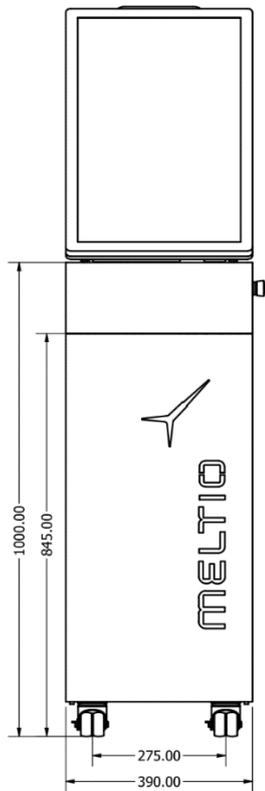


Meltio Engine



Dimensions (W*D*H):
390*650*1000mm

Weight:
90kg

Print Envelope (X*Y*Z):
inherent to motion system

Laser Type:
multiple 200W direct diode lasers

Laser Power:
1200W

Laser Wavelength:
976nm

Power Input:
208/230V single phase or 400V three phase

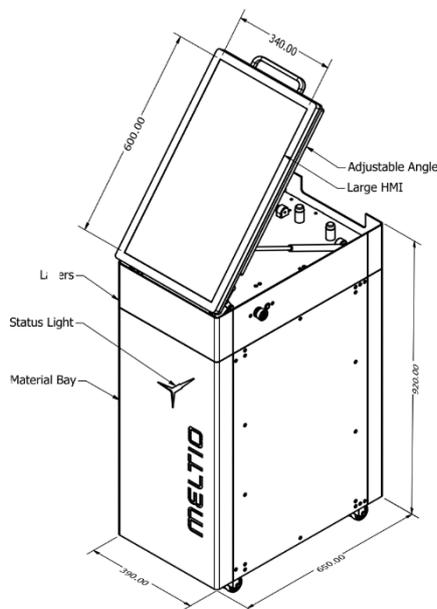
Power Consumption:
2-5kW peak depending on selected options

Process Control:
closed-loop laser and wire modulation

Cooling:
active water-cooled chiller included

Interface:
USB, ethernet, wireless datalink

Materials



Wire Materials:
stainless steel, carbon steel, titanium alloys, inconel

Powder Materials*:
stainless steel, carbon steel, inconel

In development:
copper, aluminum

In development:
copper

Wire Feedstock:
0.8-1.2mm diameter

Powder Feedstock:
49 to 90µm particle size

Wire Feeds:
from one K300 spool up to two external wire drums

Powder Feeds:
multiple plug and play powder feeders

*Powder deposition in DED systems result in contamination of equipment surfaces requiring thorough cleaning. To reduce powder contamination, its recommended to reserve powder deposition for printing fine details, creating new alloys and generating material functional gradients. For health and safety, Meltio recommends only using wire feedstock for 3D printing reactive materials such as titanium and aluminum alloys.

Meltio Engine

Integration Hardware

CNC Integration

Hardware:

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

Robotic Integration

Hardware:

mounting hardware for the deposition head and related sensors in robotic applications.

Upgrades and Accessories

Hot Wire:

programmable power supply that preheats the material before it enters the melt pool.

Powder Feeder:

necessary to 3D print from powder feedstock, unlocks on the fly metal alloying.

Dual Wire:

this option allows to 3D print two wire materials sequentially with very quick wire switches.

External Wire Drum:

allows to draw material external to it. The wire feedstock in form of 100kg drums may be used for convenience.