AMCM

Additive Manufacturing
Customized Machines

AMCM M 4K

Large scale, high productivity system for demanding AM applications. 1 meter building height with up to 4 x 1 kW laser power.

Think big.

AMCM M 4K

BENEFITS

- Compatible with legacy EOS M 400-x process parameter sets (same focus, beam quality, etc.) [1]
- Large building volume of 450 x 450 x 1,000 mm [2]
- Single or quattro optical setups available with 400 W or 1,000 W laser
- Powder handling option for manual or semi-automatic operation
- Robust welded machine frame design
- Calibration and overlap adjustment with SmartCAL [3]
- Open software for process optimization with high power laser

TECHNICAL DATA

	M 4K-4	M 4K-1 1 kW	M 4K-4 1 kW
Building volume	450 x 450 x 1,000 mm | 17.72 x 17.72 x 39.37 in		
Laser type	Yb Fiber laser		
Nominal power	4 x 400 W	1 x 1 kW	4 x 1 kW
Wave length	1070 nm		
Precision optics	F-theta-lens		
Scanner	high-speed scanner with active cooling		
Scanning speed	up to 7.0 m/s | 23 ft./sec		
Focus diameter	approx. 85 µm | 0.003 in		
Process gas cooling	additional gas cooling unit		
Power supply	63 A / 400 V		
Power consumption	34 kW	34 kW	35 kW
Inert gas supply	7,000 hPa; 20 m³/h | 102 psi; 706 ft³/h		
Dimensions (W x D x H)	4,900 x 2,100 x 3,100 mm | 193 x 83 x 122 in		
Recommended installation space	Individually on customer request, e.g. with closed loop powder handling		
Weight	approx. 9,300 kg | 20,503 lb		

Fig 1: AlSi10Mg demo part
1,000 mm height, Ø 380 mm,
Build time: ~ 73 hours,
system: AMCM M 4K-1 1kW

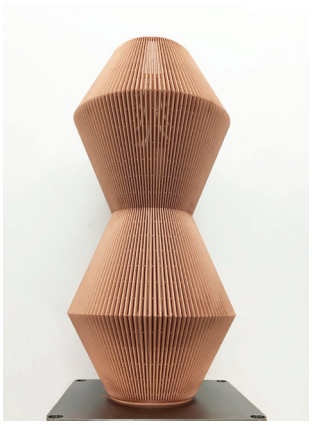

Fig 2: CuCrZr demo part
The first ever 1,000 mm
CuCrZr AM part,
system: AMCM M 4K-1 1kW

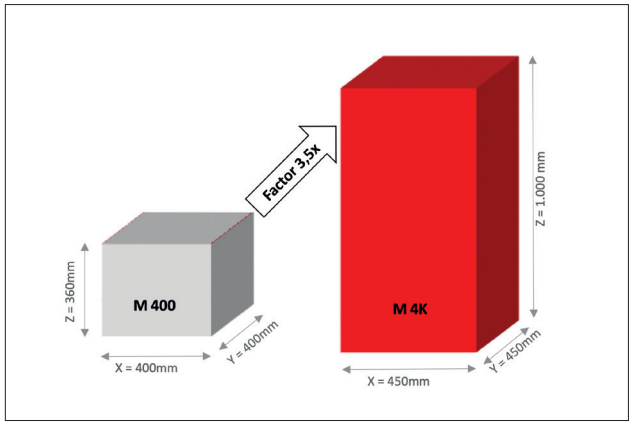

Fig 3: Building volume ratio EOS M 400 and AMCM M 4K

[1] Processes must all be re-qualified by customer.
Consulting for parameter set transfer, e.g. from EOS M 400-x to AMCM M 4K-x on request.
[2] Building height incl. build plate.
[3] Overlap calibration tool (SmartCAL) under development.

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