

THE NEXT GENERATION PROFESSIONAL RESIN 3D PRINTER

SOLIDATOR 3+



DESIGNED FOR ENGINEERS

- + LARGE FORMAT
- + EXTREMELY FAST
- + SLA QUALITY

 **MADE IN
GERMANY**

EVEN MORE POWER

PRODUCT DETAILS



EXTREMELY LARGE

Build volume of 26.9 liters
345.6 x 194.4 x 400 mm (13.61" x
7.65" x 15.75")

Solidator can print really huge models. It's also possible to print multiple smaller models in one print. With this you don't have to set up and clean the printer every single model you print. This makes it ideal for small batch productions, prototypes, single-part and print shops production and print shops.

EXTREMELY FAST

Prints up to 2363cm³ per hour
(144 in³/h) due to its large build
area and high vertical speed

Solidator is an ultra-fast Next Generation Resin 3D Printer. It prints up to 20x as fast as a comparable FDM Standard Printer and up to 10x as fast as other SLA printers.

SUPER SMOOTH

Native 4K Resolution with
additional 3D-Smoothing
Technology

With more than 1 quadrillion voxels in the build volume with a XY Resolution of 90 micron and layers as thin as 30 microns the print results are outstanding! The 3D Smoothing algorithm can further increase surface quality even beyond native pixel size.

SPECIAL RESINS

Specially formulated for high
speed curing of large volume
prints

Our resins have minimal shrinkage which makes sure the objects don't curl, resulting in flat surfaces as designed in your model. The special resins also make it possible to print overhangs and undercuts without problems.

MODERN USER INTERFACES

Integrated touch- enabled
Computer and Web UI

Modern HTML 5 Web Interface to organize and monitor prints. WiFi, Ethernet and USB Job transfer methods fit your needs

FAST SLICER

GPU-accelerated slicing and
hollowing

Solidator Studio is the professional all-in-one software package for model preparation, support generation and GPU accelerated slicing. Resin settings and material knowledge is already preset in the software for reliable printing.

PLUG & PLAY

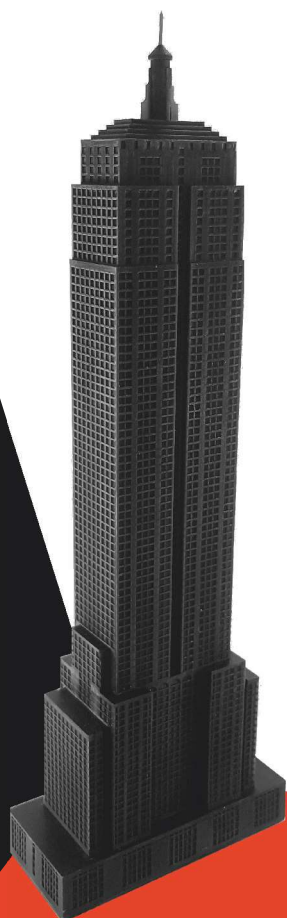
Reliable printing out of the box

Fully assembled, factory leveled z-axis, precalibrated long life light source; resin settings are fixed in our software for each supported resin

PRIOROTY SUPPORT

Talk to Experts

Direct access to our development team in Germany for support questions.



SOLIDATOR 3+

TECHNICAL SPECIFICATION



Solidator 3+

Technology	4K Resolution LCD Mask –Stereolithography
Build volume (Length x Width x Height)	345.6 x 194.4 x 400 mm (13.61" x 7.65" x 15.75")
Build Speed @ 100 micron layer height (Functional Resin)	By build volume: 2363 cm³ / h (144 in³ / h), Vertical: 35 mm / h
Resolution enhancement	3D surface-smoothing
Voxels in build volume	More than 1 quadrillion voxels
Layer height	30 / 60 / 100 microns
Z-Motor resolution	10 microns
Minimal feature size x-y	0.090 x 0.090 mm
Desktop Size Footprint (W x H x D)	682 x 376 x 810 mm (26.85" x 14.8" x 15.75")
Slicing software + Support generator	Solidator Studio (included)
Standalone 3D-printing	Yes, no external PC required during print
Touch screen	3.2" touch screen
HTML 5 WEB interface for mobile & PC devices	Yes
Wifi support for job transfer	Yes
Ethernet support for job transfer	Yes
USB Stick / USB Flash drive for job transfer	Yes
Long Life Light Source	50,000 hours, UV LED Array
Automatic Resin Refill System	Yes
Windows operation system support	Yes
Power Supply Voltage	110 - 240 V 50/60 Hz
Operating temperature	18 - 25 °C (64,4 - 77 °F)

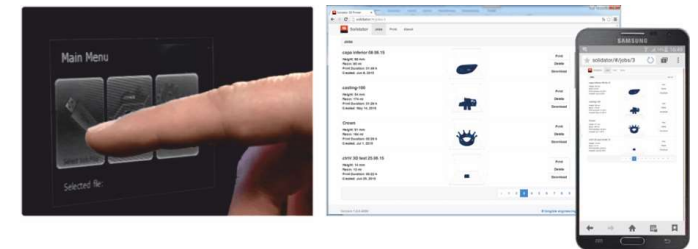
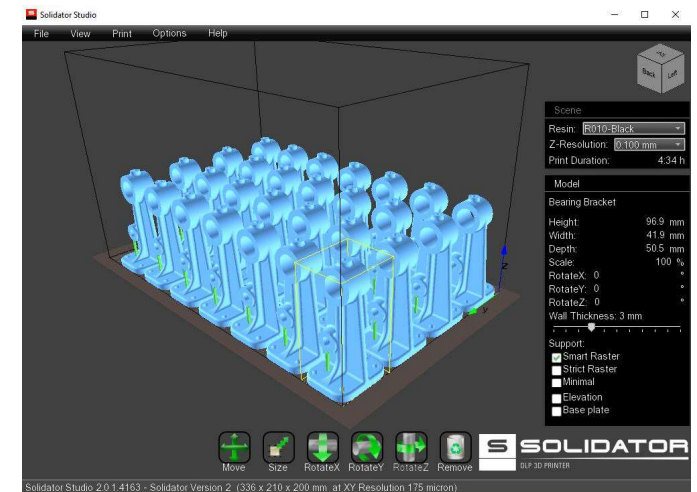
SOLIDATOR SOFTWARE + SUPPORT + EXPERT ADVICE

WE MAKE THE DIFFERENCE

Our team of dedicated engineers & customer success managers focuses on your projects. Using our custom-made state of the art software and expert advice you can quickly get up and running with series productions.

- Let's accelerate your projects and work together -

**Contact us today to evaluate feasibility & throughput
and have project-specific test parts printed.**

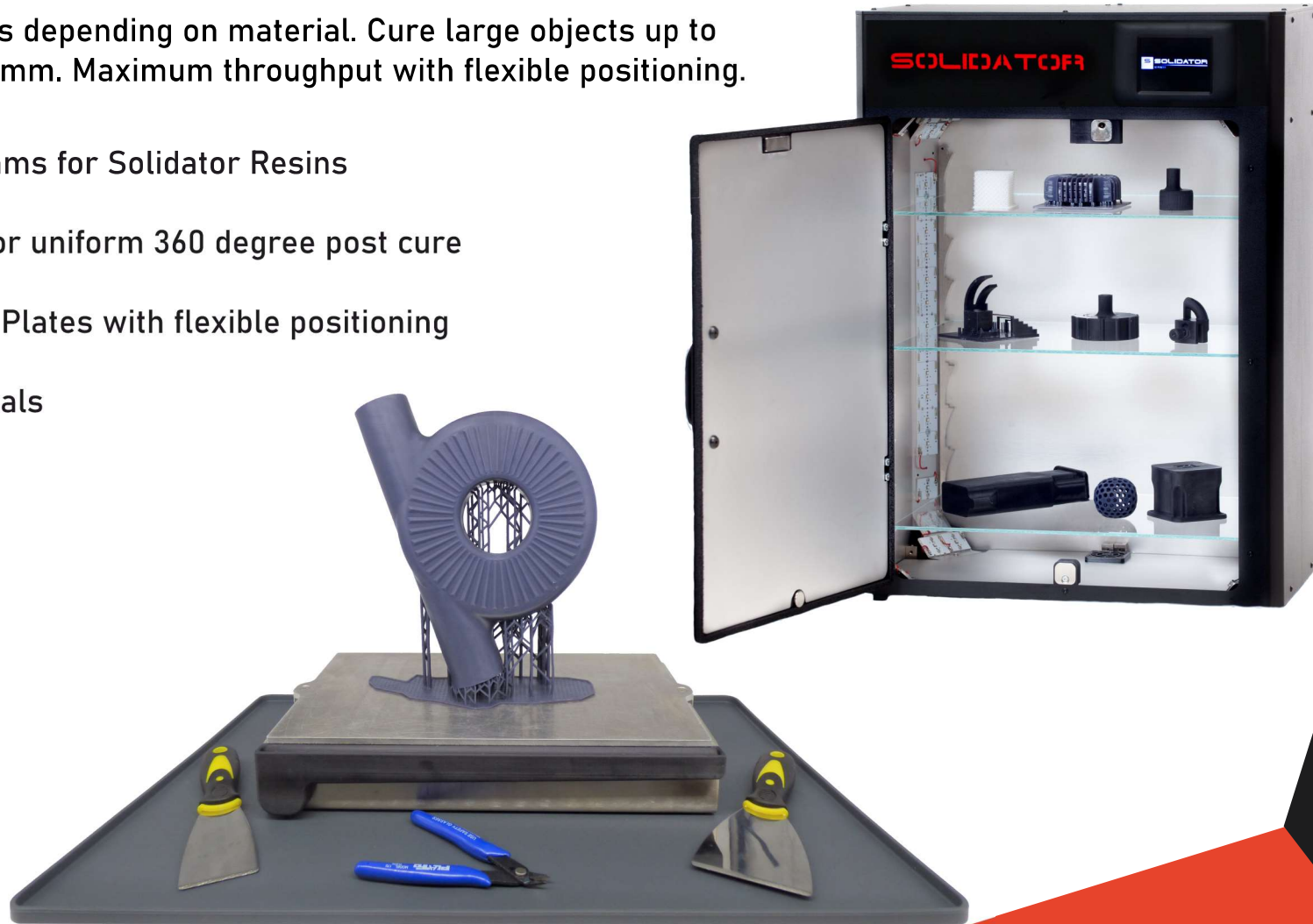


TECHNICAL FEATURES



Rapid Cure 10-35 minutes depending on material. Cure large objects up to 346 mm x 195 mm x 400 mm. Maximum throughput with flexible positioning.

- >> Optimized cure programs for Solidator Resins
- >> 76 High Power LEDs for uniform 360 degree post cure
- >> 3 Special Coated Glas Plates with flexible positioning
- >> High Reflection Materials
- >> Long Lifetime LEDs
- >> Touch Display
- >> Safety Controls
- >> Active Cooling
- >> Wavelength 405 nm
- >> Post processing Tools



FUNCTIONAL RESIN

- >> Type: Engineering Resin
- >> High Hardness
- >> High Cure Speed
- >> Suited for Snap-Fit parts
- >> High Accuracy for large parts

>> Material Data:

Shore	82D
Tensile module:	3080 Mpa
Ultimate Tensile Strength	66.2 Mpa
Elongation at Tensile Strength	2.9%
Bending module:	2630 Mpa
Flexural Strength	103 Mpa
Elongation at Flexural Strength	4.2%
Deflection at Break	>5%
HDT	68.6°C
Glow wire flammability	650°C/3.1mm
IZOD Notched	13.93 J/m

Applications

- Prototyping
- Mechanical Parts
- Functional Parts
- Connectors
- Brackets



BLACK RESIN

- >> Type: Industrial Parts Resin
- >> High Hardness
- >> High Cure Speed
- >> Ideal for medium sized parts

>> Material Data:

Shore	85D
Tensile module:	1910 Mpa
Ultimate Tensile Strength	36.6 Mpa
Elongation at Tensile Strength	3.11%
Bending module:	2122 Mpa
Flexural Strength	64.1 Mpa
Elongation at Flexural Strength	4.69%
Deflection at Break	>4.24%
HDT	53.3°C
Glow wire flammability	650°C/3.1mm
IZOD Notched	13.1 J/m

Applications

- Electronic Housings
- Figures
- Connectors
- Brackets



CLEAR RESIN

- >> Type: ToughResin
- >> Exceptional Cure Speed
- >> High Accuracy for large parts

>> Material Data:

Shore	86D
Tensile module:	2258 Mpa
Ultimate Tensile Strength	46.7 Mpa
Elongation at Tensile Strength	3.93%
Bending module:	1991 Mpa
Flexural Strength	64.9 Mpa
Elongation at Flexural Strength	4.96 %
Deflection at Break	>5%
HDT	53.5 °C
IZOD Notched	26.6 J/m

Applications

- Fluid/Flow ANALYSIS
- Architecture
- Art



TRANSLUCENT ORANGE RESIN

- >> Type: Rigid Resin
- >> Exceptional Hardness & Cure Speed
- >> Ideal for medium sized parts
- >> Withstands high static loads
- >> Withstands high temperatures

>> Material Data:

Shore	85D
Tensile module:	2100 Mpa
Ultimate Tensile Strength	40.7 Mpa
Elongation at Tensile Strength	3.45%
Bending module:	2735 Mpa
Flexural Strength	99.3 Mpa
Elongation at Flexural Strength	4.9%
Deflection at Break	>5%
HDT	66.3°C
Glow wire flammability	625°C/2.9mm
IZOD Notched	16 J/m

Applications

- Prototyping
- RTV-Molds
- Casting Molds Parts
- Dental Aligner Molds



WHITE RESIN

- >> Type: Rigid Resin
- >> High Hardness
- >> High Cure Speed

>> **Material Data:**

Shore	80.2D
Ultimate Tensile Strength	66.2 Mpa
Deflection at Break	>5%

Applications

- Architecture Models
- Sculptures
- Art



MATERIAL PORTFOLIO

Characteristic	Method	Symbol	R031 Functional Grey	R060 Clear	R001 Translucent Orange	R010 Black	R051 White
Applications			Mechanical and Functional (prototype) Parts, Connectors, Brackets	Fluid/Flow analysis, Architecture, Art	Prototyping, Molds	Electronic Housings, Figures, Connectors, Brackets	Models, Architecture, Art
Physical Properties							
Hardness Shore D	DIN EN ISO 48-4	D	82	85,6	84,7	84,6	80,2
Solid Density	DIN EN ISO 1183-1	ρ	1.21 g/cm ³	1.19 g/cm ³	1.18 g/cm ³	1.19 g/cm ³	1.21 g/cm ³
Tensile properties							
Tensile Modulus	ASTM D638, Type I	E_t	3080 MPa	2258 MPa	2101 MPa	1910 MPa	-
Tensile Strength	ASTM D638, Type I	σ_M	66.2 MPa	46.7 MPa	40.7 MPa	36.6 MPa	33.0 Mpa ¹
Elongation at Tensile Strength	ASTM D638, Type I	ϵ_M	2,90 %	3,93 %	3,45 %	3,11 %	-
Elongation at Break	ASTM D638, Type I	ϵ_{tB}	3,23 %	4,14 %	3,54 %	3,20 %	-
Bending properties							
Flexural Modulus	ASTM D790	E_f	2630 MPa	1991 MPa	2735 MPa	2122 MPa	-
Flexural Strength	ASTM D790	σ_{fM}	103 MPa	64.9 MPa	99.3 MPa	64.1 MPa	-
Deflection at Flexural Strength	ASTM D790	ϵ_{fM}	4,20 %	4,96 %	4,90 %	4,69 %	-
Deflection at Break	ASTM D790	ϵ_{fB}	> 5.0 %	> 5.0 %	> 5.0 %	> 4.24%	>5.0%
Impact Strength Properties							
IZOD Notched	ASTM D256	a_{IN}	1.37 kJ/m ² (13.93 J/m)	2.63 KJ/m ² (26.6 J/m)	1.58 kJ/m ² /(16 J/m)	1.29 kJ/m ² (13.1 J/m)	-
Thermal Properties							
HDT @ 0.45 N/mm ²	ASTM D 648 (B)	T_f	68.6 °C	53.5 °C	66.3 °C	53.3 °C	-
Glow wire flammability index	DIN EN 60695-2-12	GWFI	650 °C / 3.1 mm	-	625 °C / 2.9 mm	650 °C / 3.1 mm	-
Glass Transition Temperature	DIN EN ISO 11359	T_g	56	-	49	22	-
Linear Expansion Coeff. -20°C ... 20°C	DIN EN ISO 11359	α	80 * 10 ⁻⁶ K ⁻¹	-	92 * 10 ⁻⁶ K ⁻¹	94 * 10 ⁻⁶ K ⁻¹	-
Linear Expansion Coeff. 65°C ... 80°C	DIN EN ISO 11359	α	203 * 10 ⁻⁶ K ⁻¹	-	205 * 10 ⁻⁶ K ⁻¹	195 * 10 ⁻⁶ K ⁻¹	-
Experimental Curl / Vertical Distortion							
Dimensional Accuracy XY	Test Print (100x100x6mm)		99,83%	99,65%	99,81%	99,56%	99,71%
Curl on Test bar (200x20x5mm)	Vertical Print Orientation		0mm	0mm	0mm	0mm	0mm
Curl on Cantilever Test bar (200x20x5mm)	Horizontal Print Orientation		0.015 mm	0.1 mm	1.0 mm	1.0 mm	0.05 mm
Description & Applications							
Print Speed (cm ³ /hour)			2363	2150	1897	2213	1702

Conditions: Printed on Solidator V3, Layer Height 100 micron, Cleaned in Isopropanol < 3 min, Air Brush Clean, Post Cure with Solidator Cure Box

¹ Preliminary



Upload your part online to calculate print duration
and to request your specific sample print.

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