

COMPACT METAL LASER POWDER BED FUSION

JT-SLM-130

Metal Additive Manufacturing Cell

A compact, configurable laser powder bed fusion system for education, research, and precision metal development.



The JaegerTech JT-SLM-130 Metal Additive Manufacturing Cell combines a compact SLM printer with supporting systems for powder handling, inert gas supply, and controlled cleanup—delivering a practical starting point for universities, research laboratories, and industrial development teams.

DESIGNED FOR

 <p>Education</p> <p>Teach additive manufacturing fundamentals, design for AM, and materials science.</p>	 <p>Research</p> <p>Explore process variables, materials characterization, and experimental geometries.</p>	 <p>Development</p> <p>Prototype components, tooling features, and small-batch parts for application evaluation.</p>	 <p>Workforce Training</p> <p>Build practical skills for the advanced manufacturing workforce.</p>
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CORE CELL COMPONENTS

Component	Purpose
JT-SLM-130 Metal Additive Manufacturing System	Produces smaller metal parts using laser powder bed fusion
JT-PS-8400 Inert Powder Sieving System	Screens and recovers powder in an inert environment
JT-NG-001 Nitrogen Generation System	Provides high-purity nitrogen for inert atmosphere operation
JT-PV-001 Metal Powder Vacuum System	Supports controlled collection of powder and residue (supplier-listed as explosion-protected)

MATERIAL STRATEGY



For most educational and introductory research installations, we recommend beginning with stainless steel powders.


The printer is supplier-listed for additional material classes, including titanium alloys, mold steels, cobalt-chromium alloys, and aluminum alloys. Material suitability, safety requirements, and supporting equipment must be reviewed for each application.


RECOMMENDED WORKFLOW SEPARATION

<p>1. Powder & Printing Area</p> <ul style="list-style-type: none"> Printer operation Powder handling Powder sieving Vacuum cleanup Powder storage 	<p>2. Post-Processing Area</p> <ul style="list-style-type: none"> Build plate separation (bandsaw) Support removal Media blasting Finishing tools 	<p>3. Inspection & Teaching Area</p> <ul style="list-style-type: none"> Dimensional inspection Documentation Microcopy (as applicable) Student learning
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KEY ADVANTAGES

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Compact Footprint
Small machine size for flexible lab installation.
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Precision Performance
500 W fiber laser with adjustable parameters for process control and repeatability.
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Open Parameters
Open-access process parameter management for research and instructional applications.
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Safety-Conscious Design
Inert atmosphere operation and documented powder handling support safe workflows.
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Configurable Cell
Scalable with supporting systems and post-processing options.

JT-SLM-130 PRINTER SPECIFICATIONS

Item	Specification
Technology	Selective Laser Melting (SLM)
Build Volume	Ø130 mm × 80 mm (cylindrical)
Laser Type	Fiber laser, water-cooled
Laser Power	500 W
Laser Spot Size	50–100 µm (adjustable)
Powder Layer Thickness	20–120 µm (adjustable)
Scanning Speed	<10 m/s
Forming Speed	5–20 cm ³ /h
Powder Feeding Method	Bottom feeding, unidirectional variable-speed spreading
Protective Atmosphere	Nitrogen (N ₂) or Argon (Ar)
Working Oxygen Content	≤100 ppm
Filter System	Permanent filter cartridge, ≥30,000 hours service life (supplied data)
Rated Power	3 kW
Electrical Requirements	100–110 V or 220–240 V AC, 50/60 Hz, single phase, 16 A
Operating System	Windows 10 or Windows 11
Data Formats	CLI / SLC / STL and other formats
Machine Dimensions (WxDxH)	720 mm × 693 mm × 1726 mm
Supplier-Listed Printer Materials	Stainless steel, titanium alloy, mold steel, cobalt-chromium alloy, aluminum alloy, etc.

SUPPORTING SYSTEMS AT A GLANCE

System	Key Specifications
JT-PS-8400 Powder Sieving System	<ul style="list-style-type: none"> 100 mesh screen 200 mesh Inert gas pressure: 0.5–0.7 MPa 350 W (100 W ultrasonic)
JT-NG-001 Nitrogen Generator	<ul style="list-style-type: none"> Purity: 99.999% Flow rate: 3 Nm³/h Dew point: ≤ -40 °C
JT-PV-001 Metal Powder Vacuum System	<ul style="list-style-type: none"> Airflow: 350 m³/h Filtration: 1 µm Collection capacity: 80 L Explosion protection: 1.13D Ex h CT 130 °C Da/Db (supplier data)

READY TO BUILD YOUR METAL AM CAPABILITY?

Contact JaegerTech to discuss the JT-SLM-130 Metal Additive Manufacturing Cell and how we can help you configure the right system for your application.

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Specification and Application Notice: Technical specifications, equipment descriptions, listed material classes, and performance values are based on current supplier-provided information and are subject to confirmation. Material suitability, process parameters, atmosphere requirements, ancillary equipment selection, safety practices, facility controls, and final part properties must be evaluated for each installation, material, and application.