MELTIO
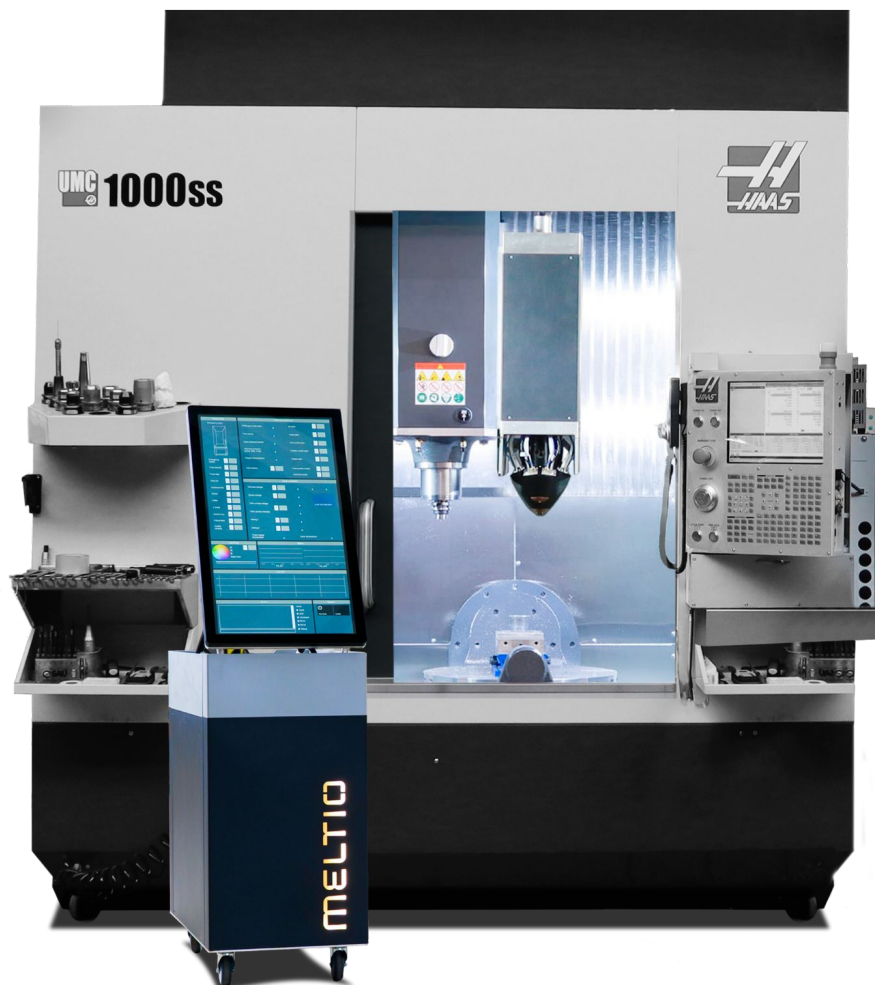
Meltio Engine CNC Integration

Hybrid Manufacturing Integration

The most affordable hybrid manufacturing solution, fitting almost any CNC machine on the market. Enable metal 3D printing and machining of complex geometries in a single process step. The Meltio Engine is the ideal CNC complement for near net shape manufacturing, repair and feature addition.

Technical Specifications

Dimensions (WxDxH):	390 x 700 x 1025 mm	**Power Consumption:**	2 - 5 kW peak depending on selected options
Print Envelope(WxDxH):	Depending on the integration	**Process Control:**	Closed-loop, laser and wire modulation
System Weight:	142 kg	**Enclosure:**	Laser-safe, sealed, controlled atmosphere
Laser Type:	6 x 200 W direct diode lasers	**Cooling:**	Active water-cooled chiller included
Laser Wavelength:	976 nm	**Wire Feedstock Diameter:**	0.8 - 1.2 mm
Total Laser Power:	1200 W	**Wire Feedstock Spool:**	BS300 or Wire drums
Power Input:	208/230 V single phase or 400 V three phase		

Wire Materials

Stainless Steels:	Excellent strength and corrosion resistance.
Mild Steels:	Cheap and ductile, with unparalleled machinability and weldability.
Carbon Steels:	High impact strength, retain hardness at high temperatures.
Titanium Alloys:	Highest strength to weight ratio and corrosion resistance.
Nickel Alloys:	High versatility, outstanding heat and corrosion resistance.

Printhead Information

Includes actuated mounting hardware where the deposition head is stored in a sealed enclosure when not in use and automatically deployed when needed.

Printhead Size (WxDxH):	202 x 297 x 784 mm
Printhead Weight:	15.5 kg
Printhead Weight:	46.5 kg

Key Integration Requirements

Spindle motors can handle the additional weight	Ability to add a NO relays to the feed hold
Deployment mechanism can be mounted without collisions	Ability to add feed resume/start buttons
5 - 8 digital input ports available	Laser safety windows can be mounted
1 - 7 digital output ports available	Possibility to add safety integration (depending on the integration)

Upgrades and Accessories

Dual Wire:	This option allows to 3D print two wire materials sequentially with very quick wire switches.
Laser Alignment System:	It allows users to alignMeltio's multi-laser deposition head accurately and effortlessly prior to every print.