



## EOS M 290

The Additive Manufacturing System for the Production of Serial Components,  
Spare Parts and Functional Prototypes Directly in Metal



e-Manufacturing Solutions

# EOS M 290: The Benchmark for the Additive Manufacturing of High-Quality Metal Parts - with Enhanced Quality Management Features

With a building volume of 250 x 250 x 325 mm, the EOS M 290 allows a fast, flexible and cost-effective production of metal parts directly from CAD data.

## Proven quality

- The EOS M 290 is an enhancement of the well-known EOSINT M 280, the leading system on the market for the tool-free manufacture of serial components, spare parts and functional prototypes directly in metal.

## Modular Components

- The system is equipped with a 400-watt fibre laser. This type of laser provides an exceptionally high beam quality combined with performance stability.

- The EOS M 290 operates in protective nitrogen as well as argon atmospheres. This allows the system to process a wide range of materials.

## Enhanced Monitoring

- Extensive monitoring features take quality management to a new level and comply with the requirements of industrial production.
- EOSTATE PowderBed: A camera integrated in the process chamber monitors the powder bed by taking single images after recoating and after exposure.

- EOSTATE Base: Parameters such as position of z-axis, laser power, scanner position, humidity, temperature and pressure are monitored continuously.
- EOSTATE Laser Monitoring: measures the laser power throughout the entire build time.

## Optimized process gas management

- A recirculating filter system with automated self-cleaning allows for fewer filter changes and longer lifetime. This significantly reduces filter costs.

## Intuitive software

- Job preparation and calculation is separated from the building process: the job file prepared at your desk is transmitted via the network; the system focusses entirely on building parts.
- This provides great flexibility and efficiency for application development which can be done offline as the system remains free for building.
- With the fast offline job preparation feature, users can quickly handle complex parts and large job files.



*Demonstration part of a nacelle hinge bracket for an Airbus A320 with optimized topology; built in titanium by using an EOS M 290 (Source: Airbus Group Innovations).*

### Improved Usability

- The system can be operated easily via touch screen. The intuitive, task-based graphical user interface was specifically developed for a production environment.
- The wizard guidance supports the system operator.

### Broad materials portfolio

- EOS M 290 supports processing for a wide range of materials: from light metals to stainless and tool steel to superalloys.
- With the EOS ParameterSets, the system manufactures parts with standardized Part Property Profiles (PPPs) for a broad range of applications.
- The ParameterEditor enables you to modify parameters to meet your individual requirements.

### Extensive Equipment

- The solution portfolio is completed by software tools for data preparation, equipment for part handling and post-processing, as well as by extensive services.

### Integrated Solutions

The development of EOS systems, powder materials, process parameters, software and services go hand in hand. All elements are optimally aligned. The result: high-quality and cost-effective production of parts with first-class properties for their dedicated application.

## Technical Data EOS M 290

Building volume	250 mm x 250 mm x 325 mm (9.85 x 9.85 x 12.8 in)
Laser type	Yb-fibre laser; 400 W
Precision optics	F-theta-lens; high-speed scanner
Scan speed	up to 7.0 m/s (23 ft./sec)
Focus diameter	100 µm (0.004 in)
Power supply	32 A
Power consumption	max. 8.5 kW / typical 3.2 kW
Nitrogen generator	integrated
Compressed air supply	7,000 hPa; 20 m³/h (102 psi; 706 ft³/h)

## Dimensions (W x D x H)

System	2,500 mm x 1,300 mm x 2,190 mm (98.4 x 51.2 x 86.2 in)
Recommended installation space	min. 4,800 mm x 3,600 mm x 2,900 mm (189 x 142 x 114 in)
Weight	approx. 1,250 kg (2,756 lb)

## Data preparation

Software	EOS RP Tools; EOSTATE; EOSPRINT; Materialise Magics RP with SG+ and further modules
CAD interface	STL. Optional: converter for all standard formats
Network	Ethernet

EOS GmbH  
Electro Optical Systems  
Corporate Headquarters  
Robert-Stirling-Ring 1  
82152 Krailling/Munich  
Germany  
Phone +49 89 893 36-0  
Fax +49 89 893 36-285

Further EOS Offices

EOS France  
Phone +33 437 49 76 76

EOS India  
Phone +91 44 28 15 87 94

EOS Italy  
Phone +39 0233 40 16 59

EOS Korea  
Phone +82 32 552 82 31

EOS Nordic & Baltic  
Phone +46 31 760 46 40

EOS of North America  
Phone +1 248 306 01 43

EOS Singapore  
Phone +65 6430 05 50

EOS Greater China  
Phone +86 21 602307 00

EOS UK  
Phone +44 1926 62 31 07

[www.eos.info](http://www.eos.info) • [info@eos.info](mailto:info@eos.info)

Think the impossible. You can get it.



e-Manufacturing Solutions