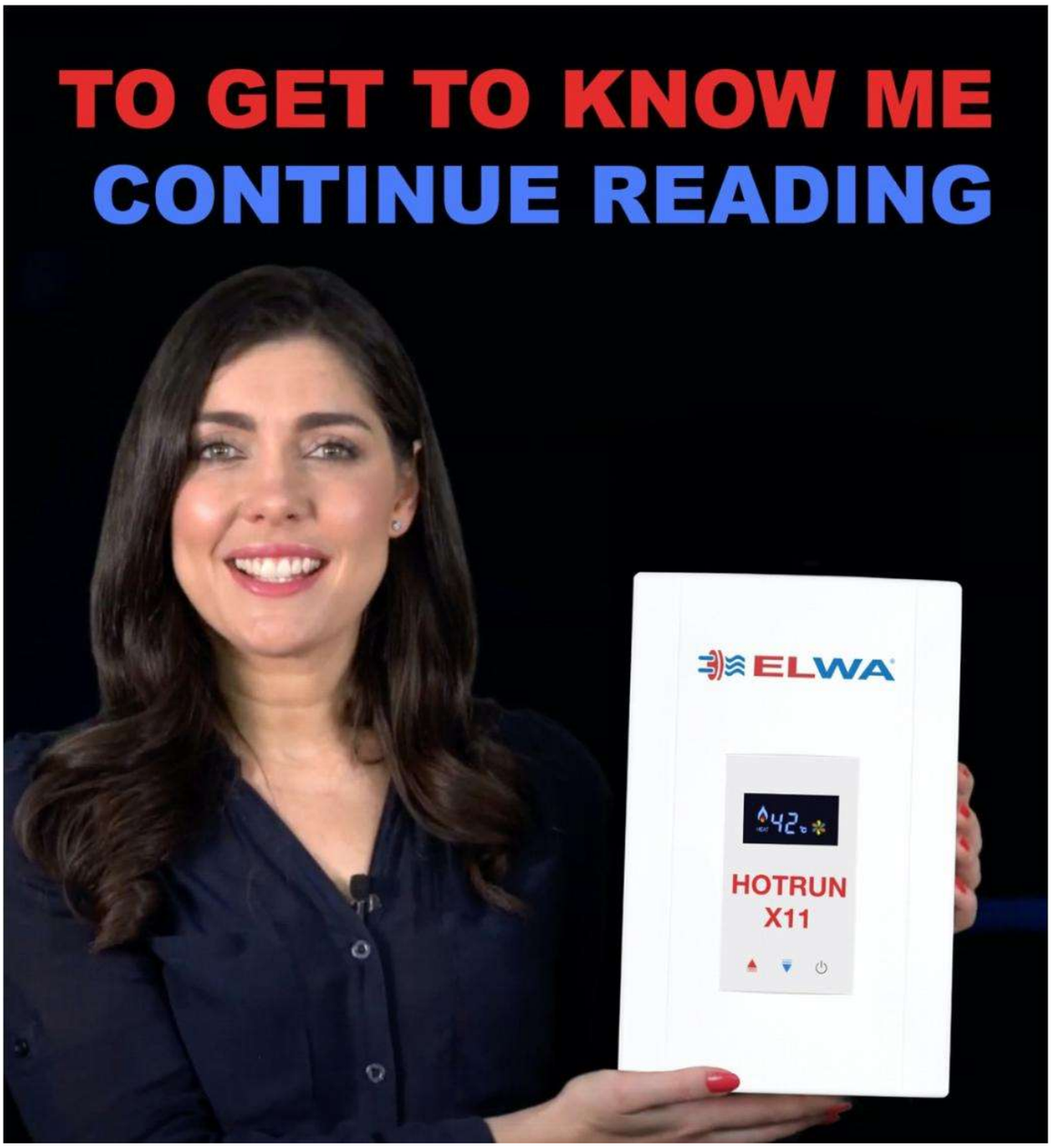
HOTRUN X6 & X11
Electric Instantaneous Water Heater
Installation & User Manual



Keep this instructions manual in a safe place once your unit is installed,
you may need to refer to it for general instructions or future maintenance.

Safety Instructions

1.For continued safety of this appliance it must be installed, operated and maintained in accordance with the manufacturer's instructions.

2.This water heater may deliver water at a high temperature. Refer to the plumbing code of Australia (PCA) and/or any further local requirements and installation instructions to determine if additional delivery temperature control is required.

3.When positioning the water heater, ensure that the electrical supply cord is not trapped or damaged. If the electrical supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons authorised by Elwa to avoid a hazard.

4.This water heater is not intended for use by people (including children) with reduced physical, sensory or intellectual capabilities or lack of experience and knowledge unless the person/s:

- Have been given specific instructions on how to safely operate the water heater.
- Is directly supervised concerning the safe operation of the water heater.
- Has been made aware of the hazards involved in the use of the water heater by a person responsible for their safety.

5.Shower heads and aerators in tapware must be cleaned /descaled regularly.

6.DO NOT SWITCH ON if there is a possibility the water inside the appliance is frozen.

7.To avoid a hazard due to inadvertent resetting of the thermal cut-out, the power supply to this water heater must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off.

8.Please read and follow the installation and operation instructions carefully, to ensure long life and reliable operation of this HOTRUN water heater.

Failure to observe & follow this instruction manual may lead to damage to the water heater.

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. **This product complies with the requirements of Lead-Free standards as defined in the National Construction Code Volume 3 and is suitable for use as part of Lead-Free installation.**

Attention!

This water heater must be installed by a licensed plumber and electrician. Not doing so will void all warranties. Under no circumstances should you attempt to install, repair, or disassemble the HOTRUN water heater without first isolating POWER to the water heater at the circuit breaker and lock-out & tag that circuit. Warranty is void if not installed according to all instructions in this manual.

Content

General information and safety instructions.....4

Product Features.....5

Child Lock.....5

Mounting instructions.....5

Water connections.....6-7

Electrical connection.....8

Technical specifications.....9

Legionella cleaning cycle.....9

Maintenance..... 9

Troubleshooting,technical support.....10-13

Terms of warranty.....14-15

Flexible connections.....15

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Approvals Standards:
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.

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 always connected to a reliable earth connection.
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 similar qualified persons with an original approved cord to avoid a hazard.

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

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

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 starts instantly when sufficient flow is detected by opening a tap 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.

Product Features

ELWA Hotrun water heaters are manufactured with patented heating technology incorporating multiple safety devices. The Hotrun X has the following features:

1. Instantaneous heating for on demand hot water, no pre-heating, no stand-by losses. This feature can save 60-70% power consumption compared to storage type water heaters.
2. Patented heating technology. Water channels are completely separated from electric elements in a solid metal heat exchanger.
3. Display diagnostic – The water heater can last you a lifetime, but if any parts ever fail, a fault-code will appear in the display to indicate what the problem is.
4. Micro-processor control of power & water consumption that can also be used to calculate water & energy usage, and efficiency with optional LoRa communication.

Child Lock

This water heater is equipped with a “child-lock” function. Child lock function: Hold down the ON/OFF key for 10 seconds. Enter the child lock function, the display will show “Loc” and none of the keys will work. Continue to press and hold the ON/OFF key for 10 seconds. Child lock function removed, display will show “Unl”.

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 & 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 by turning the HOTRUN upside-down and turning the front cover around to enable the end-user to always read the display easily. As a standard, the water heater is supplied for under-sink installation.

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 all the way down 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: 6.0kW > 1.6L/min; 7.6kW > 1.8L/min; 9.6kW > 2.0L/min; 11.0kW > 2.2L/min

When replacing an existing water heater that is already connected with flexible hoses, don't re-use the old flexible hoses but install the new water heater with the new flexible hoses supplied with the Hotrun X.

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 the 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 hot and cold 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 Hotrun 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 backpressure 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.

11.NEVER REMOVE THE BRASS HEX CAP AND FLOW SENSOR FROM THE INSIDE OF THE COLD-WATER INLET FITTINGS! The HOTRUN will not work without it.

12.EVERY HOTRUN NEEDS TO BE INSTALLED WITH THE CORRECT FLOW CONTROL ON THE INLET WATER SIDE.

HOTRUN X6 FLOW RESTRICTOR INSTRUCTION

Hotrun	Flow Rate	Colour	kWatt setting
X6	2 L/ min	OLIVE	2.8 / 3.8
	3 L/ min	BROWN	4.8
	4 L/ min	GREY	6.0

HOTRUN X11 FLOW RESTRICTOR INSTRUCTION

Hotrun	Flow Rate	Colour	kWatt setting
X11	4 L/ min	GREY	6.0
	5 L/ min	YELLOW	7.6
	6 L/ min	BLACK	9.6
	7 L/ min	GREEN	11.0

Flow restrictor inserts are DIRECTIONAL which means they can only go one way into the flexible hose as shown in the picture here.

Please ensure you place the flow restrictor in the hose facing the correct way as in the above photo otherwise water flow rate will not be accurate, and the water delivery temperature might be too low.

Insert flow restrictor into flexi hose:

Step 1 – Identify appropriate flow rate setting to match the selected kWatt power input.

Step 2 – Place appropriate flow restrictor into the end of the flexi hose. (see above photo & table for reference) Double check that flow restrictor is inserted into the hose facing the correct direction, the side with the O-ring attached faces into the flexible hose.

Step 3 – Attach flexi hose (with the installed flow restrictor) to the COLD water inlet.

Using the restrictor on the hot water outlet will cause the water heater to run with the wrong flow rate.

If the water that is coming out of the Hotrun is not hot enough, either the incoming water is too cold or the total flow-rate is too high:

Remedy

The supplied correct flow restrictor must be installed. If this is installed and the temperature doesn't reach the required setpoint, use a ball valve in the cold-water supply to the Hotrun. This can be used to reduce the flow-rate and will increase the delivery temperature. (The temperature will not exceed the pre-set temperature limiter)

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. Please make sure the main power supply circuit breaker, earth connection, cable & wire size meets the AS3000 installation requirements.

4. The water heater MUST always be connected to an uninterrupted solid earth connection directly from the main earth connection in the switchboard.

5. This water heater MUST be connected to a dedicated electrical circuit.

6. The HOTRUN must 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 to the switch.

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

Attention: Avoid overheating. Fill the HOTRUN completely with water before turning on the mains power supply. How to do this: Open the tap and wait until the water flows out from the spout without any air bubbles. Close the tap.

8. Switch on the mains supply, and do installer programming if needed (see Installer Set-Up Manual)

9. Installer to select the kWatt power setting first. This setting needs to be in accordance with the circuit breaker and cable size installed. A too-high kWatt setting will trip the circuit breaker or too-low kWatt setting will cause lower temperature rise or a lower flow rate.

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

11. 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 (see separate Installer Set-Up Manual).

**** 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'**

DO NOT REMOVE THE WIRE-LUGS CRIMPED ONTO EACH WIRE, AS THE CURRENT IS HIGH. REMOVING THE LUGS VOIDS THE PRODUCT WARRANTY!

Technical Specifications

HOTRUN X range TECHNICAL SPECIFICATIONS

HOTRUN model	X6		X11	
Power Settings	2.8/3.8/4.8/6.0 kWatt		6.0/7.6/9.6/11.0 kWatt	
Voltage	1-Phase 230/240 V		1- phase 230/240V OR	
			2- phase 230/240V	
Current	1-Phase: 12,16, 20 or 25 Amp		1-Phase: 25, 32, 40 or 50 Amp	
			2-Phase: 2 x 12,16, 20 or 25 Amp	
Performance (if ΔT =25°C) The maximum temperature rise depends on the inlet temperature and the flow rate set by the inlet flow-regulator)	Input power	Flow rate	Input power	Flow rate
	2.8kW	1.8L/min	6.0kW	4.0L/min
	3.8kW	2.2L/min	7.6kW	5.0L/min
	4.8kW	2.8L/min	9.6kW	6.0L/min
	6.0kW	3.5L/min	11kW	7.0L/min
Working pressure	Max 2000 kPa / 20Bar		Max 2000 kPa / 20Bar	

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 15 minutes at a temperature of 60-65°C as per the current Australian Health Minister's 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 (15->0 minutes) until completion, and then defaults back to all its previous user & installer settings for normal operation.
The HOTRUN Legionella cleaning cycle is patented by ELWA.

Maintenance

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

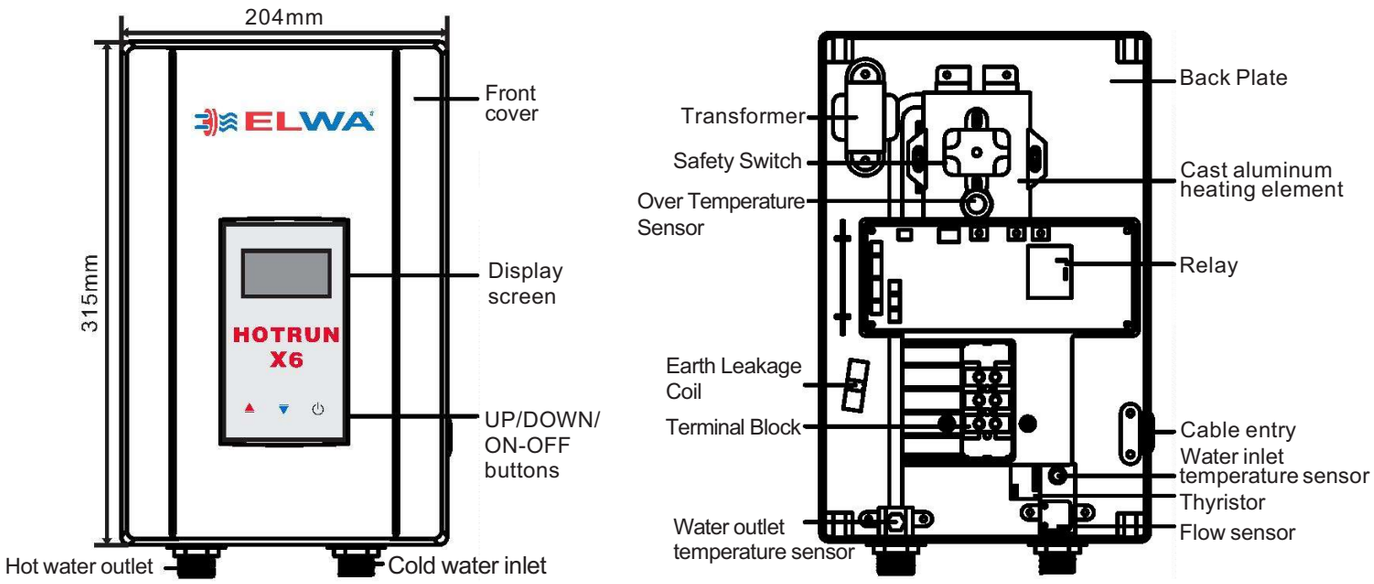
Troubleshooting, technical support

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 in water inlet-fitting.
E1	Leakage current greater than 15mA	Leakage of electricity	Request a service-tech to fix.
E2	The temperature is greater than 70 degrees	Exceed 70°C	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 in water outlet-fitting.
E4	Water heater running dry	Dry burn protection	Restart HOTRUN and adjust to 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

Essential checks prior to contacting ELWA for technical support

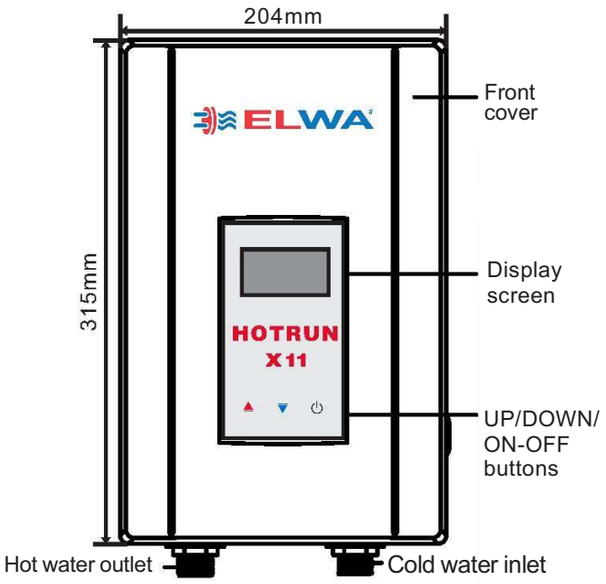
Adequate supply and pressure of the water (min. 60kPa).
Make sure the cold water inlet and the hot water outlet are not connected in reverse.
The main switch or circuit breaker is switched on.
The fuse / circuit breaker is not blown / triggered.
Flow rate from the tap needs to be higher than the minimal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

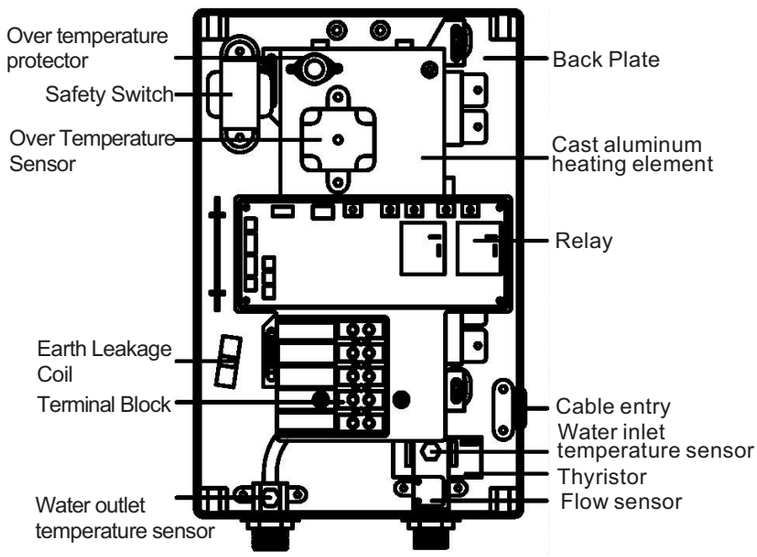
HOTRUN X6 (1-phase models)

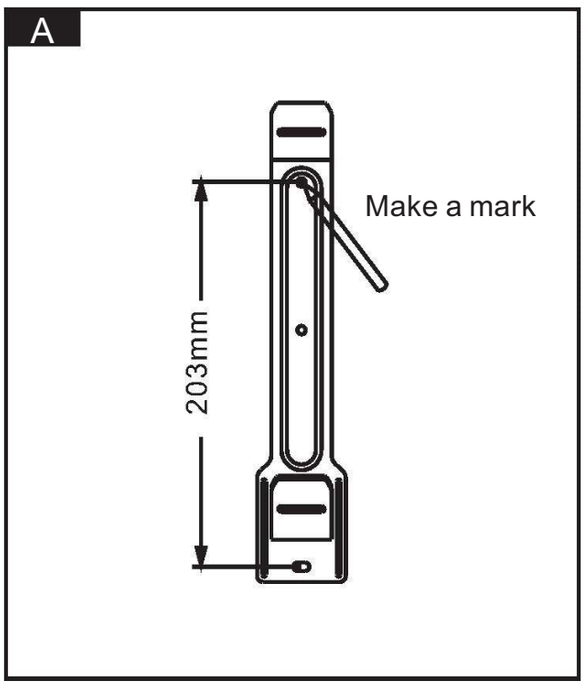


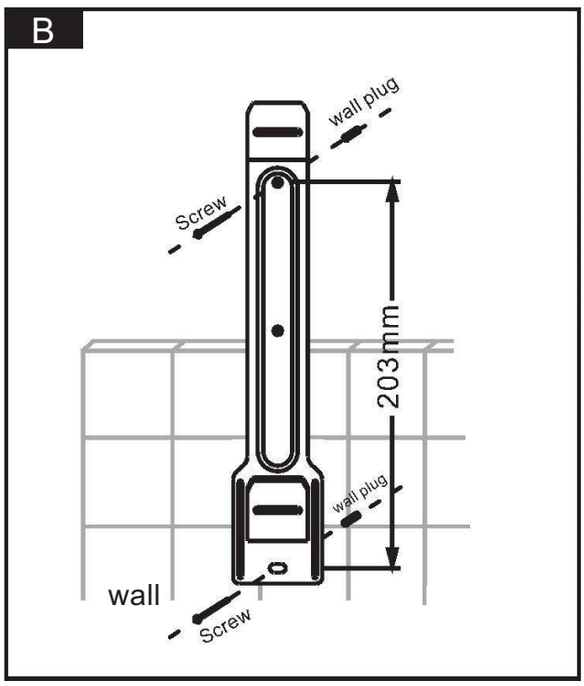
Exploded view of HOTRUN X water heaters, arrows refer to all major components

HOTRUN X11 (1&2-phase models)









Trouble Shooting Examples (Issues not covered by warranty)

1.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 is most likely due to air in the system, HOTRUN not cleared before switching on the electrical supply, or the mains incoming water pressure is too high, or air coming in from the main water supply after works done in the building and water supplies have been interrupted (often by others)
- An installed TMV (thermostatic mixing valve) doesn't operate correctly or isn't suitable in combination with a HOTRUN
- Dirt coming into the water heater from the cold-water supply has been caught inside the flow sensor.

Remedy

- Fix the water pressure problems; remove any flow restrictions from 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).
- Remove the TMV (thermostatic mixing valve) and set the built-in temperature limiter up in the HOTRUN (see separate set-up manual) Shut off the cold-water supply and disconnect flexible hose from the cold-water inlet fitting.
- Disassemble the flow sensor that sits inside the cold water fitting and clean out any debris from the black impellor of the flow sensor inside the cold-water inlet fitting.

Cause

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

Remedy

- The incoming water is very cold and/or the total flow is too high.
- The correct flow restrictor in the incoming cold water supply needs to be installed, using the correct flow rate in accordance with the kWatt setting of the water heater, see table 1 on page 7. The correct cold water flow rate to the HOTRUN can enable the user to reduce the flow rate and as a result will increase the outlet water temperature to the maximum of the temperature setting as programmed in the temperature limiter.

3.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.

4. 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 meter. This equates to approximately 30 kPa per floor plus the height of the roof tank.

Remedy
- Remove the aerator from the spout of the tap and use 'star' inserts in the spout instead of an 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 flexible hose to 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 10 years return & repair service. The warranty starts at the date of purchase as per the invoice. Warranty must be registered immediately after installation via https://www.elwa.com.au/warranty-registration. You can purchase extended warranty and remote monitoring via https://www.elwa.com.au/extended-warranty.

Elwa goods come with guarantees that cannot be excluded under the Australian Consumer Law.

You are entitled to receive a replacement or refund in case of a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or if the goods fail to be of acceptable quality and failure does not amount to a major failure.

If despite our extensive quality control, if complaints arise, you must first inform your installer to make sure any potential causes of problems (listed in the trouble shooting on pages 10-13) have been remedied.

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, you can fill in a service request form on our website https://www.elwa.com.au/Service-Request

Warranty Terms:

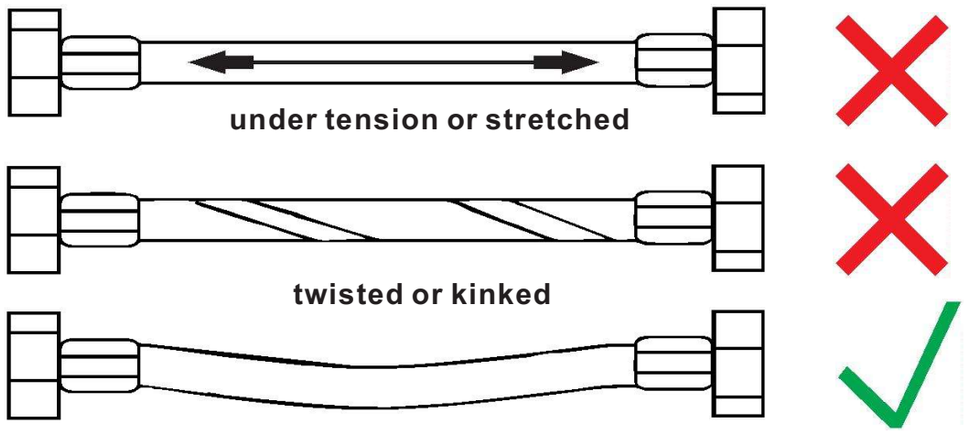
1. The warranty claim is valid only on presenting an original invoice, a copy of the certificate of compliance when the Hotrun was installed, stating the date of purchase, the name of the supplier/installer and the model & serial number of the Hotrun, name, address, all contact details of the owner, 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 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, 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 attending to a service call.

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.
9. If the Hotrun was not installed by a licensed tradesperson.
10. Damage to the Hotrun through normal wear and tear.
11. Damage to the Hotrun 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 Hotrun.

Flexible Connections



Hose must be tightened during assembly without tension and without twists

Product by:
Elwa Pty Ltd
Australia
Phone +61 (0)8 8377 6666
Email service@elwa.com.au
www.elwa.com.au

ELWA remains the right to adjust products in the future for various reasons.

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ELWA Australia	ELWA China	ELWA Europe
Adelaide, Australia Phone: +61(0) 8 8377 6666 www.elwa.com.au	Guangzhou, China Phone: +86 139 2386 0259 www.elwa.com.au	Amsterdam, The Netherlands Phone: +31 (0)20 436 1224 www.elwa.nl

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