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- 1 Turbine wheel made of 316L stainless steel – surface as sintered.
- 2 Ring nozzle made of 316L stainless steel – surface as sintered.

## BINDER JETTING

Binder Jetting (Metal 3D-Printing) is an additive manufacturing process in which parts are built up layer-by-layer from a powder by locally printing an organic binder into each new layer that causes adhesion of the powder particles. After curing the binder, the green part is cleaned of the loose powder. In a combined furnace process, the binder is removed and the powder particles fuse together. As an alternative to sintering to full density, the green parts can be pre-sintered and infiltrated with a low-melting metal.

Printing metals using Binder Jetting offers several advantages:

- Higher building rate with significant potential for cost reduction
- Building without support structures, i.e. significantly less post processing effort
- Building without residual stresses
- Lower surface roughness and roughness independent of the build angle
- Usability of cheap MIM powders

Almost all sinterable metal powders can be processed with Binder Jetting. For the selection of suitable sintering parameters, we rely on our decades of experience in metal powder injection moulding.

### Our Offer

From material selection to the printing process, debinding and sintering to analytics, the process is performed, analysed and scientifically supported in-house. In detail we offer:

- Support in component selection and production-oriented design
- Comprehensive material and process development along the process chain
- Material-specific binder development
- Market studies and benchmarking with other AM technologies
- Trainings and workshops on Binder Jetting

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