

X CARMEL 1400 M



XJET CARMEL 1400M – METAL AM SYSTEM NanoParticle Jetting (NPJ) technology

Unprecedented Productivity & Quality

- Unlimited design flexibility with unprecedented accuracy fine details and surface finish
- High productivity & repeatability enabling solutions from prototyping to full fledge manufacturing
- Addressing wide range of applications such as healthcare, aerospace, automotive, telecom and more

Revolutionary Powderless Technology

- No hazardous materials using sealed cartridges for safe & simple operation
- Automated support planning
- Soluble support material for easy & manual-free support removal
- Best-in-class part properties

XJET

CARMEL 1400M



No-hassle cartridge loading:

Solid nanoparticles suspended in liquid are delivered within convenient sealed cartridges of build or support materials, which are loaded safely and easily into the system.

State-of-the-art ink jetting:

Printheads with thousands of inkjet nozzles jet millions of ultrafine drops, simultaneously jetting build and support materials onto the build tray in ultrathin layers.

Easy support removal:

Support structures, made from special soluble material, easily dissolve in water based solution in a rapid hands-free process without harming the produced parts.

Simple final sintering:

Produced parts undergo a simple and relatively short overnight sintering process in a common sintering oven.

System Specifications

Build volume (w/d/h) on removable build tray	2 trays, 500 x 140 mm / 19.7 x 5.5 in, each
Layer thickness	8 microns
Building speed	Up to 1.0 mm height per hour
Dimensions (w/h/d)	310 x 212 x 185 cm / 122 x 84 x 73 in
Weight	3 tons / 6,614 lb
Electrical power	EU: 400 VAC; 3 phases; 3 x 30 A; 50/60 Hz US: 208 VAC; 3 phases; 3 x 50 A; 60 Hz
Operating temperature	18° - 25°C; 64° - 77°F
Regulations conformity	CE; FCC; UL (in-process)

Materials

Materials	Stainless Steel dispersion (3 kg cartridge) Soluble support for metals (2.2 kg cartridge)
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Part Quality¹

Accuracy ²	± 50 micron on dimensions up to 5 mm 1% of larger dimensions up to ± 100 micron
Minimum feature size	300 microns
Surface roughness	N8-N9
Density	7.83 g/cm ³ (>98%)
Tensile strength ³	673.4 MPa
Elongation	Up to 50%

1. All measurements are based on internal XJet lab testing made on lab specimens.

2. Depending on geometry, build parameters and model orientation.

3. Measured according to ASTM A240.

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The logo for XJET, with 'X' in red and 'JET' in blue.