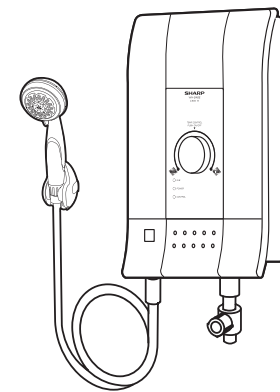


SHARP OPERATION MANUAL



ELECTRIC WATER HEATER MODEL WH-236E WH-239EP WH-246E

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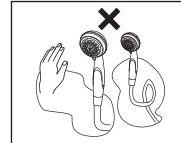
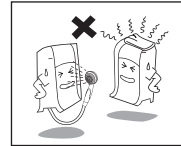
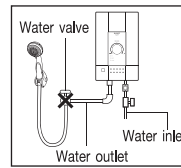
Please see the date of manufacture marked on the product. Thank you for your trust in products of Thai City Electric Co., Ltd. In order to use electric water heater in efficiency way. Please read the instructions manual carefully before using this appliance.

USAGE PRECAUTIONS

Please read the warning and cautions carefully before using this appliance and comply strictly for your own safety and to prevent the damage that may occur on your property.

WARNING

- Always turn off the main breaker before making any repairs to your electric water heater.
- Do not install water valve or faucet at hot water outlet.
- Do not spray water to the electric water heater or put wet towels on it.
- Do not cover the shower head with hands or towels or fold the shower hose.

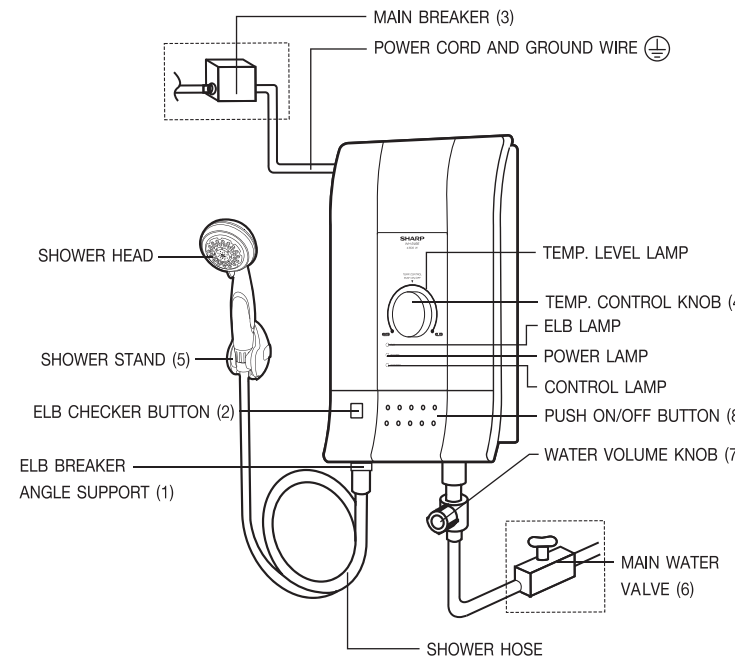


CAUTIONS

- If you see the light within your house is flashing from time to time while showering due to irregularity of electricity, the water temperature may change and this is not unusual.
- In case that using other faucet at the same as using electric water heater (common main water pipe), the water pressure and flow may be reduced and it may cause higher water temperature. This is not unusual. You should adjust water volume knob or reset temp. control knob in appropriate way.
- In the event of thunder and lightning storm, turn off the main breaker to prevent the damage that may occur on this appliance.
- In the event that ELB light (green) is shut off while electric water heater is operating, lift ELB switch up completely. However, if ELB light (green) still off, turn off this appliance by press the PUSH ON/OFF button then contact your SHARP service facility or SHARP dealer.
- Close supervision is necessary in order to check on the water temperature when used by children, elderly, patients and disabled person.
- If water has stopped flowing, turn off the PUSH ON/OFF button and ensure that there is no light on the power lamp (red) and ELB lamp indicator, (To prevent water flow when the unit is unattended after normal operation of water supply).
- While we using a product if that is stop working immediately as we do not know the cause, please inform the SHARP service center for proceed to repair.

DESCRIPTION OF PARTS

Equipments within dashed border must be purchased separately



SPECIFIC INFORMATION

Model	WH-236E	WH-239EP	WH-246E
Rated voltage (V)	220		
Rated frequency (Hz)	50		
Power consumption (W)	3,500		4,500
Water supply system	Single point		
Water temperature control	Electronic control automatic constant temperature - approximately 50°C (Maximum)*		
Minimum pressure	0.02 MPa**(0.21 Bar)		
Maximum pressure	0.34 MPa**(3.39 Bar)		
Product dimension (WxHxD) (mm.)	236 x 378 x 86		
IP number	IP25		
Weight (Kg.)	2.4		

Note : * Temperature of inlet water is approximately 25°C and flow rate is 2.3 liters/min.
** 1 MPa (Megapascal) = 10.2 Kilograms/Square centimeter.

USING YOUR ELECTRIC WATER HEATER

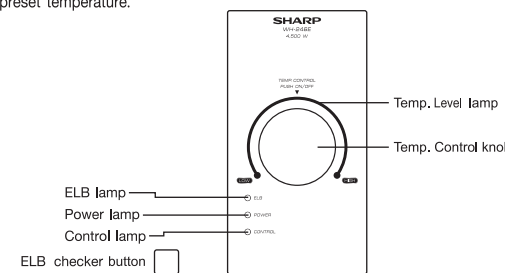
The installation must only be carried out by the company's expert or authorized dealers. For safety reason, a ground wire existence should be verified after the water heater installation.

- Open the main water valve (6) from the home main water pipe.
- Open the main breaker switch (3).
- Push the ELB breaker (1) up to activate the heater electrical system.
- Press the PUSH ON/OFF button (8) on the heater. Normal temperature water will flow and the ELB lamp indicator (green) will illuminate.
- Turn the water volume knob (7) clockwise or counterclockwise to increase or decrease water from the shower head (see the water volume knob detail in adjustment water temperature).
- Press the temp. control knob (4) and turn knob to adjust the desired temperature. The temperature level lamp will illuminate following the turning. The power lamp (red) will be illuminated and the warm water will flow from the shower head (see the detail in water temperature adjustment).
- After use, press the PUSH ON/OFF button (8) to shut the heater off and water will stop flowing and the electricity will be cut. For the next use, just simply press the PUSH ON/OFF button (8) and the water will flow at the prevailing volume and temperature.

Notice : In case of electricity or tap water outage while using, always press the PUSH ON/OFF button (8) to stop operation before leaving the bathroom.

ADJUSTMENT WATER TEMPERATURE

- To use the temp. control knob, turn the knob clockwise and observe the temperature level lamp.
 - If the temperature level lamp does not show, the water will flow at the normal temperature.
 - The warm water temperature starts from LOW (the temperature level lamp is yellow) to HIGH (the temperature level lamp is red). The water temperature is approximately 50°C.
 - The control lamp flashing when the power lamp is on means the preset temperature is higher than water temperature from the main water valve. Gradually reduce the temperature until the control lamp is on.
 - The control lamp and the power lamp are on means the flowing water reaches the preset temperature.
 - The control lamp flashing when the power lamp is off means the flowing water is hotter than the preset temperature.



USING YOUR SHOWER

Shower heads allow users to adjust into 3 types by simply twisting the shower head cover as shown in the picture.



Match the sign with your designed type.

INSTALLATION GUIDES

Installation this unit should be done by qualified technician only. Please make an inquiry from SHARP service facility or dealer.

Warning : • The ground wire must be installed with the electric water heater.
• Must connect the ground wire from the position of connecting ground wire on the base of product to go down the earth always.

1. BEFORE INSTALLATION

- Please check water pressure before operating this unit. The minimum water pressure is 0.02 MPa (0.21 Bar). The maximum water pressure is 0.34 MPa (3.39 Bar).
 - Please follow the picture below to check water pressure. Water shall overflow at the end of the tube within 2.3 meters above the faucet.
- Parts list provided in the box include: Electric water heater unit, shower head, shower hose, shower stand, water volume knob, filter gasket, rubber gasket (1 piece), screw (6 pieces), wall anchor (6 pieces), operation manual and warranty card.

2. INSTALLATION THE UNIT

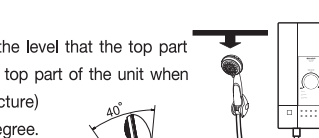
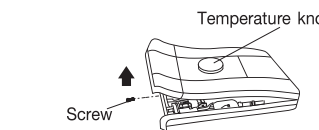
- Preparing installation area.
 - The unit must be mounted to the wall in a vertical position only. (See in the picture)
 - Leave this unit away from the wall for both sides more than 200 millimeters. (Page 16)
 - The minimum height of 1.50 meters to the lower edge of the unit must be observed.
- Removing the unit cover.
 - Remove the screw underneath the unit.
 - Open the cover by lifting from the bottom.
- Mounting the unit to the wall.
 - Drill two 6 millimeters holes in the wall with approximately 25 millimeters in depth.
 - Install wall anchors into the holes.
 - Screw the top wall anchors, leave screw length around 8-10 millimeters and hang the unit on the screw than marked the position in order to drill another 2 holes at the bottom, drill the holes and install the rest of wall anchors then fasten all of 4 screws.

2.4 Assemble the cover with the heater.

- Assemble the cover from the bottom of the heater and push tight on the top of cover.
- Tighten screws to attach the cover with the heater to the same position.

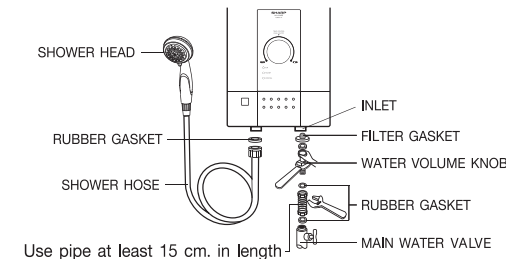
2.5 Installation the shower stand.

- Ensure that the shower stand located in the level that the top part of the shower head is not higher than the top part of the unit when hanging the shower head. (See in the picture)
- The shower stand can be adjusted 40 degree.



3. PIPING INSTALLATION

- Connection point between the unit and the water volume knob and twist the shower hose by hands until it tight. Do not use any tools during assembly because it may cause the damage to plastic components.
- Tighten the connection into the thread located at the bottom of the water volume knob. Force gauge do not exceed 40 kgf.cm.
- Connect water inlet pipe and water outlet pipe as shown in the picture.



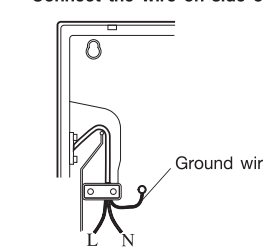
The shower head must be installed properly.

- Connect to the shower head.
- Connect to the unit.

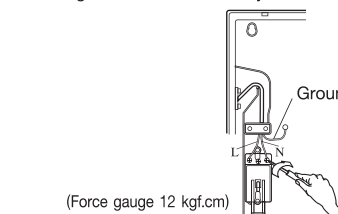
4. ELECTRIC WIRE CONNECTIONS

- Before connection the wires, please make sure the main breaker is off to cut off power.
 - Use dual insulated wire with at least 4 square millimeters cross-section. (WH-236E, WH-239EP)
 - Use dual insulated wire with at least 6 square millimeters cross-section. (WH-246E)
 - Connect electric wire to the unit from the main switch board through the main breaker which is located outside the bathroom. Wire connection must be permanent.
- Electric wire connection to the unit can be done by 2 methods. (as illustrated) Drill a small hole at the rubber to insert the wire on side or at the rear of the unit.

Connect the wire on side of the unit

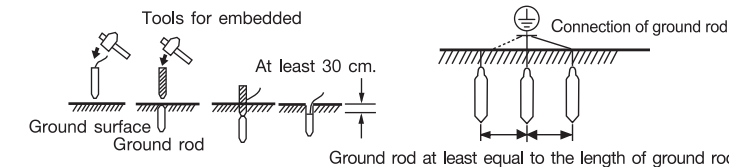


Peel the wire and connect to the ELB checker by connecting the high voltage cable to the terminal "L" and connect neutrons wire into the terminal "N". Use screwdriver to tighten the wires. (Force gauge approximately 12 kgf.cm). If the wires are connected into the wrong terminal, the unit will not work properly. It may result in damage to the circuit or may cause danger to the user.



(Force gauge 12 kgf.cm)

- The ground wire must be connected to grounding point on the unit. Grounding process.
 - Ground rod installation, select the area where moisture stored in the soil and away from flood area with no sand or limestone.
 - The diameter of ground rod is not less than 16 millimeters and the length is not less than 240 centimeters.
 - Embed the ground rod at least 30 centimeters in depth from ground surface.



4.4 Ground resistance must be less than 5 ohm.

- After grounding process is completed, if ground resistance is higher than 5 ohm, additional ground rod must be embedded. Leave the additional one away from the previous ground rod at least equal to the length of ground rod. Connect them together in parallel.

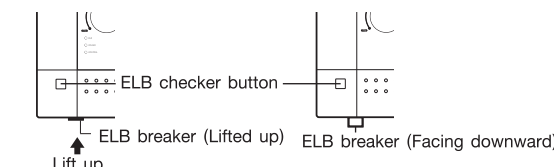
5. OPERATION TEST

- Check the leakage at any joints by open the valve in the main water pipe.
- Check wire connection before turn on the main breaker (3).
- Test the earth leakage breaker (ELB) switch.
 - Lift ELB breaker up (1) to connect the circuit.
 - Press ELB checker button (2). If the switch move down and cut off the circuit, it means ELB checker perform normal operation.
- Operation test on the unit.
 - Lift ELB switch up (1) to connect the circuit.
 - Press the PUSH ON-OFF button (8), then there a light on the ELB lamp (green) indicator. Room temperature water coming out of the shower head. Then, rotate the water volume knob (7) as designed.
 - Rotate the temp. control knob (4) in clockwise direction. The power lamp (red) displays the light. Then the warm water coming out of the shower head and when the temperature of outgoing water reaches the predetermined temperature, the unit will show the light on the control lamp (orange) and the power lamp (red).

CLEANING AND MAINTENANCE

1. Inspection of ELB checker once a month.

- Once press the ELB checker button, the circuit shall automatic cut off and you may hear the sound like "Click" and ELB checker is facing downward, it represent normal operation of ELB system. For next operation, remove the switch to its original position.



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97 Moo 20 Sala Daeng, Bang Nam Piao, Chachoengsao 24000

2. Cleaning the shower head.

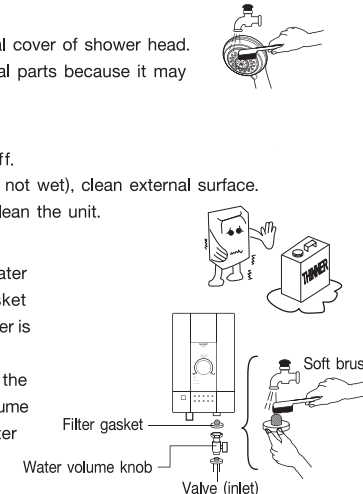
- Use soft toothbrush to clean external cover of shower head. Do not remove and clean the internal parts because it may cause damage to such components.

3. Cleaning electric water heater unit.

- Make sure the main breaker is turn off.
- Use damp cloth with mild soap (but not wet), clean external surface.
 - Do not use benzene oil, thinner to clean the unit.

4. Cleaning filter gasket.

- Clean filter gasket with clean tap water and soft brush. Clean the filter gasket from time to time when the warm water is not come out properly.
- Remove the filter gasket by twisting the connection at the top of the water volume knob (7) in anticlockwise direction after turn off the valve (inlet).



INITIAL INSPECTIONS

1. Please inspect the following before calling for service.

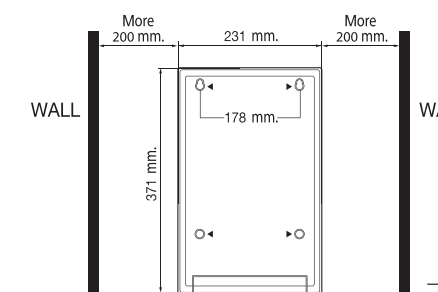
Symptom	Check points
Water cannot flow properly.	<ol style="list-style-type: none"> Check the filter gasket. It may be blocked. Please see cleaning filter gasket. (on page 16) Check the shower head. It may be blocked. Please see cleaning the shower head (on page 16). Check the valve. It may be narrowed.
Water does not flow.	<ol style="list-style-type: none"> Check the valve whether it is on. Check the PUSH ON/OFF button. Is it on status.
No electricity supply to the unit.	<ol style="list-style-type: none"> Check the ELB breaker whether switch is upward.

2. If you find the following symptom during operation, please contact SHARP service facility immediately.

- Water leakage.
- Cannot control water temperature.
- ELB lamp indicator and power lamp is not working.

3. Do not attempt to repair the unit, if it required qualified technician.

INSTALLATION STYLE



Sole Distributor in Thailand

THAI CITY ELECTRIC
THAI CITY ELECTRIC CO., LTD.
163/4 New Petchaburi Rd., Makasan, Ratchathewi, Bangkok 10400
Tel. 0 2333 3111 Call Center 0 2254 5000
E-mail : callcenter@thaicity.co.th

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