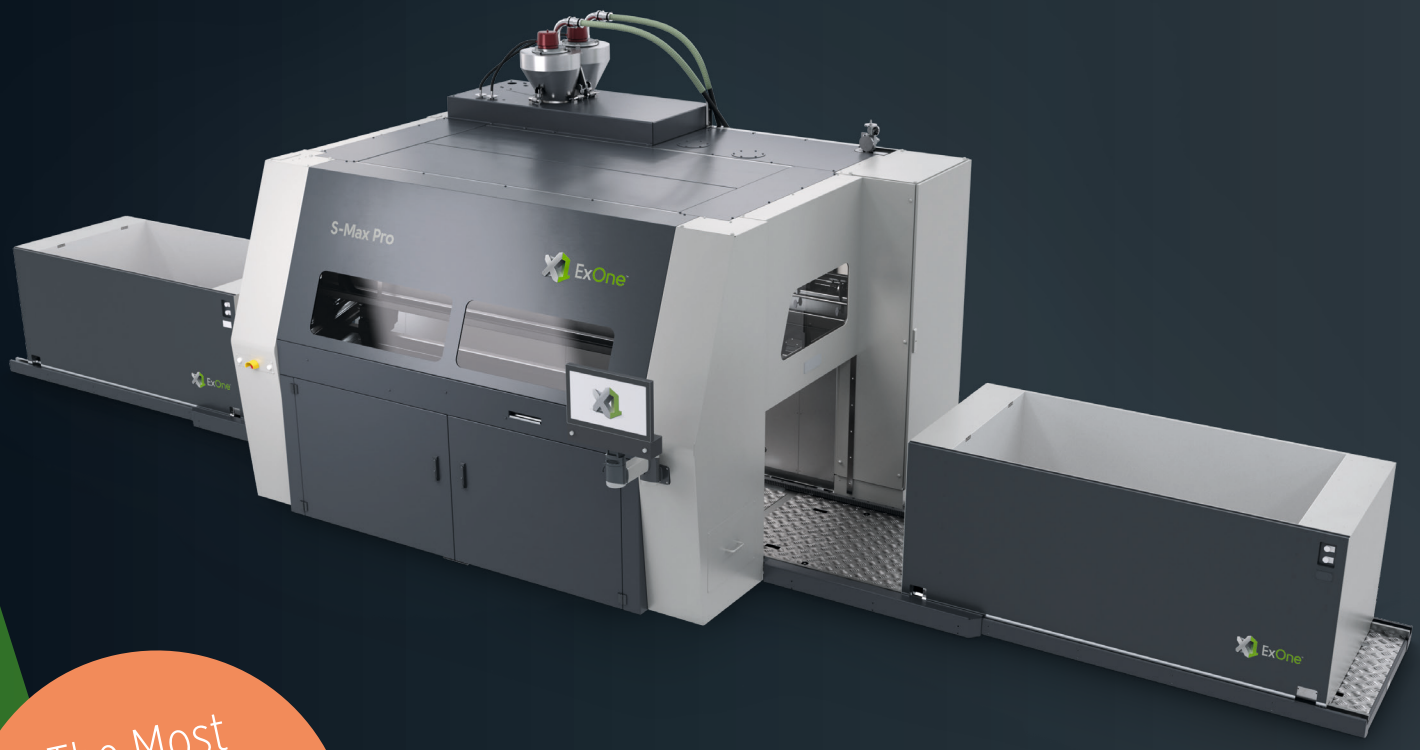


The Most Trusted Sand 3D Printing Systems

S-Max® & S-Max® Pro Production-Ready Sand 3D Printers

Advanced binder jetting systems for complex foundry cores and molds trusted by customers around the world

ExOne™

Digitally Optimized Sandcasting for Complex, Quick-Turn Metal Parts

The most popular family of sand 3D printers in the world

ExOne's S-Max® and S-Max® Pro platforms solve production challenges for applications across a variety of industries, making them the most popular in the world for the digital manufacturing of cores and molds for sandcasting. Our trusted machines support prototyping, serial production, and parts on demand, enabling foundries to go from design to metalcasting with fast turnarounds.

Introduced in 2010, the S-Max platform has been trusted in the market for over a decade. The S-Max Pro is the smartest, most advanced sand 3D printer from ExOne. These powerful systems feature up to 1260-liters of build area and reliable production with a fully automated printhead to increase print speed.

Bring digital sand technology in-house to capitalize on the benefits of lights-out manufacturing with less hard-to-find labor, the design freedom to consolidate complex cores for less assembly or integrate organic rigging and risers for less scrap, and eliminate the lead time, cost, and storage of traditional tooling.

S-Max with double job box option

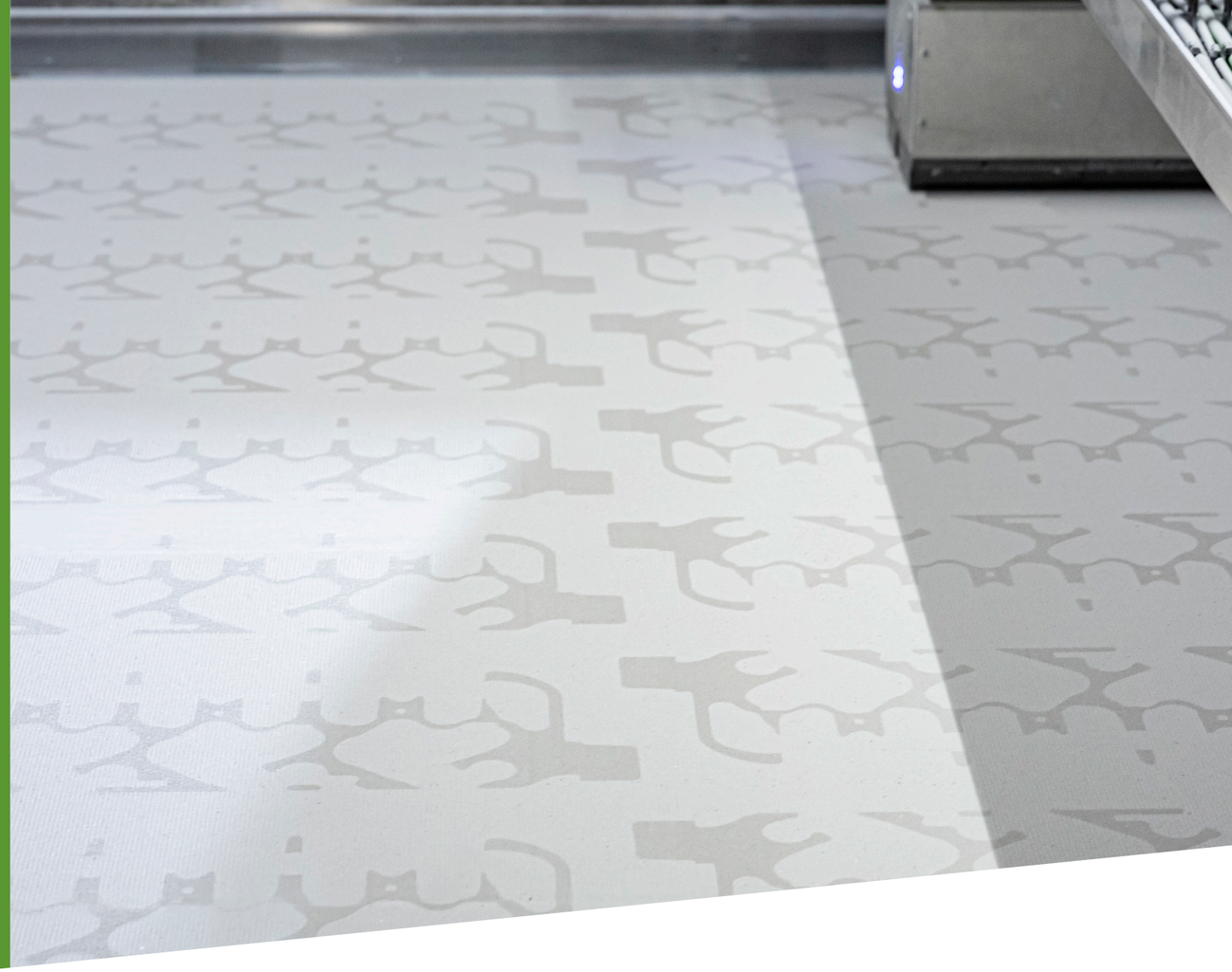
S-Max Pro with box-in-box option

S-MAX

- Large and robust sand 3D printer trusted for over a decade to provide reliable performance
- High productivity and reliability for fast and flexible production
- Double job box on a motorized roller conveyor option to reduce turnover time and increase production efficiency
- Can process furan and CHP binder systems

S-MAX PRO

- The most advanced system in the ExOne family of sand 3D printers focused on continuous 24/7 production
- Interchangeable box-in-box station option for higher machine utilization in continuous production settings
- Can process all ExOne binder systems, including furan, phenolic, and inorganic
- Offers Industry 4.0 integration with cloud connectivity and real-time machine monitoring



Technical Data

	S-Max®	S-Max® Pro
Job box (L × W × H)	1,800 × 1,000 × 700 mm 70.9 × 39.4 × 27.6 in	1,800 × 1,000 × 400/700 mm 70.9 × 39.4 × 15.8/27.6 in
Built rate	up to 145 l/h	up to 145 l/h
Layer height	0.2 to 0.5 mm 200 to 500 µm	0.2 to 0.5 mm 200 to 500 µm
Dimensional accuracy	+/- 0.5 mm +/- 0.1 % over 500 mm	+/- 0.5 mm +/- 0.1 % over 500 mm
Print media	Silica and synthetic medias	Silica and syntheic medias
Binder system	Furan, CHP	Furan, CHP, HHP, inorganic
Industry 4.0	-	Siemens MindSphere enabled

THE WORLD'S MOST TRUSTED SAND 3D PRINTING SYSTEMS
ExOne binder jetting is so transformational to business that over half of S-Max systems are installed at multi-machine facilities

Sand 3D Printing Binders

Our premium sand binder jetting machines process a range of binder systems to meet the needs of a variety of applications

Furan

Also available as BPA-free

Cure-In-Box
Binder System

CASTING MATERIAL
Steel, Iron, Non-Ferrous Metal

LOI
1.0–2.1%

MOLDING MATERIAL
Standard Process: Silica Media
Alternative: Synthetic Media

CHP

Cold-Setting
Phenolic Binder System

CASTING MATERIAL
Steel, Iron, Non-Ferrous Metal, Bronze

LOI
1.4–2.1%

MOLDING MATERIAL
Standard Process: Silica Media
Alternative: Synthetic Media

HHP

Hot-Hardening
Phenolic Binder System

CASTING MATERIAL
Steel, Iron, Non-Ferrous Metal, Bronze

LOI
1.5–2.1%

MOLDING MATERIAL
Standard Process: Synthetic Media

Inorganic

Sodium Silicate
Binder System

CASTING MATERIAL
Aluminum

LOI
~0.3%

MOLDING MATERIAL
Standard Process: Silica Media
Alternative: Synthetic Media or Combination

04 LOI dependent on chemistry and molding material

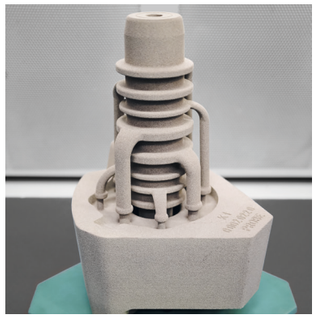
Hear how foundries are using a hybrid production strategy with sand 3D printing, watch videos of ExOne systems in action, and read success stories from our customers at exone.com/resources

WHITE PAPER

Comprehensive report documenting the market drivers and benefits of a hybrid production strategy
TeamDM.com/X1HybridCore

VIDEO

Binder jet 3D printing enables Grede Iron Mountain to do more with less using flexible digital production
TeamDM.com/Grede



CASE STUDY

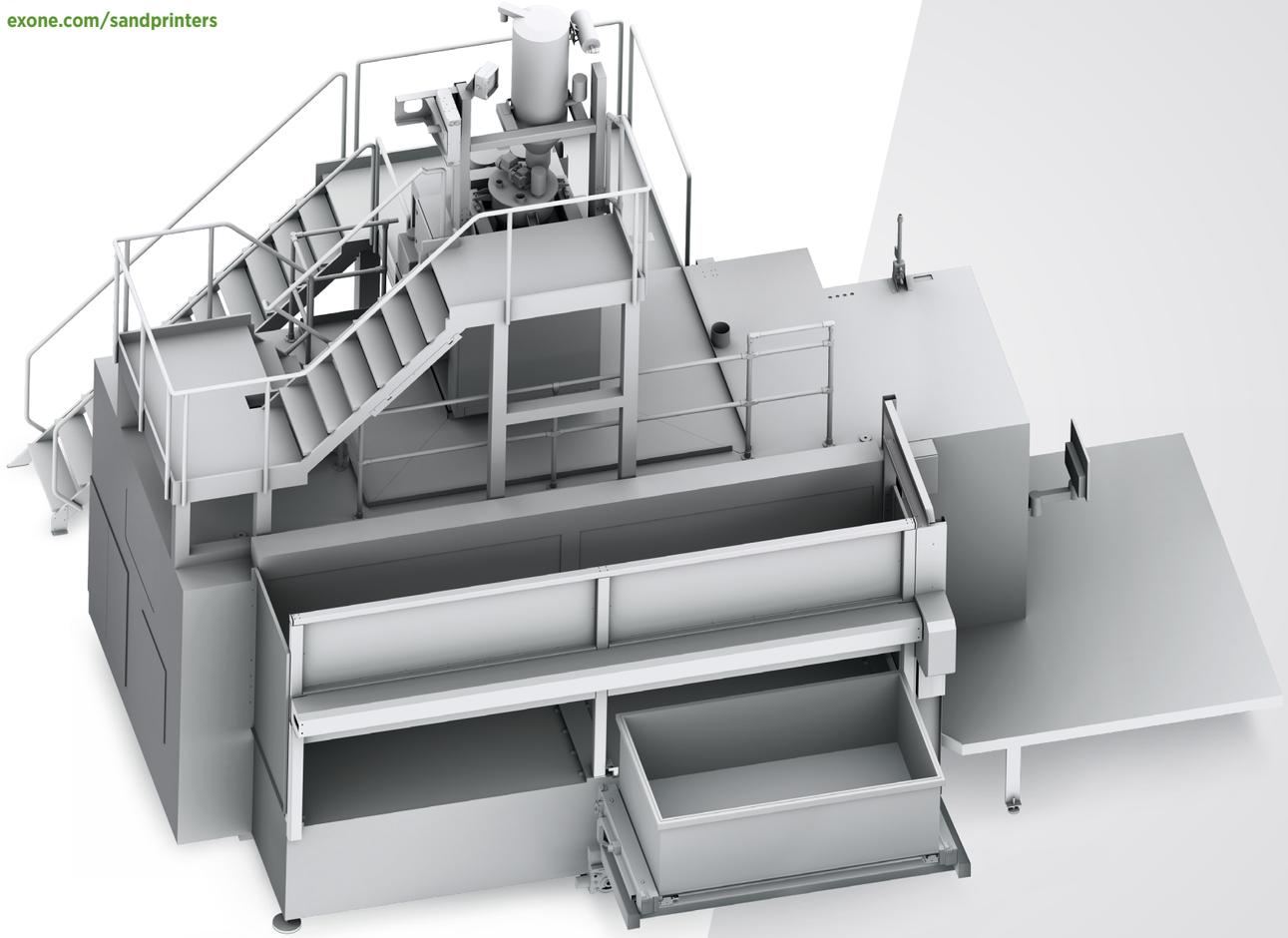
GF Casting Solutions consolidates 12 shot pieces into one 3D printed core to improve quality, among other benefits
TeamDM.com/GFCastingSolutions

Binder Jetting Machines From the Trusted Experts

ExOne's family of sand 3D printers produce sand cores and molds in a digital workflow at foundries and pattern shops around the world. Foundries have trusted our machines for two decades to go from design to metalcasting in hours or days instead of weeks and months.

No more patterns needed for sand molds. No more boxes needed for blowing cores. No jigs or fixtures needed for core assembly. Print complex cores in one piece. This is how cores were meant to be made and ExOne is the partner with the combined foundry and 3D printing expertise to ensure your success, from the start of your digital sandcasting journey to serial production scale-up.

Learn more
exone.com/sandprinters



S-Max® Flex

Robotic system to provide faster payback and easy integration into digital casting

- User-friendly design
- Fast, flexible production
- Robust, scalable architecture

TECHNICAL DATA
Job box (L x W x H): 1,750 × 850 × 700 mm (68.9 × 33.5 × 27.6 in)
Build volume: 1,000 l (35.3 ft³)
Build rate: up to 73 l/h
Layer height: 0.4 mm
Dimensional accuracy: +/– 0.5 mm, +/– 0.15 % over 500 mm
Binders: Furan

Exerial™

More sustainable serial production of complex inorganic sand cores and molds

- Prototyping
- Rapid product development
- Short-run production
- Continuous 24/7 production
- Serial production

Two job boxes for more sustainable serial production with inorganic binder

TECHNICAL DATA
Job box (L × W × H): 2,200 x 1,200 x 700 mm (86.6 x 47.2 x 27.6 in)
Build volume: 2 x 1,848 l (2 x 65.3 ft³)
Build rate: 200 – 250 l/h
Layer height: 0.3 mm
Dimensional accuracy: +/- 0.5 mm, +/- 0.1 % over 500 mm
Binders: Inorganic

Specifications are subject to change without notice.
Some data may be dependent on size and characteristics of powder being processed.

Learn more
www.exone.com/s-max
www.exone.com/s-max-pro

ExOne™

ExOne has facilities and representatives around the world. To reach us, feel free to call or email us at the locations below, or visit us at exone.com/locations

ExOne is now part of Desktop Metal's group of #TeamDM brands, which exist to make Additive Manufacturing 2.0 a reality so we can unlock the vast benefits of 3D printing at meaningful production volumes.

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