

Production System™ P-1 Specifications

Designed to bridge the gap between bench top development and mass production, the Production System™ P-1 is an open platform binder jetting solution for process and materials development as well as serial production of small, complex parts.

The Production System™ P-1 supports both non-reactive and reactive metal powders using the same Single Pass Jetting™ technology leveraged across the Production System family of products, combining mass production-level quality and consistency with enhanced process flexibility to support serial production or direct process transfers to the Production System™ P-50.

Key Production System™ P-1 benefits

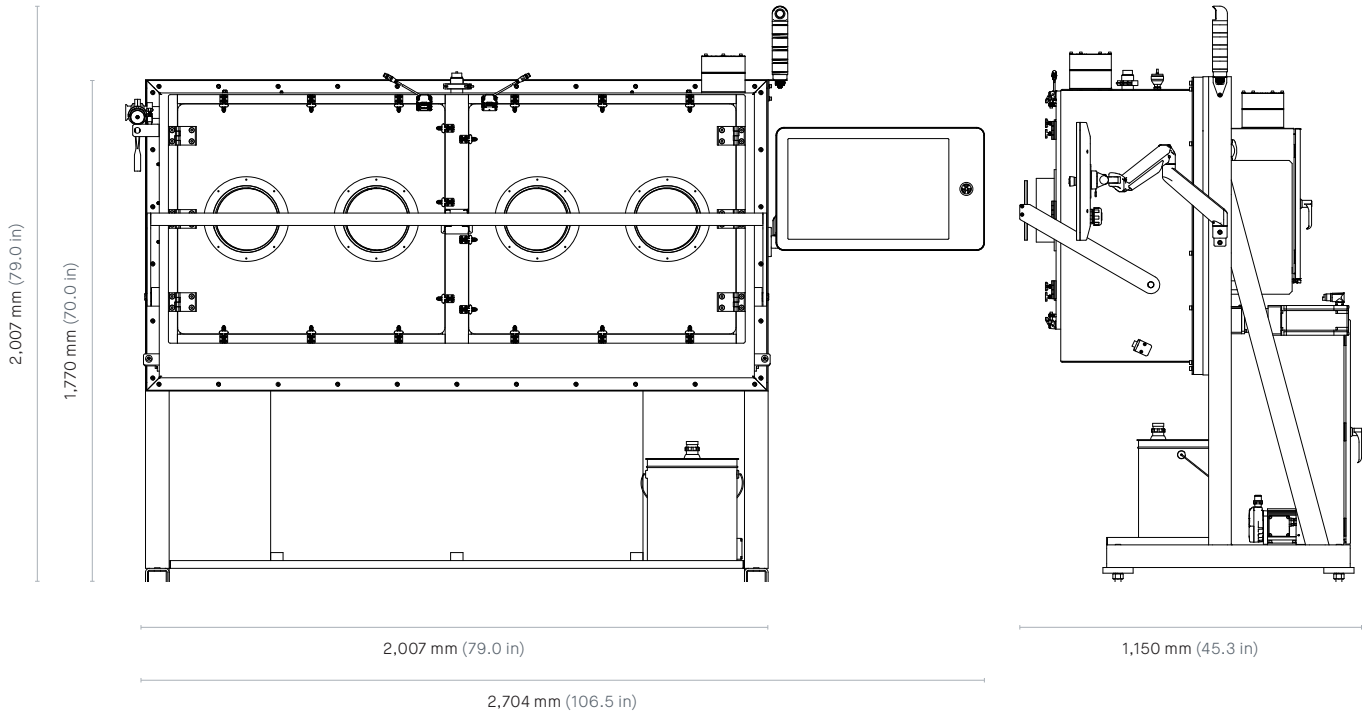
- Patent pending Single Pass Jetting™ technology enables speeds up to 1,350 cc/hr
- Constant wave spreading enhances print bed uniformity and density
- Patented anti-ballistics technology drives printhead longevity and part quality
- Inert build chamber provides reactive metal support and powder consistency
- Real-time optical bed inspection
- Open material platform

TECHNOLOGY	Print technology	Single Pass Jetting™
	Print direction	Uni-directional
	Binder jetting module	2 Piezo-electric printheads (4,096 nozzles)
PERFORMANCE	Max build rate (65 µm layer thickness)	1,350 cc/hr (82 in ³ /hr)
	Resolution	Native 1,200 dpi
	Layer thickness ¹	30 µm - 200 µm (green)
	Part tolerance	± 0.5%
PHYSICAL	External dimensions	1,770 x 2,007 x 1,150 mm (70 x 79 x 45 in)
	Weight	900 kg (1,984 lb)
	Build box size	200 x 100 x 40 mm (7.9 x 3.9 x 1.6 in)
	Chamber environment	CDA or Nitrogen inerting (<2% Oxygen)
	Onboard control	24-inch touchscreen display
ELECTRICAL	Power requirements	380 - 480 V, 50/60 Hz, 3-phase, 4 wire 11 Amp
POWDERS	Material platform	Open platform (third party MIM powders)

1. Default profiles available for 50 µm — 100 µm; 30 µm — 200 µm layer thickness is material and powder dependent.

Production System™ P-1 Specifications

DIMENSIONS



Production System™ P-50 Specifications

Created by leading inventors of binder jetting and single-pass inkjet technology, the Production System™ P-50 is designed to be the fastest way to 3D print metal parts at scale.

The Production System™ P-50 Printer leverages Desktop Metal's patent pending Single Pass Jetting™ technology to achieve print speeds up to 12,000 cc/hr, producing parts at costs competitive with conventional mass production techniques. Designed with an inert environment to process low cost MIM powders across non-reactive and reactive metals, the Production System™ P-50 offers the reliability and consistency required for high-volume, end-use applications.

Key benefits

- Patent pending Single Pass Jetting™ technology
- Bi-directional printing enables speeds up to 12,000 cc/hr
- Constant wave spreading enhances print bed uniformity and density
- Patented anti-ballistics technology drives printhead longevity and part quality
- Anti-banding technology improves reliability through printhead redundancy
- Inert build chamber provides reactive metal support and powder consistency
- Real-time optical bed inspection
- Open material platform

TECHNOLOGY	Print technology	Single Pass Jetting™
	Print direction	Bi-directional
	Binder jetting module	8 piezo-electric printheads (16,384 nozzles)
PERFORMANCE	Max build rate (65 µm layer thickness)	12,000 cc/hr (732 in ³ /hr)
	Resolution	Native 1,200 dpi
	Layer thickness ¹	30 µm – 200 µm (green)
	Part tolerance	± 0.5%
PHYSICAL	External dimensions	1,900 x 5,000 x 1,900 mm (74.8 x 196.9 x 74.8 in)
	Weight	4,751 kg (10,476 lb)
	Build box envelope	490 x 380 x 260 mm (19.2 x 15.0 x 10.2 in)
	Chamber environment	CDA or Nitrogen inerting (< 2% Oxygen)
	Onboard controls	24-inch touchscreen display
ELECTRICAL	Power requirements	380 – 480 V, 50/60 Hz, 3-phase, 4 wire 60 Amp
POWDERS	Material platform	Open platform (third party MIM powders)

1. Default profiles available for 50 µm – 100 µm; 30 µm – 200 µm layer thickness is material and powder dependent.

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