SLA RPS PRINTER

BY CAST SOLUT

SLA » STEREOLITHOGRAPHY

CAST SOLUT
Technologie Solution Service

STEREOLITHOGRAPHY BY CASTSOLUT

We have stood for quality, service and trend-setting technologies for more than 20 years. For the production of our systems we use high-quality components from selected partners. We build our systems CE certified in accordance with German and European standards. Experts test our systems for functionality and safety before they are released. This means we guarantee a consistently high standard. We also guarantee you this standard in service and accessories - everything from one source!

SLA RPS – WHY?

The RPS SLA production systems set themselves apart with customer-focused solutions for both the **RP sector** and the **production sector.**

These advantages have led to a unique and flexible system that excels with **low service costs** and our **professional support.**

The SLA RPS systems are **laser-based** production machines at the **highest level of precision.** The SLA RPS system is capable of manufacturing workpieces of the highest precision that are ready for production through the use of a modern solid-state laser.

Meanwhile a large number of applicable resins are available that have all conceivable attributes such as transparency, heat-resistance, ...

The SLA RPS units are **optimised for maintenance** which leads to significantly lower operating costs.

ADVANTAGES

- **Made in Germany**
- **Highest level of precision**
- **Workpieces ready for production**
- **Precision laser**
- **Vario-optics system**
- **Maintenance optimised**
- **No product commitment**

Your point of contact

Helmut Lutz
Office: + 49(0)7961 91 49-50
Mobile: + 49(0)162 333 30 91
Email: hlutz@castsolut.de

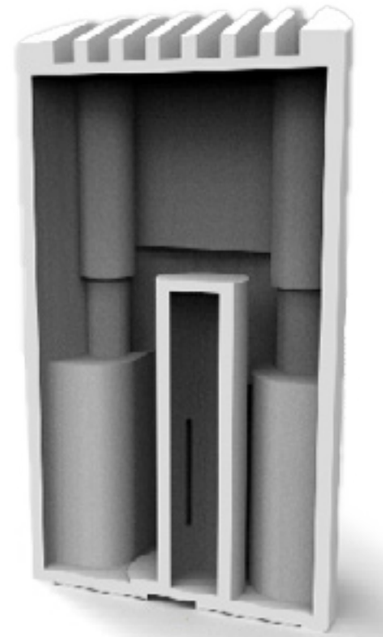
OUR SERVICE

CAST SOLUT does not only stand for high-quality systems - we also provide comprehensive full service - from **one single source.**

We provide you with comprehensive advice on how to optimise the process chains from installation though training and service.

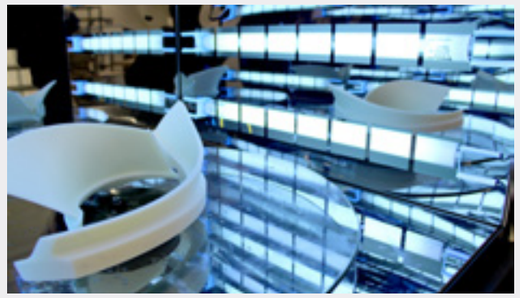
We do that to ensure the best-possible interaction of ideas, interaction and technology.

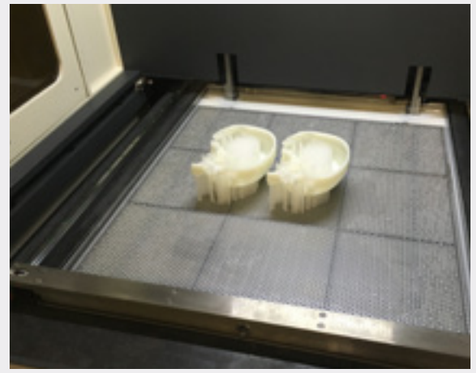
- » INSTALLATION
- » MAINTENANCE
- » TRAINING SESSIONS
- » TRAINING COURSES
- » PROCESS OPTIMISATION
- » MATERIAL/ACCESSORIES



TECHNICUM

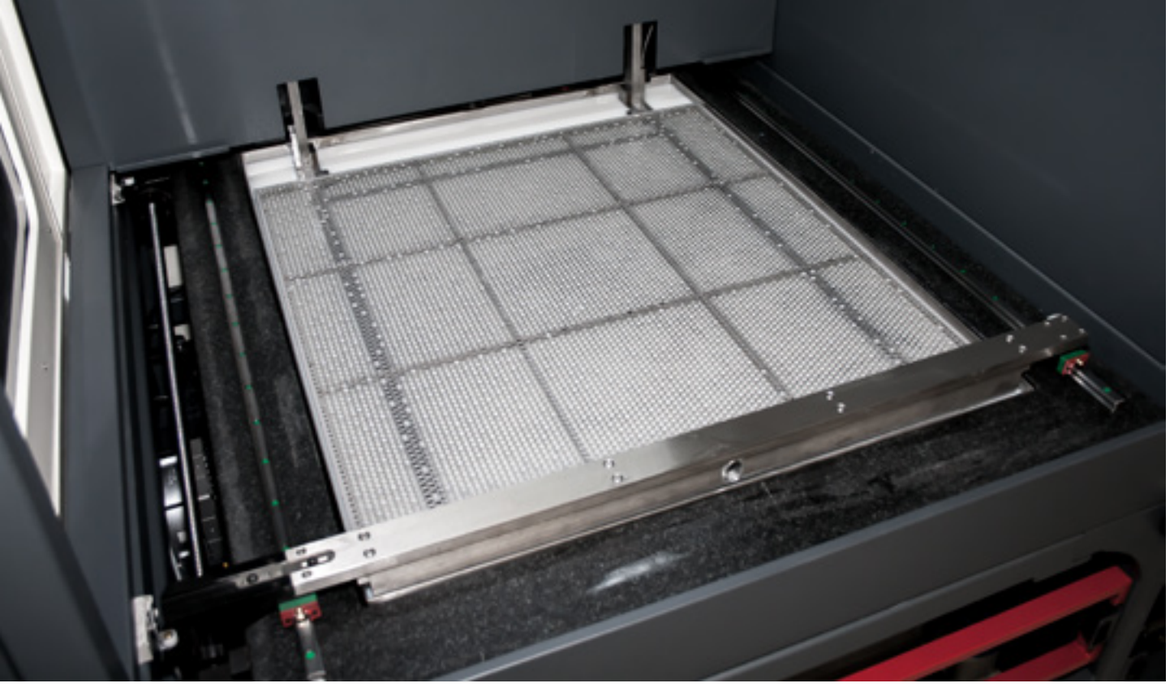
- » In our production plant we can demonstrate the entire process chain.
- » Original models for vacuum casting and precision casting.
- » Moulds and test parts for production, for instance for light-weight design.
- » Foundry technologies.
- » Accessories such as UV curing cabinets, etc.





APPLICATIONS

- » Automotive
- » Aerospace
- » Dental
- » Medicine
- » Jewellery
- » Product design
- » Architecture
- » Consumer



SLA SYSTEMS BY CASTSOLUT

he SLA RPS units operate based on the stereolithography process (SLA). During this, liquefied photopolymers (light-curable synthetics) are shaped into perfect, ready for production workpieces by using modern 100 kHz UV lasers 355 nm.

A maximum installation size of 700x700x400 (LxWxH) is available to manufacture components. The supplied software is very user-friendly.

The SLA RPS devices are integrated in a purpose-shaped, sturdy housing. The housing is provided with a touch display for unit control at eye level. The frame is made out of granite. That guarantees the highest repetition precision.

OPTICS:

The 3-axis vario-optics ensures a reliable and extremely high quality grade during data delivery.

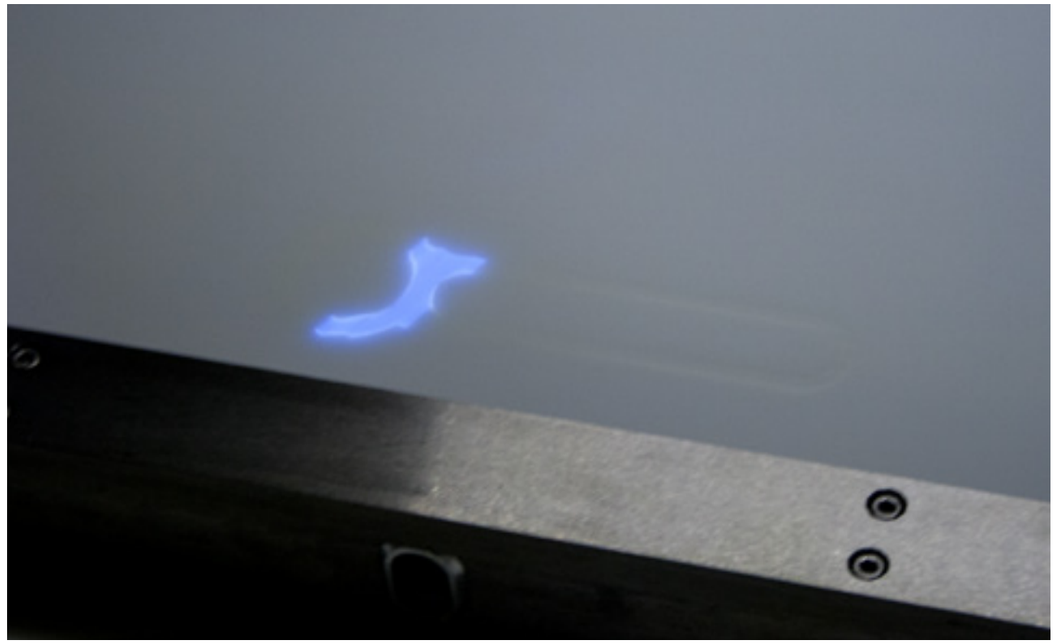
SOFTWARE FROM MATERIALISE:

The build process is prepared through a build processor from Materialise. It promises the greatest functionality and simple operation.

- **Scanlab Intelliscan Dynamic Focusing 3-axis scan system for precision.**
- **Speed and stability for optimised production.**
- **Large installation space: 700 x 700 x 400 mm (LxWxH)**
- **HO+ resolution across the entire installation space.**
- **RPS RPL 1W 1OOkHz air-cooled laser for high productivity and low operating costs.**
- **Wide range of various SLA materials, no commitment to suppliers or cartridge systems.**
- **Professional Materialise © Software license for reading-in, reprocessing and provision of data for your RPS SLA system.**
- **Granite frames for extremely high stability.**
- **Building platform and covers made of stainless steel for easy access and simple cleaning**
- **Service tailored to each customer with optional maintenance contracts.**

PRECISION LASER

- Air-cooled, durable and low maintenance.
- Complete control with the user-friendly software.
- Automatic 2-axis laser.
- High-efficiency, super-fast scanning (adjustable).
- Adjustable height and levelling.
- RS232 communications to the PC controller.



RPL 355-100-1.0 SOLID STATE Q SWITCH UV LASER

	Specifictions	Units	Remark
Laser wavelength	354.7	nm	
Source	ND:YOV4		
Average power	1.0 (2.0)	W	@100KHz (@60kHz)
Pulse width	<50	ns	@100kHz
Pulse repetition rate	50-120	kHz	
Transverse mode	TEMoo		
Beam quality factor M^2	<1.2		
Beam diameter	1,5 +/-0,2	mm	@1m measured from window
Beam full divergence	<5.0	mrad	
Beam circularity	>0.9		
Pulse pulse stability	<5	%	RMS/@100KHz
Average power instability	<5	%	RMS/8hr
Polarization ratio	>100:1		
Polarization Orientation	Horizontal		

Subject to technical modifications and other changes. Type dependent.

SLA RPS HD SYSTEM

TECHNICAL DATA

SLA RPS SYSTEME BY CASTSOLUT

MACHINE TYPE RPS 450 HD

Technical data		
Laser		
Wave length	nm	354,7
Type	Solid-state laser ND:YVO4	
Frequency	kHz	100
Power (approx.)	W	1 W at 100 kHz
		2 W at 60 kHZ
Dynamic compression strength	Yes	
Cooling	Air	
Recommended film thickness		
Precision	mm	0,05
Rapid	mm	0,1 - 0,15
Standard	mm	0,1
Optical & Scanning		
Laser diameter at max. filling	mm	0,08 - 0,8
Focus method	Dynamic	
Digital resolution (HD+)	mm	0,0008
Scan speed (approx.)	mm/s	20000
Lift		
Vertical precision	mm	0,0002
Repetition precision (+/-)	mm	0,01
Removable building platform	Yes	
Construction trough capacity		
Capacity Volume (approx.)	L	120
Max. building space	mm	450x450x350
Replaceable construction trough	Optional	
Software		
Control	RAPLAS Z	
Input data format	SLC	
Network type and protocol	Ethernet, IEEE 802.3	
Electrical data		
Voltage	V/Hz	220 - 230V 50/60Hz
Current (approx.)	A	15
Size and weight		
Size (LXWXH)	mm	1395 x 1030 x 1880
Weight (approx.)	kg	800
Work environment		
Standard work temperature	°C	20 - 26
Atmospheric humidity	less than 50% (non-condensing)	

MACHINE TYPE RPS 700 HD

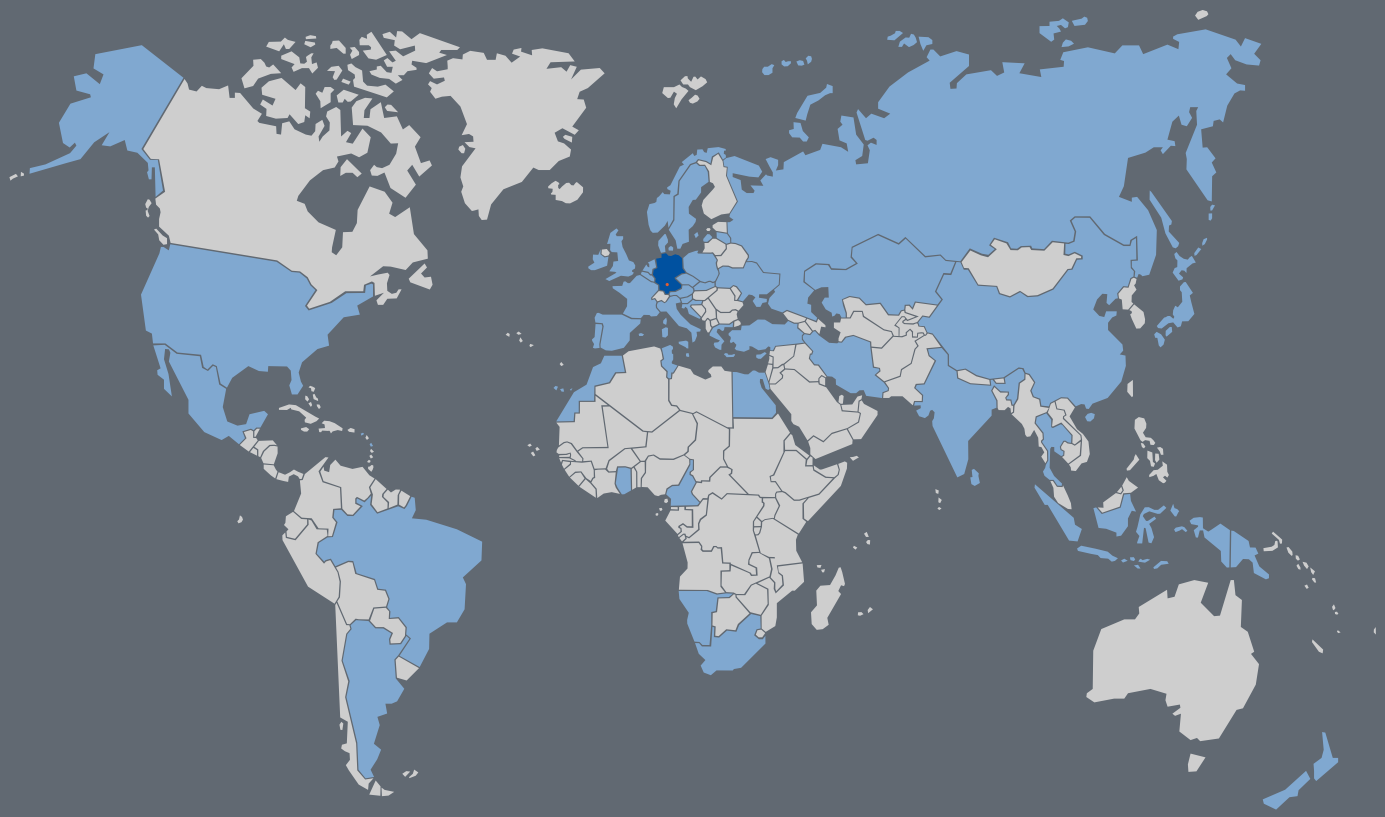
Technical data		
Laser		
Wave length	nm	354,7
Type	Solid-state laser ND:YVO4	
Frequency	kHz	100
Power (approx.)	W	1 W at 100 kHz
		2 W at 60 kHZ
Dynamic compression strength	Yes	
Cooling	Air	
Recommended film thickness		
Precision	mm	0,05
Rapid	mm	0,1 - 0,15
Standard	mm	0,1
Optical & Scanning		
Laser diameter at max. filling	mm	0,08 - 0,8
Focus method	Dynamic	
Digital resolution (HD+)	mm	0,0008
Scan speed (approx.)	mm/s	20000
Lift		
Vertical precision	mm	0,0002
Repetition precision (+/-)	mm	0,01
Removable building platform	Yes	
Construction trough capacity		
Capacity Volume (approx.)	L	310
Max. building space	mm	700x700x400
Replaceable construction trough	Optional	
Software		
Control	RAPLAS Z	
Input data format	SLC	
Network type and protocol	Ethernet, IEEE 802.3	
Electrical data		
Voltage	V/Hz	220 - 230V 50/60Hz
Current (approx.)	A	20
Size and weight		
Size (LXWXH)	mm	1680 x 1250 x 1985
Weight (approx.)	kg	1300
Work environment		
Standard work temperature	°C	20 - 26
Atmospheric humidity	less than 50% (non-condensing)	

Subject to technical modifications and other changes. Type dependent.

MACHINE TYPE RPS 200 HD

We also offer a simplified variant with the installation size 200cm x 160cm x 150cm an.

GLOBAL EXPERTISE



CAST SOLUT
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CASTSOLUT SALES AND SERVICE GMBH
Managing Director: Helmut Lutz

Dr.-Adolf-Schneider-Straße 11
D - 73479 Ellwangen

Fon: + 49(0)7961 9149-50
Fax: + 49(0)7961 9149-49

mail: info@castsolut.de
web: www.castsolut.de

District Court Ulm: HRB 721567
Ust ID no: OE 257313128