Broad portfolio with special solutions

Whether you are interested in bulk metal forming, sheet metal forming, mechanical joining, welding operations, or additive manufacturing: Simufact provides modular solutions.

Our three product lines **Simufact Forming, Simufact Welding, and Simufact Additive** cover a broad and ever growing range of forming, joining, and additive manufacturing processes: forging, cold forming, rolling processes including ring-rolling, sheet metal forming, mechanical joining, heat treatment, all common welding processes, and newly powder bed fusion AM processes.

Our product lines' modular approach embodies our product philosophy: A special manufacturing process needs special functionality – that's why we provide process-specific modules, in contrast to general-purpose tools that strive to cover all processes.

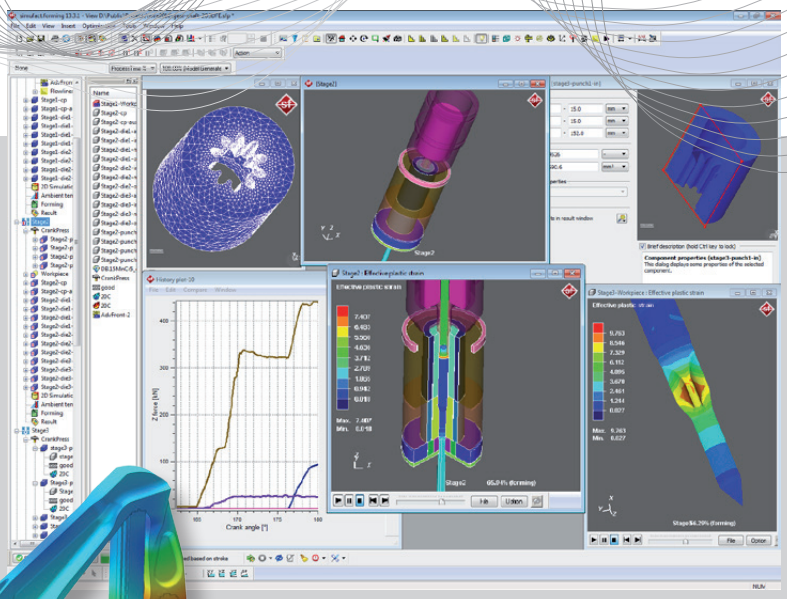
Software for engineers – in industry and research

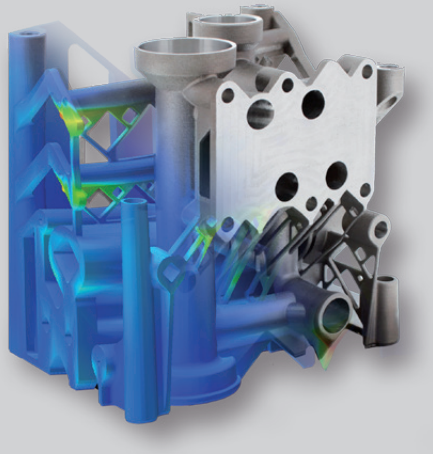
The Simufact software architecture ensures a well suited solution for shop-floor oriented users as well as for scientific experts. As modern simulation tools, our products are designed for manifold use in manufacturing departments and/or design departments: In the hands of a production expert or a development engineer, Simufact software helps you understand and optimize the manufacturing processes. In automotive assembly Simufact software is employed to validate and optimize joining processes for car body construction. Other companies use Simufact for developing new manufacturing processes or for method planning.

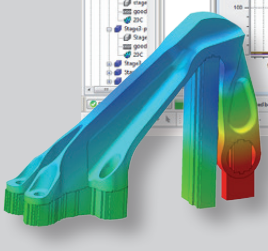
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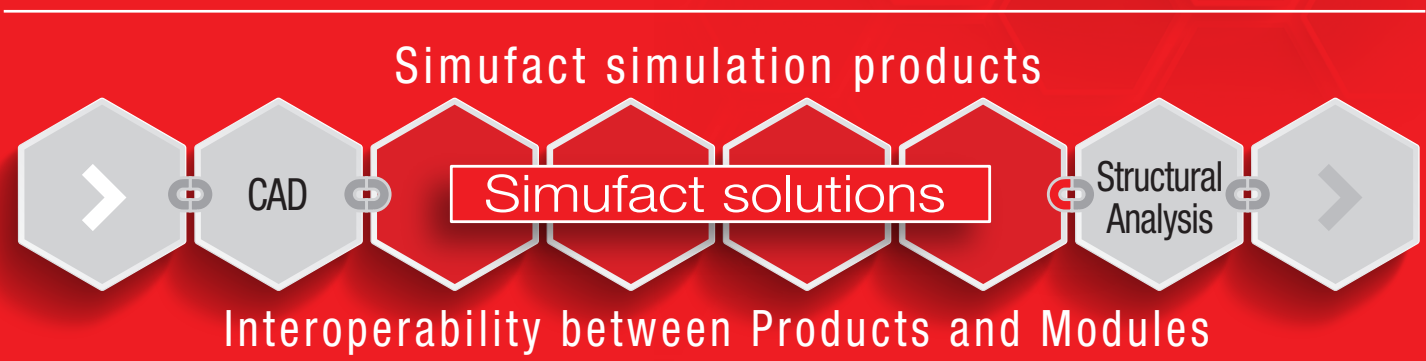




+ Modular approach ensures flexibility and scalability

Choose the modules and their functions relevant to your needs. This approach is cost effective and can easily be adapted to changing demands. While the application modules contain process-specific functions, the additional modules included in the product lines offer further functionality that is either needed for your daily use of the software, or increase the product performance.
Simufact can also be flexibly scaled to meet the scope of your work and can be supplemented by additional modules for special applications. Optimized processes with higher product quality within a very short time are the solution for our customers in a competitive, international market.





Precondition for process chain simulation

Simufact software provides interoperability capacities: Results of single simulation steps can easily be transferred to the succeeding operation (from application module to application module and from product line to product line). So the software helps you take into account such aspects as the change of material properties between the process steps while simulation results benefit from a high level of accuracy and a very low error rate. In additive manufacturing, simulation results flow back into the product design / or in order to reduce distortion and residual stress.

You can also link the software to third party products in order to use the simulation results e.g. for subsequent structure simulation. Considering e.g. the forming or joining history of your parts helps you bring your simulation closer to reality.

Please find detailed information on Simufact products on our website:
www.simufact.com

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Tempowerkring 19 · 21079 Hamburg, Germany · Phone: +49 (0) 40 790 128-000 · Fax: +49 (0) 40 790 128-199 · info@simufact.com · www.simufact.com