

# 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

<b>Dimensions (WxDxH):</b>	390x700-1300x1100-1560 m	<b>Power Consumption:</b>	2 - 5 kW peak depending on selected options
<b>Print Envelope(WxDxH):</b>	Depending on the integration	<b>Process Control:</b>	Closed-loop, laser and wire modulation
<b>Control Unit Weight:</b>	125 kg	<b>Enclosure:</b>	Laser-safe
<b>Laser Type:</b>	6 x 200 W direct diode lasers Class IV	<b>Cooling:</b>	Active water-cooled chiller included
<b>Laser Wavelength:</b>	976 nm	<b>Wire Feedstock Diameter:</b>	0.8 - 1.2 mm
<b>Total Laser Power:</b>	1200 W	<b>Wire Feedstock Spool:</b>	BS300 or Wire drums
<b>Power Input:</b>	208/230 V single phase or 400 V three phase		

## Wire Materials

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

<b>Printhead Size (WxDxH):</b>	255 x 342 x 1075-1135 mm
<b>Printhead Weight:</b>	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

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

