

# 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

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# CARMEL 1400M



CARTRIDGE LOADING

MATERIAL JETTING

SUPPORT REMOVAL

FINAL SINTERING

## 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 Quality<sup>1</sup>

Accuracy <sup>2</sup>	± 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 <sup>3</sup> (>98%)
Tensile strength <sup>3</sup>	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.