



Additive Manufacturing
Customized Machines



AMCM M 290 1kW

Increased productivity for demanding AM materials.
Enable new materials.

AMCM M 290 1kW

BENEFITS

- Increased productivity for multiple materials (e.g. Al and Cu)
- Excellent part properties (e.g. Cu density, electrical conductivity)
- Compatible with legacy M 290 400W process parameter sets (same focus, beam quality, etc.)⁽¹⁾
- Ability to pre-develop 1 kW processes on a mid-size platform (M 290 1kW) for later transfer to other single or multi-laser platforms (e.g. M 450 or M 4K)
- M 290 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 with power high laser

TECHNICAL DATA

Building volume	250 x 250 x 325 mm 9.85 x 9.85 x 12.8 in (height incl. build plate)
Lasertype	Yb Fiber laser 1 kW nominal power
Wave length	1070 nm
Precision optics	F-theta-lens
Scanner	new high-speed scanner with active cooling
Scanning speed	up to 7,0 m/s 23 ft./sec
Focus diameter	approx. 100 µm 0.004 in
Process gas cooling	additional gas cooling unit
Power supply	32 A / 400 V
Power consumption	max. 13,6 kW / average 2,4 kW / with platform heating up to 3,2 kW
Inert gas supply	7.000 hPa; 20 m³/h 102 psi; 706 ft³/h
Dimensions (W x D x H)	2.500 x 1.300 x 2.190 mm 98.4 x 51.2 x 86.2 in
Recommended installation space	min. 4.800 x 3.600 x 2.900 mm 189 x 142 x 114 in
Weight	approx. 1.250 kg 2,756 lb



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



Fig 2: Cu_cp demo part
Source: AMCM GmbH



Fig 3: Cu_cp demo part
Source: Conflux Technology

⁽¹⁾ Processes must all be re-qualified by customer.
Consulting for parameter set transfer from M290 400W to M290 1kW on request.