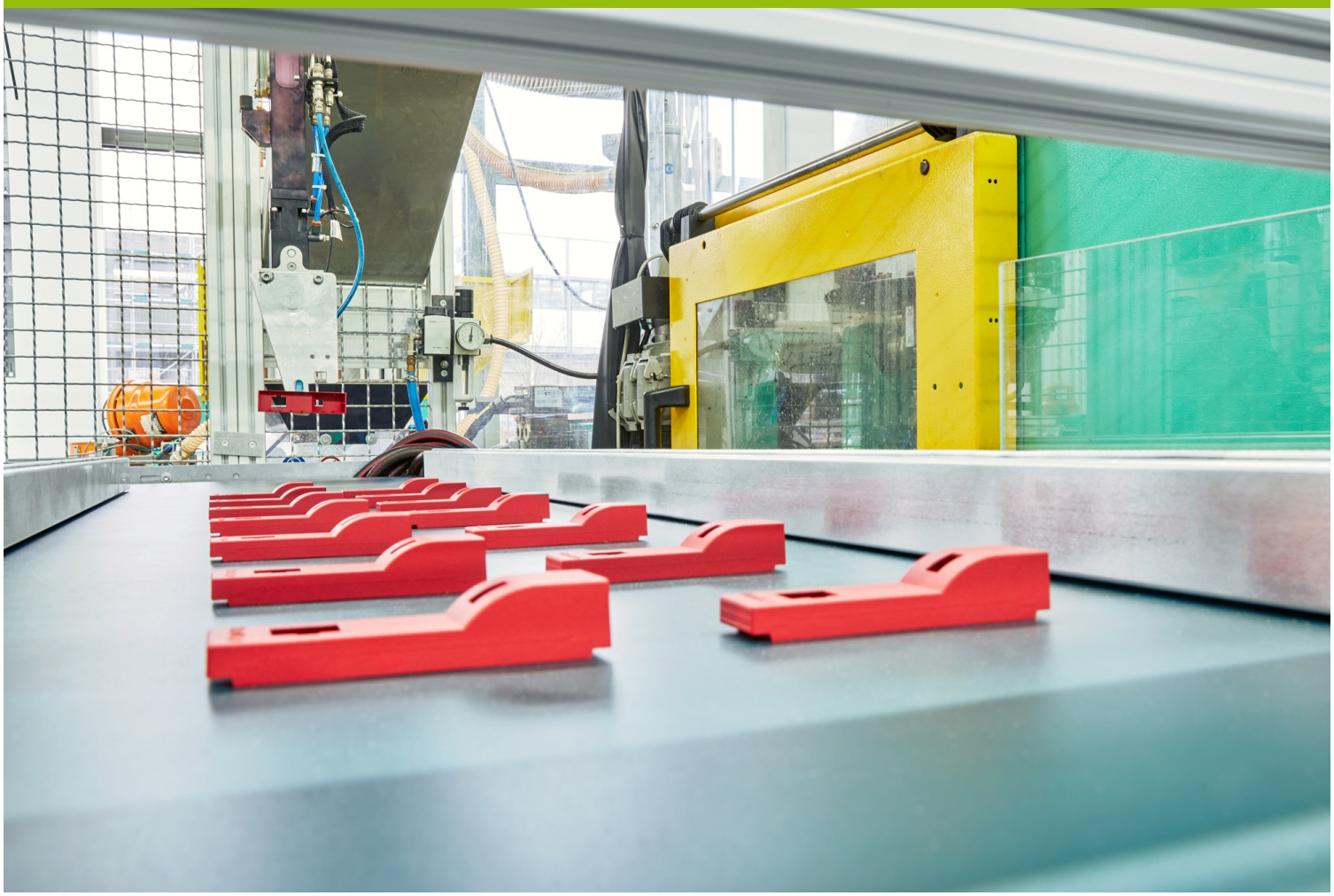
Serial Production in Additive Manufacturing

- Certified processes and quality assurance
- Production directly from 3D data
- Reduces time to market



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Additive Serial Production by PROTIQ

While industrial 3D printing has been used in recent years primarily for rapid prototyping and for producing complex custom-made products, entire product series can now be manufactured additively. The 3D printing service provider PROTIQ offers additive series production in tested quality.

What is additive serial production?

Additive manufacturing involves various production processes, in which components are built up in layers by a 3D printer instead of, for example, by milling them out of a block of material. The most widely used processes in the industry are selective laser melting and selective laser sintering.

Until a few years ago, additive manufacturing was used predominantly to construct prototypes. Due to technological progress and the increasing demand for customized or specialized components, however, companies are increasingly turning to the additive serial production of their products. In addition to aerospace and medical technology, additively manufactured 3D components are highly popular, above all in the automotive industry and in mechanical engineering.

Innovative and resource-saving

Industrial 3D printing is particularly advantageous in the production of complex parts, as any geometrical shape can be produced without the aid of shaping tools. As a result, 3D printing gives designers extraordinary freedom in regards to design, for example when redeveloping existing components based on their ideal basic shape Topology optimization

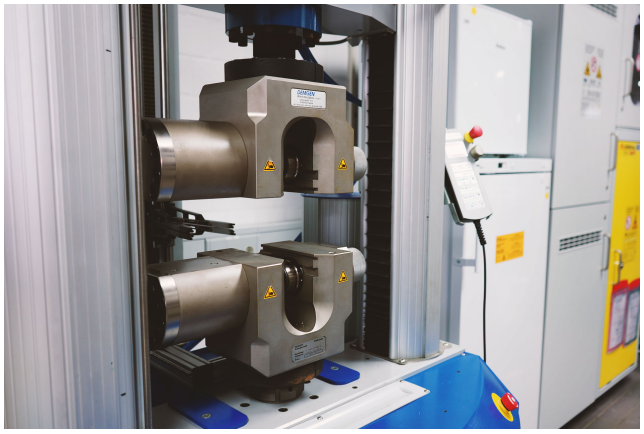
Desired modifications in the design or in the finished product can with very little effort be made directly on the 3D model and implemented immediately. The layered structure of the 3D object keeps excess material to a minimum, thereby conserving resources.

Advantages of additive serial production by PROTIQ at a glance

- Economical production beginning at a batch size of 1
- Production of individual components without additional effort
- Resource-saving through material savings
- Wide freedom of design
- Time and cost savings through direct production without forming tools

Quality assurance procedures at PROTIQ

Customized quality assurance



Competition requires that quality meets the highest standards. To ensure you can always rely on the quality of your 3D objects, we can offer you customized quality assurance. Before the start of and during the additive serial manufacturing, we are happy to determine the following for you:

- Component density (impermeable sintered metal materials and hard metals) using the Archimedean method based on DIN EN ISO 3369
- Component hardness (of rubber, plastic and metals) using the Vickers method based on DIN EN ISO 6507 and the Shore hardness method based on DIN EN ISO 868
- Static strength parameters using the tensile test method based on DIN EN ISO 6892 and DIN EN ISO 527
- Surface roughness using the profile method based on DIN EN ISO 4287
- Dimensional accuracy using CT scan and stripe light projection
- Microstructure and micrographs using metallographic analysis

This guarantees a qualified and standardized assurance of your individual or series production.
For individualized test procedures customized for your application, please contact us - service@protiq.com.

Customized offer for additive serial production

Are you interested in additive serial production? Then plan the individual steps with our 3D printing experts. First, define the most important properties of the component, such as features, work environment, environment parameters, and specific requirements. Last but not least, set the dimensional tolerances and the desired reworking – and then we can start!

Request your custom offer now!

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