

DESKTOP METAL INTRODUCES NEW MODEL TO THE PRODUCTION SYSTEM PLATFORM IN ANTICIPATION OF FIRST SHIPMENTS STARTING IN Q1 2019

- **New System Has a 225 Percent Larger Build Envelope (750mm x 330mm x 250mm) and a 50 Percent Print Speed Increase to 12,000 cm³/hour - Making It the Fastest Metal Printer in the World and Delivering the Lowest Cost Per Part**
- **Broad Range of Parts and Applications to be Previewed at formnext 2018**

FRANKFURT, GERMANY, November 13 – With preparations underway for the first customer installation of its mass production system in early 2019, Desktop Metal today announced several major advancements and expanded capabilities to the Production System™, the world’s fastest metal printer, delivering the lowest cost per part with the highest capacity of any metal 3D printing system available. At formnext 2018, the leading international trade show for Additive Manufacturing, the company will preview a wide range of metal 3D printed parts, from mass serialization in high-mix/high-volume production and assembly consolidation to simplified manufacturing for complex metal parts.

The installation of the first Production System is scheduled for Q1 2019 to a Fortune 500 company among Desktop Metal’s early Pioneer customers. Additional customer installations at major automotive, heavy duty and leading metal parts manufacturers will follow throughout 2019, with broad availability in 2020.

“We are excited to provide the international engineering and design community with deeper insights into the power of the Production System with updated innovations and an extensive display of metal parts to be publicly shown for the first time this week,” said Ric Fulop, CEO and co-founder of Desktop Metal. “As we continue to expand our list of global customers and partners, companies that are turning to the game-changing technology available with the Production System, and installations set to begin rolling out in the coming months, Desktop Metal is looking to further shift the industry beyond prototyping to now include full scale metal manufacturing.”

Production System Developments

Powered by Single Pass Jetting™ technology, the Production System is the first and only metal 3D printing system for mass production that delivers the speed, quality, and cost-per-part needed to compete with traditional manufacturing processes. It is more than 4 times faster than any binder jet competitor and offers a 100 times speed improvement over any laser-based system. Since it was first introduced, advancements to the technology and capacity of the Production System have expanded to include:

- Accelerated printing speeds to 12,000 cm³ per hour, making it the fastest metal 3D printer in the world with the highest capacity;
- The company’s flagship configuration now features an expanded build volume of 750 x 330 x 250 mm, a 225 percent improvement, designed for higher throughput and efficiency;

- Two full-width print bars, advanced powder spreaders and anti-ballistic system that work to spread powder and print in a single quick pass across the build area - making it the most sophisticated single pass inkjet printhead ever installed in a binder jet system;
- Use of 32,768 piezo inkjet nozzles that enables the broadest range of binder chemistries to print an array of metals - including tool steels, low alloy steels, titanium, and aluminum - at a rate of 3 billion drops per second;
- First and only binder jet system with an industrial inert environment, including gas recycling and solvent recovery, to safely print reactive metals in mass production; and
- Capability to print more than 60 kilograms of metal parts per hour.

formnext 2018

In addition to showcasing the latest developments and technology within the Production System, Desktop Metal will also preview printed metal parts and applications across industries at formnext 2018, demonstrating the range and complexity now achievable for mass production. The featured parts, spanning automotive, industrial machinery, consumer products, manufacturing, tooling and more, will be on display from November 13 to 16 in Hall 3.0 - booth C10.

- **Spauger Bit – Simplified Manufacturing for Complex Metal Parts**

The spauger bit, by Desktop Metal Pioneer customer Milwaukee Tool®, features complex geometry traditionally requiring multiple manufacturing steps to produce, including time-consuming, dedicated setups for milling, turning and grinding operations. The Production System has revolutionized the process by reducing the number of steps in spauger manufacturing from more than 20 steps to four, and producing as many as 1,400 spauger bits per four-hour build.



- **High-variety Manufacturing – Mass Serialization in High-Mix/High Volume Production**

The Production System is capable of mass customizing batches of generative designed gears at varying amounts with mass production efficiency. Instead of needing to post-process each part using laser or electrochemical etching, ink marking, or dot peening, parts can now be printed with serial numbers – or other customization detail – in place, rendering an entire build volume of unique parts with no need for post processing.



- **Print-in-Place Hinge – Assembly Consolidation for High-Volume Production**

Standard hinge designs, like ones used with eye-glasses, typically consist of two leaves that are bound by, and revolve around, a central pin. Assembly of these small components can be time-consuming in high volume, and often require precision engineering tools and equipment to manufacture. The Production System is able to print more than 45,000 pre-assembled 12 x 5 x 6 mm eye-glass hinges in a single four-hour build. The hinge featured at formnext has been manufactured with the pin printed directly into the knuckle of the mating leaf – eliminating assembly time and reducing risk of disassembly with use over time.



About Desktop Metal

Desktop Metal, Inc., based in Burlington, Massachusetts, USA, is accelerating the transformation of manufacturing with end-to-end metal 3D printing solutions. Founded in 2015 by leaders in advanced manufacturing, metallurgy, and robotics, the company is addressing the unmet challenges of speed, cost, and quality to make metal 3D printing an essential tool for engineers and manufacturers around the world. Since its inception, the company has raised \$277 million in financing with a portfolio of strategic partners and investors including Ford Motor Company, GV (formerly Google Ventures), GE Ventures, BMW iVentures, Lowe's, New Enterprise Associates (NEA) and more. Desktop Metal was selected as one of the world's 30 most promising [Technology Pioneers](#) by World Economic Forum; named to MIT Technology Review's list of [50 Smartest Companies](#); and recognized among the most important innovations in engineering in *Popular Science's* ["Best of What's New."](#) For more information, visit www.desktopmetal.com.

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