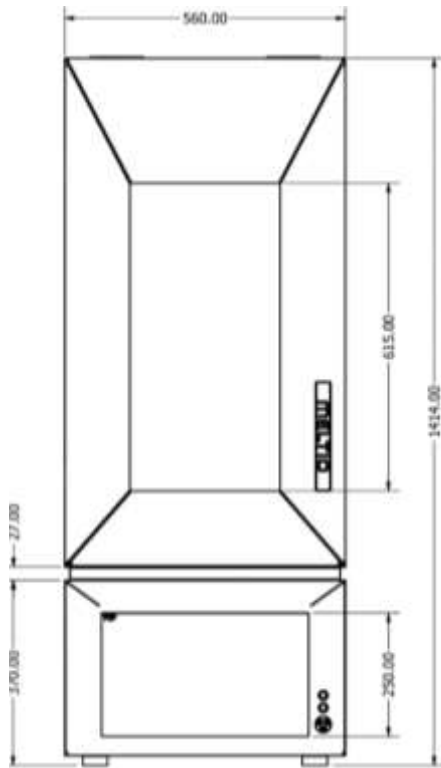


## Meltio M450



**Dimensions (W\*D\*H):**  
560\*600\*1400mm

**Print Envelope (X\*Y\*Z):**  
150\*170\*425mm

**Weight:**  
250kg

**Laser Power:**  
1200W

**Laser Type:**  
multiple 200W direct diode lasers

**Laser Wavelength:**  
976nm

**Enclosure:**  
laser-safe, sealed, controlled atmosphere

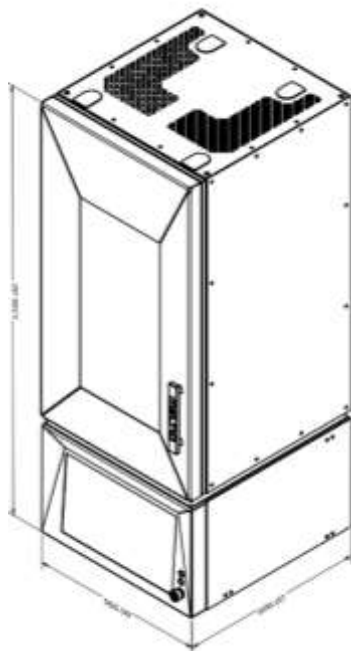
**Process Control:**  
closed-loop laser and wire modulation

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

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

**Interface:**  
USB, ethernet, wireless datalink

**Cooling:**  
active water-cooled chiller included



## Materials

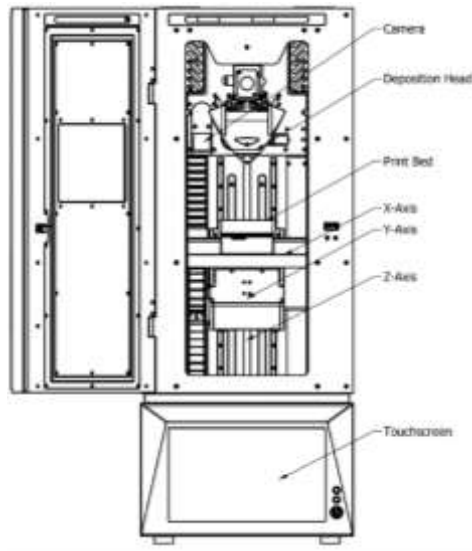
**Wire Materials:**  
stainless steel, carbon steel, titanium alloys, inconel

In development:  
copper

**Wire Feedstock:**  
0.8-1.2mm diameter

**Wire Feeds:**  
up to two K300 spools

## Meltio M450



### Upgrades and Accessories

**Hot Wire:**

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

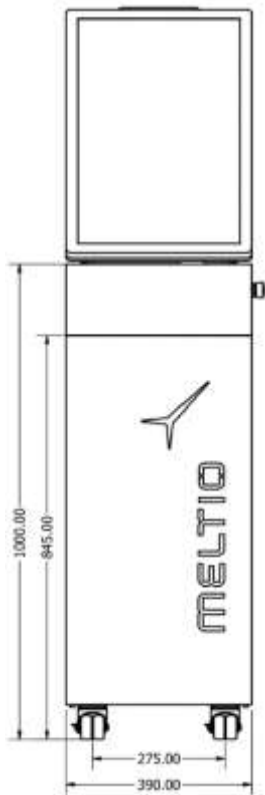
**Station:**

sturdy wheeled stand made from stainless steel and aluminum. Contains tool and material drawers.

**Dual Wire:**

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

## 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

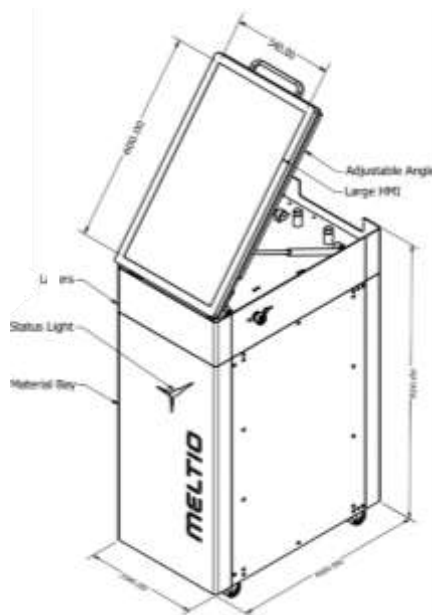
**Power Consumption:**  
2-5kW peak depending on selected options

**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

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.

#### **Robot 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 Feeder:**

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