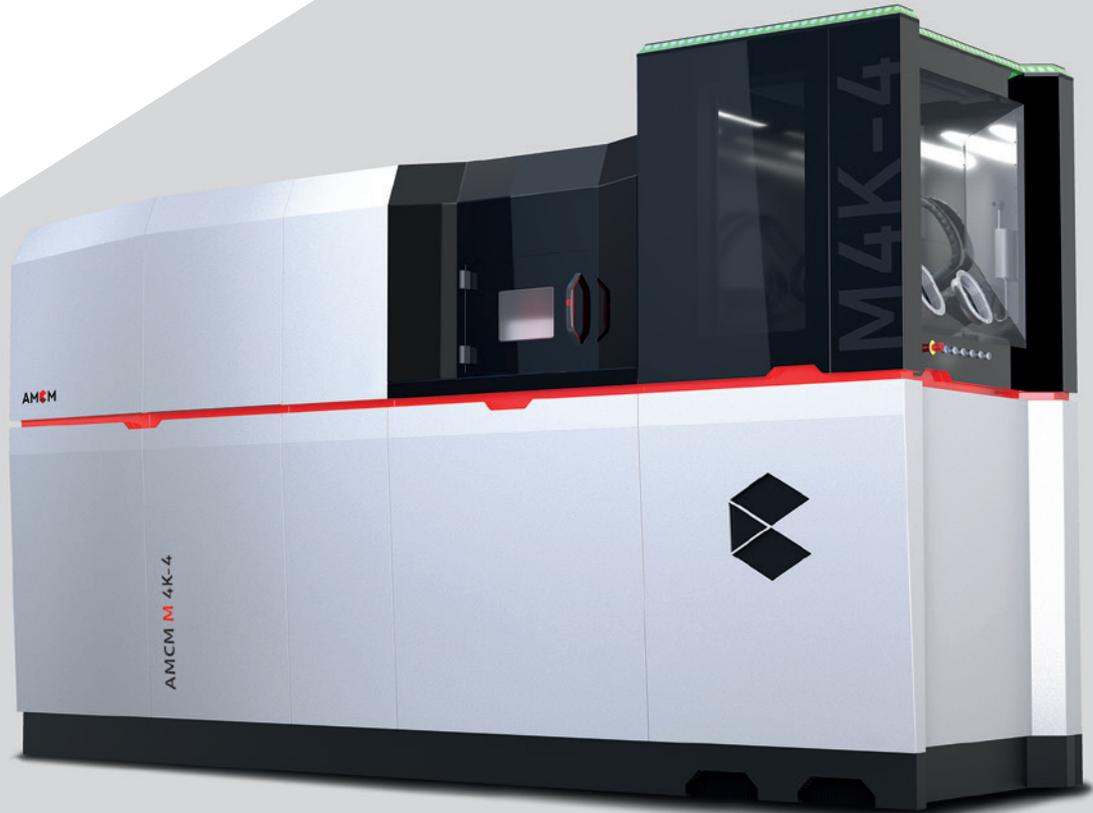




Additive Manufacturing  
Customized Machines



# AMCM M 4K

Large scale, high productivity system for demanding AM applications. 1 meter building height with up to 4 x 1.000W laser power.

**Think big.**

# AMCM M 4K-1 or M 4K-4

## BENEFITS

- Large building volume of 450 x 450 x 1.000 mm
- Single or Quattro optical setups available with 400 W or 1.000 W laser
- Compatible with legacy M 400-x process parameter sets (same focus, beam quality, etc.)<sup>(1)</sup>
- Powder handling option for manual or semi-automatic operation
- Robust welded machine frame design
- Calibration and overlap adjustment with SmartCAL 450 x 450 mm<sup>(2)</sup>
- Open software for process optimization with high power laser

## TECHNICAL DATA

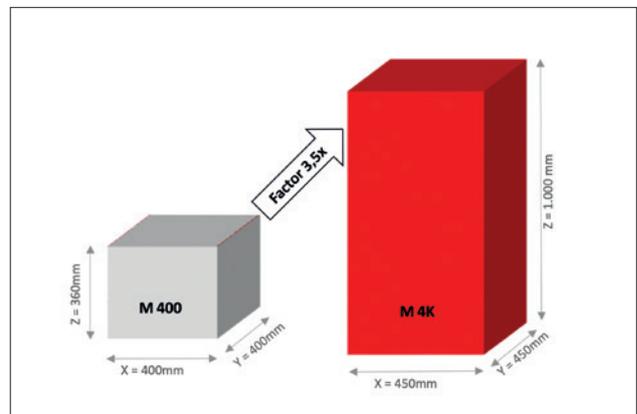
<b>Building volume</b>	450 x 450 x 1.000 mm   17.72 x 17.72 x 39.37 in
<b>Laser type</b>	Yb Fiber laser: 1.000 W optional 400W
<b>Wave length</b>	1070 nm
<b>Precision optics</b>	F-theta-lens
<b>Scanner</b>	high-speed scanner
<b>Scanning speed</b>	up to 7.0 m/s   23 ft./sec
<b>Focus diameter</b>	approx. 100 µm   0.004 in
<b>Process gas cooling</b>	additional gas cooling unit (optional)
<b>Power supply</b>	M 4K-1: 32 A / 400 V M 4K-4: 55 A / 400 V
<b>Power consumption</b>	M 4K-1: max. 20 kW for Single laser M 4K-4: max. 36 kW for Quattro laser
<b>Inert gas supply</b>	7.000 hPa; 20 m <sup>3</sup> /h   102 psi; 706 ft <sup>3</sup> /h
<b>Dimensions (W x D x H)</b>	4.900 x 2.100 x 3.100 mm   193 x 83 x 122 in
<b>Recommended installation space</b>	Individually on customer request, e.g. with closed loop powder handling
<b>Weight</b>	approx. 6.500 kg   14,330 lb



**Fig 1:** AlSi10Mg demo part  
1.000mm height, Ø 380mm,  
Build time: ~ 73 hours



**Fig 2:** CuCrZr demo part  
The first ever 1000mm  
CuCrZr AM part



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

<sup>(1)</sup> Processes must all be re-qualified by customer.

Consulting for parameter set transfer from M 4xx to M 4K on request.

<sup>(2)</sup> Overlap calibration tool for 450 x 450 mm (SmartCAL) under development.