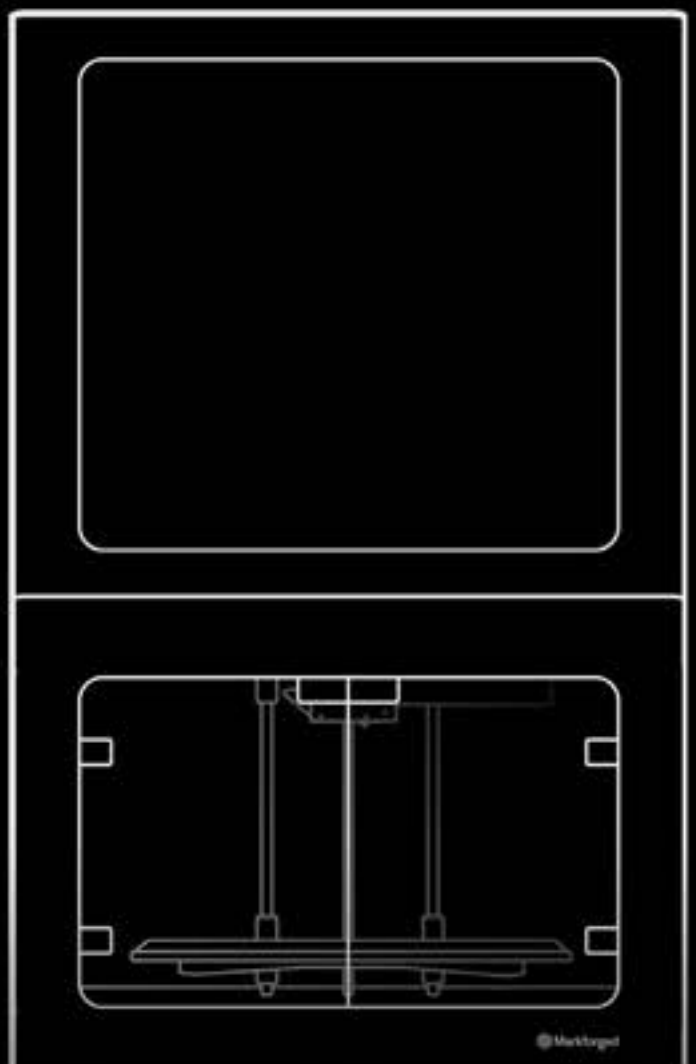


THE METAL X

Print strong metal parts

Markforged

3DZ

Print the Future

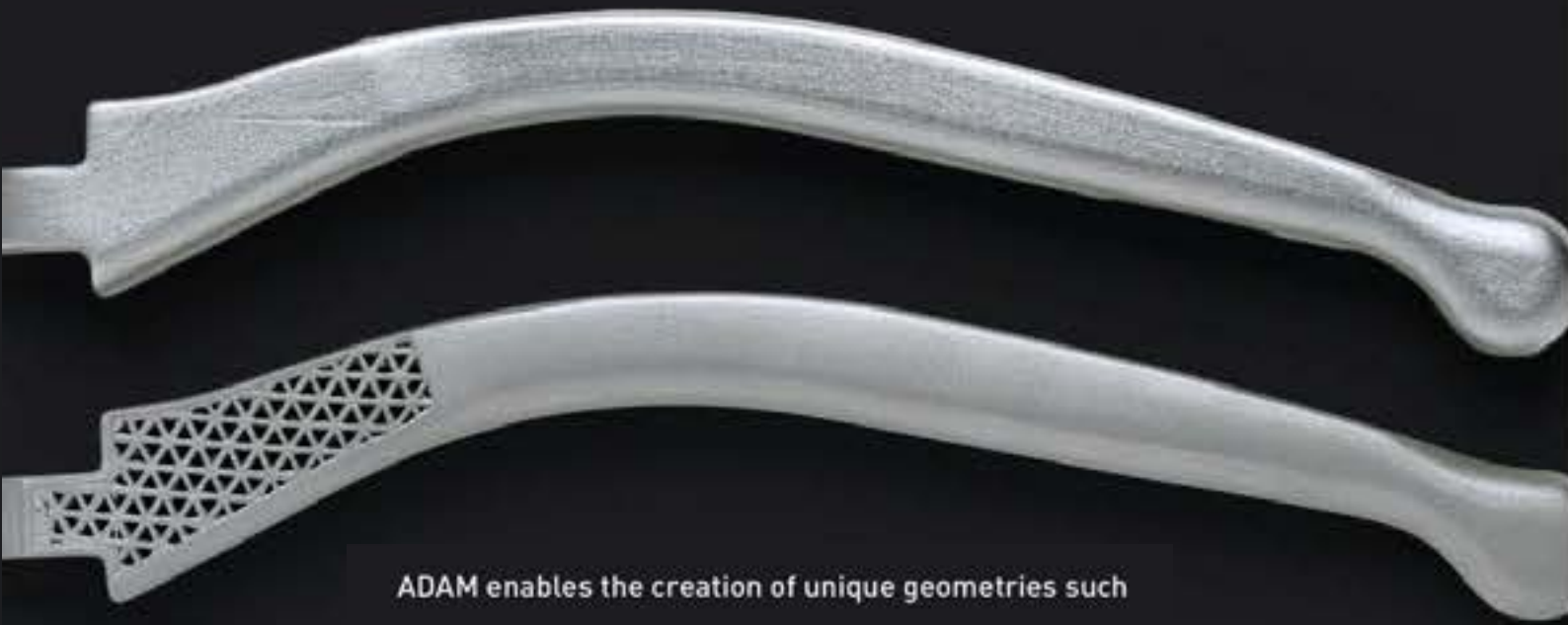
Markforged

www.3dz.es
info@3dz.es

Say Hello To ADAM

ATOMIC DIFFUSION ADDITIVE MANUFACTURING

ADAM prints your part using a bound metal powder that transforms into a dense metal part in one easy step. Bulk sintering provides crystal growth through all axes giving your parts excellent mechanical properties in all directions.



ADAM enables the creation of unique geometries such as closed-cell honeycomb infill. Parts can be printed like the structure of bones - a closed cell inner core encased in a solid outer shell. This geometry is not possible using traditional subtractive manufacturing processes

THE METAL X

Metal 3D Printer

YOUR PARTS, FASTER

Cut mission-critical time out of your development cycle. With ADAM technology your parts are ready the next day instead of next month. Even make plastic parts faster by printing injection molding tooling.

PRINT WITH EASE

Go straight from CAD to your part all in a compact, clean and highly affordable platform. Print geometries that are difficult or impossible to manufacture using conventional means. Make parts lighter with triangular infill, or build complex internal cavities and structures.

UNPARALLED ACCURACY

The Metal X gives you breakthrough quality and precision in 3D printing. Scan your parts mid-print using our cloud-based Eiger software and a laser micrometer affixed to the print head. Ensure dimensional accuracy at the most critical tolerances at any point in your print.

METALS FOR EVERY JOB

Mechanical properties equivalent to cast metal mean you can say goodbye to expensive and long-lead-time tooling for low volume metal parts. Streamline your supply chain and eliminate back-catalog inventory by printing fully functional components on-demand.

METAL X MATERIALS

STAINLESS STEEL 17-4 PH (& 316L Beta)

17-4 PH stainless steel combines high strength, corrosion resistance, and hardness, making it widely used in aerospace, medical and petroleum industries. We use it to make assembly fixtures and tooling for our Industrial Series 3D printers. Also known as marine-grade stainless steel, 316L stainless steel exhibits very good corrosion resistance and excellent weldability.

H13 TOOL STEEL

H13 is a hot-work tool steel, meaning it holds its strength and hardness up to a higher working temperature than most tool steels. We are launching H13 Tool Steel to give people the ability to print high-strength, high-temperature parts.

TOOL STEEL A2 & D2 (Beta)

A2 tool steel is air-hardened with excellent impact resistance. We use it to make punches, dies, and form tooling for our Industrial Series printers. The high carbon and chromium content of D2 tool steel provides great hardness and abrasion resistance (but not as tough as A2). D2 is often used for cutting tools.

INCONEL IN Alloy 625 (Beta)

Inconel's strength combined with its impressive heat resistance makes it ideal for heat and pressure shielding applications. This Nickel-based superalloy is commonly used in jet engines and medical applications, and is very hard to machine. It is also very chemically resistant.

TITANIUM Ti-6Al-4V (Beta)

Bearing the highest strength-to-weight ratio of any metal, Titanium 6-4 is ideal for lightweight applications and has both high tensile strength and fatigue resistance. It is widely used in aerospace applications such as airframe components and turbine blades.

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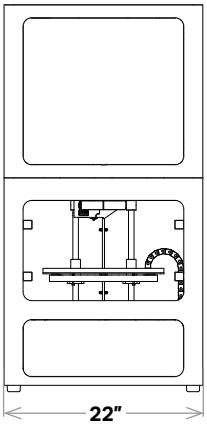
PRODUCT SPECIFICATIONS

Metal X

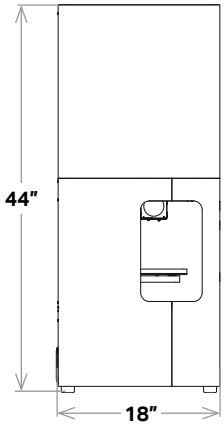
The Metal X is the world's first Atomic Diffusion Additive Manufacturing (ADAM) machine. It's up to 10x less expensive than alternative metal additive manufacturing technologies — and up to 100x less than traditional fabrication technologies like machining or casting. Affordable, reliable, and easy to use, the Metal X print system gives you everything you need to go from design to fully functional metal parts faster than ever before.

Printer Properties	**Process**	Atomic Diffusion Additive Manufacturing (ADAM)
	Build Volume	300 x 220 x 180 mm (11.8 x 8.7 x 7.1 in)
	Machine Size	575 x 467 x 1120 mm (22.7 x 18.4 x 44.1 in), 75 kg (160 lbs)
	Print Chamber	Heated
	Print Bed	Heated, Vacuum Sealed Print Sheet, Auto Bed Leveling
	Print System	2 Nozzles — Metal Material and Support Release
	Power Requirements	100-240 VAC, 2400 W (20 A peak), IEC60320 Type C20
Part Properties	**Max Part Size**	250 x 183 x 150 mm (9.8 x 7.2 x 5.9 in), 10kg
	Supports	Same Material with Ceramic Release Layer
	Resolution	50 - 200 µm
Software	**Supplied Software**	Cloud Storage, Local Storage, or On-Premise ($5,000 fee)
	Security	Two-Factor Authentication, Org Admin Access, Single Sign-On
Materials	**Launch Material**	Stainless Steel (17-4 PH, 316L) Tool Steel (H13, A2, D2), Titanium Ti6Al4V, Inconel (IN) 625
	Support Material	Ceramic (consumed at 1:10 ratio to metal spools, on average)
	Media (Spools)	Filament Fed, Bound Powder

FRONT VIEW



SIDE VIEW



3DZ

Print the Future

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