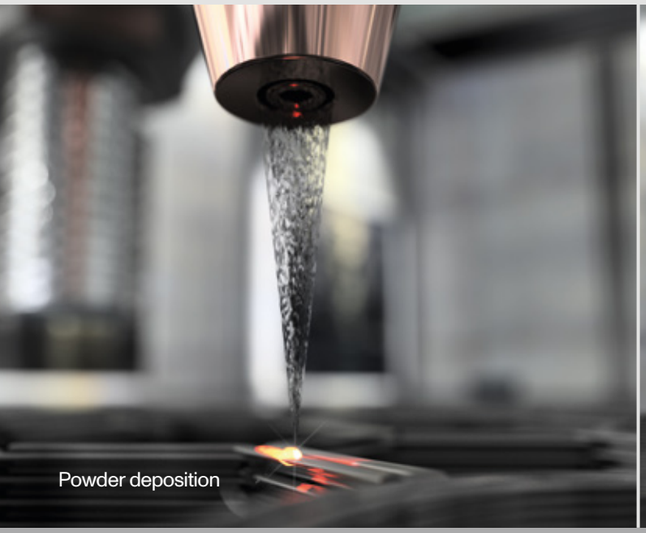
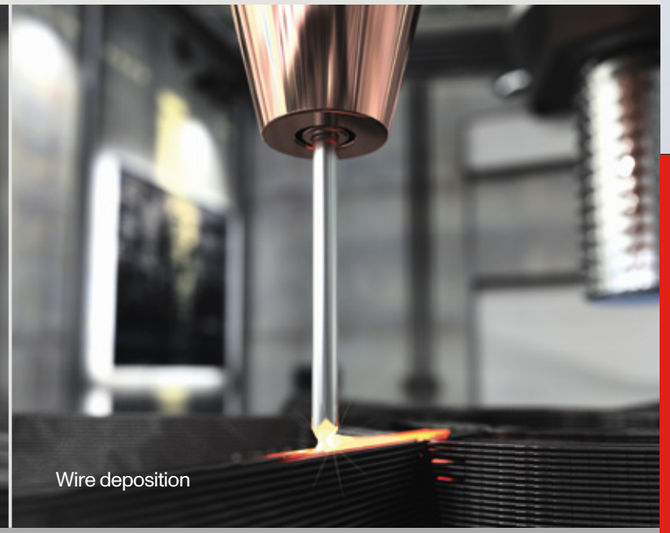
Technical features

Dimensionality	
Dimensions	550 x 550 x 1200 mm
Print envelope	Governed only by the working dimensions of the machine to which it is coupled
Mass	c. 200 kg. kg, depending on options
Lasers	
Laser power	600 W to 9 kW
Number of lasers	3+
Laser type	Solid state diode
Laser beams	3+
Wire	
Wire feedstock	0.8 to 1.2 mm diameter wire
Wire feeds	Up to 2 x K200 spools / optional wire drum configuration
Powder	
Powder feedstock	45 µm to 90 µm particle size
Powder feeds	Unlimited external plug and play feeders
Input power	230 V single-phase / 400 V three-phase
Process chiller	Active water-cooled, process interlocked
Process control	Closed-loop, laser, wire and powder modulation
Interface	USB, ethernet, wireless datalink
Other features	Optional CNC integration package



Powder deposition



Wire deposition

MELTIO ADVANCED 4D MANUFACTURING

Linares · Jaén · SPAIN
Las Vegas · Nevada · USA

+34 953 88 80 89
info@meltio4d.com

meltio4d.com

MELTIO

ADVANCED 4D MANUFACTURING

MELTIO ENGINE

LMD module for metal 3D printing with hybrid systems

MELTIO ENGINE

LMD module for metal 3D printing with hybrid systems

Unique technology

Meltio Engine can produce complex metallic components from both wire and powder feedstock. The ability to produce parts from wire makes operation and material handling very clean, as well as ensuring 100% material efficiency. Being able to process powder fills the gap to conventional LMD and brings the ability to mix alloys on the fly.

Low-cost entry solution for professional metal 3D printing

Meltio Engine provides a low-cost entry to metal additive manufacturing. It can use any commercially available metal wires and powders in the market and the cost of both the equipment and the spare parts is substantially lower compared to competing technologies. Because the Engine can be used to retrofit current machines (CNC machines, robots and gantry systems), it is highly flexible and versatile.

Unconstrained build envelope

The Metlio Engine can print full density metal parts to any size allowed by the system to which it is integrated. This provides a high degree of capability and flexibility. Furthermore, the highly compact dimensions of the Engine (550x550x1200 mm) ensures seamless integration, without the typical hassle of common and bulky industrial hardware.

MULTI-LASER HEAD PROCESSES WIRE AND POWDER

Patented arrangement of multiple off-axis diode lasers and on-axis material feeds.

Highly Compact Deposition Head:
150 mm (W/D) x 265 mm (H)

ENABLE 3D PRINTING WITH YOUR CURRENT CNC MACHINE, ROBOT OR GANTRY SYSTEM

Meltio Engine is a sophisticated and powerful device which enables 3D printing of full density metal parts with CNC machines, robots and gantry systems. The Engine enables the printing of parts from wire and powder in the same machine, by using a patented multi-laser technology. It's able to automatically use metal wire, metal powder or both simultaneously without changing the nozzle.

GREAT RESULTS AND VERSATILITY

The specially designed deposition nozzle facilitates optimized argon diffusion over the meltpool substantially reducing oxidation and enabling 3D printing of reactive metals in an open atmosphere environment. The Engine enables not only metal 3D printing of full density parts, but also an all-in-one additive manufacturing solution for repairing parts, laser cladding, laser welding (autogenous and with filler), laser cutting, laser texturing and polishing.

Easy to use software

The Engine features a powerful on-board computer with integrated touchscreen and a feature rich GUI with advanced custom designed software to allow easy access to process parameters. The Engine can also be controlled via a tablet or computer through a local wireless network or via an Ethernet connection.

Dimensions 40mm x 130mm
Mass 300 g
Material Stainless Steel 308 Wire
Material Cost $2
Print Time 1 hour
Laser Power 500 W

MELTIO ENGINE INTEGRATIONS

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CNC HYBRID MANUFACTURING

Offers a wide range of hybrid manufacturing systems powered by its Engine technology

- Customer selects a CNC mill
- Meltio performs seamless integration
- Customer prints using metal wire and/or powder
- Ideal for 3D parts or repair of machined parts

ROBOTIC INTEGRATION

Easy integration with robotic systems for 3D printing, laser cladding and laser welding

- Highly compact architecture and mountable deposition head
- Configured for metal wire, metal powder or wire and powder simultaneously
- Powerful multi laser-configuration enables high process rates