METAL X SYSTEM

Manufacturing. Reinvented.

+ Accurate printing with bound metal powder
+ Print dense parts with complex geometries
+ Shorten your time to market on any metal part

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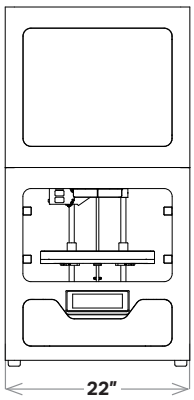
PRODUCT SPECIFICATIONS

Metal X (Gen 2)

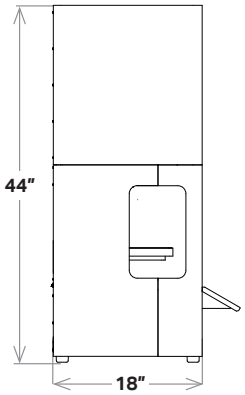
The Metal X is a revolutionary 3D printer that prints metal powder bound in a plastic matrix to eliminate safety risks associated with traditional metal 3D printing methods while enabling new features like close-cell infill for reduced part weight and cost. It's up to 10x less expensive than alternative 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**	Metal fused filament fabrication
	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) Touchscreen: 12 cm (4.7 in) horizontal extension
	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
	RF Module	Operating Band 2.4 GHz Wi-Fi Standards 802.11 b/g/n
Materials	**Metal Material**	Stainless steel (17-4 PH), Tool steel (H13, A2, D2), Inconel 625, Copper
	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

FRONT VIEW



SIDE VIEW



Touchscreen extends 12cm (4.7 in) horizontally from front face of printer.

Note: All specifications are approximate and subject to change without notice.

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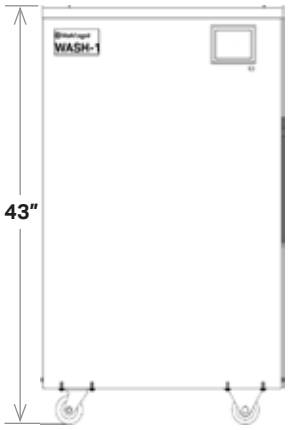
PRODUCT SPECIFICATIONS

Wash-1

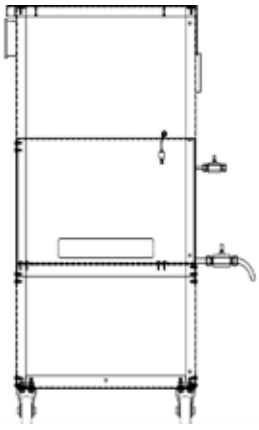
The first step in transforming a printed “green” part into fully dense metal is debinding. The Wash-1 immerses the green part in a specialized fluid which dissolves the primary binding material, leaving the part semi-porous so the remaining binder can easily burn off during sintering. This debinding 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 1,092 mm (24 x 27 x 43 in)
	Weight	136 kg (300 lbs)

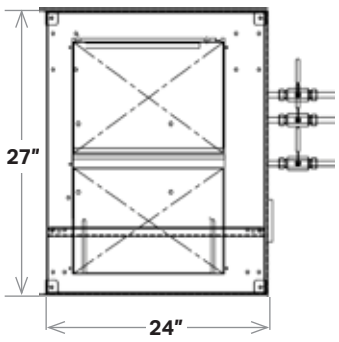
FRONT VIEW



SIDE VIEW



TOP VIEW



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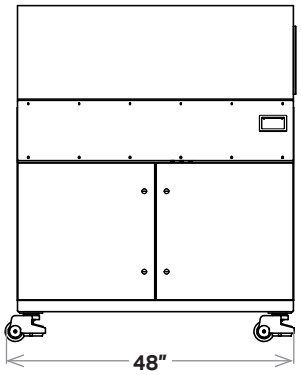
PRODUCT SPECIFICATIONS

Sinter-2

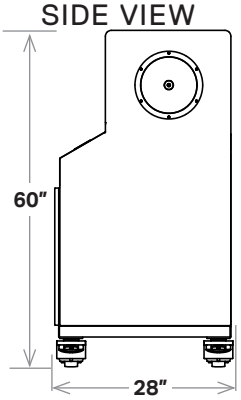
With an expansive active hot zone (19,644 cm^3 / 1,199 in^3), the Sinter-2 is the perfect solution for mid-volume batch production and for larger parts. Create high-purity metal parts by using sintering technology built with a carbon-free retort. This workhorse furnace is enabled with rapid cooling technology 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,* 17 hours (Small Parts Express Run)**
	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)
	Sintering 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)
	RF Module	Operating Band 2.4 GHz Wi-Fi Standards 802.11 b/g/n
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)

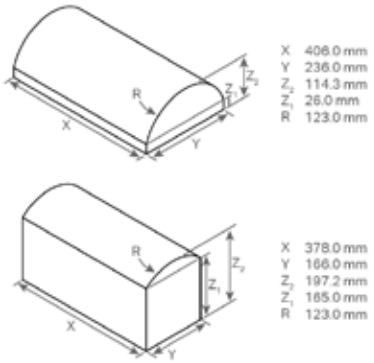
FRONT VIEW



SIDE VIEW



MAX SINTER VOLUME



* May vary by material, operating environment, run mass, electrical frequency, etc. **Note:** All specifications are approximate and subject to change without notice.
** Express Run enabled for 17-4 PH parts where brown (washed and dried) mass totals 250 grams or less