

# 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.

#### Hybrid Manufacturing

Create highly complex parts with machining tolerances in the same process.

#### Part Repair

Cost-effective component repair, part augmentation and feature addition.

#### Retrofitting

Provide new capability to any CNC machine by turning it into a hybrid metal manufacturing system.

#### Geometry Freedom

No inherent constraints when the working envelope is only limited by the size of the motion system.



# Technical Specifications

**Dimensions (WxDxH):**

390x700x1025 mm

**Print Envelope (WxDxH):**

Depending on the integration

**System Weight:**

142 kg

**Laser Type:**

6 x 200W direct diode lasers

**Laser Wavelength:**

976 nm

**Total Laser Power:**

1200 W

**Power Input:**

208/230 V single phase or  
400 V three phase

**Power Consumption:**

2-5 kW peak depending on  
selected options

**Process Control:**

Closed-loop, laser and  
wire modulation

**Cooling:**

Active water-cooled chiller  
included

**Wire Materials:**

Compatible with a wide range  
of welding wires including  
stainless steels, mild steels,  
carbon steels, titanium alloys,  
inconel and tool steel.

**Wire Feedstock:**

Diameter: 0,8-1,2 mm

Spool Type: BS300

or wire drums

## 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 Retracted  
Dimensions (WxDH):**

255x320x872 mm

**Weight:**

46,5 kg

**Printhead Unretracted  
Dimensions (WxDxH):**

255x320x1045 mm

## Key Integration Requirements

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

## Upgrades and Accessories

**Hot Wire:**

Increase the print speed with  
a programmable power supply  
that preheats the material  
before it enters the melt pool.

**Dual Wire:**

Print parts in two materials  
using the dual wire option.  
Dual wire allows for the fast  
and automatic switching of  
materials within a print without  
cross-contamination.

