Vacuum Reflow Oven

RSV152L-412-LE-LRR

SPECIFICATIONS

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SPECIFICATION

RSV152L-412—LE **[S/N :]**

- **Basic Model: RSV152L-412**
- **Conveyor Direction: RL or LR**
- **Fixed Position of Conveyor Rail: Front fixed or Rear fixed**

1. General Spec.

- Power Requirements	Voltage	: 380V AC 50/60 Hz, 3 Phase
	Current	: 56A
	Power	: 36kW Max.
	P.S. Leakage Breaker: 75A	
- External Dimensions	7,216 mm (L) x 1,420 mm (W) x 1,500 mm (H)	
- Weight	Approx. 3,200 Kg.	
- Power Control & Distribution		
	Non-contact, Zero Cross System	
- Conveyor Direction	Right to Left or Left to Right	
- Fixed Position of Conveyor Rail	Front fixed or Rear fixed	
- PWB Width Size	(W) 100mm x (L) 100 mm (Min.)	
	(W) 400 mm x (L) 500 mm (Max.)	
- Component Height	Upper&Lower 30mm(from chain top)	
- Height from Floor to Conveyor Surface	885-920mm (Standard: 900mm)	
- Conveyor speed	Pitch feeding speed by servo motor	
- Exhaust Air flow	4.8 ~ 5.7 m^3 / minute	
- Temperature Control	Zone 1 to 4 Upper & Lower (8-ch)	
	Vacuum Zone (1-ch)	
- Wind Velocity (3-inverter volume control)	Zone 1 to 4 Upper : 0.5 ~ 5.0 m /sec.	
	Zone 1 to 4 Lower : 0.5 ~ 5.0 m /sec.	
	Cooling 1 to 2 Upper : 0.5 ~ 3.5 m /sec.	
	Cooling 1 to 2 Lower : 0.5 ~ 3.5 m /sec.	
- PWB-Drop	Optical	
- PWB-Stop	Optical	

- Auto Stop	Auto off after 30 minutes
- Alarms	Emergency, Conveyor malfunction, Cover open, CA sensor, PWB-drop, PWB-stop, Temperature, Blower motor & Thermal error O2 density error

Option

(1) UPS

(2) Monthly Timer

(3)

(4) Water-cooled Radiator(Entry buffer& Cooling zone 2 lower side)

(5)Roller rail

(6)

And more options are available.

2. MECHANICAL & ELECTRICAL SPECIFICATIONS

2-1. MAIN BODY

- Exterior Color	MUNSEL N8.5 (Japan Manufacturers Assoc. :)
- Interior Color	MUNSEL 5B4/1
- Transfer Casters	4 heavyweight casters
- Adjuster Bolts	M20 in 6 places
- Exhaust Fans	2 x 150 mm Dia. Axial fan
- Emergency Stop	2 Emergency Stop switches, 1 at each end of unit.
- Signal Tower	3 colors - Red, Yellow, Green
- Cover Open	Air Cylinder by hand valve type
- Monthly Timer	Auto stop for Stop mode
- Cooling Unit	Radiator units
- PC control	All control operated by PC.

2-2. CONVEYOR

- Conveyor Direction	Right to Left or Left to Right
- Fixed Side	Front fixed or Rear fixed
- PWB Height	885 - 920 mm, 900 mm (typ)
- Conveyor Motor	Servo motor AC 200/220 V 0.4kw, 3 Phase
- Conveyor Width	100 ~ 400 mm, Auto width adjustable
- Conveyor Protection	Torque Limiter Encoder System

- Expansion Control	Heat expansion system, rails are fixed at center.
- Width Adj.	6 Acme screws for adjustment of Conveyor-Rail width, located at Entry 2, Center 2 and Exit 2.
- Speed	Pitch feeding speed by servo motor.
- PWB Sensors	PWB-Drop and Stop sensors detect and track PWB's traveling through the RSV system.
- UPS	UPS battery back up for conveyor system.

2-3. HEATING ZONE

① ZONE 1

- Heaters	Special Sheath heater (Upper: 1.2 kW x 3 / Lower: 1.2 kW x 3)
- Nozzle	Special Designed Jet-Nozzle
- Blower Const.	Stainless Steel Blower Assembly
- Blower Motor	380V AC 450W 3 Phase, 1 top unit & 1 bottom unit
- Blower System	Patented Hot-Air Convection System
- Temp. Range	Ambient - 350 °C
- Temp. Control	Adjustable blower-speed assures proper zone temperature, each zone is uniformly adjustable.

② ZONE 2

-Heaters	Special Sheath heater (Upper: 0.9 kW x 3 / Lower: 0.9 kW x 3)
- Nozzle	Special Designed Jet-Nozzle
- Blower Const.	Stainless Steel Blower Assembly
- Blower Motor	380VAC 450W 3 Phase, 1 top unit & 1 bottom unit per zone
- Blower System	Patented Hot-Air Convection System
- Temp. Range	Ambient - 300 °C
- Temp. Control	Adjustable blower-speed assures proper zone temperature, each zone is uniformly adjustable.

③ ZONE 3 to 4

- Heaters	Special Sheath heater (Upper: 1.2 kW x 3 / Lower: 1.2 kW x 3)
- Nozzle	Special Designed Jet- Nozzle
- Blower Const.	Stainless Steel Blower Assembly
- Blower Motor	380VAC 450W 3 Phase, 1 Top unit & 1 Bottom unit
- Blower System	Patented Hot-Air Convection System
- Temp. Range	Ambient - 400 °C
- Temp. Control	Adjustable blower speed assures proper zone temperature, each zone is uniformly adjustable.

④ VACUUM

- Heaters	Special Sheath heater (Upper: 1.5 kW x 3 / Lower: 1.2 kW x 1)
- Blower Const.	Stainless Steel Blower Assembly
- Blower Motor	380VAC 450W 3 Phase, 1 Outside & 1 Inside
- Blower System	Patented Hot-Air Convection System
- Temp. Range	Ambient - 300 °C
- Vacuum Pump	1 stage Chemical pump of ULVAC
- Vacuum Processing Time	30 - 90 Sec
- Vacuum Capability	30 Sec 15kpa 60 Sec 5kpa (Absolute Pressure)
- Temp. Control	Adjustable blower speed assures proper zone temperature, each zone is uniformly adjustable.

2-4. COOLING ZONE

ZONE 1 to 2

- Heaters (Zone 1 only)	Special Sheath heater (Upper: 0.7 kW x 1 / Lower: 0.7 kW x 1)
- Fan Const.	Stainless Steel Blower Assembly
- Fan System	Enforced-cycle Air Cooling System, upper & lower at exit Additional chiller Radiator (Cooling2 Lower & Entrance Buffer zone)
- Blower Motor	380VAC 450W 3 Phase, 1 Top unit & 1 Bottom unit

2-5. FLUX COLLECTION SYSTEM

- Air cooling Enforcement System works for collecting flux in Vacuum oven.
- Friendly-maintenance Radiator To save time for cleaning radiators.
  - In Cooling Zone Total 1 radiator, at the Upper-Rear
  - In Heating Zone Total 6 radiators, one at the Heating zone 1 to 4

2-6. ALARM INDICATIONS AND SIGNAL TOWER

PWB-Drop:

When PWB has not activated exit sensor within specified time.

PWB-Stop:

When PWB is stalled under exit sensor for greater than specified limit.

Thermal Overload:

When motor current exceeds design value form sub-system.

Inverter Trip:

When blower speed control module is in an abnormal condition is indicated.

Temperature Error:

When oven temperature is outside upper and lower set-limits.

- SIGNAL TOWER:

  RED: The oven is not ready to run, Error occur at present, Emergency-Stop Button pressed

  YELLOW: The oven is in process of transition.

  GREEN: The oven is ready to go, all systems are normalized.

- EMERGENCY-STOP Button:

  All systems will be halted and the red lamp will flash on the signal tower, until button is released or reset.

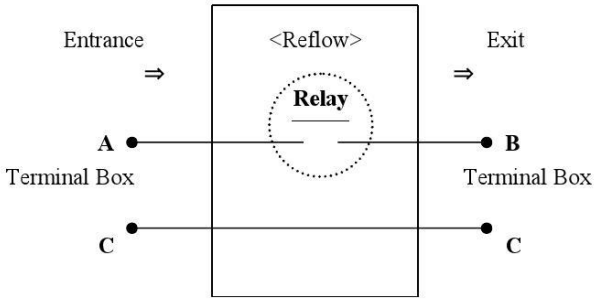
- PWB-DROP:

  When a PWB-drop has occurred the audible alarm will sound, the red signal tower lamp will blink, and the heaters will turn off. At this time, inspect the entrance and exit to locate the PWB, if necessary, carefully open the oven and retrieve the PWB. Press the reset switch after the oven cover is secured to resume oven operation.

2-7. INTERFACE

- Serial Communications: A signal goes through in Reflow from the lee to the upper when the oven is ready to run and a green lamp of the signal tower turns on. (Line-A and Line-B are connected by the relay inside oven when the reflow is ready to run.)

  The signal is interrupted not to go through into the upper when an error occurs.



2-8. PC CONTROL SYSTEM

Vacuum oven control, data management, Error Log and Operating Log are also available with PC.

- To switch the function of N_2 oven/Air oven, %/PPM, etc
- To select the function of AUTO-STOP/Manual, etc
- To control the N_2-supply pressure, the Air-supply pressure, etc

2-9. UTILITIES

1) Power Supply
   - 3ϕ 380V 36kW
   - Leakage Breaker 75A
   - Terminal Box uses M8 terminal to connect the power cable

**Please prepare the connecting cables to the Vacuum oven's terminal.*

2) Air /N2 pressure

- Pressure 0.5MPa
- Air Input-terminals is with the coupler #40 (Male) to connect the hose from the source.

-Nitrogen Consumption Approx 400L/min

**Please prepare the connecting hose with coupler (Female) to the reflow oven*

3) Exhaust system

- Exit of Exhaust: (located at Entrance and Exit of Reflow Oven)

  Φ150 (150mm in diameter)

- Volume of Airflow:

  (*The following values are estimated based on an uninstalled fan and are quoted from a catalogue provided by the product company.)

  $4.8m^3$ (50Hz) / min. x 2 ….At Entrance and Exit

  $5.7m^3$ (60Hz) / min. x 2 ….At Entrance and Exit

- Connecting Duct:

  Flexible aluminum duct is recommended

Note:

As for the exhausting performance, do ensure the volume of airflow under the lee at each fan, which is not less than 50 % of the value mentioned above, so as at least 4.8 cubic meter at 50Hz at Entrance and Exit.

3. PC REQUIREMENT

Software : Windows 7, Windows Vista.

Spec. Requirement:

- 200V AC power
- Micro Processor …Pentium or higher

  * *Pentium* is registered by Intel.
- Memory ….. 128MB up
- Serial Port ……1 Serial Port (9 Pins)
- HDD …….10GB or more
- CD-Rom ……1
- File Capability ….9999 Files

- Unit Size ……Tower Type

  Smaller Than (W)150 x (L) 400 x (H) 500 (mm)

- Key Board ……Smaller Than (W)290 x (TH) 40 x (L) 200 (mm)

4. CONSUMABLE PARTS

・Recommended Replacement Schedule (based on 8 hrs/day usage)

- Signal Tower Bulbs: 12 months
- Charcoals for the Oxygen analyzer
- Silicon sealing
- Labyrinth papers
- Silicon packing for radiator

5. Special Tools & Accessories

- A set of Eightech Standard Tool
- Activated Carbon 100g
- Install CD

6. Operation Manuals

- Operation Manual: 1 copies to include Specs, Schematics, & General Information.

7. Warranty and Acceptance Inspection

・1-year or 3,000-hour warranty, parts and labor (which ever comes first), travel charge extra, from date of Installation Report Acceptance.

Excluding items from our warranty

Any change or worn out by time elapse
Incomplete maintenance or mistake
Subtle sensual phenomena which do not affect quality & function

・Acceptance Inspection should be done at the Eightech factory or at the customers site, in the presence of the customer

IMPORTANT NOTE

The following conditions will render the warranty null and void.

- Malfunctions due to worn out by consumable parts.
- Malfunction due to exhaustion of parts beyond warranty period.
- Malfunction caused by abnormal operation or operation beyond the published performance of the equipment.
- Breakdown caused by misuse or mishandling.
- Natural disaster such as earthquake, typhoon, flood, lightening, etc.
- Modification of equipment by user or unauthorized person.
- Trouble caused by misuse or incomplete maintenance.
- Subtle sensual phenomena (not affect quality and function) such as blower sound, motor rotation, etc.

**Caution: Contents and specifications may change without notice.*