

Trouble shooting

1. Power is switched on but the power indicator does not light up

| Possible causes | Actions to take |
|---|--|
| No power input | Check the power source |
| Loose plug | Insert the plug into the socket securely |
| Device is powered and running but the power indicator does not light up | Replace the power switch |
| Power wire broke or loose connection | Replace the power wire(s) |
| Tripped fuse | Check the fuse and replace it if needed |

2. Heating indicator of the water bath does not light up after the calibration temperature is set

| Possible causes | Actions to take |
|--|--|
| Water temperature is higher than the set temperature | Cool down the water in the bath |
| Defective heating indicator | Contact Rossmax for service |
| Defective temperature controller | Contact Rossmax for service |
| Set temperature is too low | Set temperature should be at least 5°C higher than operating temperature |

3. Heating indicator of water bath lights up, whereas the water temperature remains low

| Possible causes | Actions to take |
|----------------------------------|-----------------------------|
| Defective heater circuit | Contact Rossmax for service |
| Defective temperature controller | Contact Rossmax for service |

4. Water temperature continues to rise and exceed the set temperature

| Possible causes | Actions to take |
|----------------------------------|-----------------------------|
| Defective temperature controller | Contact Rossmax for service |

5. Large fluctuation in water temperature

| Possible causes | Actions to take |
|---|-----------------------------------|
| Water temperature is not stable yet | Wait for temperature to stabilize |
| Set temperature is too close to ambient temperature | Lower the ambient temperature |
| Defective temperature controller | Contact Rossmax for service |
| Defective water heater | Contact Rossmax for service |

6. Power and power indicator are both on, whereas the water circulating pump does not start

| Possible causes | Actions to take |
|--|-----------------------------|
| Foreign object clogs inside the pump | Remove the foreign object |
| Loose screw used to secure the propeller | Tighten the screw |
| Defective motor | Contact Rossmax for service |

7. Noise generated by the stirrer motor

| Possible causes | Actions to take |
|------------------------|-----------------|
| Bearing ball oxidation | Replace bearing |
| Bearing aging | Replace bearing |



WARNING: The symbol on this product means that it's an electronic product and following the European directive 2012/19/EU the electronic products have to be disposed on your local recycling centre for safe treatment.

ISO CE

9001/13485

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rossmax

Professional Testing Device

for Thermometer

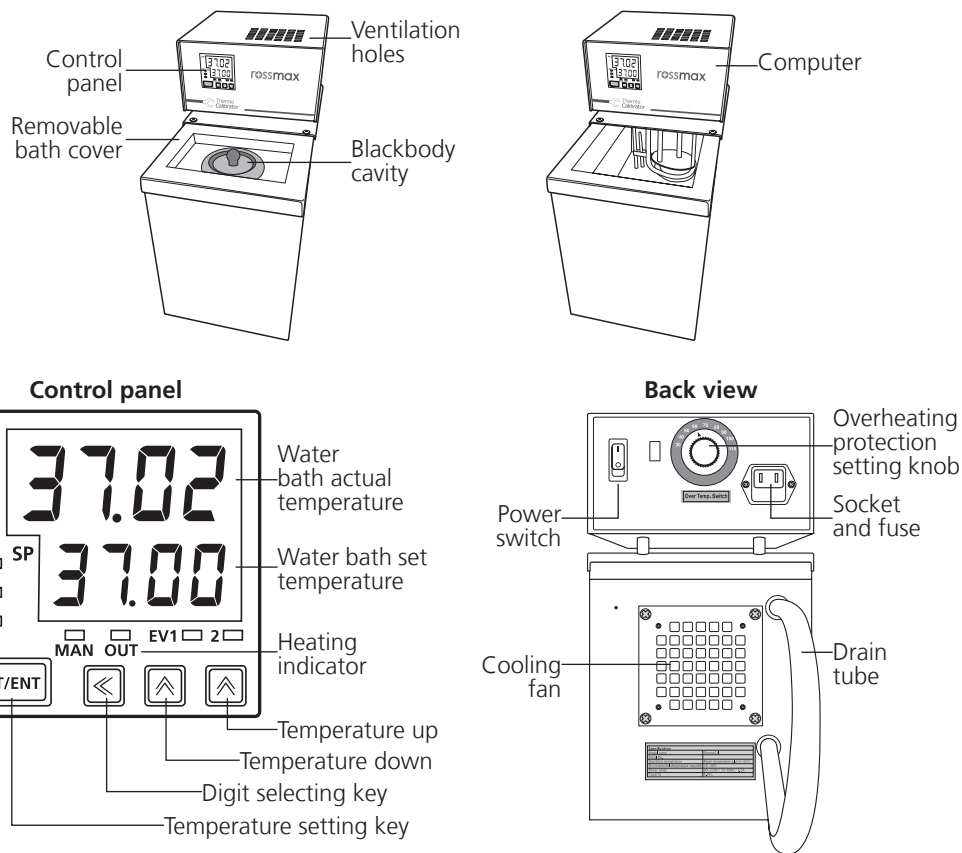


Model: **ThermoCal**
Instruction Manual

Introduction

Accuracy is always the biggest concern of a thermometer user. Rossmax ThermoCal is a portable and convenient device that allows the user to easily check the accuracy of a thermometer in just a few seconds. The innovative design of the adjustable blackbody cavity applies to all three types of Rossmax thermometer products - pen type, ear and forehead thermometer.

Parts name/location



Instructions for installation

1. Install the device on a solid surface.
2. Make sure the power is off before plugging in the device.
3. Keep the device away from the environment with direct sunlight, high temperature, high humidity or severe change in temperature.
4. Make sure the AC power and its grounding plug are properly connected.
5. Do not use power extension cords.
6. Use pure water or distilled water only for the water bath to avoid contamination or water heater breakdown.
7. Pay attention to the water level to avoid overspill.
8. The water bath is to remain 90% full at all times to reach water temperature stability.

Operation procedures

1. Check the accuracy

- Step 1: Check water level of the bath.
- Step 2: Turn on the device.
- Step 3: Select a testing temperature on the control panel (default at 37°C).
- Step 4: Wait for the water to reach the desired temperature.
- Step 5: Choose the blackbody cavity corresponding to the thermometer types.
- Step 6: Set the thermometer into the calibration mode.
- Step 7: Insert the probe/tip into the cavity.
- Step 8: Start the measurement.
- Step 9: Thermometer will beep when the measurement is completed.
- Step 10: Compare the reading given by the thermometer to the calibration temperature.
The acceptable allowance is within $\pm 0.2^\circ\text{C}$.

2. Drain the water bath

- Step 1: Make sure the device is off.
- Step 2: Remove the tube from the upper end.
- Step 3: Empty the water bath by lowering the upper end of the tube.
- Step 4: Plug the tube back in after the draining is completed.

Cautions and maintenance

1. Make sure the device, AC power and its grounding plug, is plugged in properly.
2. Change water periodically, once a month is suggested.
3. Use pure water or distilled water only for the water bath. Other water sources might increase the chance of calcium carbonate formation on the outside of the water heater.
4. Make sure there is enough water in the water bath every time before using the device. Please constantly pay attention to the water level and hygiene when/if the device runs for over 6 hours or the water temperature exceeds 40°C.
5. Keep the device away from physical impact.
6. Unplug the device and empty the water bath if the device is going to be inactive for a long time.
7. Unplug the device before moving it or draining the water bath.
8. Clean the water bath with a 3M scrub sponge if any signs of iron oxidization appear.
9. Pay attention to the water temperature to avoid scald.

Specifications

| | | |
|-------------------------------------|---|---------|
| Power source | AC 100-240V 50/60 Hz | |
| Power of water heater | 255W | |
| Testing temperature | Ambient temperature + 5°C to maximum 45°C | |
| Ambient temperature | 16 ~ 30°C | |
| Stability of water bath temperature | $\pm 0.02^\circ\text{C}$ | |
| Diameter of blackbody cavity | Pen type | 15 mm |
| | Ear | 12.5 mm |
| | Forehead | 55 mm |
| Capacity | 5.39 Liters | |
| Weight | 9.69 kgs | |
| Dimension | 180(W) x 350(H) x 320(D) mm | |