



Additive Manufacturing
Customized Machines

AMCM M 450

25 % more building volume
compared to EOS M 400.

Expand your applications.



AMCM M 450

Benefits

- Compatible with legacy EOS M 400 process parameter sets (same focus, beam quality, etc.) ⁽¹⁾
- Larger building envelope of 450 x 450 x 400 mm ⁽²⁾
- As new system: new optical setup for AMCM M 450-4 covering full 450 x 450 mm area
- Calibration and overlap adjustment with SmartCAL
- Optimized gas flow for larger build volume (Flow Upgrade)
- Consumables and options available for M 450 (building plates, recoater blades or soft recoater, etc.)
- Open software for process optimization
- Powder handling option for semi-automatic (open loop) or full-automatic (closed loop) operation
- 1.2 kW AFX nLIGHT laser with beam shaping can be integrated (AMCM M 450-4 FLX)
- Beam shaping: starting from 85 µm (index 0) Gaus, up to 210 µm (index 6) Ring

Technical Data

	AMCM M 450-4	AMCM M 450-4 1kW	AMCM M 450-4 FLX
Building volume	450 x 450 x 360 mm ⁽³⁾ 17.72 x 17.72 x 14.17 in ⁽⁴⁾		
Laser type	Yb Fiber laser		
Nominal power	4 x 400 W	4 x 1 kW	4 x 1.2 kW
Wave length	1,070 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		approx. 85 – 210 µm 0.003 – 0.008 in
Process gas cooling	–		gas cooling unit
Power supply	63 A / 400 V		
Power consumption	6 kW	30 kW	35 kW
Inert gas supply	7,000 hPa; 20 m³/h 102 psi; 706 ft³/h		
Dimensions (W x D x H)	4,880 x 2,440 x 3,308 mm 192.1 x 96.1 x 130.2 in		
Recommended installation space	min. 6,500 x 6,000 x 4,173 mm 256 x 236 x 164 in		
Weight	approx. 5,980 kg 13,184 lb	approx. 6,170 kg 13,603 lb	approx. 6,300 kg 13,889 lb

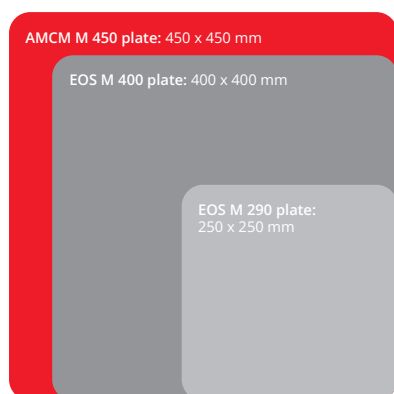


Fig 1: Building size ratio of EOS M 290, EOS M 400 and AMCM M 450.

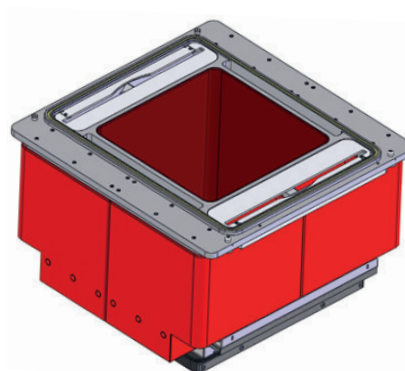


Fig 2: AMCM M 450 exchangeable frame design with extended overflow bin volume of 92 l.

⁽¹⁾ Processes must all be re-qualified by customer.

Consulting for parameter set transfer, e.g. from EOS M 400-4 to AMCM M 450-4 on request.

⁽²⁾ Building height incl. build plate.

⁽³⁾ 400 mm without heating.

⁽⁴⁾ 15.75 in without heating.