Additive manufacturing of cemented carbide: you imagine it – we make it
3D printed cemented carbide: turn the impossible into reality

The CERATIZIT Group is a pioneer and innovation leader in carbide research, as well as in the production and application of cemented carbide parts. We always closely analyse the latest market trends so we can offer you the optimal solution for your application. That is why we have developed additive manufacturing technologies for our tried and tested cemented carbide grades which are ready to use for your product.

Additive manufacturing or 3D printing is a manufacturing process that adds layers of materials to make products from a 3D data model. Thus, this process is the opposite of the conventional production process where material is removed to create a specific form. This technology allows designers to think in completely new forms and shapes, as it pushes the limits of the production process: you imagine it, we make it.
Your advantages at a glance

The characteristics of 3D printed parts are comparable to conventionally produced cemented carbide products.

They have some significant advantages:

▲ 3D printing provides new technological possibilities to overcome the existing limitations of conventional manufacturing processes.

▲ Realisation of individual parts, from batch size 1 on.

▲ Shapes can be re-designed and optimised which is especially interesting for complex shapes or to alter properties such as weight or size.

▲ Faster production than traditional powder metallurgical shaping production as time-consuming steps like CNC machining can be eliminated. This is especially advantageous for prototyping so you can do fast tests and improve designs.

▲ The manufacturing process is sustainable as there is less waste of material.

▲ The risk of errors when designing a new product is reduced which saves a lot of money as it can become very expensive in case manufacturing equipment needs to be modified.

Furthermore, cemented carbide parts that are produced by additive manufacturing technologies can be an economical substitution for high-performance materials. Thanks to the hardness of cemented carbide, your tools and components will have a much longer tool life and your productivity will increase.

> 1.000 patents and utility models
> 200 employees in R&D
> 10 innovation awards
> > 100.000 different products
Our services for you

Our experts will be happy to assist you in the following areas:

- Simulation and modelling
- Design adaptation for additive manufacturing
- Material selection
- Additive manufacturing
  - different processes possible, depending on your requirements
- We will help you choose the right technology for your product.

Passion for cemented carbide
From the ore to the ready-to-use-tool: we manage the entire process chain

Mineral extraction
Preparation and mixing of the raw materials
Additive manufacturing
Sintering
Grinding
Quality assurance
Dispatch
Your development partner

We would be happy to work with you to create your individual 3D printed cemented carbide parts. Our expertise lies in the optimisation of product designs. Thanks to additive manufacturing, we can quickly realise your individual designs. We are looking forward to hearing about your challenges and to finding the best solution for your application.

Please contact us at am@ceratizit.com.