

# Labscale High Temperature Microwave Furnace

1700°C, Atmosphere Control, Touchscreen & DAQ

**ENERZI**<sup>®</sup>  
Heating Reinvented

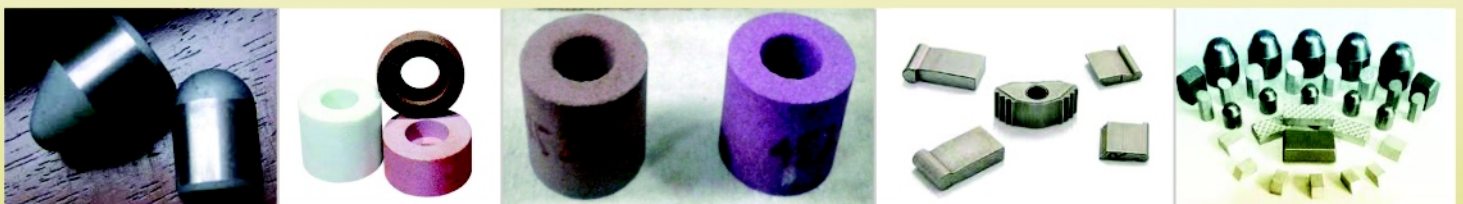


Microwave sintering furnaces are one of the very effective solutions for sintering various materials. The popularity of microwave sintering is rapidly growing because of its unique advantages in sintering process. High energy efficiency combined with short process cycles, yielding the best properties to the resultant materials make microwave sintering technology score way ahead of its contemporary counterparts.

Enerzi offers a variety of microwave sintering solutions starting from miniature labscale prototypes to full fledged continuous microwave sintering lines covering a spectrum of applications like sintering of oxides, ferrites, nitrides and powder metallurgy components.

## SALIENT FEATURES

- ▶ Aesthetic, ergonomic and compact design
- ▶ Effective hotzone of 150 x 150 x 100 mm
- ▶ Maximum process temperature upto 1700°C
- ▶ Non-contact temperature monitoring & control
- ▶ Microwave power upto 6.0 kW
- ▶ Stepless power control using micro-controller unit
- ▶ Digital display of power and temperature with interlocks
- ▶ State-of-the-art process control using high end PID controller
- ▶ Industrial computer integrated with DAQ software
- ▶ Reducing, oxidising & inert gas atmosphere sintering



## Microheat models and their features

Features	MH-2912	MH-3016	MH-3018	MH-6018	MH-6118
Microwave Power	2 x 1.45 kW	2 x 1.45 kW	1 x 3.0 kW	2 x 3.0 kW	1 x 6.0 kW
MW Generator	Continuous	Continuous	Continuous	Continuous	Continuous
Power Control	10-100%	10-100%	10-100%	10-100%	10-100%
Max. Temperature	1200°C	1600°C	1800°C	1800°C	1800°C
Temperature Sensor	Thermocouple	IR Pyrometer	IR Pyrometer	IR Pyrometer	IR Pyrometer
Temperature Control	RT - 1200°C	350-1600°C	350-1800°C	350-1800°C	350-1800°C
Chamber Size (WxDxH)	360x380x350mm	360x380x350mm	360x380x350mm	490x515x465mm	490x515x465mm
Effective Hot Zone (WxDxH)	100x100x100mm	100x100x100mm	100x100x100mm	150x150x100mm	150x150x100mm
Door Limit Switch	YES	YES	YES	YES	YES
Water Cooling	NO	YES	YES	YES	YES
Water Chiller (Cooler)	NO	Recirculating	Recirculating	Recirculating	Recirculating
Chamber Material	SS 304	SS 304	SS 304	SS 304	SS 304
Microwave Ports	WR-340	WR-340	WR-340	WR-340	WR-340
Insulation	1400°C grade	1650°C grade	1800°C grade	1650°C grade	1800°C grade
Stabiliser Capacity	NA	NA	22 kVA	30 kVA	30 kVA
Stabiliser Type	NO	NO	Servo	Servo	Servo
PLC Controls	No	Yes	Yes	Yes	Yes
Input Power	3Ph,16 A/Ph	3 Ph, 16 A/Ph	3Ph, 25 A/Ph	3 Ph, 32A /Ph	3 Ph, 32A /Ph

## Optional Auxiliary Subsystems

Inert Gas Purging	Ar/N <sub>2</sub>	Ar/N <sub>2</sub>	Ar/N <sub>2</sub>	Ar/N <sub>2</sub>	Ar/N <sub>2</sub>
Hydrogen Purging	Ar/N <sub>2</sub> + H <sub>2</sub>	Ar/N <sub>2</sub> + H <sub>2</sub>	Ar/N <sub>2</sub> + H <sub>2</sub>	Ar/N <sub>2</sub> + H <sub>2</sub>	Ar/N <sub>2</sub> + H <sub>2</sub>
Low Vacuum	Rotary	Rotary	Rotary	Rotary	Rotary
High Vacuum	Diffusion	Diffusion	Diffusion	Diffusion	Diffusion
Very High Vacuum	Turbo	Turbo	Turbo	Turbo	Turbo
Data acquisition system	P & T Vs time	P & T Vs time	P & T Vs time	P & T Vs time	P & T Vs time



MW Sintering Furnaces



Waste Processing Systems



Rubber Vulcanisation Ovens



MW Synthesis Ovens



Grain Drying & Disinfestation Systems



Resin Bonded Abrasive Curing Ovens