



MADE IN GERMANY

SINTERING
YOUR IDEAS



COMPONENTS FOR DIVERSE REQUIREMENTS

At SIMON Sinterlutions, we use special pressing and sintering processes to manufacture high-quality, complex parts as ready-to-install components and assemblies. Our products are used successfully all over the world: in the automotive industry, power tools, drive components, hardware components for the furniture industry, mechanical engineering and numerous other highly specialized fields of application. With our high quality solutions we are your perfect partner for developments in the field of component optimization. In the area of series production of functional components and assemblies, the sintering process represents a worthwhile alternative for many common technical applications. It offers numerous advantages, particularly in terms of resource conservation, economy and savings in material and weight. SIMON Sinterlutions has extensive experience in all processes such as calibrating, surface treatments, annealing and mechanical machining and is your specialist for small, medium and large series for products made of iron powder.

Sintered components – our core competence for over 50 years

- Uncomplicated communication
- Expert advice and top product quality are a given
- We support the entire development process of your components
- Quality "Made in Germany"
- Our toolmaking department, SIMON Tooling, builds your press tools
- The SIMON GROUP materials laboratory accompanies your products from raw material to series production
- Everything close at hand: Toolmaking, laboratory, R&D, quality assurance, production, and logistics are all located on the SIMON GROUP premises
- Stability: With INDUS Holding AG, to which we have belonged since 1994, we have a strong partner at our side

Challenge us!

MANUFACTURING FOCUS AREAS

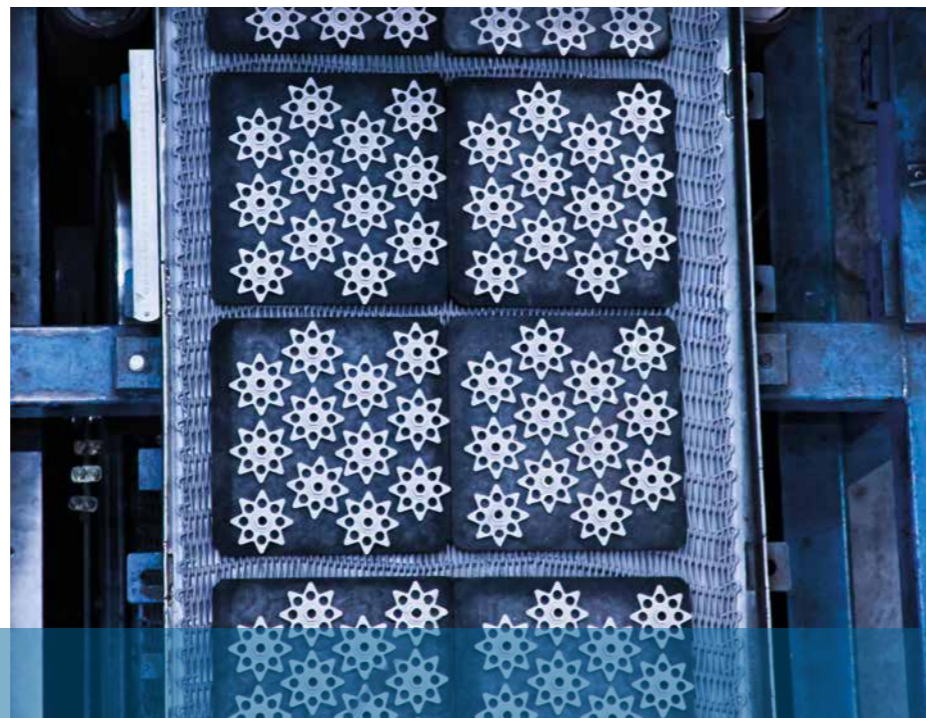
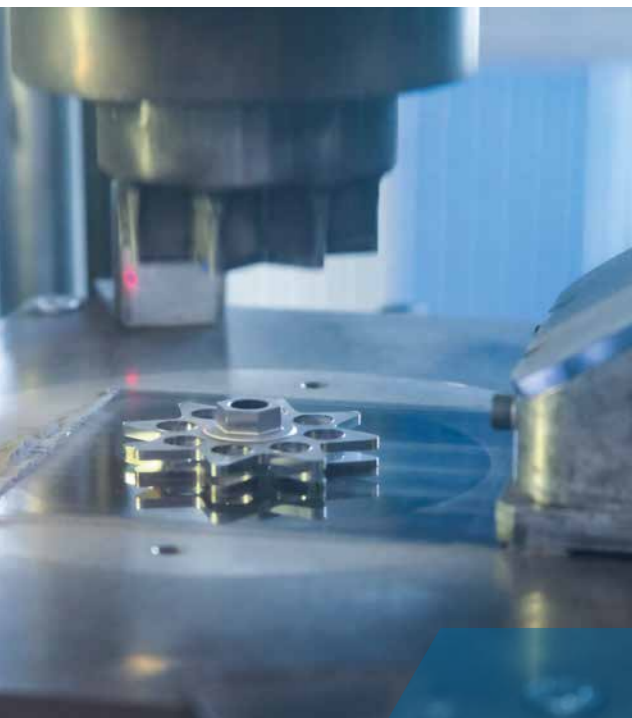
1 POWDER PRESSING

At SIMON Sinterlutions, we have a machine park with a wide range of powder and calibration presses.

This allows us to reliably and precisely meet the most diverse requirements for your component.

Our numerous mechanical, hydraulic, and servo-electric multi-level presses enable pressing forces of up to 1600 kN.

This makes us your specialist for small to medium-sized components.



2 SINTERING

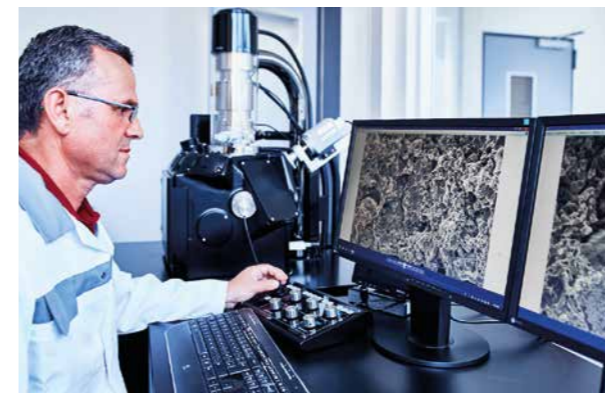


Our sintering process takes place in modern sintering plants qualified according to CQI-9 requirements.

3 POST-PROCESSING

For subsequent finishing, we have oil impregnation systems and machines for surface treatments such as vibratory finishing or scrubbing. Specialized equipment for mechanical processing and the production of complete assemblies rounds out our machinery. In addition, we offer further finishing steps such as machining, coating, and additional heat treatment.

With SIMON Sinterlutions, you get everything from a single source.

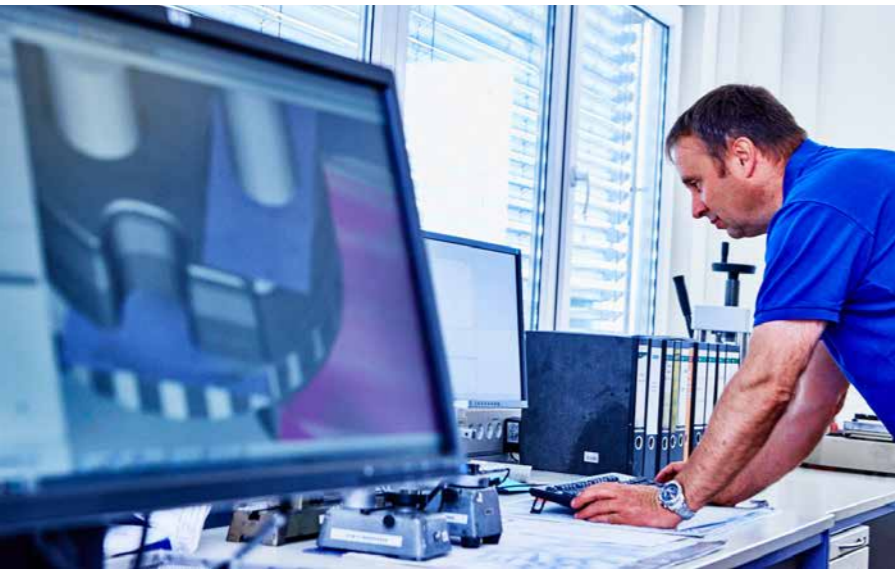


Part of our core competencies: Our in-house toolmaking and the SIMON Group's materials laboratory support us in our projects and at all stages of production. We conduct analyses using state-of-the-art equipment. This includes, for example, an ICP spectrometer for elemental analysis, various light microscopes for evaluating microstructures, and a scanning electron microscope.



QUALITY MANAGEMENT AND SUSTAINABILITY

Our aim is to manufacture the highest quality products based on comprehensive quality assurance. Therefore, at SIMON Sinterlutions, we carefully analyze all incoming raw materials and also conduct rigorous testing of our own powder blends and granules. All our semi-finished and sintered parts are also subject to continuous testing. This includes measurements such as hardness, carbon content, and magnetic properties.



CERTIFICATIONS



WE FOCUS ON TRANSPARENCY AND TAKE RESPONSIBILITY



We understand sustainable practices as the interplay of ecological responsibility, economic foresight, and social commitment.

At the heart of our approach is a manufacturing process that is precise and resource-efficient. By using modern sintering technology, we minimize energy and material consumption without compromising product quality or performance.

We utilize the Integrity Next and Supplier Assurance platforms.

These platforms centrally collect and regularly update evidence of our compliance with environmental and social standards, making it accessible to our business partners.

PERFECTLY SHAPED FUNCTIONALITY: INDUSTRY OVERVIEW

AUTOMOTIVE

At SIMON Sinterlutions we have many years of experience as an automotive supplier. We manufacture molded parts such as gears and bearings according to customer specifications. Sintered parts offer significant advantages over other forming processes in terms of precision and reproducibility.

Product Examples

- Electric motor components
- Gearbox parts
- Steering system parts
- Seat adjustments
- Seat belt buckle components
- Truck brake components



POWER TOOLS

Various solutions from SIMON Sinterlutions are used in the power tool sector. The advantage of our molded parts, gears, and bearings lies in their ability to be optimally adapted to specific requirements. This is why they are found in a wide variety of products from leading manufacturers.

Product Examples

- Chainsaw components
- Leaf blowers
- Cut-off saws
- Brush cutters
- Hedge trimmers

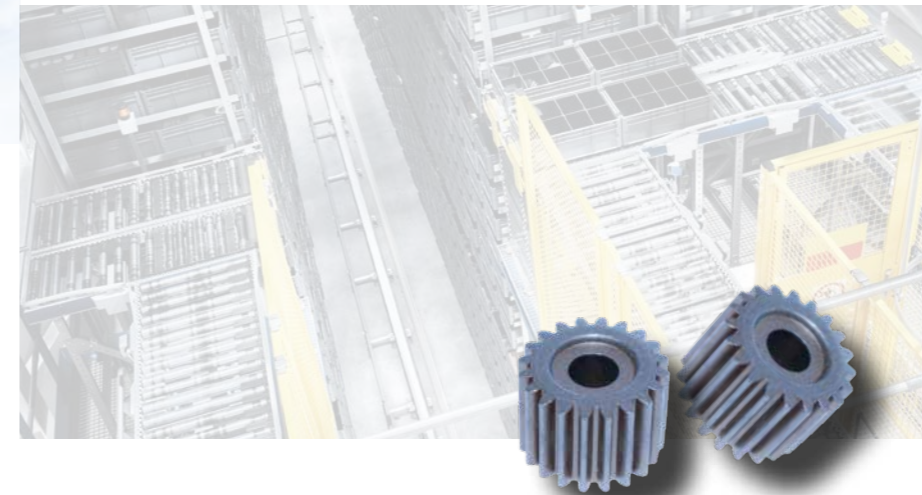


MECHANICAL ENGINEERING

In mechanical engineering, „Made in Germany“ quality is a compelling argument. The same applies to our comprehensive support when it comes to precisely tailoring components to customer needs.

Product Examples

- Plain bearings for control technology
- Plain bearings for automation technology



DRIVE COMPONENTS

Sintered products are becoming increasingly important in series-produced drive components for intralogistics. With the precision and reproducibility of our products, we can develop the perfect solution for you too.

Product Examples

- Components for planetary gearboxes
- Drive rollers for parcel sorters

CONSTRUCTION AND FURNITURE INDUSTRIES

Our sintered products are ideally suited for safety and comfort applications. High quality and consistent reproducibility for medium and large production runs ensure that our solutions are increasingly being incorporated into window and door locks and adjustable furniture.

Product Examples

- Bolts
- Toothings
- Latches



THE MANUFACTURING PROCESS



1

POWDER METALLURGY

- Steel powder



2

POWDER PRESSING

- 26 Powder presses
- Pressing forces 40 – 1600 kN
- Mechanical presses
- Hydraulic multi-plate presses
- Servo-electric multi-plate presses
- Component density up to 7.3 g/cm³
- Presses with automatic handling systems



3

SINTERING

- 4 belt furnaces
- Direct hardening
- Tempering/ annealing furnace



4

BARREL FINISHING

- Deburring
- Rounding edges



5

CALIBRATION

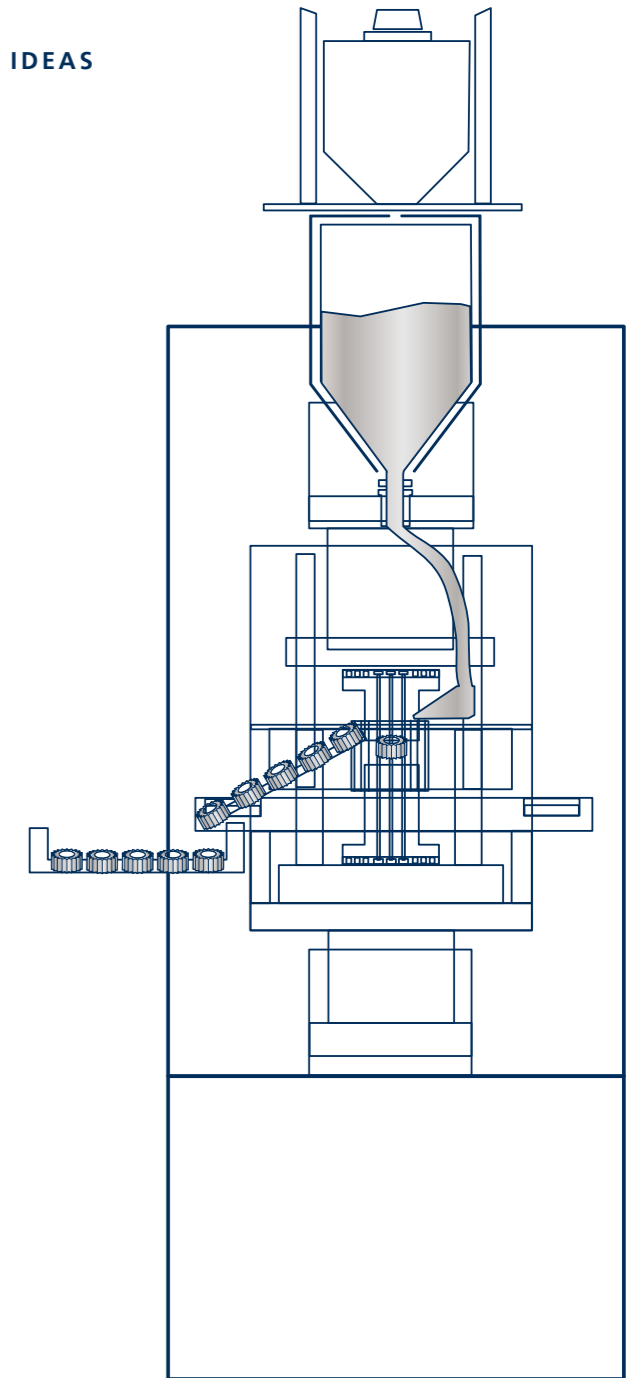
- 10 Calibrating presses
- Press forces 80 -1200 kN
- Tolerances up to IT 7
- Additional compaction process



6

POST-PROCESSING

- Parts cleaning
- Corrosion protection solutions
- Mechanical processing steps
- Infiltration/impregnation for endurance properties
- Hardening



**FURTHER OPTIONS
AVAILABLE ON REQUEST.
PLEASE CONTACT US.**



THE IMPLEMENTATION OF YOUR IDEAS



1

YOUR IDEA

- Your CAD drawing
- Your concept
- Your vision



2

CONSULTING & SUPPORT

- Personal feedback on customer requirements
- Many years of experience in powder press toolmaking and powder metallurgy
- Close collaboration with your technical departments
- A shared path to cost-optimized components



3

DEVELOPMENT OF SOLUTIONS

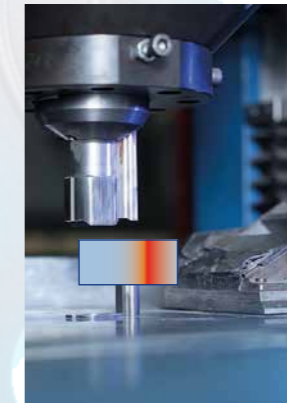
- Optimized suggestions
- Shared measurement and testing systems



4

IN-HOUSE TOOLMAKING

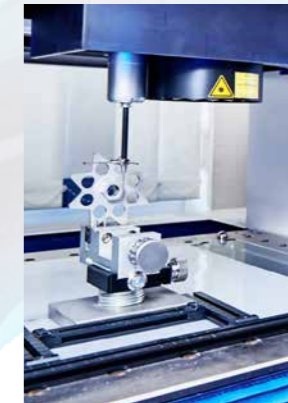
- Short lead times for tool manufacturing and repair
- Flexible response
- Direct support



5

PRODUCTION START

- Project management
- Secure implementation



6

CONSISTENT QUALITY

- 3D Measuring machine
- Materials analysis
- Metallography lab
- Scanning electron microscope
- In-house developed automated testing systems



WE MEET THE HIGH DEMANDS OF OUR CUSTOMERS FROM VARIOUS INDUSTRIES AND ENSURE THAT YOUR SERIES COMPONENTS MAINTAIN CONSISTENTLY HIGH-QUALITY PROPERTIES.



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