

Product information: CeraFab System



The **CeraFab System** is our answer to all questions about the industrial series production of additively manufactured high-performance ceramics. The modular design of the **CeraFab System** allows for a (cascading) combination of up to 4 production units – creating a big production system. Compared to a single machine, productivity can therefore be increased many times over while the risk of failures can be proportionally minimized. A central element of the **CeraFab System** is a database for storing and handling process data, which facilitates the seamless documentation of print jobs. Furthermore, machine and process monitoring is carried out in real time. The current generation of projectors with WQXGA resolution (2560×1600 pixels) ensures the absolute precision of the printed component (particularly in the micrometer range), in combination with an objective lens specially developed for the process. The optical components of the **CeraFab System** are separately encapsulated and cooled, which prevents contamination by ambient dust and ensures long-term stable exposure quality.

Modern industrial standards meet innovation

The **CeraFab System** is equipped with state-of-the-art industrial electronics and real-time control of the motor – for fast and dynamic movements. The long-term availability of spare parts is guaranteed.

Serial production powered by Lithoz

Lithoz is the leading technology provider and reliable partner when it comes to the additive manufacturing of components made from high-performance ceramics and bio-resorbable materials. This applies both to production from batch size 1 and series production in large quantities. Our customers benefit from our experience as a market leader, as well as utilizing our large network of service providers and research partners.

For more information, please contact: khofhansl@lithoz.com

CERAFAB SYSTEM – THE ADVANTAGES AT A GLANCE

AN INCREASE IN PRODUCTIVITY THROUGH THE CASCADE SYSTEM

- Modular design of up to 4 production units
- Production security and minimization of risks through the partitioning of production
- Increase in production due to higher building speed, with constant precision

ADDITIONAL FEATURES

- Automatic material feed as standard
- Vibration damping
- Building envelope heating and air-conditioning system available

ERGONOMICAL DESIGN

- Optimized working height for improved usability
- Front doors swivel upwards for barrier-free accessibility
- Unrestricted view for complete observation



ONLINE DOCUMENTATION WITH A SERVER-BASED DATABASE

- Server-based database for storing and handling process data
- Online, real-time monitoring and complete documentation of print jobs
- Ability to change parameters during a print job

DESIGN AND QUALITY

- State-of-the-art industrial electronics and guaranteed long-term availability of replacement parts
- New drive system for smooth, dynamic movements and machine control through a real-time system

HIGHER RESOLUTION USING WQXGA PROJECTOR

- Higher resolution and even finer geometries available through the state-of-the-art DLP chip and special lens
- Better performance due to an optional water-cooled (LED) light source
- Clean visuals as a result of the encapsulated installation

Technical Properties

Lateral resolution	25 or 40 µm (variants possible)
Layer thickness	10 – 100 µm
Number of pixels (X, Y)	2560 × 1600 - WQXGA
Building envelope size (X,Y, Z)	64 × 40 mm od. 102 × 64 mm × 320 mm
Data format	.stl
Build speed	Up to 150 layers an hour
Machine size (L × W × H)	1 production cell including a control unit (L × W × H): 1.05 × 0.85 × 1.78 m
Weight	450 kg