

## Model RSO-200-HV

### Reflow Solder Oven with Vacuum up to 200 mm x 170 mm substrate size



Technical and design changes reserved

- For substrate size **200 mm x 170 mm**
- Max. Temperature: **650 °C**
- Ramp up rate up to **10 K/sec**
- Control **SIMATIC®** with 7" touch panel
- **Vacuum up to 10<sup>-6</sup> hPa**
- Process gas line with **MFC** for N<sub>2</sub>

## FEATURE

- Precise ramp up and fast ramp down rates
- Up to 4 gas lines
- Heated by Infrared Lamps
- 50 programs with 50 steps each
- Integrated data logging
- Small foot print
- Incl. Quartz glass universal holder and graphite susceptor

## APPLICATION

- Reflow Solder Processes without flux
- Operation with inert gas, Oxygen, Hydrogen, Formic Acid, Formic Acid
- Lead and Lead-free SMT reflow;
- High temperature ceramic/alumina hybrid reflow;
- Pin-in-paste reflow;
- Semiconductor;
- LED attach;

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- Reflow Solder Process Oven with vacuum
- Touch Panel Svivel
- Programmable temperature profiles
- Record of process data
- Process in different gas atmospheres



### APPLICATION

The **RSO-200-HV** Reflow Solder System is an excellent tool for various solder applications up to 200 mm x 170 mm substrate size.

Some examples for applications: Laboratory furnace for all kind of developers implementing and researching new processes, prototype research, environmental research purposes and for small pre-series or series.

### PROCESS GASES

The RSO-200-HV can be used with standard process gases, like Nitrogen, Oxygen and Forming Gas. The chamber is sealed and can easily be cleaned.

### FLOW METER

One gas line with Mass Flow Controller (MFC) for Nitrogen (5 nm) is default, three more gas lines (**Option: MFC**) are possible.

### VACUUM

The system is vacuum capable of up to  $10^{-6}$  hPa incl. turbo molecular pump (rough pump on request).

### HEATING

The maximal achievable temperature is 650 °C. Key features are precisely controlled fast ramp-up 10 K/sec) and excellent ramp-down rates (depend on temperature and loading).

### TEMPERATURE DISTRIBUTION

The RSO-200-HV allows an excellent temperature distribution and homogeneity. A graphite susceptor is included by default (ramp-up rate limited to 10 K/sec).

### PROGRAMMING

The RSO-200-HV is equipped with a 7" touch panel which allows easy and comfortable programming directly on the unit. 50 programs with 50 steps each can be stored. Unlimited programs can be up- and downloaded from external storage medium.

### PROCESS CONTROL

The software allows the permanent monitoring, read- out and analysis of

- >temperature
- >process gas flow
- >cooling water level status
- >pressure value and status

### COOLING

The cooling of the parts in the quartz chamber is realized by Nitrogen gas which will be led through the chamber. For cooling of the chamber housing cooling we recommend a closed loop water cooling system. (**Accessories: WC III**)

### OTHERS

An interlock function as well as an Emergency-OFF-Button (EMO) are default.

### SPECIAL

This oven can also be orderd as „double chamber oven“. By adding a second process chamber (**Option: RSO-PC-200**) the oven does have 2 process chambers and one controller unit. This saves money when 2 different processes are needed and the chambers shall not be cleaned due to contamination or other reasons.

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### SPECIFICATION

Max. part size	200 mm x 170 mm
Chamber material	Quartz glass chamber (closed)
Chamber height	40 mm
Part holder	Graphite susceptor (160 x 160 mm)
Vacuum capability	Up to $10^{-6}$ hPa
Process chamber size	200 mm x 170 mm x 40 mm (W x D x H)
Temperature max.	650 °C
Temp. uniformity	≤ 1% of set temperature
Heating	Bottom heating with Infrared lamps
Ramp up rate	Up to 10 K/sec
Ramp down rate	T= 650°C > 400°C: 200 K/min, T= 400°C > 100°C: 30 K/min
Flow Controller	Mass Flow Controller (Nitrogen 5 nlm= norm liter per minute)
Controller	SIMATIC® 50 programs with 50 steps each
Chamber cooling	Water cooled
Substrate Cooling	By Nitrogen Gas

### TECHNICAL DATA

Dimension oven	505 mm x 505 (700) mm x 580 mm (W x D x H)	
Weight		65 kg
Electrical connection		CEE 16A (3x230V, 3 ~, N, PE, 12 kW)

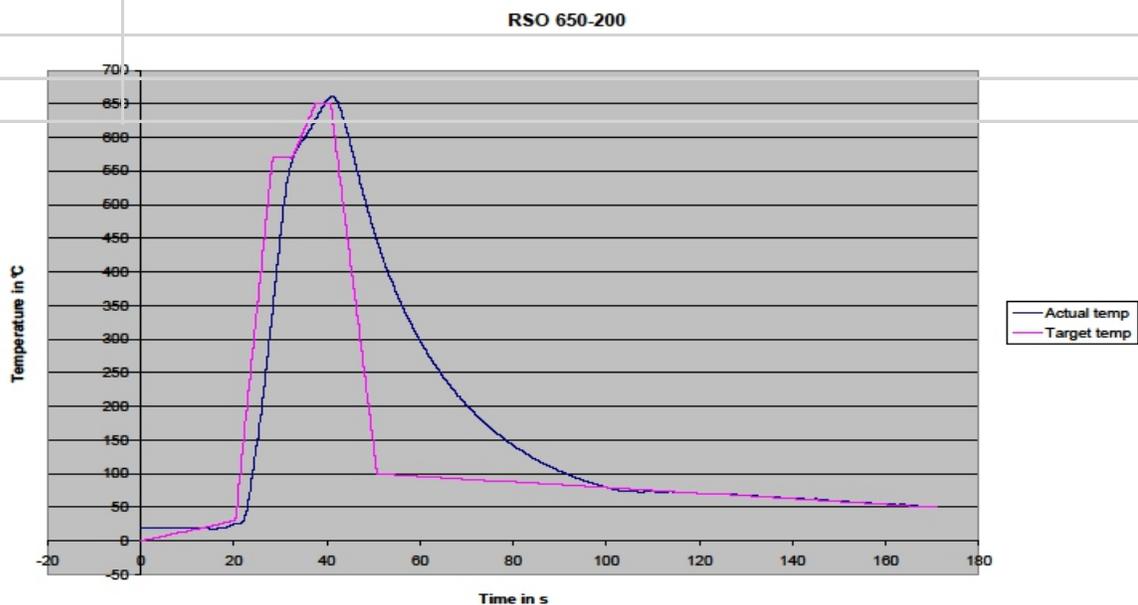
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### OPTIONS

<b>FA-T</b>	Trap for formic acid vapor (for pump protection)
<b>FT</b>	Flux trap (for pump protection)
<b>MFC</b>	Additional process gas line with Mass Flow Controller (max. 3 add) *
<b>MM</b>	Moisture Analyser to measure moisture residues in the chamber
<b>OxAtAn</b>	Oxygen Analyser to measure Oxygen residues
<b>PT</b>	Additional 3 colors pat light
<b>TC</b>	add. Thermocouple to measure on device (plugged in chamber, (max. 3)
<b>VCR</b>	Tubing made of VCR (welded)

### ACCESSORIES

<b>MP or MPC</b>	Membrane Pump (or C for „chemical“) for vacuum up to 3 hPa
<b>RVP</b>	Rotary Vane pump for vacuum up to $10^{-3}$ hPa with oil filter
<b>WC III</b>	Closed loop water cooling system (stand alone)



Okt 2016