



# inFurner

HIGH VACUUM FURNACE

by **AMAZEMET**



## Available setups

Setup	Hot zone diameter [mm]	Hot zone height [mm]
<b>inFurner 120</b>	120	100
<b>inFurner 200</b>	200	200

## Features

### Heating system:

- Molybdenum heater: operating temperature 1200 [°C]
- Multilayer isolation made of molybdenum, stainless steel and tungsten, depending on the setup

### Vacuum system:

- Preliminary pump
- Turbomolecular pump – ultimate vacuum  $8 \times 10^{-8}$  [mbar]

### Control panel:

- System for controlling furnace parameters
- Electronic display of furnace parameters
- Vacuum level [mbar]
- Furnace temperature [°C]
- Ramp-on and quenching events

### Measurement equipment:

- Pirani (2 heads)
- Ionization gauge
- S-type thermocouple

### Certification:

- Documentation
- 12-month warranty
- CE marking

## Options and upgrades

### Large Heating Zone and power:

- inFurner 200: 1200 [°C] 8,6 [kW]
- inFurner 200: 1600 [°C] 21 [kW]

### Heating element:

- Tantalum (max. temp. 1600 [°C])

### Vacuum:

- Dry scroll pump -  $7 \times 10^{-3}$  [mbar]
- Diffusion pump -  $3 \times 10^{-6}$  [mbar] with LN2 cold trap up to  $8 \times 10^{-8}$  [mbar]
- Turbomolecular pump –  $9 \times 10^{-8}$  [mbar]
- Ion pump –  $3 \times 10^{-9}$  [mbar] - semiconductors

### Process gas system:

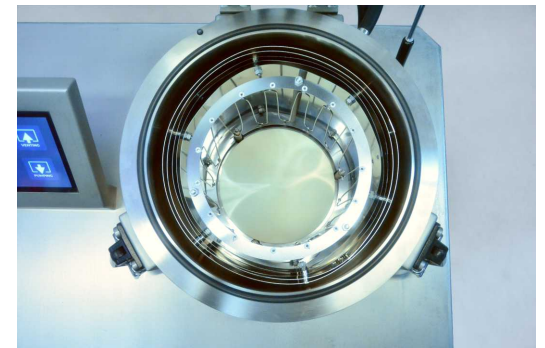
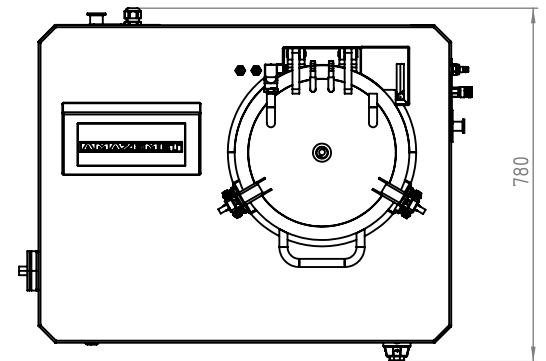
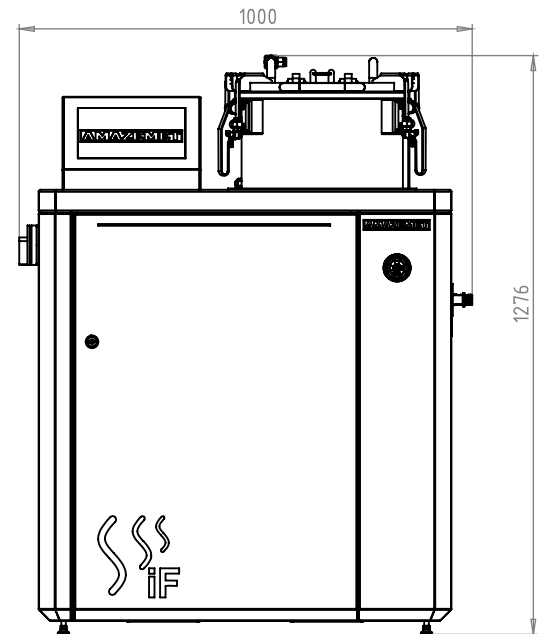
- High pressure Gas Quenching (HPGQ) up to 100 [°C/min]
- Available gases: Ar, He
- Mass flow controller (Ar)

### Cooling:

- Water Chiller - 2,2/6,8/10,4/18,8 [kW]
- Liquid Nitrogen cooling for diffusion pump

### Measurement equipment:

- B-type thermocouple



**Furnace heating area**



**Ti6Al4V alloy sample microstructure**