Model RSS-Series (RSS-110-S, RSS-160-S and RSS-210-S)

Mini Reflow Solder System with vacuum for fluxless soldering up to 210 mm x 210 mm substrate size

RSS-160-S with SPS Controller and 7" touch Panel
Technical and design changes reserved

- **Heated area**
  RSS-110-S: 110 mm x 110 mm
  RSS-160-S: 160 mm x 160 mm
  RSS-210-S: 210 mm x 210 mm
- Ramp up rate up to 240 K/min. (*)
  Ramp down rate up to 120 K/min. (*)
- Water cooling
- **SIMATIC® process control**
- **7" touch panel**
- **Vacuum up to 10^{-3} hPa**

(*) depends on model

FEATURE

- Precise ramp up and fast ramp down rates
- Excellent temperature uniformity
- One gas line (MFC) with 5 nlm N_2
- Data logging (USB, Ethernet)
- Hotplate heated by heater cartridges and cooled with water
- 50 programs with 50 steps each
- Small foot print

APPLICATION

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

UniTemp GmbH
Luitpoldstr. 6
85276 Pfaffenhofen/Ilm

Tel: +(49)(0)8441-787663
Fax: +(49)(0)8441-787664

info@unitemp.de
www.unitemp.de

UNITEMP
Universal Temperature Processes

Model RSS-110-S, RSS-160-S and RSS-210-S

- **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-110-S,RSS-160-S and RSS-210-S Reflow Solder Systems are excellent tools for various solder processes up to 210 mm x 210 mm substrate size and 40 mm height (extended height as option).

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 (depends on model) can also be used with pure Hydrogen (Option: H_2 and H_2S). The chamber is sealed and can be easily cleaned. The Option RSS-FA 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 (RSS-FA) or use of 100% Hydrogen (RSS-H_2) are 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 RSS-FA is used) and a rotary vane pump are available as accessories.

TEMPERATURE DISTRIBUTION

The max. temperature is 400 °C (optional up to 500 °C) . Key features are precisely controlled fast ramp-up (up to 240 K/min- depending on model) and ramp-down rates (up to 120 K/min).The hot plate offers an excellent temperature distribution and homogenity.

PROGRAMMING

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) (Accessory: WC I)

UniTemp GmbH
Luitpoldstr. 6
85276 Pfaffenhofen/Ilm

Tel: +(49)(0)8441-787663
Fax: +(49)(0)8441-787664

info@unitemp.de
www.unitemp.de

UNITEMP
Universal Temperature Processes

Model RSS-110-S and RSS-160-S

S P E C I F I C A T I O N

	RSS-110-S	RSS-160-S	RSS-210-S
Heated area	**110 mm x 110 mm**	**160 mm x 160 mm**	**210 mm x 210 mm**
Chamber height	**40 mm (optional: 80 mm)**	**40 mm (optional: 80 mm)**	**60 mm (optional: 80 mm)**
Temperature range	RT.....400 °C (optional: 500 °C)	RT.....400 °C (optional: 500 °C)	RT.....400 °C (optional: 50 °C)
Ramp up rate	better **120 K/min**	**up to 100 K/min**	**up to 240K/min**
Ramp down rate	up to 180 K/min.	up to 100 K/min	up to 120K/min
Interface	Ethernet / USB	Ethernet / USB	Ethernet / USB
Controller	SIMATIC® with 7" touch panel	SIMATIC® with 7" touch panel	SIMATIC® with 7" touch panel
Chamber cover	with 60 mm viewing window	with 60 mm viewing window	with 60 mm viewing window
Programs	50 programs storable each with 50 segments	50 programs storable each with 50 segments	50 programs storable each with 50 segments
Dimensions chamber	260 x 420 x 220 mm (W x D x H)	300 x 420 x 220 mm (W x D x H)	430 x 295 x 290 mm (WxDxH)
Weight	10 kg	12 kg	22 kg
Voltage	230V , 1.6 kW 115V, 1.2 kW	230V, 2.4 kW 115V, 1.2 kW	230V, 9 kW 115V, 7 kW
Current	max. 7A, 50-60 Hz	max. 10 A, 50-60 Hz	max. 25A, 50-60 Hz
Options	1 add. TC Formic Acid Module (external) Hydrogen Module Mass Flow controller (max. 1)	2 add. TC Formic Acid Module (internal) Hydrogen Module Mass fllow controller (max. 2)	3 add. TC Formic Acid Module (internal) Hydrogen Module Mass Flow controller (max. 3)

UniTemp GmbH
Luitpoldstr. 6
85276 Pfaffenhofen/Ilm

Tel: +(49)(0)8441-787663
Fax: +(49)(0)8441-787664

info@unitemp.de
www.unitemp.de

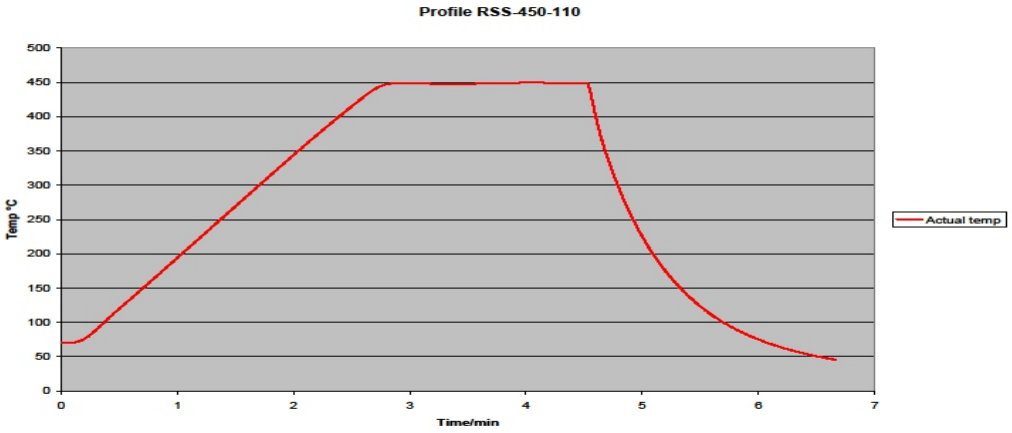
Model RSS-110-S and RSS-160-S and RSS-210-S

OPTIONS

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. 3 add. - depending on model)
MM	Moisture Analyser to measure moisture residues in the chamber
OxAtAn	Oxygen Analyser to measure Oxygen residues (not in combination with Hydrogen Option)
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
VCR	Tubing made of VCR (welded)

ACCESSORIES

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



Jul 2018

UniTemp GmbH
Luitpoldstr. 6
85276 Pfaffenhofen/Ilm

Tel: +(49)(0)8441-787663
Fax: +(49)(0)8441-787664

info@unitemp.de
www.unitemp.de