

Brose and voxeljet AG Sign Beta Program for New VX1000 HSS 3D Printer for Additive Series Production of Polymers

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FRIEDBERG, Germany--(BUSINESS WIRE)-- voxeljet AG (NASDAQ:VJET) announces one of the first participants in the High Speed Sintering (HSS) Early-Access Beta Program for the VX1000 HSS. With HSS, voxeljet combines the advantages of two existing additive technologies: selective laser sintering and binder jetting, giving the benefit of both SLS part properties and binder-jetting productivity. The new VX1000 HSS 3D printer has a significantly larger build volume and a much faster print speed than previous systems, enabling true series production. Brose, a global automotive supplier, will work with voxeljet as a cooperation partner to further develop the VX1000 HSS for use in additive series production of polymer components for the automotive industry.

Unpacking large impeller: even large-volume parts such as impellers or, as planned in the case of Brose, door modules can be produced in one piece with the VX1000 HSS. (Photo: Business Wire)

The aim of the HSS Beta Program is to test the features and capabilities of the VX1000 HSS in an extensively designed

program for use in industrial production environments. After a joint three-month development phase at voxeljet's headquarters in Munich, the system will be moved to the Brose Additive Manufacturing Center in Coburg, integrated into the production environment and optimized for customer-specific applications.

"We chose the VX1000 HSS for two reasons: First, this technology offers us unique productivity. The increasing trend towards ever more complex components with material-saving lattice structures, detached from the packing density in the build space, is translated into a consistently fast print time in the HSS process compared to laser-based technologies. With maximum part sizes of up to 1,000 x 450 x 180 mm, we can print door modules in one

piece, for example. Another decisive factor was that both the process and the materials are open. This means that in addition to the initial PA12 configuration, we can also test and qualify materials on the system that cannot currently be processed using SLS technologies, for example," explains Christian Kleylein, Additive Technology at Brose.

In addition to the production of prototypes and pilot series, Brose plans to implement the VX1000 HSS for series production. In particular, the company is focusing on so-called "end of life" components for 3D printing. These are spare parts for discontinued car models.

"Sustainability is a top priority at Brose. Thanks to additive manufacturing, tools for "end of life" components no longer need to be stored and spare parts pre-produced, but can be stored digitally and retrieved and printed on demand. With the HSS technology and its high printing speeds, we can begin to reduce physical storage for both tools and spare parts," says Kleylein.

"We are delighted to have Brose as our first collaboration partner for our HSS Beta program," says Rudolf Franz, COO at voxeljet. "Ever since our foundation in 1999 and as part of our Mission M, we have been striving for the establishment of a new manufacturing standard and redefining additive mass production. We are pleased to welcome Brose as an innovative partner with whom we can continue pursuing this vision and to launch a new era of additive industrial production."

"Here at voxeljet we recognize that true production means customizing the process around the application. We do not intend to provide an off-the-shelf solution that does quite a good job but instead provide an optimized solution that does a great job! The Beta Program with Brose is therefore an important stage for us to understand the demands in automotive production and adjust our machines to match those demands in ways that no other AM solution can achieve." James Reeves, Global Director of Polymer Sintering (HSS) at voxeljet.

The focus of further development of the VX1000 HSS is in particular on adapting, optimizing and integrating the machine to the specific process and production conditions at Brose. In addition, the flexibility and adaptability of the HSS technology to various applications will be tested through the direct developer support on a hard- and software level included in the program.

First printed parts and further information about the VX1000 HSS will be available at the upcoming formnext trade fair from November 16 - 19 in Frankfurt at the voxeljet booth C129 in hall 12.1.

About Brose

Brose is the fourth-largest family-owned automotive supplier. Every second new car worldwide is equipped with at least one Brose product. The company's intelligent solutions for vehicle access and interiors provide greater

comfort and flexibility. Innovative concepts for thermal management increase efficiency and contribute to environmental and climate protection. Brose's systems understanding enables new functions in all kinds of vehicles - whether on four or two wheels. Around 25,000 employees at 65 locations in 24 countries generated a turnover of 5.1 billion euros in 2020.

About voxeljet

voxeljet's (NASDAQ: VJET) roots reach back to the year 1995 with the first successful dosing of UV-resins. In the context of a "hidden" project, initial 3D-printing tests are performed at the Technical University Munich. Our company was founded on May 5, 1999 as a spin-off from TUM in Munich with a clear vision in mind: to establish a new manufacturing standard by developing new generative processes for the series-production of complex components using 3D printing. In the beginning, operations were launched with four employees at the TUM. Today, we are a globally acting, leading provider of high-speed, large-format 3D printers and on-demand 3D printed parts to industrial and commercial customers. Components manufactured with the help of our technology are flying in space, make mobility more efficient and the production of new engineering solutions possible. Visit our website www.voxeljet.com, and follow us on [LinkedIn](#), or on [Twitter](#).

Cautionary Statement on Forward-Looking Statements

This press release contains forward-looking statements concerning our business, operations and financial performance. Any statements that are not of historical facts may be deemed to be forward-looking statements. You can identify these forward-looking statements by words such as "believes," "estimates," "anticipates," "expects," "plans," "intends," "may," "could," "might," "will," "should," "aims," "projects" or other similar expressions that convey uncertainty of future events or outcomes. Forward-looking statements include statements regarding our intentions, beliefs, assumptions, projections, outlook, analyses or current expectations concerning, among other things, our results of operations, financial condition, business outlook, the potential timeline for development of and application of new technology and new materials and their impact on future business, the industry in which we operate and the trends that may affect the industry or us. Although we believe that we have a reasonable basis for each forward-looking statement contained in this press release, we caution you that forward-looking statements are not guarantees of future performance. All of our forward-looking statements are subject to known and unknown risks, uncertainties and other factors that are in some cases beyond our control and that may cause our actual results to differ materially from our expectations, including those risks identified under the caption "Risk Factors" in voxeljet's Annual Report on Form 20-F and in other reports voxeljet files with the U.S. Securities and Exchange Commission. Except as required by law, voxeljet undertakes no obligation to publicly update any forward-looking statements for any reason after the date of this press release whether as a result of new information, future events or otherwise.

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