A NEW ERA FOR SLS

FUSION AMP MODULES

LASER SINTERING MODULES FOR ALL YOUR MANUFACTURING NEEDS

Unique and patented in the field of Selective Laser Sintering (SLS), the Sintratec **All-Material Platform** separates the cutting-edge Fusion Module (3D printer) from the movable Build Module (powder container). Thanks to this modularity both polymers and metals can be processed on the same system and exchanged rapidly without cross-contamination or lengthy cleaning processes.

SINTRATEC S3

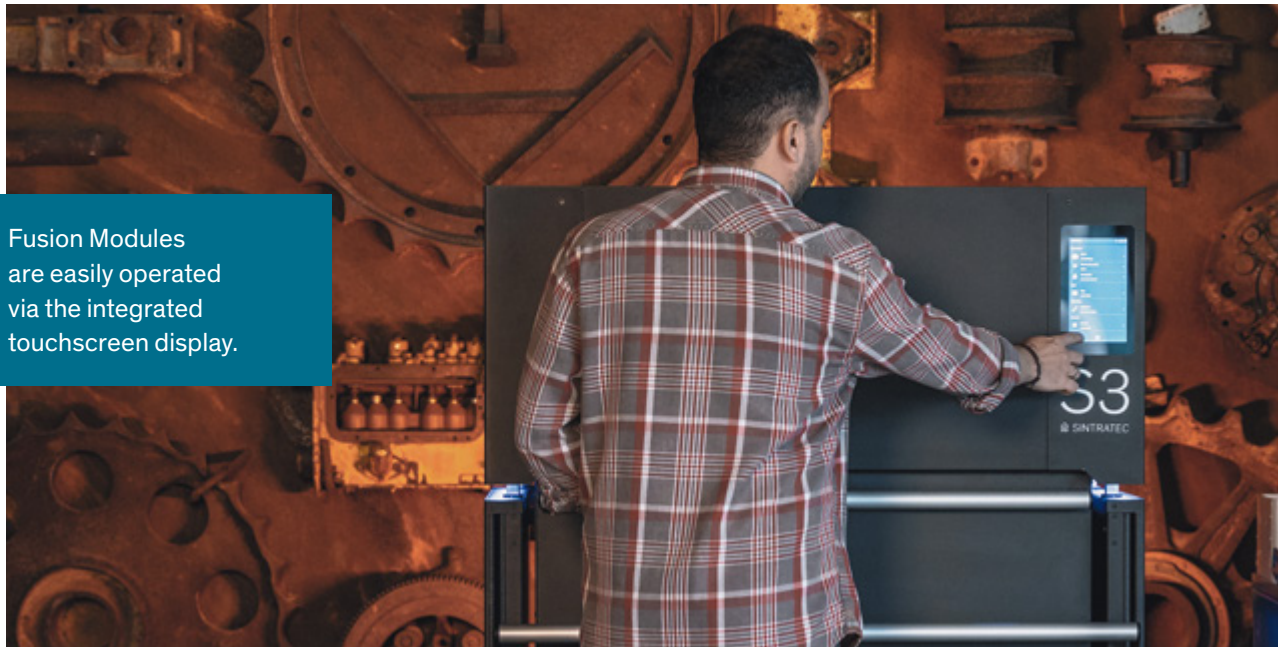
New laser power for your production

The Sintratec S3 is the latest Fusion Module for the Sintratec **All-Material Platform**. Developed for around-the-clock SLS 3D printing, the S3 is a workhorse that packs a punch. Its 30-watt fiber laser fuses powder particles into precise, industrial-grade objects at unprecedented speeds.

- Powerful 30-watt fiber laser
- Three times faster laser speed
- Next-level productivity and throughput
- Ideal for larger manufacturing setups and series production
- Compatible with all **AMP** materials and Build Modules

Technical Specifications

Dimensions (h × w × d)	1,490 × 990 × 600 mm
Power supply	230 V | 11 A max | 50 – 60 Hz
Laser Type	30W CW Fiber Laser (1064 nm wavelength)
Laser Spot Size	145 µm
Weight	80 kg



Fusion Modules are easily operated via the integrated touchscreen display.

SINTRATEC S2

More than just a 3D printer

The Sintratec S2 is the first-generation **AMP** Fusion Module and offers an excellent entry into the world of industrial 3D printing. Since its introduction in 2019, the Sintratec S2 has proven itself in a broad variety of industries worldwide for production, prototyping, and research.

- Precise 10-watt fiber laser
- Entry-level SLS 3D printer
- Ideal for rapid prototyping to small and mid-sized series production
- Successfully in use worldwide since 2019
- Compatible with all **AMP** materials and Build Modules

Technical Specifications

Dimensions (h × w × d)	1,490 × 990 × 600 mm
Power supply	230 V | 11 A max | 50 – 60 Hz
Laser Type	10W CW Fiber Laser (1064 nm wavelength)
Laser Spot Size	145 µm
Weight	72 kg

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The Sintratec S2 delivers parts with great quality at an exceptional speed and allows us to develop much faster at a lower cost.

Valentin Vergnes
Prototyping technician at INFACO

MOVABLE BUILD MODULES FOR EFFICIENT OPERATION

The **AMP** Build Modules are designed to carry all Sintratec printing materials. The units come with integrated powder mixing and sieving functions and are easy to move. Their cylindrical build volume and multi-zone heating ensure an even heat distribution and consistent results.

BUILD

AMP

MODULES

SINTRATEC MCU-220

Build Module for higher throughput

The Sintratec Material Core Unit 220 is the new Build Module compatible with all Fusion Modules of the **All-Material Platform**. The build volume of 15.2 liters makes the MCU-220 the ideal choice for large objects and high-throughput manufacturing.

- 90 % larger build volume than the MCU-160
- High level of process reliability
- Integrated re-coating and multi-zone heating system
- Compatible with all **AMP** materials and Fusion Modules

Technical Specifications

Dimensions (h × w × d)	1100 × 850 × 530 mm
Build cylinder height	400 mm*
Build cylinder diameter	220 mm*
Build cylinder volume	15.2 l
Weight	65 kg

The Build Modules are easy to move and require no heavy lifting.

SINTRATEC MCU-160

Material switches within seconds

The MCU-160 is the first generation **AMP** Build Module and well suited for the production of small to mid-sized pieces. Multiple units dedicated to different powders allow you to increase the material variety and reduce downtimes of your system.

- Entry-level Build Module
- High level of process reliability
- Integrated re-coating and multi-zone heating system
- Compatible with all **AMP** materials and Fusion Modules

Technical Specifications

Dimensions (h × w × d)	1100 × 850 × 530 mm
Build cylinder height	400 mm*
Build cylinder diameter	160 mm*
Build cylinder volume	8 l
Weight	59 kg

* *The actual print range depends on the used material and printing parameters.*

"The SLS process by Sintratec meets our key requirements – namely tolerances, dimensional stability and heat resistance

Benjamin Kaubeck
Head of Apprenticeship Training at LiSEC

MATERIAL

AMP

HANDLING

COMPLEMENTARY HARDWARE FOR CLEANING AND POST-PROCESSING

In addition to the 3D printing modules, Sintratec offers material handling and peripheral solutions that are specifically tailored to the Selective Laser Sintering technology. Easily depowder your objects, improve the surface finish of your parts, and collect recyclable material for your next print job.

MATERIAL HANDLING STATION

Dedicated station for preparing & depowdering

Once your print job is completed, simply move the **AMP** Build Module into the dedicated Material Handling Station for further processing. The freely accessible work area with an air filtration system gives you a clear view of the object while depowdering. Additionally, it allows you to easily collect, sieve and recycle the unused powder for your next print.

- Powerful air filtration system
- Integrated screening & mixing function
- High-resolution camera for real-time evaluation
- Compatible with all **AMP** materials and Build Modules

Technical Specifications

Dimensions (h × w × d)	1,570 × 990 × 600 mm
Power supply	230 V | 5 A max | 50 – 60 Hz
Available motorized sieves	140 µm | 314 µm (mesh size)
Touchscreen	7" (3280 × 2464px)
Weight	57 kg

Step-by-step instructions on the touchscreen assist the user with material handling.

BLASTING STATION

Fast post-processing of your 3D prints

The Sintratec Blasting Station enables you to quickly and easily depowder your SLS parts and improve their surface finish. The sandblaster is equipped with a high-quality ceramic nozzle and is suitable for different materials such as quartz and glass beads.

- Dust reduced work due to circumferential seals
- Clear view of the parts being processed
- Ergonomic and efficient operation

Technical Specifications

Dimensions ext. (h × w × d)	590 × 485 × 490 mm
Working pressure	2.8 – 8 bar
Connection	3/8”
Weight	17.25 kg

POLISHING STATION

Magnetic tumbler for an optimal surface finish

With the Sintratec Polishing Station your prints get a modern surface look. Remove surface impurities of your SLS pieces and provide them with a smooth, stainless steel like finish.

- Easy-to-use magnetic tumbler
- Ideal results in a short amount of time
- Simultaneous processing of several parts

Technical Specifications

Dimensions (h × w × d)	360 × 400 × 370 mm
Polishing chamber size	ø290 × 160 mm
Motor Speed	2,800 rpm
Weight	28 kg

INDUSTRIAL-GRADE POLYMER MATERIALS

The Sintratec materials allow you to print highly precise parts that can be used for functional prototypes as well as end-use components. Our first-class SLS powders have proven to be the right choice for mechanically demanding applications across a wide range of industries.

SINTRATEC PA12-GF

PA12 GF is a glass-filled polyamide 12 variant that produces parts with an exceptionally high stiffness and great impact strength. The powder is the perfect choice for mechanical applications that require dimensional stability.

SINTRATEC PA12

PA12 nylon is the most commonly used material for industrial SLS 3D printing. The polyamide powder produces strong and durable parts that are ideally suited for prototypes as well as for end-use applications.

SINTRATEC TPE

TPE is an elastomer that results in flexible, rubber-like parts. With an impressive elongation at break of up to 438 %, the industrial-grade material works well for applications that require a high degree of ductility.

SOFTWARE AND ADDITIONAL FEATURES

3D printing hardware is only as efficient as its software. That is why Sintratec has always been developing its own software to provide you with the best possible printing experience. Apart from the Sintratec Central Software that comes freely with every system, we offer additional features to suit your needs perfectly.

CENTRAL

Sintratec Central is the essential tool that transforms 3D designs into print data for your SLS system. The basic software includes import, auto placement and slicing functions, as well as remote controls and a live camera view of your printerleet.

PRODUCTIVITY UPGRADE

The Productivity Upgrade offers you a powerful nesting function developed for an unprecedented throughput. With a single click imported 3D objects are automatically placed inside the build volume to achieve an ideal print job density and to save up to 40 % material and time.

MATERIAL DEVELOPER UPGRADE

The Material Developer Upgrade is a software feature that opens up next-level research possibilities. With over 100+ configurable parameters and unlimited freedom for laser strategies the upgrade allows you to adapt existing powder materials or to transform new ones into applications.

elmec3D
Additive innovation

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Sintratec, founded and based in Switzerland, created the first Selective Laser Sintering (SLS) desktop 3D printer in the world - the highly praised and awarded Sintratec Kit. Since then, we have been continuously improving our machines and developing new solutions. Our Swiss made high-tech systems enable companies and research institutes from various industries around the world to create outstanding applications and products.

SINTRATEC

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