

Production System™ P-50 Specifications

About

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*	12,000 cc/hr (732 in³/hr)
	Resolution	Native 1,200 dpi
	Layer thickness**	30 µm - 200 µm (green)
	Dimension tolerance	± 1% or 0.2 mm, whichever is greater
PHYSICAL	External dimensions (W x D x H)	3,935 x 1,910 x 2,005 mm (154.9 x 75.2 x 78.9 in)
	Weight	5,443 kg (12,000 lb)
	Build box size	490 x 380 x 260 mm (19.2 x 15.0 x 10.2 in)
	Print envelope*** (L x W x H)	440 x 330 x 250 mm (17.3 x 13.0 x 9.8 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)
	Oxygen concentration	LOC ≥ 3.4% (with Nitrogen inerting)

* Based on 65 µm green layer thickness

** 30 µm - 200 µm layer thickness is material and powder dependent.

*** Subject to continued optimization

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DIMENSIONS

