

Metal X System

The Leading End-to-End Metal 3D Printing Solution

Metal X

Built around a 5th-generation extrusion and motion system, the Metal X is office friendly, easy to use, and has a small footprint. It features advanced failure detection and can be monitored from the cloud.



Technical Advantages

- Easily 3D print complex geometries
- Eliminate tooling spend
- Safe, automated processes



What Can You Do With a Metal X?

Manufacture Smarter with Custom Tooling

The Metal X metal 3D printer enabled a job shop to deliver parts to customers faster and at lower cost by quickly tooling up an automated bending cell.

Rapidly Prototype Metal 3D Printed Parts

Metal 3D printing allows Shukla Medical to get tools in the hands of surgeons faster. They prototype custom surgical tools like this helicopter socket in-house.

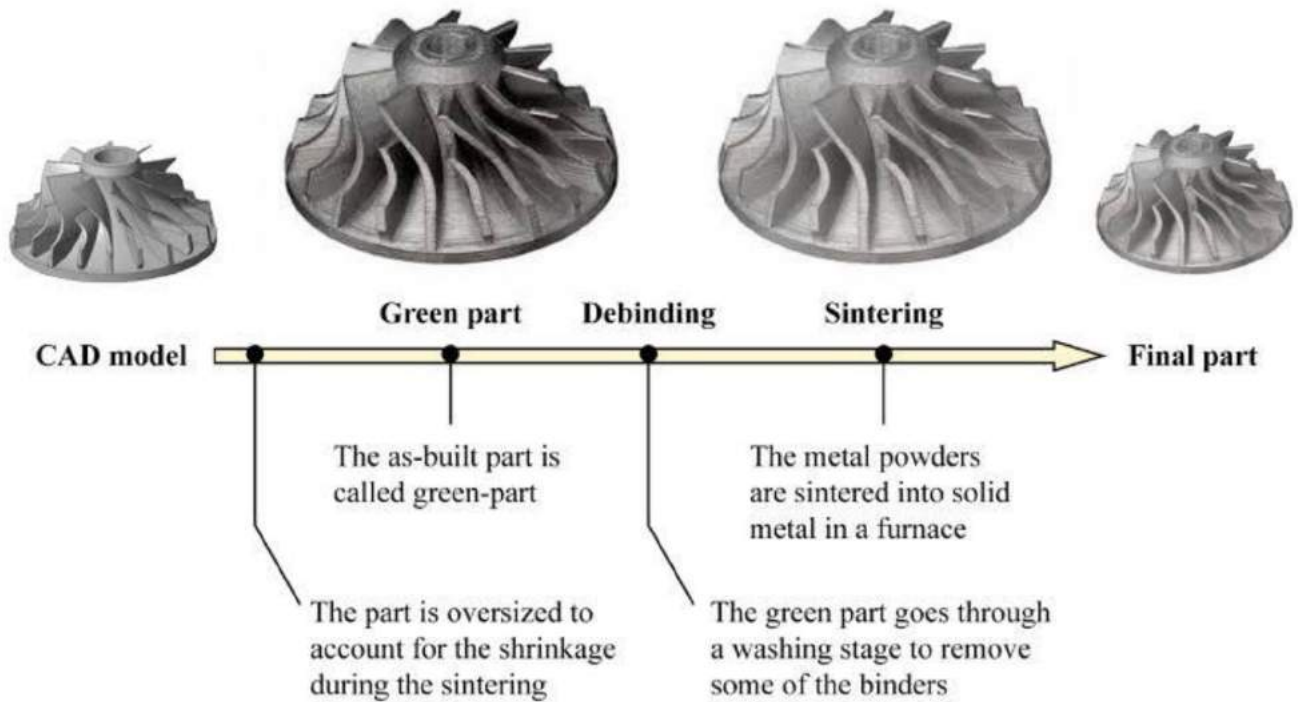
Bring Low-Volume Production in-House

Nieka Systems brought small-batch Inconel manufacturing in-house with a Metal X, eliminating lead time variability by removing reliance on a third-party DMLS print service.

Print Replacement Parts On-Demand

Stanley Black & Decker cut inventory and manufacturing costs by replacing casting with 3D printing for small-batch replacement parts.

Process Flow (MIM)



Industrial Materials for Every Application



17-4PH Stainless Steel



Inconel 625



H13 Tool Steel



D2 Tool Steel



A2 Tool Steel



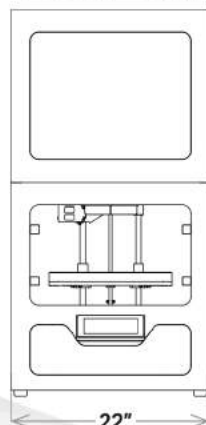
Copper

Metal X (Gen 2)

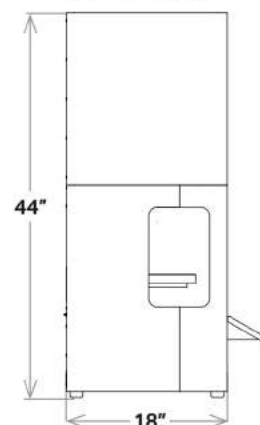
The Metal X is a revolutionary 3D printer that prints metal powder bound in a plastic matrix to eliminate safety risks associated with traditional metal 3D printing methods while enabling new features like close-cell infill for reduced part weight and cost. It's up to 10x less expensive than alternative 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.

Wash-1 Specifications

Debinder Properties	Materials Supported	All metals
	Fluid (Solvent)	Opteon SF79
	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	120/240 VAC single phase, 15 A / 1,650 W peak draw
Physical Dimensions	External Dimensions	609 x 685 x 1,067 mm (24 x 27 x 42 in)
	Weight	136 kg (300 lbs)

Sinter Specifications

		Sinter-1	Sinter-2
Furnace Properties	Materials Supported	Chemically debound Metal X-printed parts	Chemically debound Metal X-printed parts
	Heating Element	Kanthal	Kanthal
	Controller	Pre-programmed automatic cycling	Pre-programmed automatic cycling
	Sinter Run Time	26 hours*	30 hours*
	Peak Internal Temp.	1,300° C / 2,372° F	1,300° C / 2,372° F
	Sintering Capacity	Rectangle w/radius top — 141 mm ID x 305 mm L (5.55 in ID x 12 in L)	Rectangle w/radius top — 248 mm ID x 406 mm L (9.8 in ID x 16 in L)
	Sintering Workload	3,020 cm ³ (184 in ³)	1,300° C / 2,372° F
	Sinter Surface Area	348 cm ² (53.9 in ²) for single ceramic setter plate	1,644 cm ² (254.8 in ²) for stackable ceramic setter plate
	Maximum Part Size	X:235mm, Y:68.3mm, Z:65.5mm, Z:80mm, R:55.5mm	X:378mm, Y:166mm, Z:197mm, Z:165mm, R:123mm
	Setter Plate Dimensions	11.4cm W x 30.4cm D, (4.5in W x 12.0in D)	Top plate: 24.0cm W x 41.0cm D, Bottom plate: 17.0cm W x 41.0cm D
	Gas Types	Argon, argon / hydrogen mix	Argon, argon / hydrogen mix
	Retort	High purity refractory retort (carbon-free)	High purity refractory retort (carbon-free)
Safety & Installation	Environmental Req.	External exhaust (100–150 CFM)	External exhaust (100–150 CFM)
	Power	200–240 V single phase 36A, recommend wiring 50A	200–240 V, 3 phase (3 wire), 30 A 346–416 V, 3 phase (4 wire), 30 A
Physical Dimensions	External Dimensions	1,067 x 505 x 720 mm (42 x 20 x 28 in)	1,200 x 700 x 1,500 mm (48 x 28 x 60 in)
	Weight	136 kg (300 lbs)	350 kg (772 lbs)