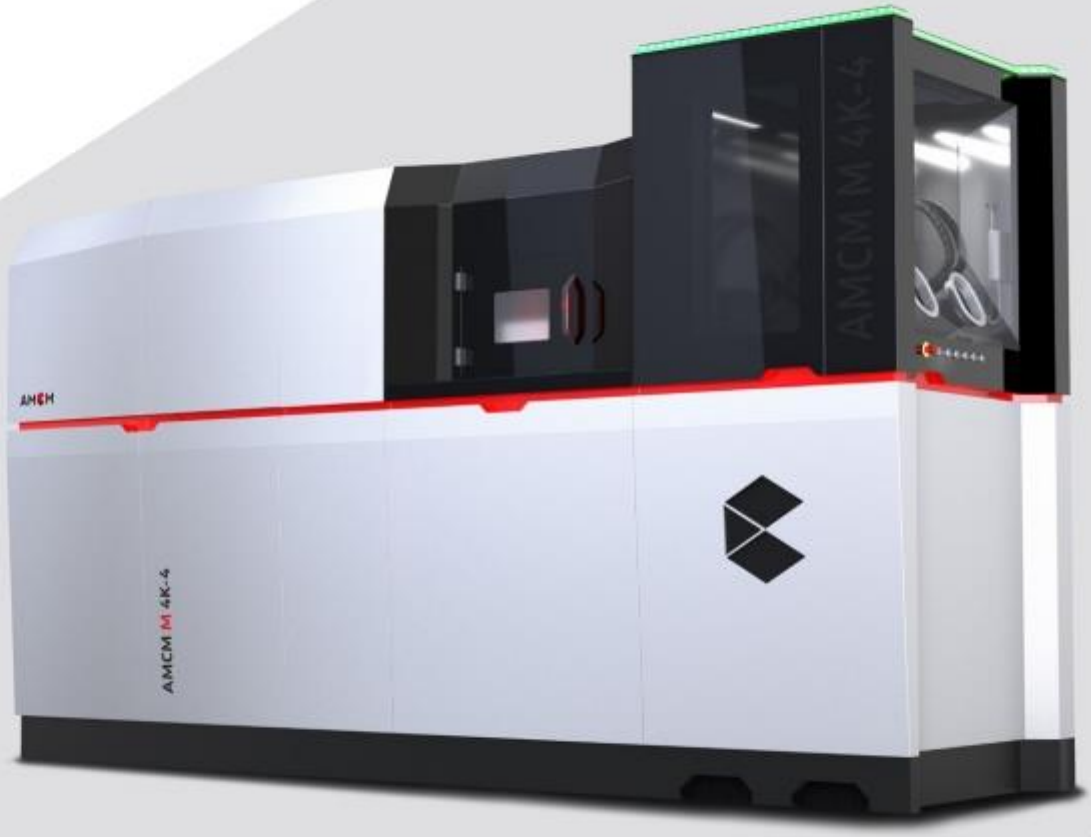
AMCM

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 1.000 W 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.) (1)
- Powder handling option for manual or semi-automatic operation
- Robust welded machine frame design
- Calibration and overlap adjustment with SmartCAL 450 x 450 mm (2)
- Open software for process optimization with high power laser

TECHNICAL DATA

Building volume	450 x 450 x 1.000 mm | 17.72 x 17.72 x 39.37 in
Laser type	Yb Fiber laser: 1.000 W optional 400W
Wave length	1070 nm
Precision optics	F-theta-lens
Scanner	high-speed scanner
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 (optional)
Power supply	M 4K-1: 32 A / 400 V M 4K-4: 55 A / 400 V
Power consumption	M 4K-1: max. 20 kW for Single laser M 4K-4: max. 36 kW for Quattro laser
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. 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

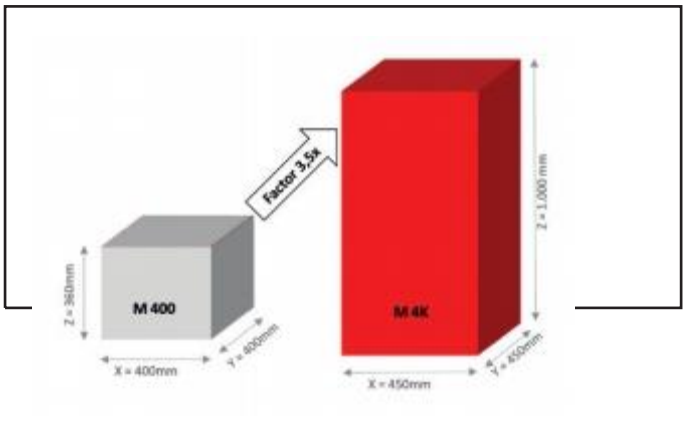


Fig 3: Building volume ratio EOS M 400 and AMCM M 4K

(1) Processes must all be re-qualified by customer.
Consulting for parameter set transfer from M 4xx to M 4K on request.
(2) Overlap calibration tool for 450 x 450 mm (SmartCAL) under development.

System_Data-Sheet_M_4K_EN_V2-CRD. Status 20/07. Technical data subject to change without notice.
AMCM is certified according to ISO 9001.

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