



*Aliaxis*



Aliaxis Technical Ceramics

## **RAPID PROTOTYPING**

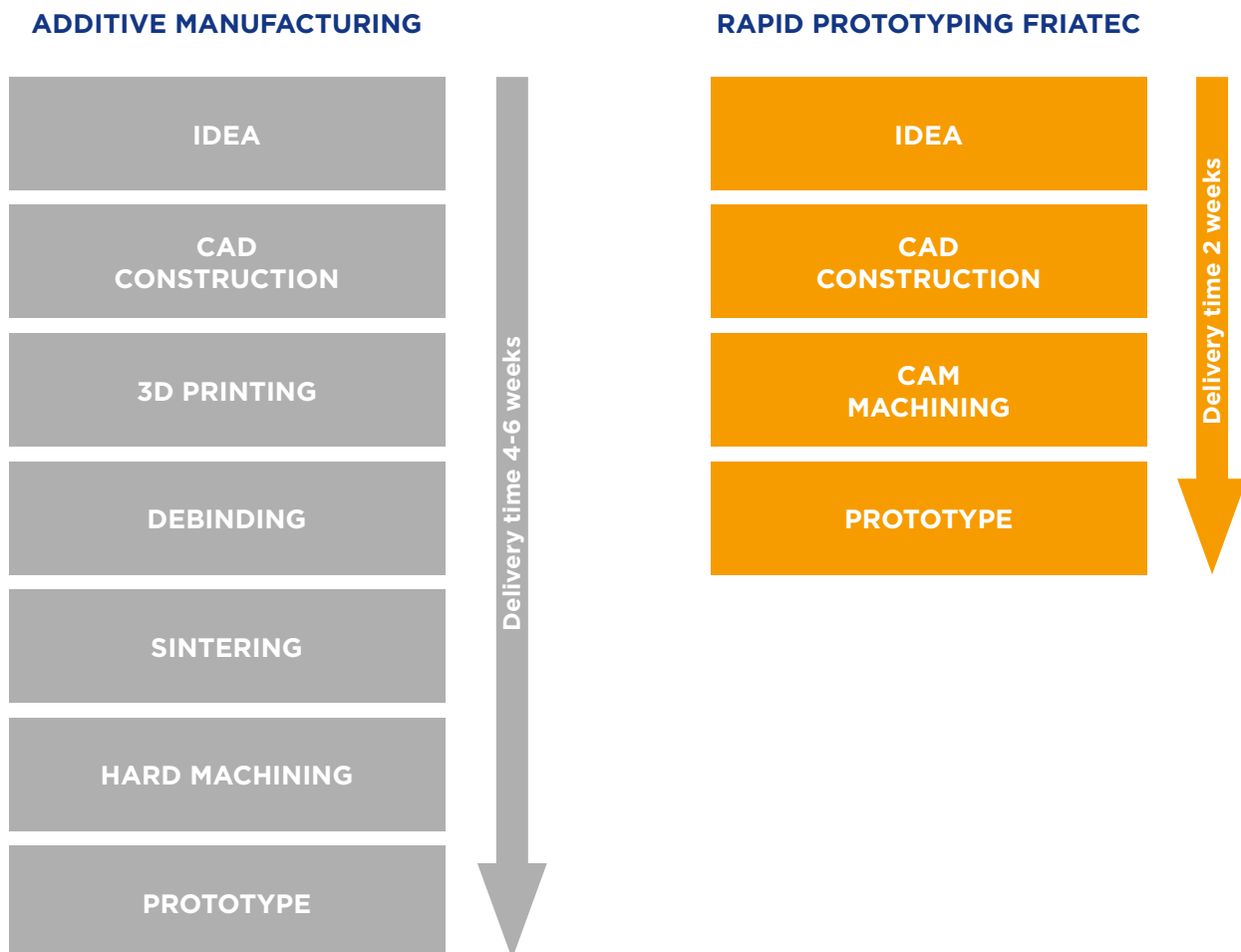
Prototypes made of FRIALIT®-DEGUSSIT®  
High-Performance Ceramics  
in serial quality

# FRIATEC AG - YOUR PARTNER IN PROTOTYPE AND SERIAL MANUFACTURING

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  $< 20 \mu\text{m}$  and surfaces  $R_a < 0.4 \mu\text{m}$ ) 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.



**Prototypes in  
serial quality  
within 2 weeks**

## **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



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