

EOSINT P 390

Plastic laser-sintering system for the direct manufacture of series, spare parts, functional prototypes and patterns for investment or vacuum casting

Laser-sintering is well known as the technology of choice for ensuring the quickest route from product idea to market launch. Innovative companies from a broad range of industries are using this technology for e-Manufacturing – the fast, flexible and cost-effective production directly from electronic data for every phase of the product life cycle.

New Benchmark in Terms of Productivity and Flexibility

EOSINT P 390 offers economical solutions for a broad range of applications. It is a highly productive system for processing thermoplastics. The machine manufactures plastic products of any complexity from polyamide or polystyrene materials directly from CAD data and within a very short time. Especially for individualized products or for products with complex geometries the machine unleashes its full potential. IntelliScan 20, a digital scanner of the latest generation, exposes the respective layers in a so-far unknown speed and stands for highest precision.

EOSINT P 390 builds end products, fully functional parts as well as high-quality patterns for plaster, investment and vacuum casting in a few hours. The system builds up to thousands of different products or components at the same time and in

a single process. New components can even be added during the production process. Once built, the parts are removed from the process chamber. The next order starts immediately.

EOSINT P 390 creates products without support structures. That saves time and costs. The build volume of the machine is 340 mm x 340 mm x 620 mm (13.4 x 13.4 x 24.4 in). Thus the system also creates larger plastic components in a single process. The volume also allows the efficient production of a broad range of plastic goods, be it for the medical device industry, the automotive or aerospace industry.

Integration into an Industrial Environment

EOSINT P 390 distinguishes itself by ergonomic peripheral devices and a high level of automation. These features ensure highest user friendliness, the optimal utilization of the machine capacity and excellent integration into an industrial environment. In order to optimize the process flow, EOSINT P 390 offers an Integrated Process Chain Management (IPCM). This concept includes automatic powder conveying, an unpacking and sieving station with exchangeable frame docking system, as well as powder recycling.



Automatically to Highest Productivity

EOS offers different software packages for the preparation of the three-dimensional CAD data. EOSPACE is just one of them. The software places parts in a surface-oriented way. EOSPACE guarantees an optimum utilization of the build envelope and minimizes the build height. As a consequence, turn-around times and costs decrease.

The EOSINT P 390 offers the flexibility of a Rapid Technology, combined with the automation and efficiency of series production.

Technical Data

<i>Effective building volume</i>	<i>340 mm x 340 mm x 620 mm (13.4 x 13.4 x 24.4 in)</i>
<i>Building speed (material-dependent)</i>	<i>up to 35 mm height/h (1.38 in/h)</i>
<i>Layer thickness (material-dependent)</i>	<i>typically 0.1 mm - 0.15 mm (0.004 - 0.006 in)</i>
<i>Support structure</i>	<i>not necessary</i>
<i>Laser type</i>	<i>CO₂, 50W</i>
<i>Precision optics</i>	<i>F-theta lens</i>
<i>Scan speed during build process</i>	<i>up to 6 m/s (19.7 ft/sec)</i>
<i>Power supply</i>	<i>32 A</i>
<i>Power consumption (nominal)</i>	<i>2 kW</i>
<i>Nitrogen generator</i>	<i>integrated (optional)</i>
<i>Compressed air supply</i>	<i>minimum 5,000 hPa; 6 m³/h (73 psi; 7.9 yd³/h)</i>
Dimensions (B x D x H)	
<i>Machine incl. switchgear cabinet</i>	<i>1,840 mm x 1,175 mm x 2,100 mm (72.4 x 46.3 x 82.7 in)</i>
<i>Control terminal</i>	<i>950 mm x 700 mm x 1,550 mm (39.5 x 27.6 x 61 in)</i>
<i>Powder conveying system</i>	<i>1,480 mm x 1,170 mm x 1,470 mm (58.3 x 46.1 x 57.9 in)</i>
<i>Unpacking station</i>	<i>1,190 mm x 620 mm x 1,500 mm (46.9 x 24.4 x 59 in)</i>
<i>Recommended installation space</i>	<i>4.3 m x 3.9 m x 3.0 m (169.3 x 153.5 x 118.1 in)</i>
<i>Weight</i>	<i>approx. 1,060 kg (2,336 lb)</i>
Data preparation	
<i>PC</i>	<i>current Windows operating system</i>
<i>Software</i>	<i>EOS RP Tools; Magics RP (Materialise)</i>
<i>CAD interface</i>	<i>STL. Optional: converter to all common formats</i>
<i>Network</i>	<i>Ethernet</i>
Certification	<i>CE, NFPA</i>

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EOS has been developing technologies and processes for Rapid Prototyping since 1989. Today the company is the world-wide leading manufacturer of laser-sintering systems for Rapid Prototyping, Rapid Tooling and Rapid Manufacturing. Laser-sintering is the key technology for e-Manufacturing.

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