

ProX™ 400

Direct Metal Production 3D Printer



3DSYSTEMS®

Harness the power of additive manufacturing for metal part and mold production

The ProX™ 400 Direct Metal Printer manufactures high-quality metal parts and high-precision complex molds for demanding high-capacity industrial applications. Large parts (up to 500 x 500 x 500 mm or 19.69 x 19.69 x 19.69 in), or large volumes of smaller parts can be manufactured quickly and economically from a wide range of metal alloys, with no down time between builds. The printed parts are fully dense and have exceptional detail, surface finish and overall accuracy.

The ProX 400 is part of a modular production system that includes automated part cleaning and material recycling for efficient high-volume manufacturing. This system, from the leader in 3D printing, is the ideal way to bring additive metal manufacturing to your factory floor.



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MANUFACTURING *THE* **FUTURE**

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Specifications

Laser power/type	2 Fiber lasers / 2 x 500 W (1 KW optional)
Laser wavelength	1070 nm
Layer thickness range	10 µm – 100 µm
Build envelope capacity (X x Y x Z)	500 mm x 500 mm x 500 mm (19.7 x 19.7 x 19.7 in)
Metal materials	Stainless steels, tooling steels, non-ferrous alloys, super alloys
Repeatability	20 µm
Minimum detail resolution	x, y 100 µm / z 20 µm

Space requirements (WxDxH)

Dimensions uncrated	
Manufacturing module	300 x 300 x 300 cm (118.11 x 118.11 x 118.11 in)
Power unit	250 x 250 x 250 cm (98.43 x 98.43 x 98.43 in)
Weight uncrated	
Manufacturing module	13608 kg (30000 lbs)
Power unit	4536 kg (10000 lbs)

Electrical requirements	400 V - 480 V / 3 phases + ground
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Compressed air requirements	6-8 bar
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Control System & Software

Software tools	Processing – Manufacturing
Control software	PX Control
Input data file format	STL, IGES, STEP
Network type and protocol	Ethernet 10/100 RJ45

Accessories	Build chamber transfer tool
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Certification	CE
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Print the largest metal parts and tools with the ProX 400

- New dual-laser and faster layering systems with advanced build strategies significantly improve build speed.
- Patented layering system capable of printing very fine powders and lower-cost, non-spherical powders.
- Superior part quality, with better surface finish and feature resolution than other metal printers.
- Maintain part accuracy and properties across the full build platform with three-axis dynamic laser movement.
- Modular production system increases capacity with separate automated part cleaning system.
- Removable build chamber with offline setup and post-processing, so the printer is dedicated to production.
- Capable of printing in more than a dozen alloys and ceramics, including stainless steel, aluminum, cobalt chrome, titanium and maraging steel.

3D Systems offers software tools specifically designed to ensure your successful direct metal or ceramic manufacturing process. When it comes to additive manufacturing, the printing system is only one part of the equation. Software integration with the manufacturing process is an important factor when utilizing direct metal 3D printing to produce a more cost-effective workflow in the development and production of new products.

Direct Metal Printing (DMP)

3D Systems' Direct Metal Printing process builds up fully dense, chemically pure metal parts from 3D CAD data by melting fine powder with a laser beam, layer by layer. With layer sizes ranging from 5–30 microns, there are no limitations to part complexity. ProX DMP systems support particle sizes as low as 5 microns, resulting in better part accuracy, surface finish and feature-detail resolution.



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