

LITHOZ®

Manufacture the future.

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LITHOZ.COM



**YOUR SYSTEM PROVIDER FOR
ADDITIVE MANUFACTURING OF
HIGH-PERFORMANCE CERAMICS.**



www.lithoz.com

DISCOVER THE ADVANTAGES OF OUR LCM-TECHNOLOGY FOR YOUR PRODUCT, YOUR INNOVATION OR AS YOUR INDIVIDUAL SOLUTION!

STANDARD MATERIALS

	LithaLox HP 500 (Al₂O₃)	LithaCon 3Y 610 Purple
Material	High-purity alumina	3 mol% stabilized zirconia
4P-bending-strength	430 MPa	650 MPa
Density	> 3.96 g/cm ³ (99.4 % T.D.)	> 6.01 g/cm ³ (99.1 % T.D.)
Surface roughness (R _a)	≈ 0.4 μm	≈ 0.6 μm

Same material properties as in conventional production!

Customized material development

Do you need a specific material or would you like to use your own powder? Lithoz supports its customers with high material competence and develops customer specific materials.

INNOVATIONS IN MATERIAL DEVELOPMENT



LithaBone 300 (Tricalcium phosphate)

Lithoz' research and development team has developed bioresorbable ceramics. Tricalcium phosphate is especially suited to be used as a bioresorbable bone substitute. The LCM-technology can realize bionic designs, fine channels and defined cellular pore structures.

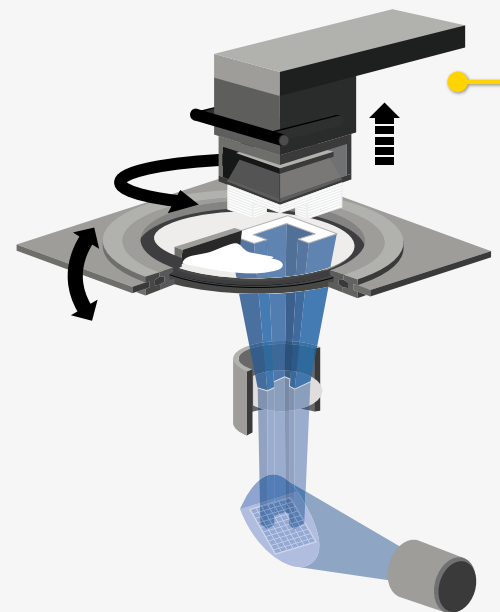


Casting Cores

A further field of application for the LCM-technology is the production of cores for investment casting of turbine blades made of superalloys. Complex structures become possible because our tool-free manufacturing technology eliminates the problems related to demolding.

3D-PRINTING FOR HIGH- PERFORMANCE CERAMICS

For the first time high-performance ceramics can be produced cost efficiently in a tool-free process from lot size 1.

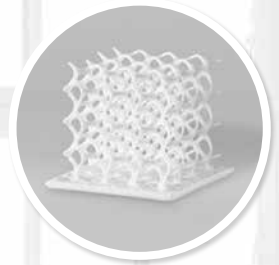


LED-BASED LIGHT ENGINE TO GENERATE LAYER INFORMATION

The printer does not require special safety precautions and keeps energy costs at a very low level.

SIMPLE DATA PREPARATION AND USER-FRIENDLY MACHINE CONTROL

Data preparation is managed directly and comfortably from the workplace to determine all the relevant process parameters. The intuitive user interface of the machine facilitates an easy operation and handling.



COMPLEX GEOMETRIES WITH HIGH-PERFORMANCE CERAMICS

Highly complex geometries with undercuts, cavities or cellular structures can be implemented without any demolding issues.



PARALLEL PRODUCTION OF DIFFERENT DESIGNS

High-performance ceramic components with variations in design can be produced simultaneously directly from the CAD files without any need for specific tools.

MATERIAL SAVING PRODUCTION METHOD

Bottom-up exposure keeps material consumption very low and the remaining material is left for further use. Due to the quick-locking system a change of material can be completed within 5 minutes.

MACHINE FOOTPRINT

Height: 170 cm
Width: 80 cm
Depth: 120 cm
Weight: ca. 250 kg



Technical properties	CeraFab 7500	CeraFab 8500
Lateral resolution	40 μm (635 dpi)	60 μm (423 dpi)
Layer thickness	10 – 100 μm	10 – 100 μm
Number of pixels (X,Y)	1920 x 1080	1920 x 1080
Building envelope (X,Y,Z)	76 mm x 43 mm x 170 mm	115 mm x 64 mm x 200 mm
Data format	.stl (binary)	.stl (binary)
Light source	LED	LED
Building speed	up to 100 slices per hour	up to 100 slices per hour

LITHOZ

YOUR SYSTEM PROVIDER FOR ADDITIVE MANUFACTURING OF HIGH-PERFORMANCE CERAMICS

Lithoz provides both industry and research with additive manufacturing systems as well as optimized materials for the production of high-performance ceramics. The Lithography-based Ceramic Manufacturing (LCM)-technology allows the production of high-quality ceramics without any tools and saves resources.

Discover the advantages of our LCM-technology for your product, your innovation or as your individual solution

- Shorter **time to market**
- Large **degree of freedom in design & improvement** in the functionality of the products
- Mass customization of products through **tool-free manufacturing**
- **Resource-efficient production** from lot size 1

Lithoz GmbH

Mollardgasse 85a / 2 / 64 - 69
1060 Vienna • Austria

Phone: + 43 1 9346612 - 200

Fax: + 43 1 9346612 - 99

Email: office@lithoz.com



ADDITIVE MANUFACTURING SYSTEMS FOR HIGH-PERFORMANCE CERAMICS

Complete system including machines, software, as well as different ceramic materials for the production of parts of the best quality.

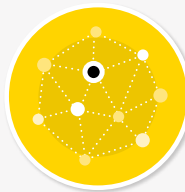


CUSTOMIZED DEVELOPMENT

Application: Lithoz supports its customers all the way from the design to the production of the ceramic parts.

Material: Lithoz offers feasibility studies for its customer to adapt the LCM-Technology for a specific powder / material.

System: Lithoz provides solutions to meet the specific requirements of industry and research.



CONSULTING & WORKSHOPS

Workshops & Consulting operated by our in-house experts guiding through the entire manufacturing process chain of ceramics.



RESEARCH PROJECTS & RESEARCH COOPERATIONS

Competent support for the realization of national and international research projects.