

AN ACCESSIBLE END-TO-END METAL **3D PRINTING** SOLUTION DESIGNED TO YIELD FUNCTIONAL METAL PARTS.

Print a wide range of materials from stainless steel to copper with minimal training on a closed workflow.



METAL X SYSTEM

The Metal X System is the most accessible way to fabricate complex metal parts in the widest variety of advanced metals.

METAL X

The Metal X is a revolutionary 3D printer that prints metal powder bound in a plastic matrix to eliminate safety risks associated with traditional metal 3D printing methods while enabling new features like close-cell infill for reduced part weight and cost. 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 1,120 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	Two nozzles — Metal material and release material
	Power Requirements	100–120 / 200–240 VAC (12A / 6A), IEC 60320 type C20
Materials	Metal Material	Stainless steel (17-4 PH, 316L*), Tool steel (H13, A2, D2), Inconel 625, Copper, Titanium-6Al-4V*
	Release Material	Ceramic (consumed at 1:10 ratio to metal spools, on average)
	Media (Spools)	Filament fed, bound powder
Part Properties	Max Part Size	250 x 183 x 150 mm (9.8 x 7.2 x 5.9 in), 10kg
	Supports	Metal material with ceramic release layer
	Layer Height	50µm and 125µm post-sinter
Software	Supplied Software	Eiger Cloud (Other options available at cost)
	Security	Two-factor authentication, org admin access, single sign-on



WASH-1

The first step in transforming a printed “green” part into fully dense metal is debinding. The Wash-1 immerses the green part in a specialized fluid which dissolves the primary binding material, leaving the part semi-porous so the remaining binder can easily burn off during sintering. This debinding step purifies the final metal part and helps keep your sintering furnace clean.

Debinder Properties	Materials Supported	All metals
	Fluid (Solvent)	Opteon SF79, Opteon SF80, or Tergo Metal Cleaning Fluid
	Controller	Integrated control system
	Workholding	Stainless steel basket
	Washing Size	356 x 254 x 203 mm (14 x 10 x 8 in)
	Washing Volume	18,356 cm ³ (1,120 in ³)
Safety & Installation	Environmental Req.	External exhaust
	Safety Control	Low fluid shutoff control High vapor pressure shutoff control
	Regulatory	Refer to MSDS
	Emissions	Low emission design to conserve solvent
	Power	110-120 VAC single phase, 11A / 1,320W peak draw
Physical Dimensions	External Dimensions	609 x 685 x 1,067 mm (24 x 27 x 42 in)
	Weight	136 kg (300 lbs)

Best Fit Application for Metal 3D Printing

Metal Application	Problem Solved
Tooling and Fixtures	Long lead time, high part cost, limited CNC bandwidth, complex geometries/assemblies
Prototyping (Design and Functional)	Design limitations, long iteration cycles, slow time to market, waste
Replacement Parts	Long lead time, high part cost unplanned downtime

SINTER-2

With an expansive active hot zone (19,644 cm³ / 1,199 in³), the Sinter-2 is the perfect solution for mid-volume batch production and for larger parts. Create high-purity metal parts by using sintering technology built with a carbon-free retort. This workhorse furnace is enabled with rapid cooling technology and can process the full range of commercial-grade metals from their washed state into dense metal parts in as few as 30 hours.

Furnace Properties	Materials Supported	Chemically debound Metal X-printed parts
	Heating Element	Kanthal
	Controller	Pre-programmed automatic cycling
	Sinter Run Time	30 hours*
	Peak Internal Temp.	1,300° C / 2,372° F
	Sintering Capacity	Rectangle w/radius top — 248 mm ID x 406 mm L (9.8 in ID x 16 in L)
	Sintering Workload	12,135 cm ³ (741 in ³)
	Sinter Surface Area	1,644 cm ² (254.8 in ²) for stackable ceramic setter plate
	Setter Plate Dimensions	Top plate: 24.0cm W x 41.0cm D, (9.4in W x 16.1in D) Bottom plate: 17.0cm W x 41.0cm D, (6.7in W x 16.1in D)
	Gas Types	Argon, argon / hydrogen mix
	Retort	High purity refractory retort (carbon-free)
Safety & Installation	Environmental Req.	External exhaust (100–150 CFM)
	Power	200–240 V, 3 phase (3 wire), 30 A 346–416 V, 3 phase (4 wire), 30 A
Physical Dimensions	External Dimensions	1,370 x 810 x 1,520 mm (54 x 32 x 60 in)
	Weight	350 kg (772 lbs)

Complete Process Chain for Metal 3D Printing

