CMF Sinter 8CG Sinter Furnace

The compact application development solution to build up know-how & first parts

CARBOLITE® GERO 30-3000°C | COLDMETAL FUSION

Automatic tube sinter furnace optimized for ColdMetalFusion. The furnace has two heating zones and is equipped with additional heat shielding for optimized temperature homogeinity.

8 Liter

Build Tube Size 300mm (Length) x 180mm (Diameter)

1300° Celsius

Maximum Operating Temperature

Dual Heat Zones

For high temperature homogeinity

Compact Form Factor fits most doors

Optimized for lab and workshop environments with narrow doors (90cm). Frame mounted on high quality wheels and an option for integrated water cooler.

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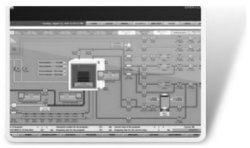
Full Process Control



Touchpanel Control

Full process overview and easy process control

headmade materials®

CMF - material sinter programs

Ships with pre-installed sinter programs optimized by Headmade Materials for ColdMetalFusion. Possibility for updates for new materials.

Build for application developers

Optimized to reduce sinter costs in R&D

The hardest challenge for newcomers in the powder metallurgy industry is the high cost associated with developing applications, as most parts often take multiple attempts in the furnace to shrink into the net geometry with precision, or worse fall apart during the first sinter runs. Paired with low energy & gas consumption. the CMF-SI-8L provides an optimal size to develop your small to mid size parts.

Large size ready for big parts & small series

With a tube diameter of 180mm, the CMF-SI-8L surpasses established FDM furnace offerings and also fits your big projects. It also allows you to run your first small series for medium and small parts.

High quality parts ready for scale-up

Based on 40 years of experience in the Metal Injection Molding (MIM), this high-performance furnace delivers outstanding quality parts. Develop your application and just copy & paste your process to the next-tier level CMF furnaces.

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Available Materials

For Live Production

17-4PH Stainless
high mech. properties & wear resistance

Ti6Al4V - Grade 5
light, high strength & corrosion resistance
- requires Argon Option

M2 Tool Steel
high hardness & toughness

For Application Development & Prototyping (Beta)

H13 Tool Steel
wear resistance at high temperature

Ti - Grade 1
high ductility & max. corrosion resistance
- requires Argon Option

Inconel 625
heat & corrosion resistance

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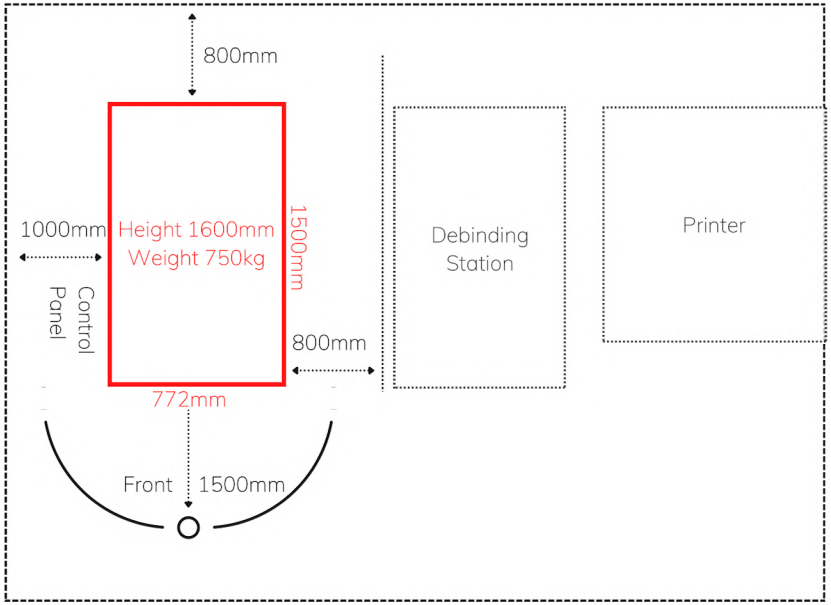
Dimensions & Required Connections*



*Commissioning and mandatory training by Carbolite Gero or Headmade Materials after finished installation incl. connection to all gases and support systems

Supply connections for power & process gases

Power	10kW
Voltage	1x 400V
Current	1x 18A
Pre fuse	1x 25A

Argon / Hydrogen 3% gas supply, 6mm compr. fitting with >7 Bar pressure; 50-350 L/h flow

Supply connections for support systems & gases

Cooled Water with 3-4 Bar pressure at 20-25°C and 3 L/min flow; PH 7-9; 12-14°dH hardness

Compressed air supply with >6 Bar pressure

Air extraction with >10 m³/h, exhaust temperature <100°C, no filter required, exhaust chimney stack

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Technical Specifications

Tmax atmosphere pressure (°C)	1300
-Delta-T between 500 and 1500°C (K) according to DIN 17052	+/- 5
Max. heat-up rate (K/min)	2.5
Cooling time (h)	10
Insulation material	APM Alloy (ferritic iron-chromium-aluminium)
Volume (litres)	8
Dimensions: External H x W x D (mm)	1600 x 772 x 1500
L x D usable space (mm)	300 x 1800
Weight (kg)	750

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