

Meltio Robot Cell

Advanced Additive Manufacturing Robotic System

An affordable turn-key solution for the Meltio Engine Robot Integration. It is designed to provide industries with a secure and efficient solution for manufacturing metal 3D printed parts.

The Meltio Engine Robot Cell is the most versatile & capable solution for 3D printing, repair, cladding and feature addition.



1. Structural Steel Platform with Laser-safe Class 1

3. 6- Axis Robot Arm & 2-Axis Workpiece Positioner

5. Unified Control Panel

7. External Dimensions (LxWxH)
4.050 x 2.350 x 3.000 mm

USA: 3.962 x 2.337 x 2.667 mm

9. 4k WebCam Camera

11. Standard Warranty

2. Laser System: [Meltio Engine Blue](#)

4. Meltio Space Slicer Software included

6. Dual Wire for increased productivity

8. Build Volume with positioner interpolation:
Ø 1000 mm x 1000 mm
Ø 1000 mm x 800 mm with inert bubble
Ø 1000 mm x 800 mm with or without inert bubble for **USA**

10. Optional Inert Bubble

12. Actively Cooled Build Platform

**The Meltio Robot Cell is available in regional configurations, including units manufactured in Spain for European and international markets and units assembled in the USA by localized qualified partners for the North American market. External Appearance, dimensions, certifications and technical specifications may vary by region, while maintaining Meltio's required functional, safety, quality and branding standards.*

Key Technical Features

CLASS 1 Laser Product	All cell controls unified on single control panel
Meltio Space 1 (one) year subscription	Everything is sent integrated and tested
Large 3D Printing Volume with Continuous positioner axes interpolation	The final reseller/integrator focuses work on training and enabling the client to manufacture parts
All equipment and peripherals anchored on the platform.	Load and unload from truck with standard industrial forklift
Standard CE certification (not applicable in USA, for the USA market, UL or equivalent electrical certification shall be evaluated.)	Includes 300 x 400 mm actively cooled build platform and buildplates
Steel platform with leveling points and wiring ducts	

Technical Details

Dimensions (WxDxH):	4.050 x 2.350 x 3.000 mm. Indoor use only USA: 156 in x 92 in x 105 in / 3.962 x 2.337 x 2.667 mm
Print Envelope:	1 meter diameter printing volume with continuous positioner axes interpolation. Actively Cooled 300x400 mm build platform
System Weight:	4.000-5000 kg
Laser System:	Meltio Engine Robot - Laser Integration Kit
Platform:	Structural Steel with Laser-safe Class 1 enclosure with CE certification (not applicable in USA). All equipment anchored to the platform
Robot System:	ABB 6- Axis Robot Arm & 2-Axis Workpiece Positioner
Integration:	Unified Control Panel, 4k WebCam monitoring & Live Timeline of sensors and 3D model based on reading TCP positions from robot
Slicing software:	Meltio Space one year subscription included. Pre-defined Print profiles and slicing strategies. Focused on ease of use
Power Input:	380-415V 50/60Hz (3W+N+PE) 20kw peak 7kw avg. upon request: 230V 50/60Hz (3W) USA: 2 power inputs (230V & 208V three phase). Other electrical configurations may be quoted separately.
Required Inputs:	Inert Argon Gas supply between 4,5–5 bar. (Meltio offers an optional Gas Regulator) & Internet Lan cable connection
Accessories:	Inert Bubble for full Print envelope with Independent Atmospheric Control O2 and Humidity and Temperature Monitoring
Integration Requirements:	Robot Requirements

Technical Specifications - Integration and Safety

Single three-phase connector input.

All **cell controls unified** on single control panel:

- **Cell Controls:** Open doors and arm security
- **Robot Controls:** Motors On, Mode Selector and Emergency

Connected to the customer's **local network (LAN) for PC interconnectivity**

ABB's SafeMove to **avoid collisions with enclosure**

Safe environment for the end customer

European CE and laser safety regulations.

UKCA in UK and UL in America to be evaluated.

Fully Tested

Specific Quality Controls before and after integration, ensuring maximum performance at its final destination.



Technical Specifications - Supplies Area

Meltio **Engine Control Unit**

Engine and Build Platform **Water Chillers**

External Feeders, for spool holders and drums of +100kg

Inert Gas Supply options:

- Attachments for three 50L Argon bottles with non-return valves.
- Optional Meltio Gas Regulator
- Or Supplied by customer



* All these equipment and peripherals are anchored on this platform and may not exceed from the maximum dimensions of the self-supporting platform during transport.

Technical Specifications - Load and Build Volume

Load:	500 kg max load (Standard)
Actively Cooled Build Platform:	Buildplate 300x400mm Buildplate 150x200mm Buildplate 120x100mm

Positioner Interpolation: Ø 1000 mm x 1000 mm
USA: Ø 1000 mm x 800 mm
Inert bubble limits positioner interpolation to Ø 1000 mm x 800 mm

* The cooling bed allows control of the temperature of the prints as wells to protect the positioner, hardware that cannot be over 70°C on periods of more than 24h.