Meltio Product Datasheet

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

2. Laser System: Meltio Engine Blue

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

4. Meltio Space Slicer Software included

5. Unified Control Panel

6. Dual Wire for increased productivity

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

8. Build Volume with positioner interpolation:
∅ 1000 mm x 1200 mm

9. 4k WebCam Camera

10. Optional Inert Bubble

11. Standard Warranty

12. Actively Cooled Build Platform

*The solution is offered by localized, qualified partners. It may differ in external appearance and details from the representative photo.

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Key Technical Features

CLASS 1 Laser Product

Meltio Space 1 (one) year subscription

Large 3D Printing Volume with Continuous positioner axes interpolation

All equipment and peripherals **anchored on the platform.**

Standard **CE certification**

Steel platform with leveling points and wiring ducts

All cell controls unified on single control panel

Everything is sent **integrated and tested**

The final reseller/integrator **focuses work on training and enabling the client to manufacture parts**

Load an unload from truck with **regular size and load forklift**

Includes 300 x 400 mm actively cooled build platform and buildplates

Technical Details

Dimensions (WxDxH):	4.050 x 2.350 x 3.000 mm. Indoor use only
Print Envelope:	1 meter diameter printing volume with continuous positioner axes interpolation. Actively Cooled 300x400 mm build platform
System Weight:	4.000 kg
Laser System:	Meltio Engine Robot - Laser Integration Kit
Platform:	Structural Steel with Laser-safe Class 1 enclosure with CE certification. 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:	385-415V 50/60Hz (3W+N+PE) 20kw peak 7kw avg. upon request: 230V 50/60Hz (3W)
Required Inputs:	Inert Argon Gas supply between 2 to 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:	Requirements Robot

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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.

UCKA 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:	∅ 1000 mm x 1200 mm
No Positioner Interpolation:	1600 x 1000 x 1000 mm Custom build platform not included No positioner movement, only robot tool orientation

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