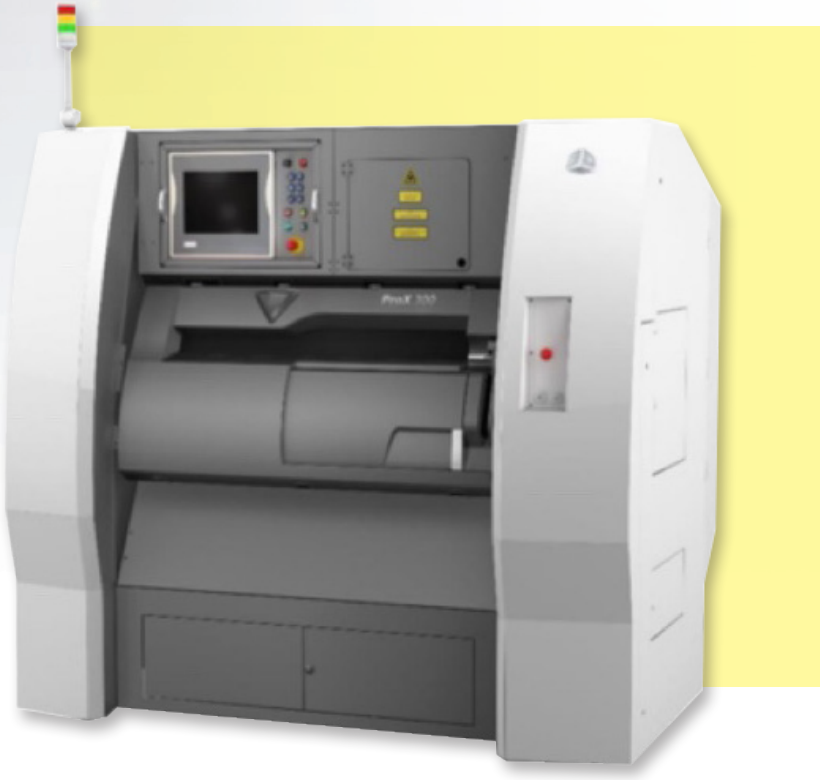
Metalmite corporation

GET PARTS TOMORROW

PROX DMP 300 3D PRINTER

Large size, high throughput, finest detail and best surfaces metal 3D printing

Metalmite Corporation can now print parts in 18 hours made out of 17-4 Stainless, tool steel, Aluminum, carbon fiber, nylon, or Kevlar.



The ProX DMP 300 is a high-performance, high-quality metal 3D printed part manufacturing system, offering reduced waste, greater speeds for production, short set up times, very dense metal parts, and the ability to produce very complex assemblies as a single part. With a build volume of 250 x 250 x 330 mm (9.84 x 9.84 x 12.99 in) it features an automated material loading and recycling system.

Finest details, thinnest wall thicknesses, best surfaces

Due to 3D Systems' patented layer applying technology, smaller particles can be used that allow to generate finest feature detail and thinnest wall thicknesses. A surface finish quality of up to 5 Ra µm (200 Ra micro inches) is achievable, requiring less post-processing. Due to the proprietary powder deposition system, the ProX DMP 300 builds down to 20° angles without supports. Less supports and improved surface quality ultimately mean less post processing and less material usage – saving time and cost.

PARTS TOMORROW

Estimated Cost: **$2900**

Production Runs
Estimated Cost: **$75 each**

"METALMITE HAS LONG BEEN A LEADER IN INNOVATIVE SOLUTIONS USING 5-6 AXIS AND WIRE EDM TO MACHINE PRECISE DETAILS FOR THE AEROSPACE AND MILITARY INDUSTRY. NOW WITH THE ADDITION OF 3D PRINTING WE CAN OFFER FASTER LEADTIMES AND REDUCED COST TO THIS PROCESS."

Tom Gendich
President of Metalmite Corporation

50 Metalmite corporation YEARS

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METALMITE.COM

PROX DMP 300 3D PRINTER

LaserForm® 17-4PH (B) | LaserForm® Maraging Steel Properties and Comparisons

LaserForm® 17-4PH (B)

Element	Content	Mechanical Properties	
Carbon, C	0%	Ultimate Tension	1100MPG
Chromium, CR	17.5%	Yeild Stength	620 mpg
Iron, FE	Balance	Elongation	16%
Manganese, Mn	≤1.0%	Hardness	300HV5
Molybdenum, Mo	0%	Density	100%
Phosphorous, P	0%		
Silicon, Si	≤1.0%		
Sulfur, S	0%		

Comparisons

LaserForm® Maraging Steel		HSLA A 808		SAE 4140	
Element	**Content**	**Element**	**Content**	**Element**	**Content**
Carbon, C	0.03%	Carbon, C	0.12%	Carbon, C	0.38%
Chromium, CR	0.25%	Chromium, CR	...%	Chromium, CR	0.80%
Iron, FE	rest%	Iron, FE	rest%	Iron, FE	97%
Manganese, Mn	0.15%	Manganese, Mn	1.65%	Manganese, Mn	75%
Molybdenum, Mo	4.5%	Molybdenum, Mo	.0%	Molybdenum, Mo	.15%
Phosphorous, P	≤0.01%	Phosphorous, P	≤0.04%	Phosphorous, P	≤.035%
Silicon, Si	0.10%	Silicon, Si	.3 - .5%	Silicon, Si	.15 - .3%
Sulfur, S	≤0.01%	Sulfur, S	≤0.05%	Sulfur, S	≤0.04%

[1] Values based on literature

[2] Values based on minimun and maximum rangers

APPLICATIONS:

- Simplified assemblies/reduced number of parts
- Reduced weight/lightweight design
- Enhanced fluid flow
- Large tool inserts
- Conformal cooling
- Topology optimization
- Mass customization

FEATURES:

- Uses Direct Metal Printing (DMP) technology
- Max build envelope capacity
- (W x D x H): 250 x 250 x 330 mm
- (9.84 x 9.84 x 12.99 in)
- Very dense, non-porous parts
- Typical accuracy is +/- 50 µm (+/- 0.002 in) on small parts,
- +/- 0.2% on large parts
- Repeatability of approximately 20 µm (0.0008 inches)
- Surface finish quality of up to 5 Ra µm (200 Ra micro inches)
- 3DXpert software for fast and easy part preparation, localized print strategies
- High-quality materials with predeveloped parameters

BENEFITS:

- Integrated solution (for printers, materials, software and application support)
- Consistently high accuracy parts even on first-time builds
- Exceptional surface finish and resolution
- Minimal waste of materials
- Clean and safe, no operator contact with powder materials
- Able to produce parts not normally manufacturable using traditional methods
- Shortened production time and increased part precision
- Ease of use - intuitive workflow

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