

Sintratec S2

The compact and expandable
SLS system

Sintratec S1

The SLS system for professional needs

Sintratec Kit

The low-cost kit

 **PRINT YOUR MIND**
TURN YOUR IDEAS
INTO REALITY
WITH OUR
3D PRINTERS

BREAK DOWN BARRIERS!

Dear Technology Community,

Our vision is to enable you to bring your design ideas into reality, with perfect shape and a flawless surface. We firmly believe that with the help of Sintratec technology you will develop even better products, optimize your applications and thereby create key advantages. Your creativity should be given free rein, and untapped potential in design and development should be unleashed. It is about breaking down existing barriers between the ideas in your head and implementing them in reality – no matter whether you are dealing with a batch size of one or one thousand. We are moving a huge step toward achieving this vision with the Sintratec S2, our brand-new manufacturing solution.

Welcome to the world of additive manufacturing!



Dominik Solenicki
Co-Founder and CEO of Sintratec AG



Christian von Burg
Co-Founder and CTO of Sintratec AG

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MATERIALS

Polymer or elastomer

MODULARLY DESIGNED AND SELF-CONTAINED

The Sintratec S2, the affordable all-in-one solution, allows you to minimize downtimes and benefit from cost-effective operation. You can carry out a material change within a short period of time and tedious cleaning processes are a thing of the past.

The selective laser sintering system consists of the Laser Sintering Station (LSS), the Material Core Unit (MCU) and the Material Handling Station (MHS). Together these modules make up a uniquely self-contained process system for additive manufacturing.

Once high-quality SLS printing in the Sintering Station is completed, the printed objects are then conveniently and cleanly depowdered in the Handling Station. The ingenious Material Core Unit allows you to easily switch from one print material to another and reduce downtimes. Thanks to the modular system design you can expand your SLS machinery as needed.



- ① Sintratec S2 Laser Sintering Station (LSS)
- ② Sintratec S2 Material Core Unit (MCU)
- ③ Sintratec S2 Material Handling Station (MHS)
- ④ Sintratec Vortex Unit

SINTRATEC S2 LASER SINTERING STATION (LSS)



The Sintratec Laser Sintering Station's cylindrical printing volume means you get consistent and homogeneous printing results. You can follow your print job live at any time and evaluate the surface of the individual printed layers in real time with the integrated high resolution camera. The precise laser scanning system enables improved repeat accuracy and fast printing processes. The sophisticated heating system gives your SLS parts a high-quality surface finish.

- Faster printing due to a shorter preparation time
- Precise laser scanning system
- Eight controlled heating zones for optimum printing processes

TECHNICAL SPECIFICATIONS

X-Y laser scanning system for fast printing	Height x width x depth	1,500 x 1,100 x 750 mm
High-resolution camera for real-time monitoring	Weight	72.5 kg
Touchscreen for direct operation	Power supply	230 V 11 A max 50 - 60 Hz
Network connection for remote control and monitoring		
Contactless point measurement for powder surface temperature control		
Multi-zone heating		

SINTRATEC S2 MATERIAL HANDLING STATION (MHS)



You no longer need additional equipment to reprocess used print material into ready-for-printing material – and it's all thanks to the efficient screening and mixing function in the Sintratec Material Handling Station. The freely accessible work area with an air filtration system gives you a clear view of the object to be depowdered and allows for a clean working environment.

- No additional tools needed to screen the print material
- High visibility when depowdering parts
- Touchscreen-based operation

TECHNICAL SPECIFICATIONS

Air filtration system	Height x width x depth	1,650 x 1,000 x 750 mm
High-resolution camera for real-time monitoring	Weight	60 kg
Touchscreen for direct operation	Power supply	230 V 5 A max 50 - 60 Hz
Network connection for remote control and monitoring		
Integrates powder screening and mixing functions		

SINTRATEC S2 MATERIAL CORE UNIT (MCU)

The mobile Sintratec Material Core Units with an integrated powder mixing function ensure convenient powder handling. Several units allow you to increase the material variety and reduce downtimes.

- High level of process reliability
- Integrated multi-zone heating for build cylinders
- Two internal powder tanks for quick layer change
- Integrated re-coating system (coordinated to powder)

Build cylinder height	400 mm*
Build cylinder diameter	160 mm*
Height x width x depth	1,100 x 870 x 530 mm
Weight	60 kg

*Effective printing range depends on the application and material. For example: The current Sintratec PA12 general print range is ca. 360 mm in height and 130mm in diameter, excluding the small area reserved for temperature sensing.



SINTRATEC BLASTING STATION

The Sintratec blasting unit removes excess powder and creates appealing SLS workpieces with an improved surface quality in a short amount of time.

- Dust-free work thanks to full circumferential seals on the cover frame and door frame
- Lighting with fluorescent tubes for excellent visibility
- Suitable for different blasting materials such as quartz, glass beads and plastic beads

Working pressure	2.8–8 bar
Compressed air connection	3/8"
Internal dimensions	580 x 480 x 300 mm
External dimensions	590 x 485 x 490 mm
Weight	17.25 kg



SINTRATEC POLISHING STATION

Creating smooth surfaces on your SLS workpieces is simple and convenient with the Sintratec magnetic tumbler. The stainless steel magnetic pins polish surfaces, creating an improved, stainless steel like finish within a short period of time.

- Autonomous and compact system
- Polishes surfaces and creates a smooth finish
- Several components can be processed at the same time

External dimensions	290 x 290 x 340 mm
Weight	20 kg
Speed	2,800 revolutions per minute (rpm)



SINTRATEC VORTEX UNIT

Removing excess and used powder is a piece of cake with the professional powder management module. Powder that has already been used can be collected and made available for the next print jobs.

- Single-motor wet and dry vacuum cleaner
- High-efficiency cyclone pre-separator
- Anti-static industrial vacuum cleaner

Weight	Approx. 20 kg
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THE SLS SYSTEM FOR PROFESSIONAL NEEDS

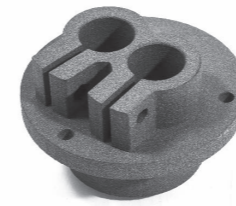
The Sintratec S1 allows you to perfectly turn your digital 3D objects into reality. The integrated laser sintering technology allows you to create highly complex and functional parts with virtually unlimited freedom in terms of shape – from rapid prototyping to very small batches.

Laser sintering is a recognized method in industrial additive manufacturing. Thanks to the Sintratec S1's diode laser you achieve particularly high-resolution printing results. With Sintratec technology you create high-quality objects that are tailored precisely to your needs.

The integrated "Sintratec Central" software helps you to achieve great printing results.

With this user-friendly software you have your printing processes under control at all times.

The Sintratec S1 was developed to meet the specific needs and requirements of an extremely wide range of industries. In addition to aviation, the automotive industry, medical technology and industrial manufacturing, the Sintratec S1 is also used at universities and research institutes.



Functional Part

This microphone, climate sensor and antenna holder was designed by Elekon AG. This part is used in a measuring instrument for the observation of bats.



Functional Prototype

Virtually unlimited freedom in terms of shape during engineering: Bosch uses this highly stretchable object as a basis for creating individually adaptable designs for a medical technology application.



TECHNICAL SPECIFICATIONS

Physical build volume	130 × 130 × 180 mm
Volume available for printing	110 × 110 × 160 mm*
Layer height	100 µm
Height × width × depth	757 × 670 × 365 mm
Weight	67 kg
Delivery state	Ready to print
Power connection	230 V
Maximum power consumption	1.9 kW

*Effective printing range depends on the application and material.

THE LOW-COST KIT

Would you like to bring crazy design concepts to life?
The Sintratec Kit allows you to easily print high-quality objects in a virtually unlimited range of shapes. It's the perfect introduction to the world of additive manufacturing.

Laser sintering is a recognized method in industrial additive manufacturing. The Sintratec Kit – the only SLS kit of its kind in the world – helps you to take the ideal first step into the world of selective laser sintering – at an affordable price.

Thanks to the Sintratec Kit's diode laser, you achieve particularly high-resolution printing results.

With Sintratec technology, you create high-quality objects that you can tailor precisely to your needs.

The integrated "Sintratec Central" software helps you achieve great printing results. With this user-friendly software you have got your printing processes under control at all times.



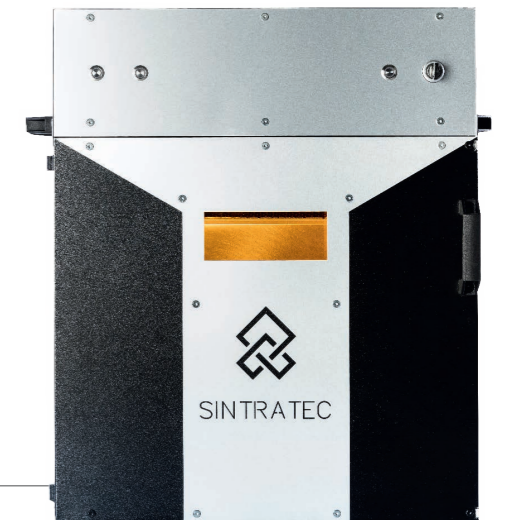
Functional Prototype

ETH Zürich designed this component for a geo-scientific test apparatus that measures the permeability of a substrate or a rock.



Functional Part

To ensure that the robots don't scratch visually perfect parts, Samuel Werder AG has developed these sensitive yet stable grippers made of flexible material.



TECHNICAL SPECIFICATIONS

Physical build volume	110 × 110 × 110 mm
Volume available for printing	90 × 90 × 90 mm*
Layer height	100 µm
Height × width × depth	600 × 520 × 380 mm
Weight	28 kg
Delivery state	Kit
Installation time (1 person)	Approx. 4 days
Power connection	230 V or 110 V AC
Max. power consumption	1.7 kW

*Effective printing range depends on the application and material.

POLYMER OR ELASTOMER: TWO FIRST-CLASS MATERIALS

Using our two powder materials you can produce objects with a wide variety of geometries and stresses and different properties.

Print high-quality parts that can be used as functional prototypes in mechanically demanding applications or that can be directly installed as components. On the one hand, Sintratec PA12 is a first-class industrial polymer powder (nylon). It's suitable for precise objects that have to be stiff

and temperature-resistant and need to have a long service life. Components can be excellently mechanically reworked. On the other hand, with the new Sintratec TPE elastomer powder, you can produce precise objects that are highly elastic.



SINTRATEC PA12

Sintratec PA12, the high-tech polymer, was specifically developed for use in additive manufacturing. The anthracite-colored powder guarantees a high level of stability and a high resolution, even in the case of fine and complex objects. The surface of the printed components can be soaked in a chemical bath if needed.

Main material	Polyamide 12
Color	Anthracite
Particle size	Approx. 60 µm
Heat Deflection	177 °C



Functional prototype
of a basic design for a soil
measuring instrument.

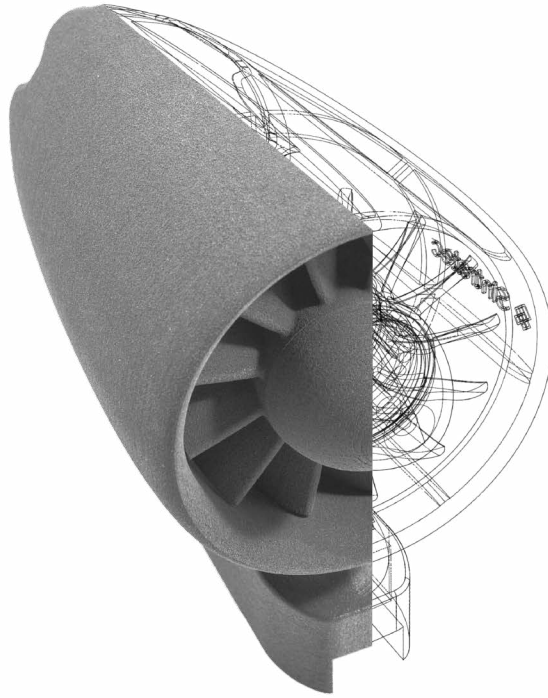
SINTRATEC TPE

Sintratec TPE, the elastomer powder, was developed to print rubbery, highly flexible parts. The material is surprisingly stretchy and retains its shape well. It therefore offers the ideal characteristics for applications with dynamic components that have to return to their exact original shape after being stretched.

Main material	Elastomer
Color	Anthracite
Particle size	Approx. 50 µm
Heat Deflection	104 °C



Functional prototype
of a complex object
for medical technology.



PRINT
YOUR MIND

Sintratec AG

Badenerstrasse 13
5200 Brugg, Switzerland
Phone +41 56 552 00 22

info@sintratec.com
www.sintratec.com