



® **SOLDER POT OWNER'S OPERATION MANUAL**
POT-100C / POT-102C
POT-200C / POT-202C



POT-200C

OWNER'S OPERATION MANUAL



WARNING

Before using the solder pot, read this Owner's Operation Manual. Failure to follow the safety precautions and instructions in this manual could result in serious injury and property damage.

KEEP THIS MANUAL FOR FUTURE REFERENCE

Your new solder pot has been engineered and manufactured to the **goot** high standard for dependability, ease of operation, and operator safety. If you follow the instructions and safety precautions in this manual and on the product and use the solder pot properly and only for what it is intended, you will enjoy years of safe, reliable service. Thank you again for buying the **goot** solder pot.

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SAFETY

The safety signal words [**WARNING**] and [**CAUTION**] are defined below.



WARNING

Failure to obey a safety warning could result in serious injury or death to yourself or to others. Always follow the safety precautions to reduce the risk of electric shock, fire or personal injury.



CAUTION

Failure to obey a safety caution may result in a minor or moderate injury to yourself or to others. Always follow the safety precautions to reduce the risk of electric shock, fire or personal injury.



WARNING

The melted solder held in these models is very hot. Carefully read this OPERATION MANUAL to avoid an accident (fire or serious injury) and to obtain the best result with the solder pot. Do not use these models for any purpose other than solder dipping work.

WARNING



The pot will become corroded by the solder over long-term operation. This corrosion may cause melted solder leakage. Even if no corrosion appears, replace the pot after every 2 years of operation at the minimum when using regular solder. The checking of the pot is done by removing the melted solder in the pot. Therefore it is very dangerous for the user to do.

When using Sn-Pb eutectic solder, have the pot inspected after 1 year of operation (approximately 8 hours per day, 5 days per week, temperature setting at 250°C). When using lead-free solder, have the solder inspected after half a year of operation (approximately 8 hours per day, 5 days per week, temperature setting at 250°C) . Return the solder pot to the dealer or distributor you purchased it from for inspection of the pot. Do not attempt to inspect it by yourself as the solder has to be melted before inspection. Failure to replace the pot could result in serious injury, a fire or damage.

INSTALLATION AND SAFETY INSTRUCTION



WARNING

Install the solder pot in a place where no other worker can accidentally come in contact with the solder pot. Install it on a firm metal bench and position the tray provided under the solder pot. Keep the solder pot away from flammable substances. Operators must be thoroughly instructed about safety.

TO PREVENT ELECTRICAL SHOCKS AND FIRE



WARNING

- Be sure to plug the grounded plug into a grounded receptacle. Turn OFF the main power switch and unplug from the receptacle before replacing the fuse or removing the housing for service.
- Never use the solder pot if the power cord is damaged or the solder pot itself is damaged as this may result in fire and electric shocks.



CAUTION

- Do not leave the solder pot unattended when it is hot as the pot and surroundings become very hot.
- Keep children and bystanders away from the solder pot.
- Do not touch any side of the solder pot when it is hot except the front operation panel with the temperature control panel and the main power switch.
- Do not use the solder pot with a damaged power cord in order to prevent electrical shocks and fires.
- Be sure to plug the solder pot into the proper power supply.
- Do not use the solder pot in a damp or humid environment to prevent electric shocks.

2 FEATURES & SPECIFICATIONS

2-1 FEATURES

- Dual digital displays provide temperature setting value and measured value visually.
- PID control system enables deviation of solder temperature and setting temperature to be minimized.
- Excellent accuracy of setting value and measured value at a very minimal tolerance as $\pm\{(1.25\% \text{ of displayed value})+1^{\circ}\text{C}\}$
- Built-in warning lamp to detect beyond the upper and lower limit temperature range.
- Separated structure of the solder bath and heater allow simple replacement of each part.
- Lead-free solder applicable. (**POT-102C / POT-202C**)

2-2 SPECIFICATIONS

SPECS	MODEL	POT-100C	POT-102C	POT-200C	POT-202C
Voltage		110, 120, 130, 220, 230, 240V AC		110, 120, 130, 220, 230, 240V AC	
Power Consumption		440W		720W	
Max. Temperature		350°C		400°C	
Control System		PID Control			
Dimensions		220(L) × 350(W) × 127(H) mm		210(L) × 446(W) × 127(H) mm	
Solder Pot Dimensions		91 (L) × 135(W) × 60(H) mm		130 (L) × 180(W) × 60(H) mm	
Weight		Approx. 4kg		Approx. 5.5kg	
Max. Solder Volume		Approx. 5.5kg		Approx. 9.5kg	
Solder Bath		SUS316	Ceramic Coating	SUS316	Ceramic Coating
Temperature Accuracy		$\pm\{(1.25\% \text{ of display temperature})+1^{\circ}\text{C}\}$			
Power Cord		3 core cord with ground plug			

NOTE

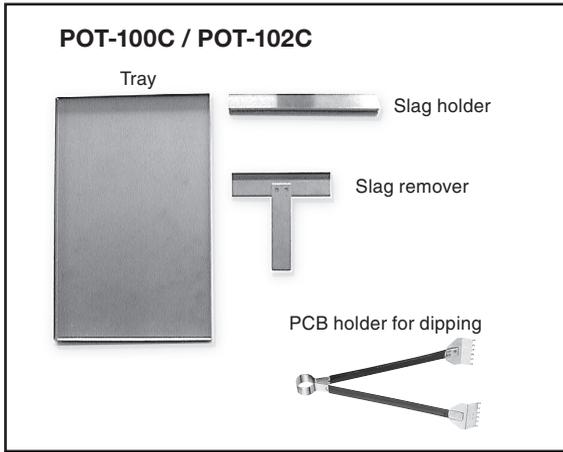
The PID controller is preset to the optimum temperature (250°C) for dipping PCBs.

The ALM lamp lights up when the temperature is 5°C higher or lower than the set temperature.

For further information about the temperature controller installed in the solder pot, please refer to the operation manual **REX-C100 SERIES (RKC INSTRUMENT INC.)** included in the box.

3 ACCESSORIES

Make sure that the following accessories are included with the solder pot.



4 HOW TO SETUP



WARNING

Be sure to install the solder pot in a firm metal bench. The solder pot becomes heavy with the solder and the solder pot and surroundings become very hot. Failure to follow this could result in a serious accident.

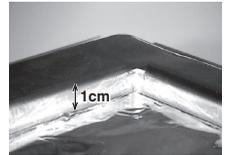
4-1 SETUP

1. Position the tray provided under the solder pot.
2. Hook the slag holder behind the top plate.
3. Put the appropriate volume of solder into the bath (See Max. Solder Volume in the specifications) and turn ON the main power switch (I side). The proper amount of melted solder is about 1cm below the top edge of the bath.
4. Set the temperature following the control panel setting procedures explained in 4-3. The solder pot is preset at 250°C before shipment.
5. After setting, the control output lamp (OUT) lights up and temperature control output is ON. The solder melts in about 40-50 minutes. Remove the oxidized slag on the solder surface with the slag remover and start dipping.
6. Be sure to turn OFF the main power switch when not in use and when left unattended.

2. Hook the slag holder



3. The level of the melted solder should be about 1cm below the top edge of the pot.



5. Remove the oxidized slag on the solder surface with the slag remover before doing dipping work.

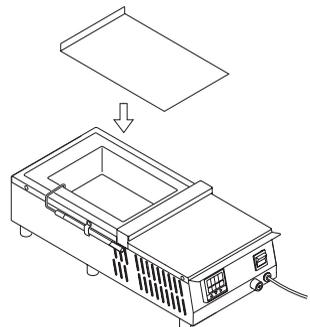


POT-200C / POT-202C ONLY

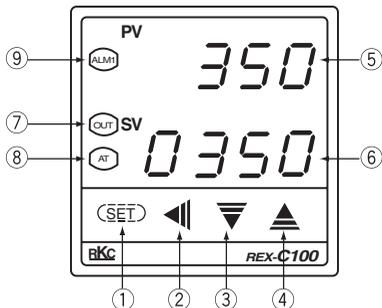


WARNING

Use the solder pot cover for the **POT-200C/ POT-202C** included with the solder pot. Before turning the solder pot ON each day, be sure that it is properly on the top and do not remove until the solder melts fully. The solder may splatter from the solder pot while it is melting. Be careful when removing the plate, as it is hot and will cause burns. Failure to cover the solder pot could result in serious injury, a fire or damage.



4-2 PARTS NAMES AND FUNCTIONS OF CONTROL PANEL (COMMON TO ALL MODELS)



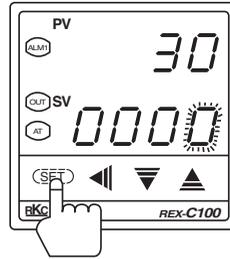
- ① **Set (SET) key**
 - Registration of set value
 - Changing Modes and parameters
 - Changing PV, SV, display mode or setting mode of parameters.
- ② **Setting digit shift key**
 - Changing set value, move the cursor to the digit to be changed.
- ③ **Set value decrement key**
 - For decreasing the value when changing the set value.
- ④ **Set value increment key**
 - For increasing the value when changing the set value.
- ⑤ **Measured value (PV) display unit [Green]**
 - Displays the measure value (PV).
 - Displays the parameter symbol in the parameter setting mode.
- ⑥ **Set value (SV) display unit [Orange]**
 - Displays the set Value (SV).
 - Indicates the set value of the parameter symbol displayed on the (PV) display unit in the parameter setting mode.
- ⑦ **Control output (OUT) Lamp [Green]**
 - Lights up when the control output is ON.
- ⑧ **Auto-tuning (AT) lamp [Green]**
 - Flickers in the auto-tuning mode.
- ⑨ **Alarm (ALM) lamp [Red]**
 - Lights up when the measured temperature value is 5°C lower or higher than the set temperature.

4-3 HOW TO SET

Example sequence to enter 200°C as the set value (SV) (PV value at 30°C)

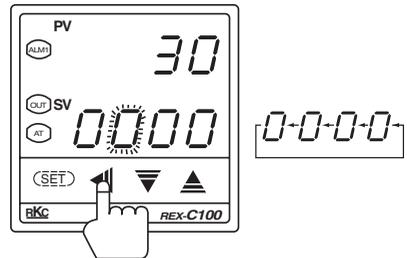
Enter the setting mode

Press the (SET) key to enter the SV setting mode. The lowest digit in the SV display brightly lights up.



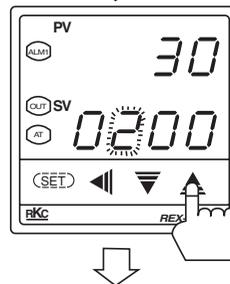
Digit shifting

Press the ◀ key until the 100 digit brightly lights-up. Press the ▲ key and set on [2]. The brightly lit digit increased by 1 with each push of the ▲ key.



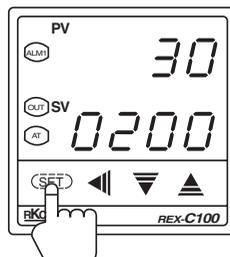
Increase / decrease of the value

The ▲ key is used to increase and the ▼ key is used to decrease the value.



Registration of the set value

Press the set key to finish the setting. The set value brightly lights.



Remarks

The set value cannot be set above the maximum temperature.

5 MAINTENANCE

- Make sure that the tip of the sensor is always in the melted solder. Always keep the solder volume at about 1cm below the top edge of the pot.
- Regular cleaning is essential to remove the accumulated oxidized slag in the pot. If this is not removed, the heat conductivity will deteriorate causing the heater to overheat.

6 REPLACEMENT

6-1 REPLACEMENT PROCEDURES



WARNING

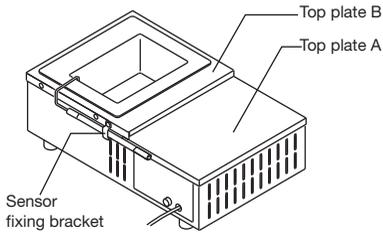
Turn OFF the main power switch and unplug from the receptacle and allow the solder in the pot and surroundings to cool before replacing the heater and the heat insulation board.

Heater Replacement

1. Turn OFF the main power switch and unplug from the receptacle and allow the solder in the bath and surroundings to cool.
2. Remove the sensor fixing bracket and take the bath out of the solder pot with special care not to damage the sensor.
3. Remove the top plates [A] and [B] for the **POT-100C / POT-102C** and the plates [A], [B], [C] for the **POT-200C / POT-202C**.
4. Take out the heat insulation boards.
5. Remove the nuts (3 locations for the **POT-100C / POT-102C** and 6 locations for the **POT-200C / POT-202C**) that fix the lead terminals of the heater and grounding using a M4 box wrench. Be careful that the bottom nut does not become loose.
6. Take out the heater and replace it with a new heater.

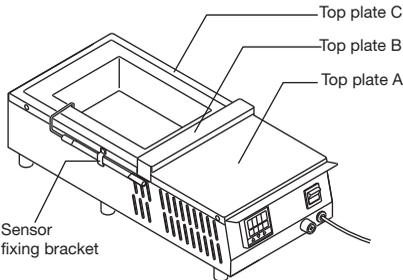
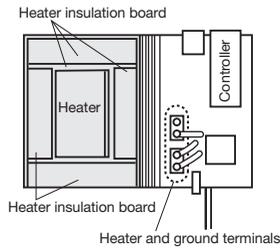
Heat Insulation Board Replacement

1. Turn OFF the main power switch and unplug from the receptacle and allow the solder in the bath and surroundings to cool.
2. Remove the sensor fixing bracket and take the bath out of the solder pot with special care not to damage the sensor.
3. Remove the top plates [A] and [B] for the **POT-100C / POT-102C** and the plates [A], [B], [C] for the **POT-200C / POT-202C**.
4. Take out the heat insulation boards. The heat insulation board under the heater can only be taken out after removing the heater. Replace them with new heat insulation boards.



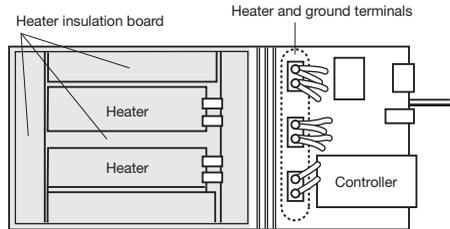
POT-100C / POT-102C

TOP VIEW

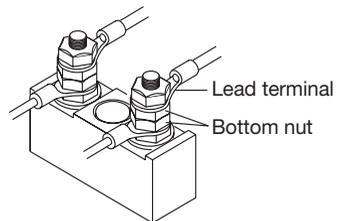


POT-200C / POT-202C

TOP VIEW



Be careful that the bottom nut does not become loose.



Sensor Replacement

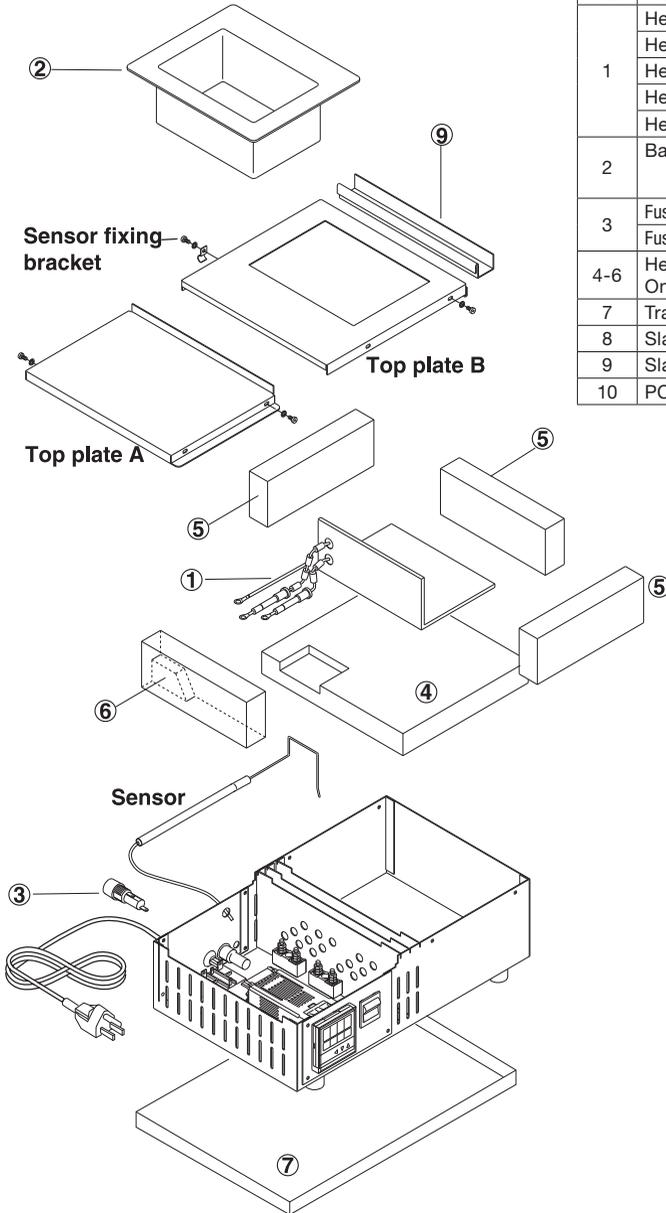


WARNING

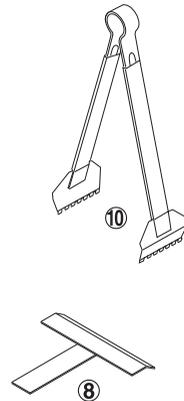
Replacement work of the sensor for the **POT-100C / POT-102C** and **POT-200C / POT-202C** should be done while the solder is in the bath. Therefore it is very dangerous for the user to do. Ask the dealer or distributor you purchased it from to do the replacement work.

6-2 REPLACEMENT PARTS

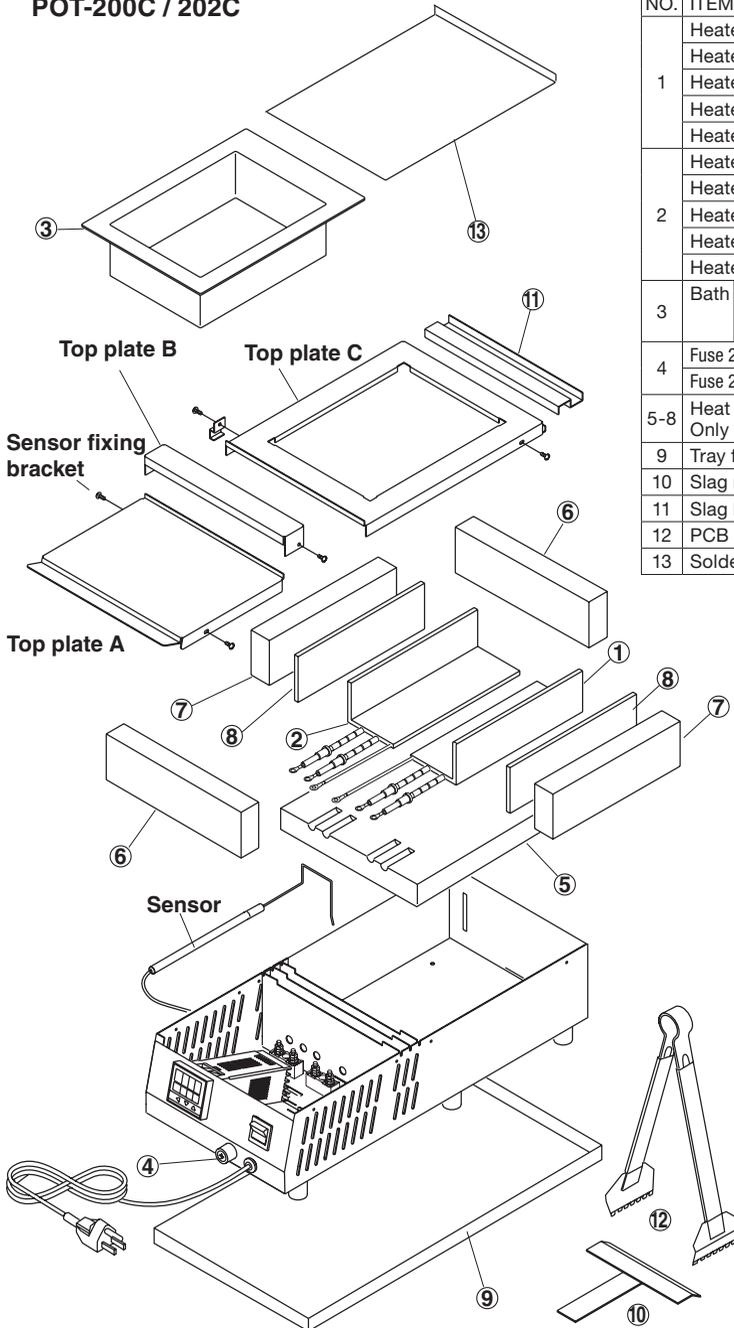
POT-100C / POT-102C



NO.	ITEM
1	Heater for 110V
	Heater for 120V
	Heater for 130V
	Heater for 220V
	Heater for 240V
2	Bath POT-100C: POT-100CP POT-102C: POT-102CP Ceramic coating bath
3	Fuse 250V 8A for the 110-130V model
	Fuse 250V 4A for the 220-240V model
4-6	Heat insulation board set Only available as a set
7	Tray for POT-100C
8	Slag remover for POT-100C/200C
9	Slag holder for POT-100C/200C
10	PCB holder for dipping



POT-200C / 202C



NO.	ITEM
1	Heater R for 110V right side
	Heater R for 120V right side
	Heater R for 130V right side
	Heater R for 220V right side
2	Heater L for 110V left side
	Heater L for 120V left side
	Heater L for 130V left side
	Heater L for 240V left side
3	Bath POT-200C: POT-200CP POT-202C: POT-202CP Ceramic coating bath
	Fuse 250V 10A for the 110-130V model Fuse 250V 5A for the 220-240V model
5-8	Heat insulation board set Only available as a set
9	Tray for POT-200C
10	Slag remover for POT-100C/200C
11	Slag holder for POT-100C/200C
12	PCB holder for dipping
13	Solder pot cover



SOLDERING EQUIPMENT AND ACCESSORIES
TAIYO ELECTRIC IND.CO.,LTD.

Customer service: Contact your nearest distributor

Website : www.goot.co.jp E-mail: info@goot.co.jp