



# EOSINT P 730

up to 40 percent increased productivity

## EOSINT P 730

*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.

### Highest Productivity – Today and Tomorrow

The EOSINT P 730 is an advancement of the EOSINT P 700, the world-wide first double-laser system for laser-sintering of plastics. It is one of the largest plastic laser-sintering systems available on the market. The EOSINT P 730 is up to 40 percent more productive compared to the EOSINT P 700 and combines increased productivity with highest part quality. IntelliScan 20, a digital scanner of the latest generation, exposes the respective layers in a so-far unknown speed and stands for highest precision. The system is ideally suited for the economic production of small series and individualised products, especially with complex geometries. At the same time it provides capacity for the fast and flexible creation of prototypes or patterns for investment and vacuum casting. Within a very short time, the machine also produces large and complex plastic products or castings. These often occur in the automotive, medical and aerospace industry.

### Production of Plastic Products and Investment Casting Patterns

The EOSINT P 730 processes a wide range of materials. It generates fully functional plastic products and investment casting patterns of any complexity. The components are built layer by layer, directly from CAD data, in a single process. The technology requires no support structures. That saves time and costs. With its build volume of one metre diagonal, even large geometries are realized in just a few hours. Building larger parts horizontally significantly reduces the number of layers to be built. As a consequence the building process shortens. In addition, the quality of the resulting plastic parts or casting patterns is optimized: these can be built in one piece rather than having to be assembled. For example, the EOSINT P 730 manufactures a fuel tank with a size of 607 mm x 330 mm x 491 mm (23.9 x 13 x 19.3 in) faster than any other laser-sintering system. The tank is built in one piece and is ready for use in just 4 days. The parts are ideally suited for extensive functional tests with aggressive substances such as petrol. And for small components, EOSINT P 730 delivers convincing advantages as well: the system produces more than a thousand parts economically in a single laser-sintering process.

### Excellent Integration into an Industrial Production

Due to its ergonomic peripheral devices and the high degree of automation, the EOSINT P 730 offers user-friendly handling, the optimum level of





productivity as well as excellent integration into an industrial environment. The automatic powder conveying system, the unpacking and sieving station with exchangeable frame docking system as well as the powder recycling form part of the Integrated Process Chain Management (IPCM). Additional productivity is gained by the use of EOSPACE. This software guarantees an optimum utilization of the build envelope and minimizes the build height. As a consequence, turn-around times and costs decrease.

EOSINT P 730 offers its users totally new dimensions in time and space.

#### Technical Data

<i>Effective building volume</i>	<i>700 mm x 380 mm x 580 mm (27.6 x 15 x 22.9 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 0.12 mm (0.005 in)</i>
<i>Support structure</i>	<i>not necessary</i>
<i>Laser type</i>	<i>CO<sub>2</sub>, 2 x 50 W</i>
<i>Precision optics</i>	<i>F-theta lenses</i>
<i>Scan speed during build process</i>	<i>up to 2 x 6 m/s (19.7 ft/sec)</i>
<i>Power supply</i>	<i>32 A</i>
<i>Power consumption (nominal)</i>	<i>3.5 kW</i>
<i>Nitrogen generator</i>	<i>integrated</i>
<i>Compressed air supply</i>	<i>minimum 6,000 hPa; 20 m<sup>3</sup>/h (87 psi; 26.2 yd<sup>3</sup>/h)</i>
<b>Dimensions (B x D x H)</b>	
<i>System incl. switchgear cabinet</i>	<i>2,250 mm x 1,550 mm x 2,100 mm (88.6 x 61 x 82.7 in)</i>
<i>Control terminal</i>	<i>1,045 mm x 850 mm x 1,620 mm (41.1 x 33.5 x 63.8 in)</i>
<i>Powder conveying system</i>	<i>1,890 mm x 1,350 mm x 1,550 mm (74.4 x 53.2 x 61 in)</i>
<i>Break-out station</i>	<i>1,600 mm x 800 mm x 1,370 mm (63 x 32 x 53.9 in)</i>
<i>Recommended installation space</i>	<i>4.8 m x 4.8 m x 3.0 m (189 x 189 x 118 in)</i>
<i>Weight</i>	<i>approx. 2,300 kg (5,071 lb)</i>
<b>Data preparation</b>	
<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>
<b>Certification</b>	<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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