EOSINT S 750

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Double laser-sintering system for the direct, tool-less production of sand cores and moulds for metal castings

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.

Directly from CAD Data to Sand Cores and Moulds

The EOSINT S 750 is the only double laser-sintering system world-wide for the processing of Croning moulding material. Using the DirectCast method, the system builds cores and moulds for sand casting. Directly from CAD data, fully automatically, with a building speed of up to 2,500 cm^3/h (0.09 ft^3/h.) and without any tooling. Sand parts of any complexity are built layer by layer, with high accuracy, detail resolution and surface quality. The maximum part size adds up to 720 mm x 380 mm x 380 mm (28.4 x 15 x 15 in.). The resulting cores or core packages are realized with significant savings in time and costs compared to conventional technologies. Usually they also consist of less parts which are thus assembled faster and more precisely.

Innovative Production of Castings for a broad Range of Applications

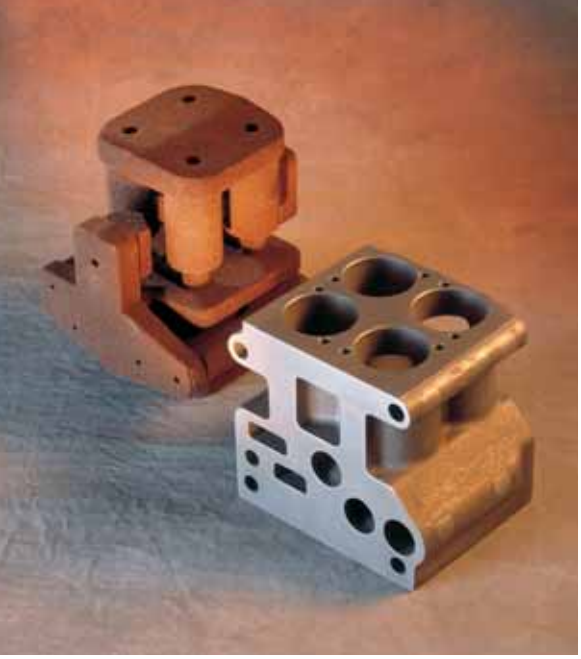
DirectCast with EOSINT S 750 enables the production of castings in batch sizes that would be extremely laborious, economically unviable or even impossible to manufacture with conventional techniques.
In this way, high-quality castings are produced for the engine development, for pumps or hydraulic applications. These castings can be used as fast, cost-effective prototypes or as final products in small series. The technology allows foundries to cater for new trends such as spare parts on demand.

Intelligent Combination of proven and new Technologies

Your company is looking for a solution to produce cast parts in small series economically? Combine laser-sintered cores and conventionally produced moulds and fit them together in a single core package. This intelligent combination opens up previously unknown potentials.

Application-optimized Materials

EOSINT S 750 uses different Croning sands which are commonly used in foundries. These sands have been optimized by EOS for the DirectCast application. The system is ideally suited for building highly complex, detailed sand cores and moulds for premium castings in series quality.
Laser-sintering of foundry sand achieves excellent results for light-weight constructions using aluminium or magnesium. The technology also opens up new applications for cast iron and steel.



EOSINT S 750

Designed for Industrial Process Chains

EOSINT S 750 is not a technological island, but can be seamlessly integrated into today's industrial environment. The Integrated Process Chain Management (IPCM) developed by EOS offers a full range of ergonomic and highly automated peripheral devices. IPCM takes care of the moulding material cycle and includes automatic sand recycling as well as a post-curing station. These features further increase the productivity and user-friendliness of the system. At the same time, IPCM ensures a high level of workplace safety.

Technical Data

Effective building volume	*720 mm x 380 mm x 380 mm (28.4 x 15 x 15 in.)*
Building speed (material-dependent)	*up to 2,500 cm³/h (0.09 ft³/h.)*
Layer thickness	*0.2 mm*
Laser type	*CO_2, 2 x 100 W*
Precision optics	*2 x F-theta lens, 2 x high speed scanner*
Scan speed	*up to 3.0 m/s (9.8 ft./sec.)*
Power supply	*32 A*
Power consumption	*6 kW (average), 12 kW (maximum)*
Compressed air supply	*minimum 6,000 hPa; 15 m³/h (87 psi; 19.6 yd³/h.)*
Dimensions (B x D x H)	
Process cabinet	*1,420 mm x 1,400 mm x 2,150 mm (55.9 x 55.2 x 84.7 in.)*
Control cabinet	*750 mm x 610 mm x 1,830 mm (29.5 x 24 x 72.1 in.)*
Switchgear cabinet	*870 mm x 810 mm 2,150 mm (34.3 x 31.9 x 84.7 in.)*
Recommended installation space	*4.5 m x 4.6 m x 2.7 m (177.3 x 181.2 x 106.4 in.)*
Weight	*approx. 1,050 kg (2,315 lb.)*
Data preparation	
PC	*current Windows operating system*
Software	*EOS RP Tools; Magics RP (Materialise)*
CAD interface	*STL. Optional: converter for all standard formats*
Network	*Ethernet*
Certification	*CE, NFPA*

EOS has been developing technologies and processes for Rapid Prototyping since 1989. Today the company is the world's 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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