ELWA®

HOTRUN-X

Operating and Installation Instructions

ELECTRIC AND DIGITAL CONTROLLED WATER HEATERS

Revolutionary temperature control and limiter

The most advanced way saving energy and water

Contents

Approvals:
IEC/AS/NZS 60335.2.35
AS/NZS 3498

General information

Thank you for choosing an ELWA digital controlled instantaneous water heater.

To ensure your own safety and that of others you need to read these installation and operating instructions before using this water heater for the first time.

Please keep the instructions and other documentation close to the unit for future reference.
Failure to observe this instruction may lead to damage to the water heater.

This product should not be disposed of. ELWA water heaters can always be serviced or repaired if needed.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle responsibly to promote the sustainable reuse of material resources.

Plumbing and electrical installation work, commissioning and maintenance of this appliance should only be undertaken by a qualified tradesperson. Correct and reliable operation of this unit will only be ensured if original ELWA accessories are used.

This water heater must be connected to a reliable earth connection at all times.
The water heater should not be installed in an area exposed to the risk of freezing.

Do not operate a HOTRUN in a “dry state”. The electrical power should remain switched off until the HOTRUN is completely filled with water and all air is released from the system.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons with an original approved cord in order to avoid a hazard.

This water heater is manufactured in accordance with applicable safety standards and has been tested by the relevant independent authorities. It has been certified to comply with AS/NZS and EU standards and the IEC declaration of electromagnetic conformity.

The exact technical specifications of every water heater is shown on the label of the water heater and described in more detail in the manual.

This appliance is not intended to be programmed by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Accessories supplied with every ELWA HOTRUN water heater: wall plugs and screws, two flexible hoses Watermark approved for hot and cold water connections, a water flow regulator.

The ELWA HOTRUN electric instantaneous water heaters are designed for both point of use (most efficient and lowest water and energy consumption) and multipoint applications, such as hand wash basin/shower/kitchen sink(s), in fact all places where instant hot water is required.

The heating of the water is started instantly when sufficient flow is detected by opening a tap or valve connected to the hot water outlet.
The outlet water temperature depends on the following factors:

- The temperature set on the water heater display
- The flow rate through the HOTRUN that is set by a flow regulator on the cold water inlet
- How far the hot water tap is actually opened (or the incoming flow into the HOTRUN restricted)
- The temperature of incoming cold water
- The mixing of hot- and cold water

The hot water temperature can rise while reducing the flow rate. By closing the hot water tap or when the flow drops below a minimum flow rate, the heating of the water will stop automatically.
The capacity/performance of the HOTRUN depends on the selected capacity (kWatt rating).

A temperature rise of 25°C is a benchmark to reverence to flow rate, but the actual flow rate can be set differently during installation or afterwards.

Mounting instructions

1.Position the water heater allowing for enough space above and below the water heater to remove the cover after installation and for the cord to be connected to an isolator switch without tension on the power cord.

2.Mark the position of the plugs or screws according to the positional template to fix the bracket to the wall, allowing enough space below and above the water heater (>200mm) to open the front cover screws after installation. The HOTRUN-X model can be installed in an over-sink and under-sink position be turning the bracket upside-down and turning the front cover around to enable the end-user to read the display at all times. As a standard, the water heater is supplied for under-sink installation. To mount in an over-sink position rotate the wall bracket and the front cover of the water heater 180°.

3.Fit the bracket to the wall in the right position and straight with the screws supplied.

4.Secure the water heater into position by sliding it onto the bracket and push it all the way until it “clicks” into position.

Water connections

1. The HOTRUN-X range can be connected to any cold water supply with a water pressure of at least 60kPa. When connecting the HOTRUN to a low pressure tank/rainwater system without pressure pump, it is unlikely to switch on in a reliable manner. If rainwater is supplied to the HOTRUN the water must be filtered before passing the HOTRUN water heater.
2. The minimum supply pressure and flow rate needs to be secured at all times or the HOTRUN can fail to switch on.

The minimum flow rate to operate the HOTRUN-X models depends on the model and kWatt setting.

Start-up flowrates:

HOTRUN-X6 2.8kW >1.2 L/min; 3.8kW > 1.4 L/min; 4.8kW > 1.4 L/min; 6.0kW>1.6 L/min

HOTRUN-X11: 7.6kW > 1.8L/min; 8.6kW > 2.0L/min; 9.6kW > 2.2L/min; 11.0kW > 2.4L/min

3. Connect the incoming cold & outgoing hot water pipe-work to the HOTRUN water connectors only with the supplied flexible hoses that are supplied with water-heater. The flexible hoses supplied are rated for this purpose, are Watermark approved and have a flat sealing connection. By using the supplied flexible hoses you will avoid excessive tension on the HOTRUN fittings. Damaging internal copper pipework during installation is not covered by warranty.

4. The incoming and outgoing water connections for cold and hot water can't be swapped. The fitting with the blue marking is for the cold water inlet and the one with the red marking is for the hot water outlet.

5. Always use a ½″ BSP (100% bore) ball valve to be able to isolate the water supply in the cold water supply for service purposes.

6. Important: After installation open the hot water tap to flush the device to release all air from the Heat Exchanger and check all connections. Failing to do so shortens the life-span of the electric elements. Replacement of elements burning out during installation is not covered by warranty.

7. There is no need to install an overpressure relief valve or a pressure limiter.

8. The HOTRUN-X range water heaters can be programmed to any temperature limit required. At the time this manual was written only the 50°C limited models for sanitary fixings for personal hygiene are exempted from the requirement of installing a TMV by the AS3500, the national plumbing code of Australia and as is required by AS3498 for testing and approval of water heaters in Australia and New Zealand. New legislation is underway to cover this exemption for all other temperatures. In some states in Australia other temperature limiter settings are allowed to be used with HOTRUN water heaters without the need to install an additional TMV.

9. Any set temperature between 25°C and 60°C, as temperature limit, can be programmed into the water heater by ELWA. This setting can not to be changed by the end user after installation. Ask for assistance from an ELWA technician if you need to change the temperature limiter programming.

10. Make sure that any flow restrictors in shower heads and aerators in taps are not too restrictive, kept clean and make sure these cause minimal back-pressure to enable the HOTRUN to switch on and off properly. The outlet back-pressure needs to be a lot less than the cold water inlet supply pressure, as the cold water can be pushed back to the HOTRUN when mixing cold water to the hot water and cause the HOTRUN to switch off. Sometimes a pressure limiter in the total cold water supply needs to be installed to secure proper performance at all times.

Electrical connection

1. ELWA HOTRUN water heaters must be installed by a licensed electrician.

2. Local wiring rules and guidelines must be adhered to.

3. It is necessary to provide a dedicated RCD circuit direct from the switchboard to each HOTRUN.

4. The HOTRUN has to be connected to an isolator switch to be positioned next to the water heater and positioned so that the power cord can easily be terminated in the switch.

5. Check insulation resistance and proper earth continuity before commissioning.

6. Fill and flush the water heater with water first and only then, switch the power on.

Attention: Avoid overheating. Fill the unit completely with water before turning on the mains power supply. For that purpose: Open the tap and wait until the water flows out from the spout without any air bubbles. Close the tap.

7. Switch on the mains supply
Installer programming (separate instructions for the installer only)

8. Select the kWatt power setting first, while the display shows “standby” The 2-digits show the kWatt setting, for example 48 = 4.8kWatt The setting needs to be in accordance with the circuit breaker and cable size installed. A too-high kWatt setting will trip the circuitbreaker or too-low kWatt setting will cause lower temperature rise or a lesser lower rate.

9. Activate the HOTRUN on the control panel with on/off push-button .

10. Set the required outlet temperature limiter for the purpose as required by the plumbing code, for example 45°C for Education facilities where students have access to the taps, or disabled hand wash basins and showers, and 50°C for all other personal hygiene applications in both commercial as in residential buildings and the HOTRUN is ready to use.

**** CONNECT THE LIVE WIRES (RED, BROWN or GREY TO THE TERMINAL(s) MARKED ‘L’**

**** CONNECT THE NEUTRAL WIRES (BLUE&BLACK) TO THE TERMINAL MARKED ‘N’**

**** CONNECT THE EARTH WIRES (YELLOW&GREEN) TO THE TERMINAL MARKED ‘E’** ⏚

Technical Specifications

HOTRUN X range TECHNICAL SPECIFICATIONS

HOTRUN model	X6	X11	X21
Power Settings	2.8/3.8/4.8/6.0 kWatt	7.6/8.6/9.6/11 kWatt	12/15/18/21 kWatt
Voltage	1-Phase 230/240 V	1- phase 230/240V OR 2- phase 230/240V	3-phase 400/415 Volt
Current	1-Phase: 16, 20 or 25 Amp	1-Phase: 32, 36, 40 or 50 Amp 2-Phase: 2 x: 16,18, 20 or 25 Amp	3-Ph 16, 20, 25 or 32Amp

Legionella Cleaning Cycle

A service technician can program a HOTRUN-X model to run through a Legionella Cleaning Cycle. The purpose of the Legionella Cleaning Cycle is to provide a thermal disinfection of fixtures downstream of the HOTRUN water heater. A cycle will run for 10 minutes at a temperature of >65°C as per the current Australian Health Ministers' Regulations and directions given to ELWA in every State of Australia. ELWA can organise this service for all customers who have a HOTRUN model installed with models produced from 2015 onwards. During the Legionella cleaning cycle the display shows the count-down time of the cycle (600 seconds/10mins) until completion, and then remembers all its previous settings for normal operation.
The ELWA Legionella cleaning cycle is patented by ELWA.

Maintenance

- Due to its advanced design the HOTRUN does not require any maintenance.
- To clean cover, use damp cloth only.
- Scouring and dissolving agents are not suitable.
- Regularly remove debris or scale building up in shower heads and in tap-aerators.

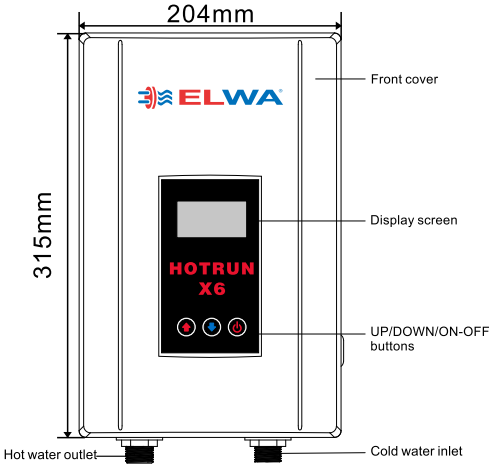
Troubleshooting,technical support

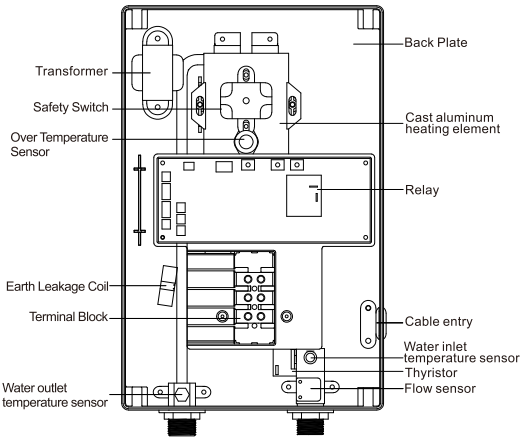
Show	Fault condition	Failure analysis	Solution
F2	Water inlet sensor short-circuit or open circuit	Temperature probe of water inlet is faulty	Replace the temperature probe of water inlet
E1	Leakage current greater than 15mA	Leakage of electricity	Send to after-sale service
E2	The temperature is greater than 70 degrees	Exceed 70℃	Select lower power level or turn down the temperature
E3	Short circuit or open circuit of outlet water sensor	Temperature probe of water outlet is faulty.	Replace the temperature probe of water outlet.
E4	Water heater running dry	Dry burn protection	Restart machine and adjust lower power.
E5	Low flow (delayed by 5 seconds after start-up)	Low water flow rate for a long time (at the critical point of being able to start or not to start)	Clean tap spout aerator, inlet fitting filter/flow sensor and try again

Initial checks

- Adequate supply and pressure of the water (min. 60kPa).
- Make sure the cold water inlet and the hot water outlet are not connected in reverse.
- The main switch or circuit breaker is switched on.
- The fuse / circuit breaker is not blown / triggered.
- Flow rate from the tap needs to be higher than the minimal flow-rate of the model installed to activate the heating elements.

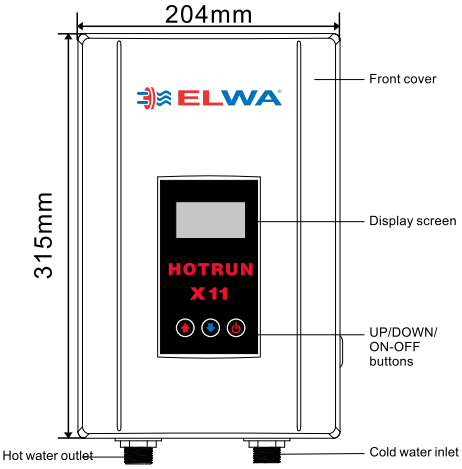
HOTRUN X6 (1-phase models)

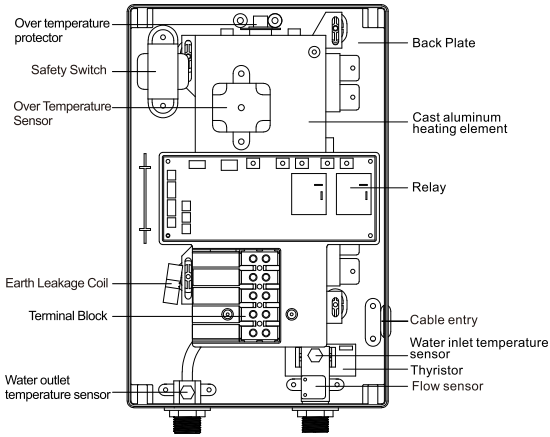


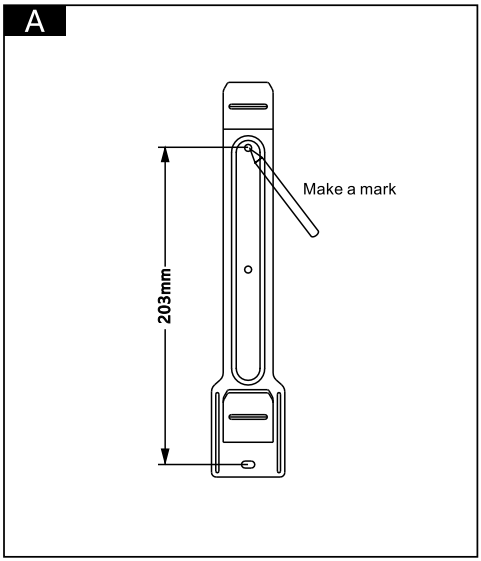


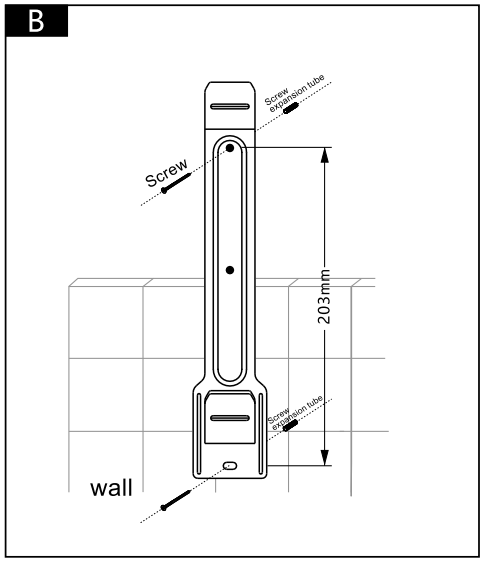
Drawing of the open water heater with arrows referring to all major components

Heat-exchanger of the 1 & 2-phase model HOTRUN X-11









Trouble Shooting Examples

The HOTRUN does not switch on when opening the tap fully

Causes

- This problem is usually caused by lack of water flow problems. Ensure the pressure on the cold water supply is over 60kPa, while the HOTRUN is in use and the flow rate is sufficient to turn the heating elements on.
- Too much back pressure in tap-outlets or shower heads after the HOTRUN, causing lack of pressure differential over the HOTRUN (back-pressure through the cold)
- Maximum temperature cut-out safety switch is activated. This if most likely due to air in the HOTRUN not cleared before switching on the electrical supply, or the mains incoming water pressure is too high, or air coming in from the mains after works done in the building and water supplies been interrupted (often by others)

Remedy

- Fix the water pressure problems; remove any flow restrictions fixtures such as shower-heads and tap outlets.
- Switch the electric power supply off; make sure there is no power on any of the terminals.
- Check continuity over the safety switch terminals. If there is no continuity over the contacts, push the reset button on the safety switch.
- Seek electrical assistance to check power supply on all phases and continuity all the way to the electric elements, and measure electrical continuity of the elements (resistance).

The water that is coming out of the HOTRUN is not warm enough

Cause

- The incoming water is very cold and/or the total flow is too high.

Remedy

- The flow regulator valve on the incoming cold water supply needs to be adjusted to the right flow rate in accordance with the kWatt setting of the water heater, see table 1 on page 5 Setting the right cold water flow rate to the HOTRUN can enable the user to reduce the flow and so increase the temperature to the maximum of the temperature setting as programmed in the temperature limiter.

The heating of water stops working when trying to mix cold water to get the required outlet temperature

Causes

- Aerator/restrictor in nozzle of outlet causing too much back pressure.
- Incorrectly balanced flow restrictor in the supply line, not reducing the pressure of the cold water to the taps enough to balance the mixing of hot & cold water in the tapware.

Remedy

- Remove the restrictions in the tap-aerator or shower-head.
- Check all other taps or restrictors built into the supply line are not affecting the flow or reducing the pressure too much.

A HOTRUN fitted in an upper floor situation of a building that is gravity fed, the HOTRUN doesn't switch on

Cause

- The pressure is less than 60 kPa. The pressure of water under gravity is 9 kPa per metre, this equates to approximately 30 kPa per floor plus the height of the roof tank.

Remedy

- Remove all restrictors in the tap or aerator and use 'star' inserts in spout instead of aerator. Allowing full flow will often help in low pressure situations. Additionally if needed the flow-controller that is fitted in the cold water inlet fitting of the HOTRUN can be removed.

Warranty

On the provision that the installation instructions have been followed, ELWA gives a warranty of twelve months onsite service in Australia and/or 2 years return and repair service. The warranty starts at the date of purchase as per the invoice.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

If despite our extensive products control complaints arise, you should inform your installer first to make sure the power and water supply to the water heater are fine.
Your installer can call the ELWA service department when on site if any questions arise.
Before you contact the installer, we advise you to read the directions for use.
You can avoid needless discomfort and possible costs.
Please also read our service manual (online on www.elwa.com.au)
If you or your installer cannot fix the problem fill in a service request form on our website www.elwa.com.au/customerservice.

Warranty terms:

1. The warranty claim is valid only on presenting an original invoice, a copy of the certificate of compliance when the unit was installed, stating the date of purchase, the name of the supplier/installer and the model & serial number of the unit, name, address, all contact details of the owner, description of fault, address and contact where the unit is located, providing a signature agreeing & accepting the terms should the item of the request for service, be proven to not be a Elwa Pty Ltd supplied product, or it is proven to be an installation fault, a call-out fee and labour costs shall be charged to the person making the request.

2. ELWA will repair or replace, subject to the warranty exclusions and at our discretion a faulty component under this warranty, the warranty period is not extended from the time of the repair or replacement.

Warranty exclusions:

3. ELWA may void the warranty if the invoice is not legible.

4. If the barcode or serial number is missing, the warranty will be voided.

5. The warranty will be voided from the moment the appliance has been tampered with or has been modified in any way.

6. Damage caused as a result of improper use, or faulty installations are not covered by this warranty.

7. Incorrect installation or maintenance issues such as blocked filters in aerators or flow restrictors and too low or too high water supply pressure are not warrantable items and may result in a charge from ELWA or the contractor responsible for the service call out service.

8. Warranty can be voided if the supplied flexible hoses are not used for hot and cold water connections or when too much force was used on the water connections and that has damaged the copper pipes inside the water heater.

9. If the unit was not installed by a licensed tradesperson.

10. Damage to the unit through normal wear and tear.

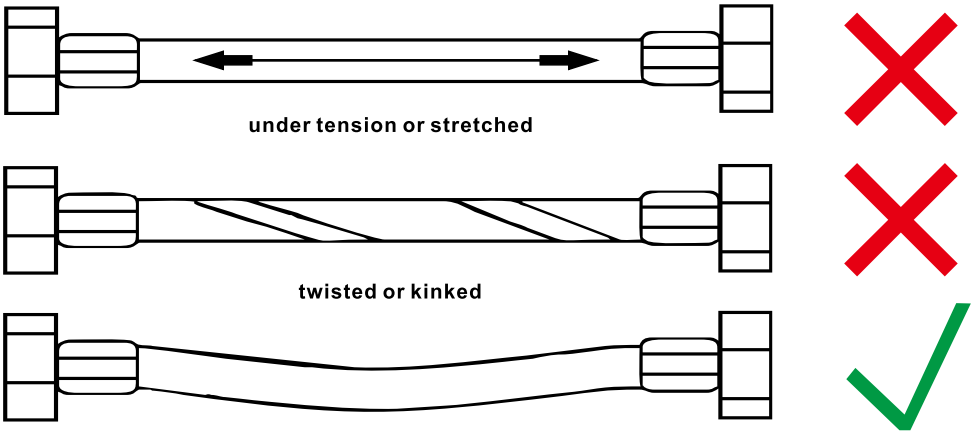
11. Damage to the unit via incorrect connection, faulty power supply, electrical surges or lighting strikes, including all other actions of the natural elements.

12. Connection to faulty equipment.

13. Accidental or malicious damage.

14. Non approved or non genuine parts used on the unit.

Flexible connections



Hose must be tightened during assembly without tension and without twists

This manual has been made with care.
ELWA remains the right to adjust products in the future for various reasons.

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