Meltio Engine
Integration kits for Robots and
Vertical Machining Centers

MELTIO

Integration Kits

For **Robots** and **Vertical Machining Centers**

Meltio is dedicated to making advanced metal additive manufacturing **accessible and affordable** for the industry. In addition to our complete 3D printing solutions like the Meltio M600, and Meltio Robot Cell, we offer integration-agnostic Meltio Engine Integration Kits. These kits **enhance Industrial Robots and CNC Mills** by incorporating our high-precision laser head technology, allowing companies to leverage metal 3D printing using their existing equipment.

By democratizing metal manufacturing, Meltio **empowers businesses to innovate and elevate their production** capabilities efficiently. Our **flexible integration solutions** maximize return on investment, enabling more companies to compete effectively in the evolving manufacturing landscape.

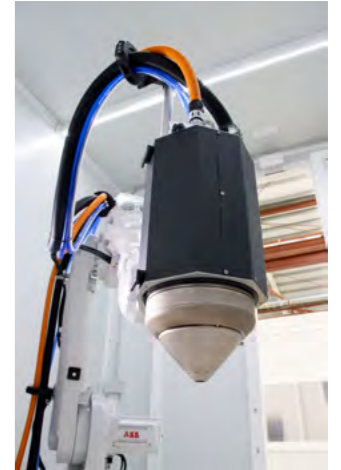| Hybrid	Retrofitting	Geometry Freedom	Part Repair	Large-Scale	Cladding

1. **+1.4kw Blue Laser** Factory Calibrated

2. **Stronger & Reliable** Dual Wire Feeders

3. **Compact** & Simple System

4. All Quick-Connect **Easier Integration**

5. **Process Control** More Stable & Compatible

6. 27" & 17" **Screen Options**

7. **Melt Pool Camera** on Head

8. **Max Safety** Level PL4e

9. **Predefined Print Profiles** for Meltio Materials

10. **Frictionless Wire Liners** (no external motor or reservoir)

Easier than Ever

Integration Steps

1. **Select Your Movement System**: Choose between Robot or CNC Mill

2. **Mount the Meltio Engine:** Includes Laser Deposition Head, Engine Control Unit, Touch Screen (HMI), Spool Holder and Chiller

3. **Protect Your Team:** Laser-safe windows, panels, and door interlocks

4. **Two-Way Communication:** 8 digital I/O & respective M-codes. Dual channel safety lines between controllers

5. **Let's Slice:** Enjoy a 1-year free Meltio Space subscription for Robots, or select Hybrid CAM software with adaptable post-processors for CNC Mills and M-codes

6. **Start Printing:** Enhance your productivity with predefined print profiles for Meltio Materials for solid and hollow geometries

Rely on your **Integratior's Network**

Local Expertise: Integrators understand regional markets and specific robot/CNC brands, tailoring solutions effectively

Enhanced Support: Local partners offer timely, expert support, boosting customer satisfaction across platforms

Market Penetration: Our partner network enables fast market entry, adapting to different brands and technologies

Adaptation and Innovation: Collaborations drive innovation, aligning Meltio's technology with diverse sector needs and CNC architectures

Accessibility: This approach ensures Meltio's solutions remain globally accessible and compatible with various machinery

Explore the opportunity to **become one of our partners**

Include your own integrations within the "Powered by Meltio" Portfolio, allow your integration to be sold within your region by our reseller network.

Meltio Engine Integration Kit for Vertical Machining Centers

Hybrid Manufacturing

The most affordable hybrid manufacturing solution, fitting almost any Vertical Machining Center in the market. Enable metal 3D printing and machining of complex geometries in a single process step.

The Meltio Engine is the ideal complement for near-net shape manufacturing, repair and feature addition.

`Hybrid` `Retrofitting` `Geometry Freedom` `Part Repair`

Laser System:	1000 W 9 x 450 nm direct diode lasers
Printhead:	Mounted on the right side of the spindle 32.5 to 35 kg
Printhead Retracted Size (WxDxH):	280 x 332 x 684 mm
Printhead Unretracted Size (WxDxH):	280 x 332 x 943 mm
Control Unit:	Wall mounted, air-cooled 80.5 kg 600 x 300 x 800 mm
Human Machine Interface:	Wall mounted 17" tactile screen
Cooling:	Water-cooled deposition head. Chiller Included
Print Envelope (WxDxH):	Depending on the Machining Center

Feeder System:	Quad-point traction servo feeders, frictionless liners
Process Control:	Melt Pool Camera & Closed-loop wire modulation
Power Input:	200/240 V 3W+PE 380/415 V 3W+N+PE
Power Consumption:	9,2 kW peak 2-5 kw avg.
Wire Feedstock:	Diameter: 0.8-1.2 mm / Spool Type: BS300 External wire drum ready
Product Configurations:	Single or Dual Wire

Semi-Open Impeller

Size:	73 x 48 x 17 mm
Weight:	1.47 kg
Material:	Stainless Steel 316L // Nickel 625

Aircraft Bracket

Size:	110 x 161 x 35 mm
Weight:	1.5 kg
Material:	Titanium 64

Meltio Engine Integration Kit for Industrial Robots

Large-Scale Metal 3D Printing

Turn a robot arm into a metal 3D printing system with no inherent size constraints. It is the perfect platform for large and complex 3D printing, repair, cladding and feature addition.

The Meltio Engine integrates with any robot arm manufacturer and interface on the market. Meltio Space slicer software for robots is compatible with ABB, Kuka, Fanuc, Yaskawa and Siemens.

`Large-Scale` `Geometry Freedom` `Part Repair` `Cladding`

Laser System:	1000W 9 x 450 nm direct diode lasers
Printhead:	Robot Mounted 20.5 to 23 kg
Printhead Size (WxDxH):	262 x 272 x 572 mm
Control Unit:	Wall mounted, air-cooled 80.5 kg 600 x 300 x 800 mm
Human Machine Interface:	Wall mounted 27" tactile screen
Cooling:	Water-cooled deposition head. Chiller Included
Slicer Software:	Meltio Space 1-year subscription Included
Print Envelope (WxDxH):	Depending on robot's reach

Feeder System:	Quad-point traction servo feeders, frictionless liners
Process Control:	Melt Pool Camera & Closed-loop wire modulation
Power Input:	200/240 V 3W+PE 380/415 V 3W+N+PE
Power Consumption:	9,2 kW peak 2-5 kw avg.
Wire Feedstock:	Diameter: 0.8-1.2 mm / Spool Type: BS300 External wire drum ready
Product Configurations:	Single or Dual Wire

Screw Compressor

Size:	75 x 75 x 230 mm cladded
Weight:	6.6 kg
Material:	Stainless Steel 316L

Naval Propeller - 3 Blades

Size:	900 x 900 x 250 mm
Weight:	11 kg
Material:	Stainless Steel 316L

Meltio Engine Robot Cell

Plug-and-Play Solution for Robot Integration

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.

Plug-and-Play Installation   **Best Components**   **Safe**   **Tested and Certified**

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 Type:	Meltio Engine Robot Integrated and Tested
Movement System:	6- Axis Robot Arm & 2-Axis Workpiece Positioner
Platform:	Structural Steel with Laser-safe Class 1 enclosure with CE certification. All equipment anchored to the platform

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

Conveyor Belt

Size:	130 x 903 x 855 mm
Weight:	4.99 kg
Material:	Stainless Steel 316L

High Performance Exhaust Header

Size:	160 x 326 x 190 mm
Weight:	5.95 kg
Material:	Stainless Steel 316L

Powered by Meltio

Turn-key Meltio Engine solutions by our partners

Harness the power of our advanced metal additive manufacturing technology with confidence, backed by expert support of our integration and reseller partners. **Available regionally,** these solutions cater to a wide range of industrial applications, making it easier than ever for businesses to elevate their production capabilities.

Our vision is to integrate with every robot, CNC mill, and CNC controller, including various CNC architectures like lathes. **"Powered by Meltio"** is a game-changing market segment, **adapting to diverse industries** while upholding the quality and reliability of the Meltio brand. We invite new integrators and resellers to join us in this exciting journey, empowering you to offer innovative solutions that meet the evolving needs of the market. **Together, we can transform the future of manufacturing!**

Turn-key   **Pre-configured**   **Expert Support**   **Confidence**   **Regional Availability***

Phillips Additive Hybrid

3-axis & 5-axis Hybrid CNCs
Haas Controller

Jupiter & Union MT

3-axis & 5-axis Hybrid CNCs
Fanuc Controller

Lagun L1600 Hybrid

3-axis Hybrid CNC
Fanuc Controller

Force Automation
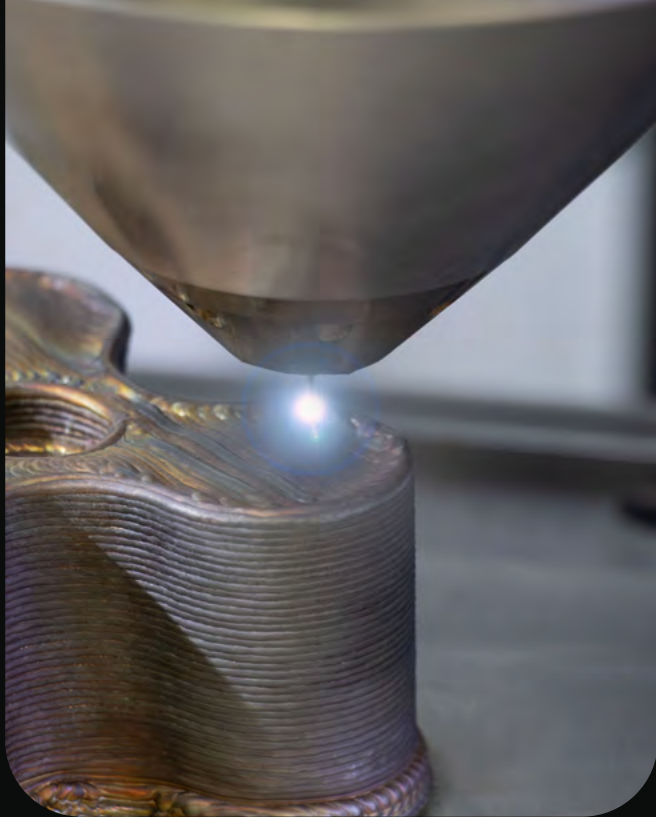
6+2 axis Robot Cell
ABB Robot

Wire Trading

6+2 axis Robot Cell
Kuka Robot

Accufacture

6+2 axis Robot Cell
Fanuc Robot

*Consult Meltio for their availability in your region

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Get to know us!

www.meltio3d.com