

HASCO Combines Stratasys 3D Printing with Quick-Change Mold System to Create New Price/Performance Benchmark for Low Volume Injection Molding

Mold making pioneer reports significant time and cost efficiencies utilizing this approach for low volume production, enabling molders to quickly change inserts for different products

MINNEAPOLIS & REHOVOT, Israel--(BUSINESS WIRE)-- <u>Stratasys Ltd</u>. (Nasdaq:SSYS), a global leader of 3D printing and additive manufacturing solutions, today announced that worldwide moldmaker, HASCO, has developed a rapid, cost-efficient method to producing low volumes of injection molded prototypes by integrating Stratasys 3D printing with its K3500 quick-change mold system. Utilizing this innovative approach, molders can quickly change between inserts for different products, enabling them to cost-effectively produce low volumes of injection molded parts for samples, prototypes and small production runs.

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HASCO 3D printed the inserts in Stratasys' ultra-tough Digital ABS material using the Objet500 Connex Multi-material 3D Production System. With a 3D printed mold insert taking only hours to produce, molders can make design modifications to the product for a fraction of the time and cost of conventional tooling methods.

"With time-to-market cycles shorter than ever and production quantities dropping, our customers are

HASCO 3D prints injection mold inserts with Stratasys PolyJet technology in a matter of hours and can make design iterations at a fraction of the time and cost of traditional tooling methods. Photo: Stratasys

now looking for

solutions that enable them to deliver prototypes quickly and cost-effectively," says Dirk Paulmann, Executive Vice President, Sales & Business Development at HASCO. "Compared with conventional metal or aluminum inserts, our new approach offers molders the flexibility to quickly produce and switch inserts, making them much more productive and profitable. Combining our longstanding heritage in mold making with Stratasys' pioneering expertise in 3D printing injection molds, this best of both worlds technique is the future of prototype and low volume production."

Unique approach put to the test

When producing a sealing plug for its industry-standard A8001 clamping fixture, HASCO identified that the walls of the ABS plastic sealing screw would need to be 12mm thick to seal the large number of threaded holes. Given this geometry, it was clear that the screw could not be produced using the conventional injection molding process. With the level of intricacy enabled by Stratasys PolyJet 3D printing, HASCO redesigned the screw with a reduced wall thickness and subsequently 3D printed a mold insert to the new specifications in order to test the integrity of the design before mass production.

"The speed of the process was incredible," explains Paulmann. "Using our Objet500 Connex 3D Production System, we produced the parts of the cavity that shape the polymer – such as the inserts and slides – in just six hours compared to the 24 hours it previously took. We then worked with prototyping specialists Canto Ing. GmbH, Lüdenscheid to finish the 3D printed inserts and test the sample mold. We were delighted with the result, the first sealing screws were produced ready for mounting on our clamping unit in a record time of only four days.

"Through the use of tried-and-tested standardized HASCO products and Stratasys state-ofthe-art 3D printing, the project has proved that it is possible to implement this innovative rapid-technology application within the injection molding process. For the production of lowvolume prototypes in the final product material, the ability to quickly change molds with a 3D printed cavity offers a rapid, low-cost alternative to conventional methods," he adds.

Nadav Sella, Director, Manufacturing Tools, Vertical Business Unit, Stratasys, concludes, "We're extremely excited about what this collaboration has done to advance the low volume injection molding process and the resulting manufacturing efficiencies that can be achieved by molders. We view this as an application area with significant potential and will continue to work with partners such as HASCO to further extend the benefits of additive manufacturing into the world of mold making and injection molding."

About HASCO

Founded 1924 in Lüdenscheid, Germany, HASCO Hasenclever GmbH + Co KG is regarded as the inventor of the standard mould unit. HASCO is the world's leading supplier of modular standard mould units and accessories. The company's hallmark is based on state-of-the-art standardised mould products.

With 700 employees worldwide, including 380 in Germany, HASCO supplies customised products and services. Investments in new production technologies and infrastructure enable the company to continue setting standards for the future.

Stratasys Ltd. (Nasdaq:SSYS), headquartered in Minneapolis, Minnesota and Rehovot, Israel, is a leading global provider of 3D printing and additive manufacturing solutions. The

company's patented FDM[®] and PolyJet[™]3D Printing technologies produce prototypes and manufactured goods directly from 3D CAD files or other 3D content. Systems include 3D printers for idea development, prototyping and direct digital manufacturing. Stratasys subsidiaries include MakerBot and Solidscape, and the company operates the digital parts manufacturing service, Stratasys Direct Manufacturing. Stratasys has more than 3,000 employees, holds over 800 granted or pending additive manufacturing patents globally, and has received more than 30 awards for its technology and leadership. Online at: <u>www.stratasys.com</u> or <u>http://blog.stratasys.com</u>

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Forward Looking Statement

The statements in this press release relating to Stratasys' expectations of the benefits that it will receive from its collaboration with HASCO, are forward-looking statements reflecting management's current expectations and beliefs. These forward-looking statements are based on current information that is, by its nature, subject to rapid and even abrupt change. Due to risks and uncertainties associated with Stratasys' business, actual results could differ materially from those projected or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to: the risk that the benefits that Stratasys expects from the collaboration will not materialize, or could be less, than Stratasys currently expects, due to technical or other unforeseen reasons; and other risk factors more fully explained under the caption "Risk Factors" in Stratasys' most recent Annual Report on Form 20-F, filed with the Securities and Exchange Commission (SEC) on March 3, 2015. Stratasys is under no obligation (and expressly disclaims any obligation) to update or alter its forward-looking statements, whether as a result of new information, future events or otherwise, except as otherwise required by the rules and regulations of the SEC.

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