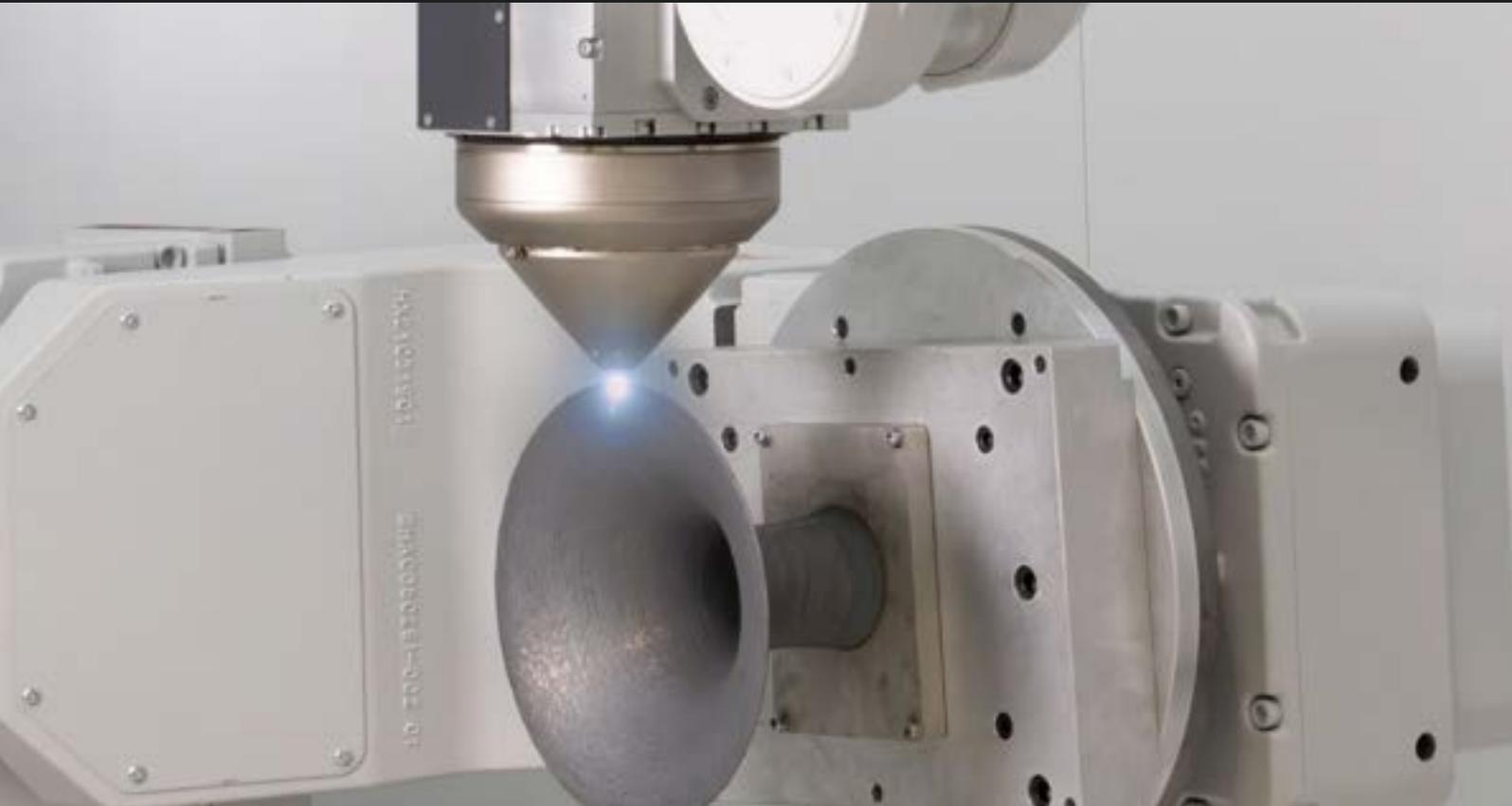


MELTIO

Meltio Engine

Integration kits for
Industrial Robots and CNCs



Easier than ever

Integration steps

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 regional integrator partner

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, allowing your integration to be sold within your region by our reseller network.

Meltio Engine Integration kits for Industrial Robots and CNCs

Enhance your existing equipment

The integration-agnostic Meltio Engine Laser Integration 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 adding advanced additive 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



- 1.0/1.4kW Blue Laser factory calibrated
- Stronger & reliable dual wire feeders
- Compact & simple system
- All Quick-Connect easier integration
- Process control more stable & compatible
- 27" & 17" screen options
- Melt pool camera on head
- Max safety level PL4e
- Predefined print profiles for meltio materials
- Frictionless wire liners (no external motor or reservoir)

Meltio Engine Integration kit for CNCs

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:	1.0/1.4 kW 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



Injection knife - Agriculture

Printing time:	15h Printing Time
Material:	Stainless Steel 316L



Aircraft bracket - Aerospace

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

Meltio Engine Integration kit for Industrial Robots

Large and complex manufacturing

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:	1.0/1.4 kW 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



Ball Valve - Oil & Gas

Size:	360 x 405 x 301 mm
Weight:	4.3 kg
Material:	Stelloy 21



Eductor - Naval

Printing time:	58 h Printing Time
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 and 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 300 x 400 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) 20 kW peak 7 kW 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



Jet engine exhaust - Aerospace

Size: R167 x 355 mm

Weight: 12 kg

Material: Stainless Steel 316L



Vertical manifold - Automotive

Size: 255 x 255 x 450 mm

Weight: 5.7 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



Snowbird - SAMM Tech

3-axis Hybrid containerized solution
Fanuc controller



AM Solutions

6+2 axis Containerized solution
Kuka robot



AM Solutions - with:Plus

6+2 axis Robot Cell
ABB robot



Force Automation

6+2 axis Robot Cell
ABB robot



Wire Trading

6+2 axis Robot Cell
Kuka robot



Accufacture - Alchemist I

6+2 axis Robot Cell
Fanuc robot



3D Solution

6+2 axis Robot Cell
Kuka controller

*Consult Meltio for their availability in your region



Get to know us!

www.meltio3d.com

The Meltio Engine Laser Integration kit is an integration-agnostic solution that adds metal 3D printing capabilities to existing industrial robots or CNC machining centers. Unlike standalone systems, it enhances existing equipment, offering a flexible and cost-effective option.

Integrate it with your industrial robot to enable multi-axis metal additive manufacturing, suitable for applications like complex geometry creation, part repairs, or feature enhancements.

Produce high-precision parts that require both 3D printing and fine machining by equipping your vertical or hybrid CNC machine with our LMD technology.

