

Model RSS-3X210

Compact Reflow Solder System with 3 heated zones



Technical and design changes reserved

- For up to 12 wafers with 100mm dia.
- Temperature up to 300 °C
- Ramp up rate up to 120 K/min
- Ramp down rate 60 K/min
- with vacuum up to 10⁻³ hPa
- active cooling
- production machine with small foot print

FEATURE

- Precise ramp up and fast ramp down rates
- Up to 4 internal gas lines
- Data logging
- hard coated heating plate with lift pins
- SIMATIC controller with 7" touch panel
- Small foot print

APPLICATION

- Reflow Solder Processes without flux
- Operation with inert gas, Oxygen, Hydrogen , Forming gas, Formic Acid
- Lead free soldering
- Resistor paste firing

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- **Vacuum Soldering oven as table top version**
- **Programmable temperature profiles**
- **Record of process data**
- **Process in different gas atmospheres (inert gases)**
- **Perfect lab tool for small production purpose**

APPLICATION

The **RSS-3X210** Reflow Solder System is an excellent tool for various solder processes up to 100 mm diameter wafer (12 pcs in one run).

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

Beside standard process gases, like Nitrogen, Oxygen, Forming Gas the system can also be used with pure Hydrogen (**Option: H2 and H2S**). The chamber is sealed and can easily be cleaned.

FLOW METER

One gas line with Mass flow controller for the process gas is default, one more gas line (**Option: MFC**) is possible.

VACUUM

The system is vacuum capable of up to 10^{-3} hPa.

TEMPERATURE

The maximal achievable temperature is 300 °C).

TEMPERATURE

DISTRIBUTION

The hot plate allows an excellent temperature distribution and homogeneity.

PROGRAMMING

The RSS-3X210 is equipped with a SIMATIC controll with 7" touch panl. This allows the programming directly on the unit or by using the USB interface and comfortable programming on a PC. It is possible to store 50 programs with 50 steps each.

COOLING

The hot plate is active cooled. For chamber housing cooling an external cooling is required (we recommend a chiller (**Accessories: WC-II**))

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SPECIFICATION

Max. part qty/size

3 heated plates each 210mmx210mm
for example: for 12 pc 100mm wafer diameter for parallel processing (using the lift pin option)

Chamber material

Aluminium chamber (chamber area: 210 mm x 630 mm)

Vacuum capability

Up to 10^{-3} hPa

Temperature max.

300 °C

Temp. uniformity

$\leq 1,5$ % of set temperature

Heating

IR Lamps crossed aligned (18 kW)

Ramp up rate

Up to 120 K/min

Ramp down rate

T= 300°C > 200°C: 90 K/min

Flow Controller

Mass Flow Controller for process gas Nitrogen 5 nlm

Cooling Chamber

By external water cooler

Cooling Hot Plate

By external water cooler

Controller

SIMATIC SPS process control

TECHNICAL DATA

Dimension oven

820 mm x 630 mm x 315 mm (W x D x H)

Weight

100 kg (estimated)

Electrical connection

CEE 3x32 A, 230 V, 3 ~ + N + PE

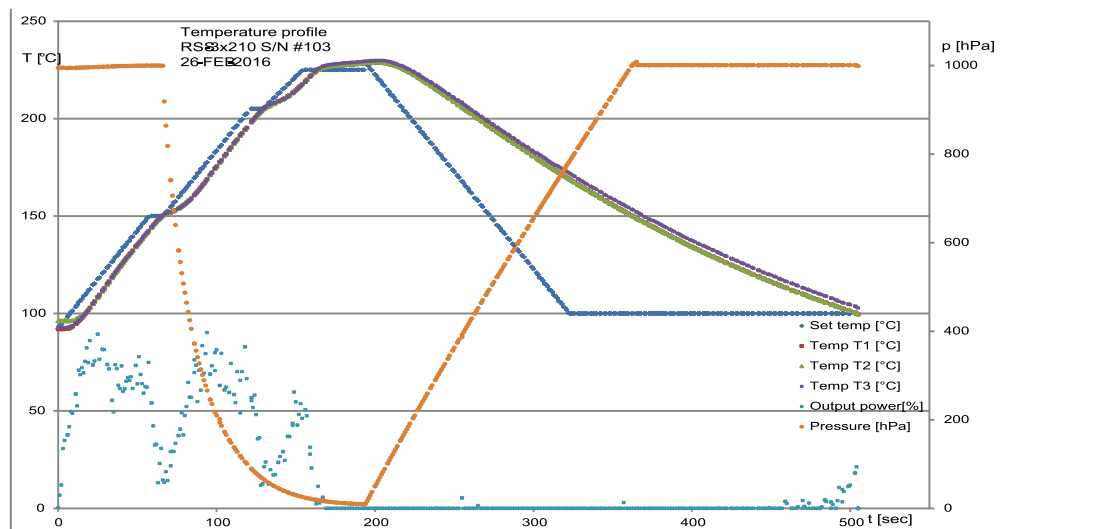
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OPTIONS

Lift Pin	Lift pins for lift up and down for 12 wafers with 100mm diameter each
FA I	Formic Acid Module - with Mass Flow Controller (external module - able for later retrofit)
FA II	Formic Acid Option with internal gas line and Mass Flow Controller
FA III	Formic Acid Option , the gas line is shared with the standard N2 Mass Flow Controller
FT	Flux trap (for pump protection)
H2	Hydrogen option with Safety device (Sensor and Hydrogen monitoring)
H2S	Safety device for Hydrogen option (with cover and sensor)
IL	Interlock mechanism to prevent unintentional opening of the chamber during process
MFC	Additional process gas line with Mass Flow Controller (max. 2 add.)
PT	Additional 3 colors pat light
SW	Switchbox
TC	add. Thermocouple to measure on device (plugged in chamber, max. 3 depending on model)
VAC I	Basic Vacuum up to 3 hPa, Vacuum sensor, vacuum valve DN16 , ball check valve
VAC II	Comfort Vacuum up to 10exp-3 hPa, Pirani Sensor, vacuum valve DN16, ball check valve

ACCESSORIES

MP	Membrane Pump for vacuum up to 3 hPa
MPC	Chemical Resistant vacuum pump up to 3 hPa (when option FA is ordered)
RVP	Rotary Vane pump for vacuum up to 10 ⁻³ hPa with oil filter
WCII	Closed loop water cooling system (stand alone)



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