

# Mini Reflow Solder System with vacuum for fluxless soldering



## Model RSS-160-SC

- Heated area: 160 x 160 x 65 mm
  - Ramp up rate up to 120 K/min.\*  
Ramp down rate: T = 400 °C > 200 °C: 120 K  
T = 200 °C > 50 °C: 90 K
  - Water cooling
  - SIMATIC® controller
  - 7" touch panel
  - Vacuum capability: VAC I: up to 3 hPa  
(valve and sensor included, pump not included)
- \* depends on model

## Application

- Reflow Solder Processes (fluxless)
- Lead free and void free soldering
- Operation with inert gas, Argon gas, Forming gas, Formic Acid  
(depends on model)

## Features

- Precise ramp up and fast ramp down rates
- Excellent temperature uniformity
- One gas line (Mass Flow Controller) with 5 nlm Nitrogen
- Data logging (USB, Ethernet)
- Hotplate heated by heater cartridges and cooled with active cooling  
(heat dissipation to chassis)
- 50 programs with 50 steps each
- Small foot print

## RSS-160-SC

- Reflow Solder System as table top version
- Programmable temperature profiles
- Monitoring and read out of process data
- Processes in different gas atmospheres (inert gases)
- Perfect lab tool due to small dimensions and weight

### Application

The RSS-160-SC Reflow Solder System is an excellent tool for various solder processes up to 160 mm x 160 mm substrate size and 65 mm height.

Some examples for applications:

Laboratory furnace for all kind of developers implementing and researching new processes, proto-type research, environmental research purposes and for small pre-series or series.

### Process Gases

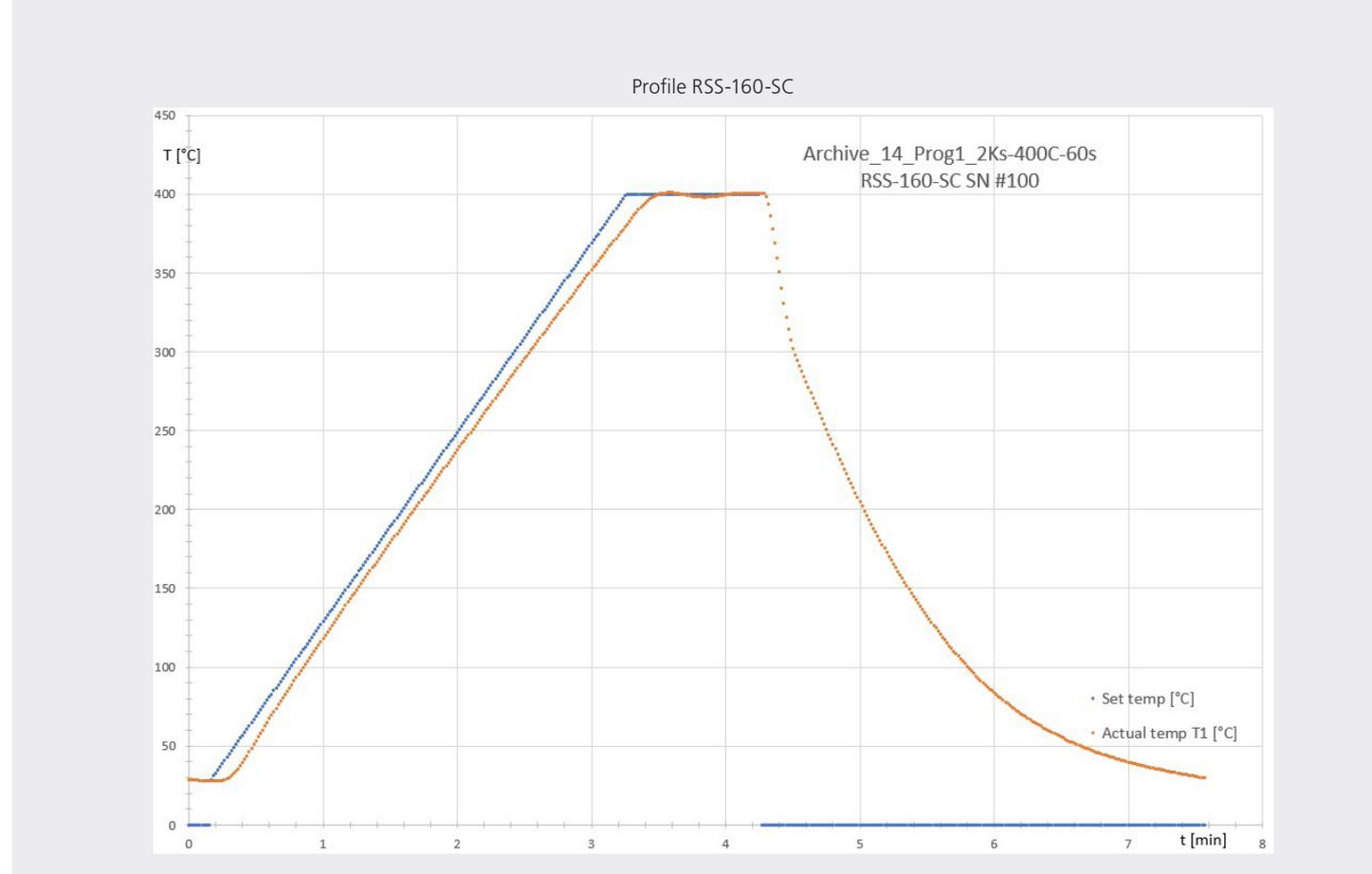
Beside standard process gases, like Nitrogen, Oxygen, Forming Gas the system (depends on model). The chamber is sealed and can be easily cleaned. The Option allows the use of formic acid for void free solder results.

### Flow Control

One gas line with Mass Flow Controller (MFC) is default. Options like Formic Acid Module is controlled by an own Mass Flow Controller or with a shared gas line.

### Vacuum

The system is vacuum capable to  $10^{-3}$  hPa. A membrane/diaphragm pump, a chemically resistant pump (recommended when is used) and a rotary vane pump are available as accessories.



### Temperature Distribution

The max. temperature is 400 °C. Key features are precisely controlled fast ramp-up (up to 120 K/min. depending on model) and ramp-down rates (up to 90 K/min). The hot plate offers an excellent temperature distribution and homogeneity.

### Programmig

The systems are 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 an 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 hot plate is water cooled. An external water cooling is required (we recommend a closed loop water cooling system)

## RSS-160-SC

### Specification

<b>Heated area</b>	160 mm x 160 mm x 65 mm
<b>Process chamber</b>	Aluminium chamber
<b>Chamber height</b>	65 mm
<b>Mass Flow Controller</b>	One MFC included for Nitrogen
<b>Temperature range</b>	room temperature up to 400 °C
<b>Temp. uniformity</b>	± 0.5 % of set temperature
<b>Ramp up rate</b>	120 K/min.
<b>Heating</b>	by heater cartridges
<b>Chamber cooling</b>	water cooled
<b>Ramp down rate</b>	T = 400 °C > 200 °C: 120 K/min. T = 200 °C > 50 °C: 90 K/min.
<b>Vacuum capability</b>	VAC I: up to 3 hPa (valve and sensor incl. MFC)
<b>Formic acid:</b>	controlled with shared gas line
<b>Thermocouple</b>	add. flexible thermocouple for substrate measurement included
<b>Interlock</b>	temperature controlled
<b>Interface</b>	Ethernet/ USB
<b>Controller</b>	SIMATIC® with 7" touch panel
<b>Programs</b>	50 programs storable each with 50 segments
<b>Dimensions chamber</b>	365 mm x 520 mm x 275 mm (W x D x H)
<b>Weight</b>	25 kg
<b>Electricity</b>	230 V, 50 Hz, 2.4 kW (optional: 100 V/ 115 V)

### Options:

<b>MFC</b>	Additional process gas line with Mass Flow Controller (max. 1 add.)
<b>VAC II</b>	Vacuum up to 10 <sup>-3</sup> hPa, digital Piezo/Pirani pressure gauge, Vacuum valve, excl. pump
<b>PT</b>	Additional 3 colors pat light

More options on request

### Accessory

WC I or WC II

