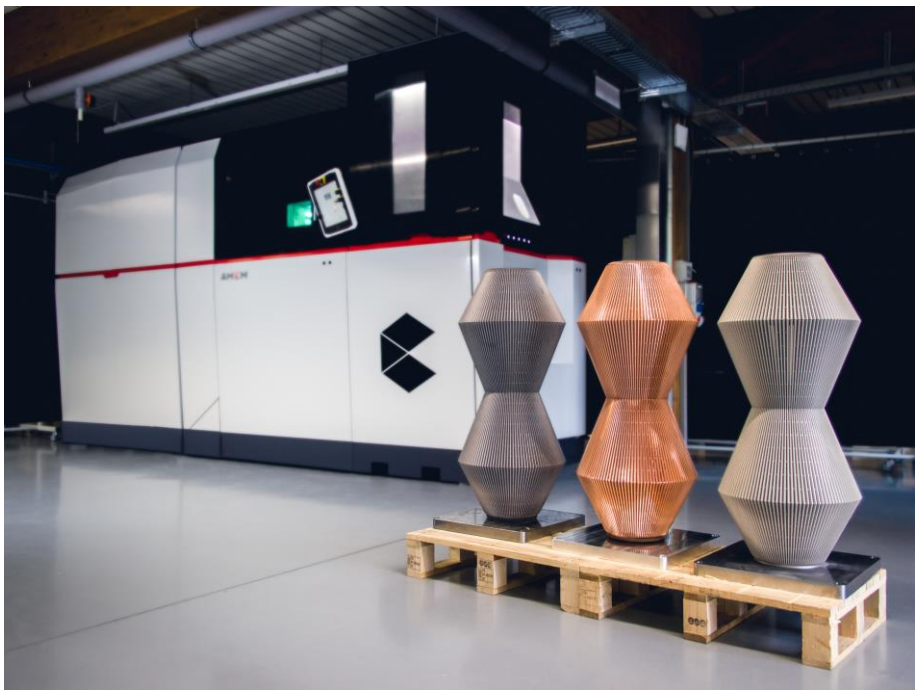
Press Release

# AMCM Begins Serial Production of Its AMCM M 4K Industrial Metal 3D Printer, Printing Applications Up To One Meter High

*Based on the EOS M 400 series, the customized, high-performance Direct Metal Laser Solidification (DMLS®) printers now in production at AMCM's newly expanded facility*

→ **New 3D printer available in both one (1) and four (4) laser offerings**
→ **Available build volume of 450 x 450 x 1000mm**
→ **Rocket manufacturing organizations seen as early adopters**
→ **Several M 4K currently in production in the dedicated new production facility in Starnberg**



**Starnberg, Bavaria, Germany, May 28, 2020** – AMCM, an EOS Group company, today announced the serial production of its **AMCM M 4K-1** (single laser) and **AMCM M 4K-4** (four laser) industrial DMLS metal 3D printing platforms.

Built on the industry proven EOS M 400 platform, the AMCM M 4K is tailored to produce large applications, with a height up to one meter (39.37 inches). Additional features include increased robustness of the frame design, a new filter system (RFS 2.0), and optional soft recoating. Out-of-the-box, the AMCM M 4K can produce applications from a wide range of materials, including aluminum (AlSi10Mg), nickel alloy (IN718), and copper alloy (CuCr1Zr).

"The AMCM M 4K is a wholly new offering that we have been perfecting for two years. What customers can appreciate is that its underpinnings are that of the EOS M 400 processes— which are the benchmark for metal 3D printing," said Martin Bullemer, managing director of AMCM. "Our team is extremely proud of this system now producing the biggest, highest quality metal powder-bed 3D printing applications in the world."

## Additional Details of the AMCM M 4K Platform

- Large building volume of 450 x 450 x 1,000 mm
- Laser Type: Yb Fiber laser: 1 x 1,000 watt, 4 x 400 watt or 4 x 1,000 watt, optional
- Wave length: 1,070 nm
- Precision Optics: F-theta-lens
- Scan Speed during build process: up to 7.0 m/s (23 ft./sec)
- Process Gas Cooling: additional gas cooling unit (optional)
- Dimensions of complete system: (W x D x H): 193 x 83 x 122 in
- Compatible with legacy EOS M 400 Series process parameter sets
- Powder handling option for manual or semi-automatic operation
- Open software for process optimization with high power laser

Powder bed DMLS 3D printing is used for the most demanding applications – high performance, sophisticated, mission critical parts. With the help of AMCM, Launcher was one such organization that realized very early in the AMCM M 4K's development that it could now produce – using the preferred DMLS method – its copper alloy E-2 combustion chamber, the world's largest 3D printed liquid rocket engine. "The AMCM M 4K solved for both our desire to 3D print a tall combustion chamber in a single piece, and produce it in a copper material," said Launcher CEO, Max Haot. "Printing in a single piece reduces cost and enables the highest-performance regenerative cooling design." Launcher will be testing E-2 at NASA Stennis as part of an Air Force Phase II SBIR later this year.

The AMCM M 4K platform is a global offering and is available now. AMCM is ramping up its production at their new expanded facility in Starnberg, Germany. In addition to the AMCM M 4K platform, AMCM is pushing the limits of additive manufacturing (AM) technology producing other high-performance, customized industrial 3D printers based on EOS technology. For more information on AMCM, visit amcm.com.

## About AMCM

Additive Manufacturing Customized Machines (AMCM) engineers and produces custom, high-performance industrial 3D printing solutions. Based on EOS technology, AMCM offers customized AM solutions and modified and enhanced EOS systems tailored to customer requirements – from new lasers to adapted heating concepts and modified build volumes. AMCM also builds completely new systems designed specifically to meet customer requirements. AMCM is an EOS Group company.