Aliaxis Technical Ceramics

RAPID PROTOTYPING

Prototypes made of FRIALIT®-DEGUSSIT®
High-Performance Ceramics in serial quality
Prototypes within just 2 weeks!
Rapid Prototyping using single-stage manufacturing at FRIATEC.

Rapid Prototyping is frequently associated or identified with Additive Manufacturing such as 3D Printing. However, FRIATEC uses a much more efficient single-stage manufacturing method for the production of prototypes. The FRIATEC method achieves both impressive precision (tolerance classes < 20 μm and surfaces Ra < 0.4 μm) and material properties in proven serial qualities.

A 3D volume model showing additional permissible tolerances and required surface qualities should be provided to enable fast prototyping. Alternatively, FRIATEC will develop the required volume model according to 2D drawings.
ADVANTAGES OF FRIATEC RAPID PROTOTYPING

- Max. 2 weeks delivery time
- Reliable transmission of data in CAD/CAM machining also for 3D and free geometries
- Precision machining using CNC 5-axis milling machines
- Prototype and serial with the same material properties
- Components with engineering tolerances, ready for installation

FRIATEC provides all common manufacturing methods to ensure economic serial production. A wide range of ceramic-to-metal and ceramic-to-ceramic joining methods is available. An experienced team of innovative application and production specialists supports you to obtain the best possible component design.

THE MATERIALS

- $\text{Al}_2\text{O}_3$: FRIALIT F99.7, DEGUSSIT AL23, DEGUSSIT AL24, Sintered ruby DEGUSSIT DD57
- $\text{ZrO}_2$: FRIALIT FZM, FRIALIT FZM/K, DEGUSSIT FZY, DEGUSSIT ZR25
- ZTA: FRIALIT FZT
- $\text{Y}_2\text{O}_3$: DEGUSSIT Y23

Prototypes in serial quality within 2 weeks