



The automation-ready manufacturing platform for laser sintering
of plastic parts on an industrial scale

EOS P 500: maximum productivity for processing polymers at operating temperatures of up to 300°C

The innovative manufacturing platform produces high-quality components at the lowest cost-per-part. Thanks to clever hardware interfaces and accessories, the uptime of the EOS P 500 increases by up to 75% compared to predecessor systems and competition models.

High productivity, excellent part quality and homogeneous properties

- The innovative recoater, which applies and densifies material with a speed of up to 0,6 m/sec, as well as two powerful 70 watt lasers reduce cost-per-part by more than 30%.
- The new 3-stage filter unit and an intelligent thermo- and protective gas management ensure optimum process conditions.
- The system processes polymer materials at operating temperatures of up to 300°C enabling maximum material flexibility. Open software interfaces and user-friendly tools support application and material development.
- The EOSAME feature homogenizes the energy input, thus ensuring excellent part properties.
- SmartScaling compensates shrinkage behaviour contributing to perfect dimensional accuracy.
- Extensive sensor technology plus optical and thermal monitoring enable excellent process monitoring to meet the requirements of the aerospace and automotive industries.
- With EOSYSTEM the machine is operated intuitively. EOSPRINT 2 enables software integration in CAD systems, e. g. NX™ from Siemens and via EOSCONNECT the connection to ERP systems. Thus the EOS P 500 supports a digital control of production.
- Automated interfaces and optimized accessories reduce the cycle time drastically and ensure building process of several days duration.

Technical data EOS P 500

Building volume	500 x 330 x 400 mm (19.7 x 13 x 15.7 in)
Laser type	CO ₂ , 2 x 70 W
Building rate	up to 40 mm/h (1.6 in/h); up to 6.6 l/h
Layer thickness (depending on material)	0.06 mm (0.00236 in), 0.10 mm (0.00394 in), 0.12 mm (0.00472 in), 0.15 mm (0.00591 in), 0.18 mm (0.00709 in)
Precision optics	F-theta lens, surface module, high-speed scanner
Scan speed during building process	up to 2 x 10 m/sec (32.8 ft/sec)
Power supply	400 V/100 A; max. power consumption 80 A

Dimensions (W x D x H)

System	3,400 x 2,100 x 2,100 mm (133.9 x 82.7 x 82.7 in)
Recommended installation space	min. 7.2 x 5.2 x 3 m (284 x 205 x 118 in)
Weight	approx. 7,000 kg (15,432 lb)

Software

EOSYSTEM with EOSAME feature, EOSPRINT 2 with SmartScaling feature and EOS ParameterEditor, EOSCONNECT, EOSTATE Powderbed

Materials

PA 2200, PEKK*

Optional accessories

Heating station, cooling station, IPCM P plus, unpacking and sieving station, blasting cabinet

* currently under development

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