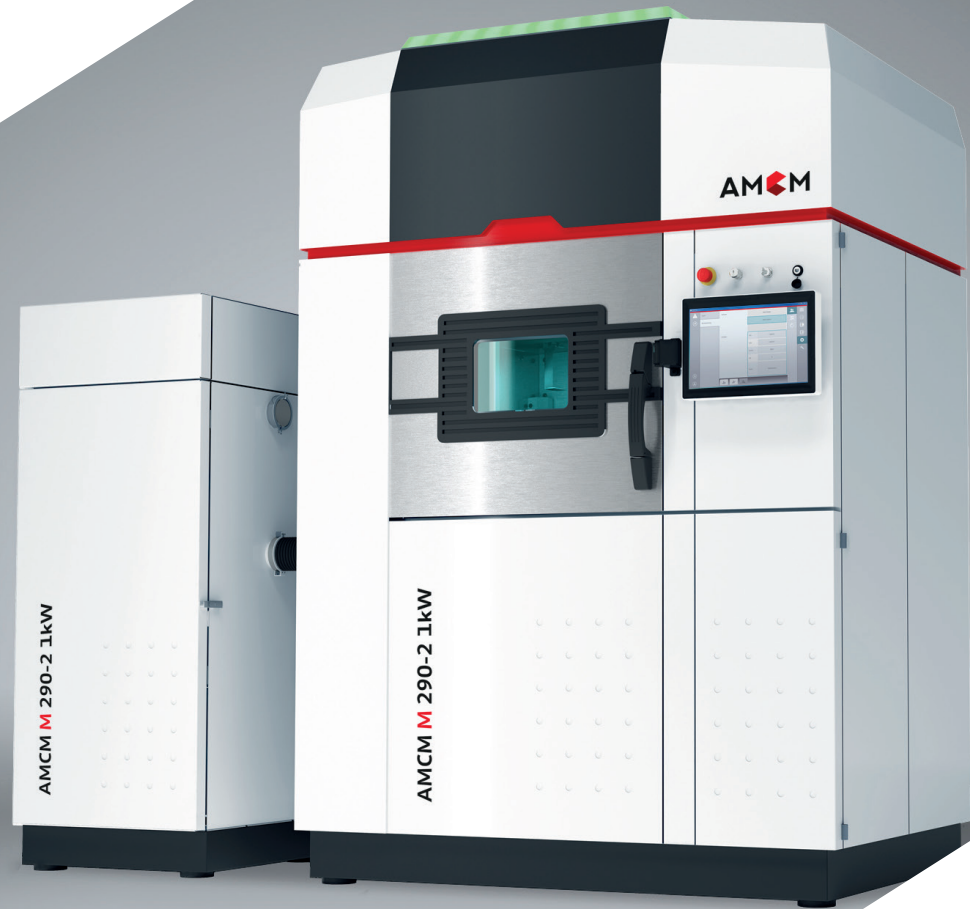




Additive Manufacturing
Customized Machines



AMCM M 290

As 400 W (also with FDR – fine detail resolution)
or 1 kW system each with single or dual laser set-up.

Optimized for your applications.

AMCM M 290

BENEFITS

AMCM M 290-2

configuration with 2 x 400 W:

- Compatible with EOS M 290 (400 W) process parameter sets (same focus, beam quality, etc.) ⁽¹⁾
- High productivity due to dual laser setup
- Full-field overlap

AMCM M 290-2 FDR

configuration with 2 x 400 W and FDR (fine detail resolution):

- For demanding applications with finest structures down to 100 µm
- Open software for process optimization
- High productivity due to dual laser setup

AMCM M 290-1 1kW, AMCM M 290-2 1kW

configuration with up to 2 x 1 kW lasers:

- Compatible with legacy EOS M 290 (400 W) process parameter sets (same focus, beam quality, etc.) ⁽¹⁾
- Increased productivity for multiple materials (e.g. Al and Cu)
- Excellent part properties (e.g. Cu density, electrical conductivity)
- Ability to pre-develop 1 kW processes on a mid-size platform (AMCM M 290-x 1kW version) for later transfer to other single or multi-laser platforms (e.g. AMCM M 450-1 1kW or AMCM M 4K-x)
- AMCM M 290-1 1kW available as new system or upgrade (upgrade can be performed on-site)
- Process gas cooling for constant process conditions
- Open software for process optimization for high laser power
- Single or dual laser setup with full field overlap

TECHNICAL DATA

	AMCM M 290-2	AMCM M 290-2 FDR	AMCM M 290-1 1kW	AMCM M 290-2 1kW
Building volume	250 x 250 x 325 mm 9.85 x 9.85 x 12.8 in (height incl. build plate)			
Laser type	Yb Fiber laser			
Nominal power	2 x 400 W	2 x 400 W	1 x 1 kW	2 x 1 kW
Wave length	1070 nm			
Precision optics	F-theta-lens			
Scanner	digital scanner with active cooling	digital scanner with active cooling	standard scanner with active cooling	digital scanner with active cooling
Scanning speed	up to 7.0 m/s 23 ft./sec			
Focus diameter	approx. 85 µm 0.003 in	approx. 40 µm 0.0016 in	approx. 85 µm 0.003 in	
Process gas cooling	x	-	x	x
Power supply	32 A / 400 V			
Power consumption	15 kW	15 kW	15 kW	17 kW
Inert gas supply	7,000 hPa; 20 m³/h 102 psi; 706 ft³/h			
Dimensions (W x D x H)	2,500 x 1,350 x 2,400 mm 98.4 x 53.1 x 94.49 in		2,500 x 1,350 x 2,200 mm 98.4 x 53.1 x 86.2 in	2,500 x 1,350 x 2,400 mm 98.4 x 53.1 x 94.49 in
Recommended installation space	min. 4,800 x 3,600 x 3,500 mm 189 x 142 x 138 in		min. 4,800 x 3,600 x 2,900 mm 189 x 142 x 114 in	min. 4,800 x 3,600 x 3,500 mm 189 x 142 x 138 in
Weight	approx. 1,350 kg 2,756 lb		approx. 1,250 kg 2,756 lb	approx. 1,350 kg 2,756 lb

⁽¹⁾ Processes must all be re-qualified by customer.
Consulting for parameter set transfer from EOS M 290 (400 W) to AMCM M 290-1 1 kW on request.



Fig 1: AlSi10Mg demo part manufactured in segments with dynamic adaptive parameter sets (AMCM M 290-1 1kW).
Volume rate: 12 up to 32 mm³/s
Source: EOS Innovation Center Düsseldorf



Fig 2: CuCP demo part (AMCM M 290-1 1kW).
Source: Conflux technology

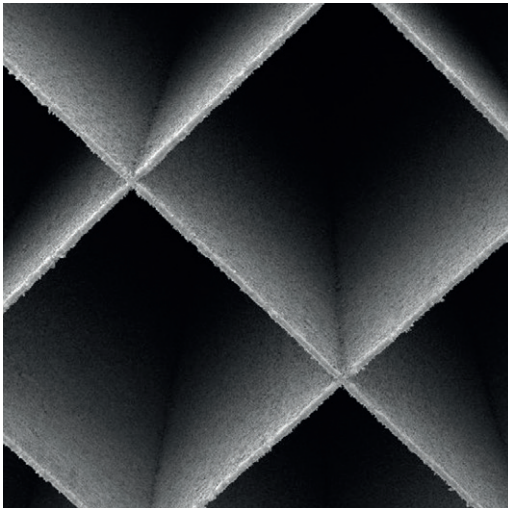


Fig 3: Tungsten anti-scatter-grid with 100 µm wall thickness made possible with fine detail resolution (AMCM M 290-2 FDR).

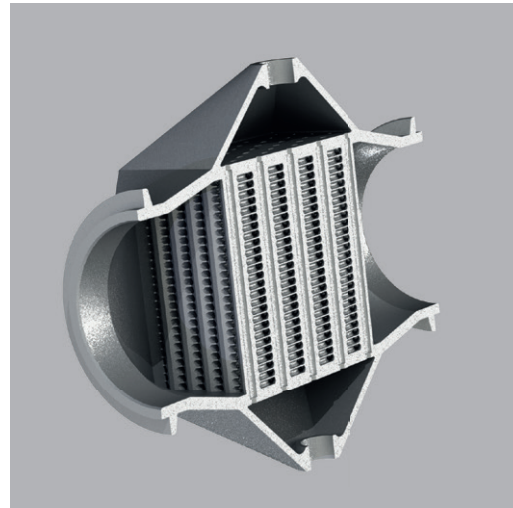


Fig 4 AlSi10Mg gas cooler for process gas cooling built into AMCM M 290 systems – 3D printed on AMCM M 290-1 1kW.