

Additive Manufacturing Customized Machines

# **AMCM M 290 1kW**

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Increased productivity for demanding AM materials. **Enable new materials.** 

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## **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.)<sup>(1)</sup>
- 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 consistant process conditions
- Open software for process optimization with power high laser

## **TECHNIC AL 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 mm<sup>3</sup>/s Source: EOS Innovation Center Düsseldorf

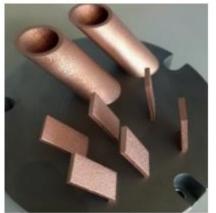


Fig 2: Cu\_cp demo part Source: AMCM GmbH



Fig3: Cu\_cp demo part Source: Conflux Technology

#### <sup>(1)</sup> Processes must all be re-qualified by customer. Consulting for parameter set transfer from M 290 400W to M 290 1kW on request.

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### (주) HDC

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