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| News Release  **HP Showcases Growth in High-Volume 3D Printing Deployments and Breakthrough Applications for Manufacturing**  *Protolabs, IAM 3D Hub, Materialise, and ZiggZagg embrace HP’s Multi Jet Fusion for digital manufacturing; new applications for the Pontifical Swiss Guard, PepsiCo, auto racing, orthotics, industrial machinery, and more* |

## News highlights:

* Protolabs upgrades seven HP systems to the Jet Fusion 4210 3D printing platform in the U.S. and Germany offering customers truly global digital production services
* IAM 3D Hub in Spain deploys eight HP Jet Fusion 4200 3D printers; ZiggZagg in Belgium installs six HP Jet Fusion 4210 3D printing systems to meet growing demand for production-grade 3D printed parts
* Long-standing HP customer Materialise demonstrates the power of HP’s end-to-end 3D solutions with production of custom insoles
* New breakthrough applications across vertical industries demonstrate power of HP Multi Jet Fusion platform

**Barcelona, Spain - May 22, 2018 —** Today at the HP Innovation Summit in Barcelona, Spain, HP announced expanded installations of its HP Jet Fusion 3D printing solutions with digital manufacturing innovators Protolabs, Materialise, and ZiggZagg. As a leader in helping the world take advantage of digital technologies in the 4th Industrial Revolution, HP also showcased its collaboration with the International Additive Manufacturing (IAM) 3D Hub and highlighted numerous applications of 3D printing in action, including new lighter-weight helmets for the Pontifical Swiss Guard, custom merchandising for PepsiCo, airflow manifolds for high-performance auto racing, industrial machinery used in the construction of skyscrapers, and orthosis devices improving the quality of life for patients, amongst others.

*“The digital transformation of the $12 trillion manufacturing industry is changing the game for the world’s designers, product developers, manufacturing and supply chain professionals, creating massive opportunity for the 3D printing ecosystem,”* said Ramon Pastor, general manager of Multi Jet Fusion, HP Inc. *“In collaboration with our customers, we are proud to reinvent the way the world designs and manufacturers and to drive innovative new applications made possible with HP Multi Jet Fusion. Whether it’s helping the Swiss Guard protect the Vatican or reinventing what can be done for an entire industry like orthopedics, the possibilities are endless.”*  
  
**Innovative Leaders Look to the Digital Future of Manufacturing with HP Multi Jet Fusion Technology**  
**Protolabs (NYSE: PRLB),** the world’s fastest manufacturer of custom prototypes and on-demand production parts with 11 manufacturing facilities across four countries, is upgrading its seven HP Jet Fusion 3D printers in the U.S. and Germany to industrial HP Jet Fusion 4210 3D systems to meet the increasing demand for global 3D production services.

*“The demand for 3D-printed production applications continues to grow and HP’s Multi Jet Fusion technology is furthering our ability to deliver our customers industrial-grade parts quickly and cost-effectively,”* said Vicki Holt, president and CEO, Protolabs. *“By expanding the capacity of our HP Multi Jet Fusion services and installing printers in the United States and Europe, we are meeting the needs of our global customer base and demonstrating that geographically distributed, on-demand production is a reality today.”*

Protolabs is using the speed, quality, and cost advantages of Multi Jet Fusion technology to provide compelling custom packaging applications for customers including **PepsiCo (NASDAQ: PEP)** who recently [3D printed **Black Panther** masks](https://www.protolabs.com/resources/case-studies/pepsico/) for its promotional beverage kits. These benefits also [translated to success for **Stream Lion Design**](https://www.protolabs.com/resources/case-studies/stream-lion/), another Protolabs customer in the industrial sector who found the production-grade capabilities of Multi Jet Fusion ideal for solving a combustion turbine problem in the utilities industry. A new HP 3D printed modal hammer has enabled the company to survey engine turbines in the field and **double the speed of data collection**.

**Materialise (NASDAQ: MTLS)**, a leading provider of Additive Manufacturing software and services for the medical and industrial markets, has already deployed eight HP Jet Fusion 4200 3D printers. In an exciting development, Materialise and HP have now entered into an exclusive agreement with RSPrint to scale an end-to-end 3D solution to design and manufacture individualized insoles.  Through RSPrint, FitStation powered by HP, uses Materialise’s 3D design and manufacturing software to translate individual biomechanical data into personalized insoles. Insoles can then be securely manufactured worldwide on Materialise’s HP Jet Fusion 3D printers.

**ZiggZagg**, a leading 3D printing provider in Belgium, joins existing digital manufacturing service providers such as Forecast 3D, Go Proto, Materialise, Protolabs, and Stern with multi-unit deployments of HP’s Jet Fusion 3D printing solutions. The company has installed six HP Jet Fusion 4210 3D printers to produce parts for their customers across the medical, consumer goods, automotive and industrial markets.

ZiggZagg used its HP Multi Jet Fusion technology to print **a single-piece engine manifold for a race car** participating in the [Belcar Endurance Championship](https://www.belcarseries.com/) racing series in Belgium and The Netherlands. The HP 3D printed part replaced two pieces that were injection molded and had to be welded together. Using the injection molded parts, the team often lost races when the parts broke apart, destroying the entire manifold due to the extreme pressure. The team optimized the HP 3D printed part by using additive design advantages to simplify the structure and improve air flow, resulting in a Top 5 finish in its most recent race.  
  
**Global 3D Center of Excellence Collaborates with HP to Drive 4th Industrial Revolutio****n  
  
IAM 3D Hub**, which brings together private companies, public entities, and R&D organizations, has installed eight HP Jet Fusion 4200 3D printing systems. IAM 3D Hub is also tapping HP’s industry leadership and technology expertise to expand educational and training opportunities, provide business mentoring, and grow the industry ecosystem. The Hub was founded to help integrate and coordinate 3D printing activities around the world and provides customers with an alternative way to design, develop, and manufacture new competitive products and services.

*“IAM 3D Hub shares HP’s vision to accelerate the adoption and development of 3D printing technologies for industrial production, and provide expansive education and training opportunities to grow the market,”* said Aintzane Arbide, general secretary, IAM 3D Hub. *“HP’s leadership has already helped us move the needle across our various programs specific to technology innovation. The advanced capabilities of Multi Jet Fusion allow organizations to completely rethink their approach to product engineering and design, complex workflows, and advance the future of their manufacturing processes.”*

**Breakthrough 3D Printing Applications Go Beyond the Imagination**

The HP Multi Jet Fusion platform enables the design and production of previously inconceivable applications. In addition to the innovative applications from Protolabs, Materialise, and ZiggZagg, as part of the HP Innovation Summit, HP showcased a variety of additional 3D printing applications across industries including:

* **Custom designed helmets for the Pontifical Swiss Guard**, who have been responsible for providing security to The Vatican, including protecting the Pope and the papal residence, since 1506. These state-of-the-art trained Swiss security professionals are clothed in the traditional renaissance uniform, and have begun wearing much lighter weight helmets 3D printed with HP Multi Jet Fusion.
* The ability to produce a **20 percent lighter bike helmet** using Multi Jet Fusion is a tremendous advantage for **Syncro Innovation**, an industrial design firm located in Quebec, Canada. Printed by **Sculpteo**, a manufacturing service provider based in France, Syncro selected Multi Jet Fusion services for their consistent quality and cost effectiveness. Sculpteo recently added the HP Jet Fusion 4210 3D printer to its existing portfolio of Jet Fusion 4200 3D printers to support increased demand from customers including Syncro.
* **daVINCI Painting Line Arm by FICEP Steel Surface Systems** (FICEP Ss), an industrial engineering company specialized in Additive Manufacturing, Design, and R+D. FICEP S3 is using MultiJet Fusion to reduce the weight and further optimize over 40 percent of the daVINCI's final production parts allowing for faster acceleration, deceleration and position control, with geometries that could not be machined or molded. This new machine is an evolution of the machines used in the structural steel industry to protect the steel used in buildings like the **Freedom Tower in New York City** or the **Shard in London**.
* **Ankle Foot Orthosis** by Crispin Orthotics, a UK-based specialist in modern orthotics. The capabilities of Multi Jet Fusion have the potential to completely reinvent the orthotics industry by enabling the creation of individualized, precise and more cosmetic options for patients. In addition to these advantages, Crispin’s dynamic ankle foot orthosis is printed on Multi Jet Fusion for 50 percent less than a comparable carbon fibre product.​
* **Industrial applications** including a gripper for robots and mounting fixtures produced by **Stern 3D**, a leading digital manufacturer in Germany with 10 HP Jet Fusion 4200 3D systems. Known for conventional manufacturing for medical and automotive customers, Stern will now be offering customers the ability to quickly produce new parts with Multi Jet Fusion.

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