

# Microwave Chamber Oven 24 kW 2440..2470 MHz

## Based on Magnetron Technology



### Application

Research microwave oven for homogeneous drying of various products with minimal pressure losses across the microwave chamber. The device is suitable for all drying and heating processes (up to 1500° C using insulating box) under different atmospheres like

- Bricks and Ceramics
- Refractory products
- Food (in a hygienic design)

### Technical Data

Type of Microwave Generators	Magnetron
Power	4 x 6 kW = 24 kW 2440..2470 MHz
Power Input	125 A
Total connected load	100 A
Main Supply	3x 400 VAC, 50 Hz/ PE

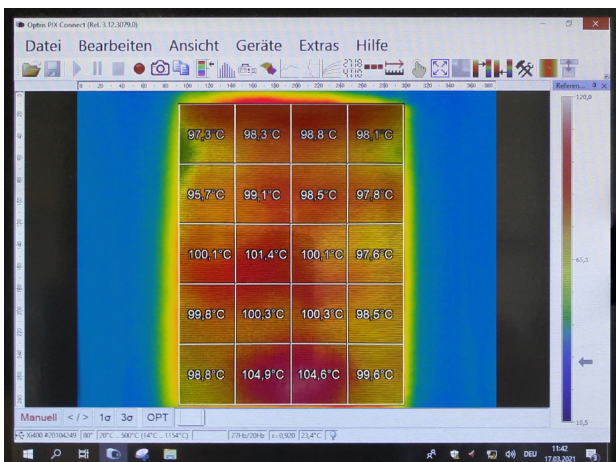
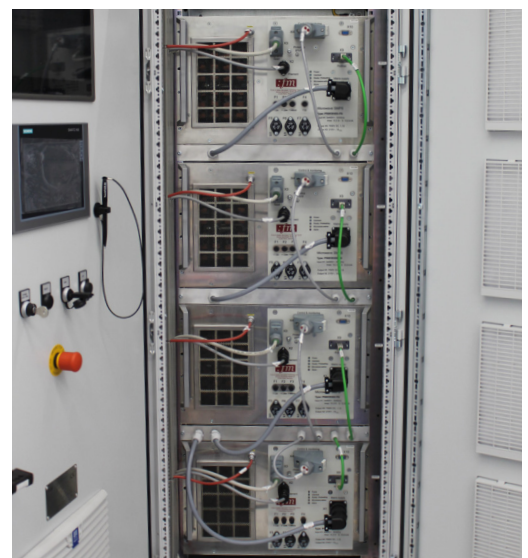
### Cooling

#### Water cooling

Total cooling water flow rate	min. 40 l/min.
Water temperature	20° - 25° C
Water pressure	3.5 - 4.5 bar, max. 5 bar

### Dimensions

Outer dimension WxHxD	2020 x 2885 x 3180 mm
Inner dimension WxHxD	800 x 800 x 1000 mm
Loading	max. 250 kg
Weight	ca. 3000 kg



#### IR measurement

$\Delta T$ : max  $\pm 5^\circ$  C over the surface of 800 x 1000 mm

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## Key Features

- Measurement of the microwave power injected into the chamber and reflected from the chamber
- Electromagnetic simulation of the microwave coupling systems (antennas) and the microwave chamber to generate very homogeneous microwave fields
- Sophisticated control or regulation via Siemens PLC
- Hot air system adjustable in volume flow, humidity and temperature up to 250 °C
- Drying according to defined progressions in the h-x diagram
- IR camera with high resolution, fiber optics and jacketed high temperature sensors
- Moisture measurement up to 250 °C
- Electric lift door
- Microwave chamber largely sealed to allow drying or heat treatment under controlled atmosphere
- Illumination of the microwave chamber
- Viewing window or camera to allow visual inspection during drying or heat treatment

## Optional Features

- Combination with a second frequency of 915 MHz with 2 microwave generators each 5 kW 915 MHz
- Optional microwave generators based on Solid State Microwave Technology
- Oscillating work table. This allows processes to be simulated in continuous operation
- Installation of high temperature insulation for sintering processes is possible
- Microwave chamber made microwave permeable material like vacuum desiccator
- Humidification system
- Convection, circulation and mixed operation of hot air
- IR heating min. 10 kW
- Pressure measurement in microwave chamber
- Weighing system
- Turntable with integrated weighing system
- Manual door instead of the electric lift door