



Sintratec

Press Release – July 2016

Sintratec catches up with industry leaders and assumes social responsibility

Shipping of Sintratec's new S1 laser sintering system will start in July. The first customers have joined Sintratec for a one-day workshop in June and will receive a fully operational prototyping powerhouse that doesn't shy away from producing end-products.

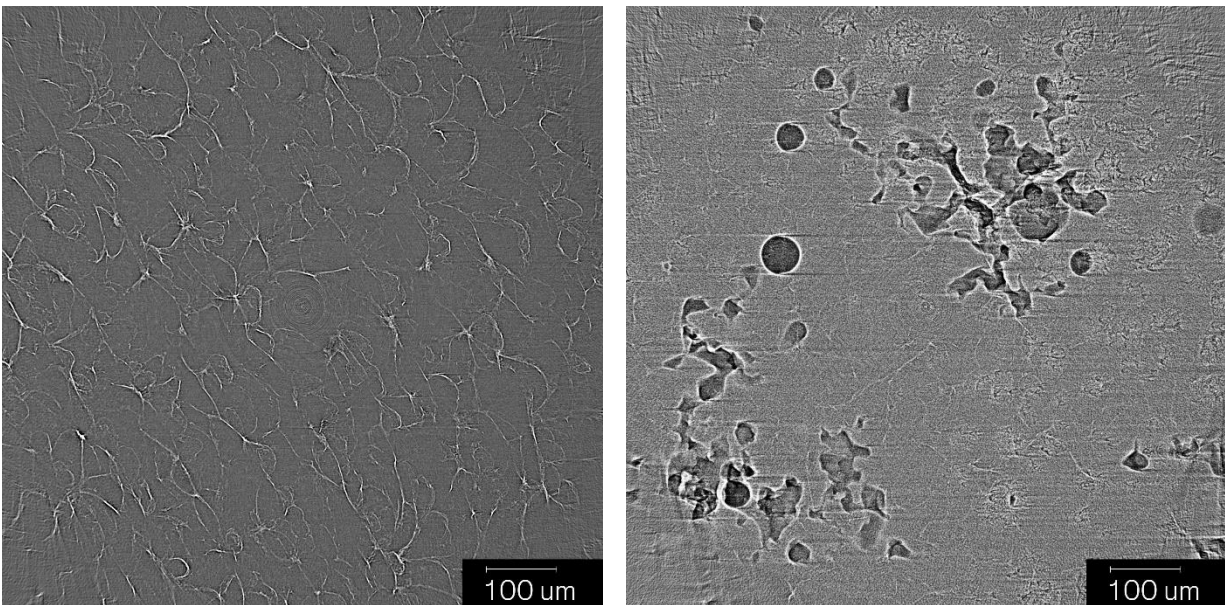
The S1 joins the Sintratec Kit in Sintratec's machine portfolio. But the S1 is not a consumer product. It doesn't try to make compromises in production quality, both in its own makeup and in its ability to 3D-print parts. With the S1 you have a machine that is made in Switzerland and built to perform. But with a price point in the order of 10% of industrial laser sintering equipment it is the first machine of its kind now coming to market.



Sintratec engineer at work on a S1

Over the last months Sintratec's engineers, designers and software developers worked hard to make the S1 ready for market entry. The delivery of all the Sintratec Kits and all the experience, feedback and encouragement gathered from customers allowed Sintratec's team to quickly improve the 3D-printing experience.

But the improvements did not stop with user experience. Sintratec has the opportunity to work together with world class scientists from the Paul Scherrer Institute (PSI), the largest research institute for natural and engineering sciences within Switzerland. Thanks to their cutting-edge particle accelerator Sintratec got an extremely detailed look at the internal makeup of parts printed with the S1. With those insights Sintratec was able to reengineer core components of the S1 before going into production. The final scans showed densities surpassing even those of parts from an industry leader.



Cross-section of a Sintratec part (left) and an industry leader part (right). The black spots on the picture to the right are air pockets. Scans taken by the TOMCAT beamline of PSI's synchrotron particle accelerator.

Further evidence for the high quality of the Swiss startup's 3D-printed parts can be found in early test results taken by Geberit, a multinational group specialized in manufacturing and supplying sanitary parts and related systems and S1 customer. Internal tests at their additive manufacturing lab showed that Sintratec's parts are waterproof and can sustain 30 atmospheres of pressure (30 bar). Significant firm- and software improvements on the S1 led to an even a better result (40 bar water pressure) and catapulted Sintratec ahead of Stratasys and into the region of high-end systems manufacturer EOS. "Now that we are on their heels, it is our aim to surpass them", says Sintratec CTO Christian von Burg with a wink after being asked if he is happy with the results.

Internal Pressure Burst Benchmark

Company	Machine	Procedure	Material	Temp.	Pressure Resistance			
					10 bar	20 bar	30 bar	Defect at
Geberit Internal Test	Objet Connex500	3D-Printer	Photopolymer Endur RGD450	30° C	✓	✓	✓	31 bar
Geberit Internal Test	EOS Formiga P100	SLS	PA2200	30° C	✓	✓	✓	45 bar
Sintratec AG Brugg	Sintratec S1	SLS 12.2.2016	PA12 dark grey	30° C	✓	✓	✓	30 bar
Sintratec AG Brugg	Sintratec S1	SLS 19.2.2016	PA12 dark grey	30° C	✓	✓	✓	40 bar



Geberit's comparison between Sintratec S1, Objet500 Connex and EOS Formiga

Meanwhile the Sintratec Kit also underwent some development. While the S1 is manufactured in-house Sintratec has decided to work together with the Swiss Domino foundation to commission the [Sintratec Kit](#). The foundation is committed to improve the quality of life and social integration of people with disabilities. Procedures ranging from counting small parts and cutting the isolation to the packaging of the Kits are all executed by people with disabilities. Sintratec co-founder Joscha Zeltner states the following about the cooperation: "They have a very professional attitude and seeing how committed they are makes us really happy. They deliver great work and it is a true win-win situation!". You can read more on Sintratec's [new stories page](#).



Sintratec Kit being commissioned by the Domino Foundation



The Sintratec Kit, the world's first and only laser sintering printer sold as a kit, is on the market since early 2016 and available at Sintratec [webshop](#). Since its market release Sintratec has made a support platform available at [support.sintratec.com](#).

Sintratec can be contacted at sales@sintratec.com for any inquiries regarding the S1.