

Revolutionary
Temperature
control and
limiter

Operating and installation instructions



HOTRUN-VE range

ELECTRONIC INSTANTANEOUS WATER HEATERS



saving energy and water

General information	3
Technical data	4
Safety instructions	4
Installation manual	5
Water connection	7
Electric connection	9
Initiation	10
Maintenance	10
Troubleshooting	10
Terms of warranty	11

**Electrical approvals to Australian/New Zealand standards AS/NZS 60335.2.35,
Certificate of approval number 11422**



AS/NZS 3498
40034

**Plumbing approvals to Australian/New Zealand standards AS/NZS 3498
Certificate of approval number 40034**

Thank you for choosing an Elwa instant water heater.

To ensure your own safety and that of others you need to read these installation and operating instructions before using the unit 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 instantaneous water heater.



This product should not be disposed with other household waste. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources.

Plumbing installation work, commissioning and maintenance of this appliance should only be undertaken by a licensed plumber and comply with the AS 3500:4 for plumbing and drainage.

Electrical connections must be made by a licensed electrician according to AS3000 for electrical installations



This water heater must be connected to a reliable earth connection at all times.

The electrical resistance of the water should not be less than 1300 Ω/cm^2 .

Your water supplier/company can inform you about the electrical resistance (specific resistance) of the water in your area. 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. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

This water heater is manufactured in accordance with applicable standards and has been tested by the relevant authorities. It has been certified to comply with CE declaration of electromagnetic conformity. The technical specifications of the unit are shown on the label of the water heater

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:

3 wall plugs and screws

2 flexible hoses approved for hot- and cold water connections

3 white blanking grommets

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 by opening a tap or valve connected to the hot water outlet.

The outlet water temperature depends on the following factors:

- The flow rate through the HOTRUN (can be controlled by a flow restrictor on the cold water inlet side) or the incoming flow into the Hotrun can be restricted by a flow regulating ball-valve.
- How far the hot water tap is actually opened
- The temperature of incoming cold water
- The mixing of hot- and cold water

When closing the hot water tap or when the flow drops below a minimum flow rate the heating will be stopped automatically. The performance of the Hotrun depends on its electrical capacity (kWatt rating) and also depends on the Voltage of the power supply.

A temperature rise of 25°C can be expected with the following (variable) flow rates:

Model Hotrun-	120VE	150VE	180VE	210VE	240VE
Number of outlets simultaneously	2	2	2	3	3
Hot water flow rate at $\Delta t=25K^1$ (l/min)(min~max)	2.5~8	2.5~9	2.5~10	2.5~12	2.5~14

The cold inlet water temperature effects the performance of the water heater, the higher the inlet water temperature, the more flow can be expected from the Hotrun water heater.

A pressure of 90kPa is the minimum required for correct operation.

Mounting instructions

The screws and plugs are supplied with the unit.

1. Mark the position of the plugs or screws according to the positional template.
2. Mount the unit using 2 screws for the straight bracket.
3. Fit the top screws allowing it to protrude approximately 2-3 mm. Slide the bracket onto the protruding screws and ensure that it is secured without movement.
4. Fit the last securing screw between the hot- and cold water connection.

Water connections

1. All plumbing work needs to comply with the AS 3500:4 for plumbing and drainage
2. The Hotrun-VE range of products can only be installed to a cold water supply operating pressure of minimal 90 kPa and maximum of 600kPa. The 90 kPa pressure must remain under full flow conditions. The minimum flow rate to operate these 3-phase models is 2.5 ltr/min. Connecting the Hotrun-VE to a low pressure tank/rainwater system without pressure pump it likely to fail, ask Elwa for advice. The minimum supply pressure needs to be secured at all times or the Hotrun can fail to switch on.
3. Make sure that any flow restrictors in shower heads and the aerators in tap outlets installed after the Hotrun are kept clean and make sure these cause minimal backpressure to enable the Hotrun to switch on and off. The outlet back-pressure needs to be 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.
4. Connect to the water pipe-work only with the supplied flexible hoses that are supplied with each Hotrun, hand tighten + max. ½ turn with a spanner. All Hotrun fittings and flexible hoses are Watermark approved and have a flat seal connection. By using the supplied flexible hoses you can avoid excessive tension on the Hotrun fittings. Damaging water connections during installation is not covered by warranty.
5. The fitting with the blue arrow (in) is for the cold water inlet and the one with the red arrow (out) is for the hot water outlet. Do not reverse the connections or the water heater!
6. Always use a ½" BSP (100% bore) ball valve in the cold water supply for service purposes.
7. **Important: After installation open the water tap to flush the device to release all air from the coil and check all connections before turning on the power supply to the water heater. Failing to do so shortens the life-span of the electric elements. Replacement of elements burning out during installation is not covered by warranty.**
8. The Hotrun-VE 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 plumbing code of Australia and a TMV is required for other applications (see fig.1). New legislation is underway for all other temperatures that will eliminate the need to install a TMV in all applications.
9. Further, any set temperature between 25 and 60°C as temperature limit can be programmed into the water heater not to be changed by the end user after installation.
10. Each water heater is supplied for exposed water and electrical connections. However, water and electrical connections can also come in from the wall through the back plate of the water heater (see template for positioning all connections prior to fitting the unit to the wall). To do so, remove the inlet and outlet water connections and use the supplied blanking grommets to close of the hole.
11. The Hotrun-VE range needs to be installed on a water supply with a maximum inlet water pressure of 600kPa. If it is not guaranteed the pressure will be limited to 600kPa a pressure limiter to 600kPa (or less) needs to be installed.

Installation of TMV

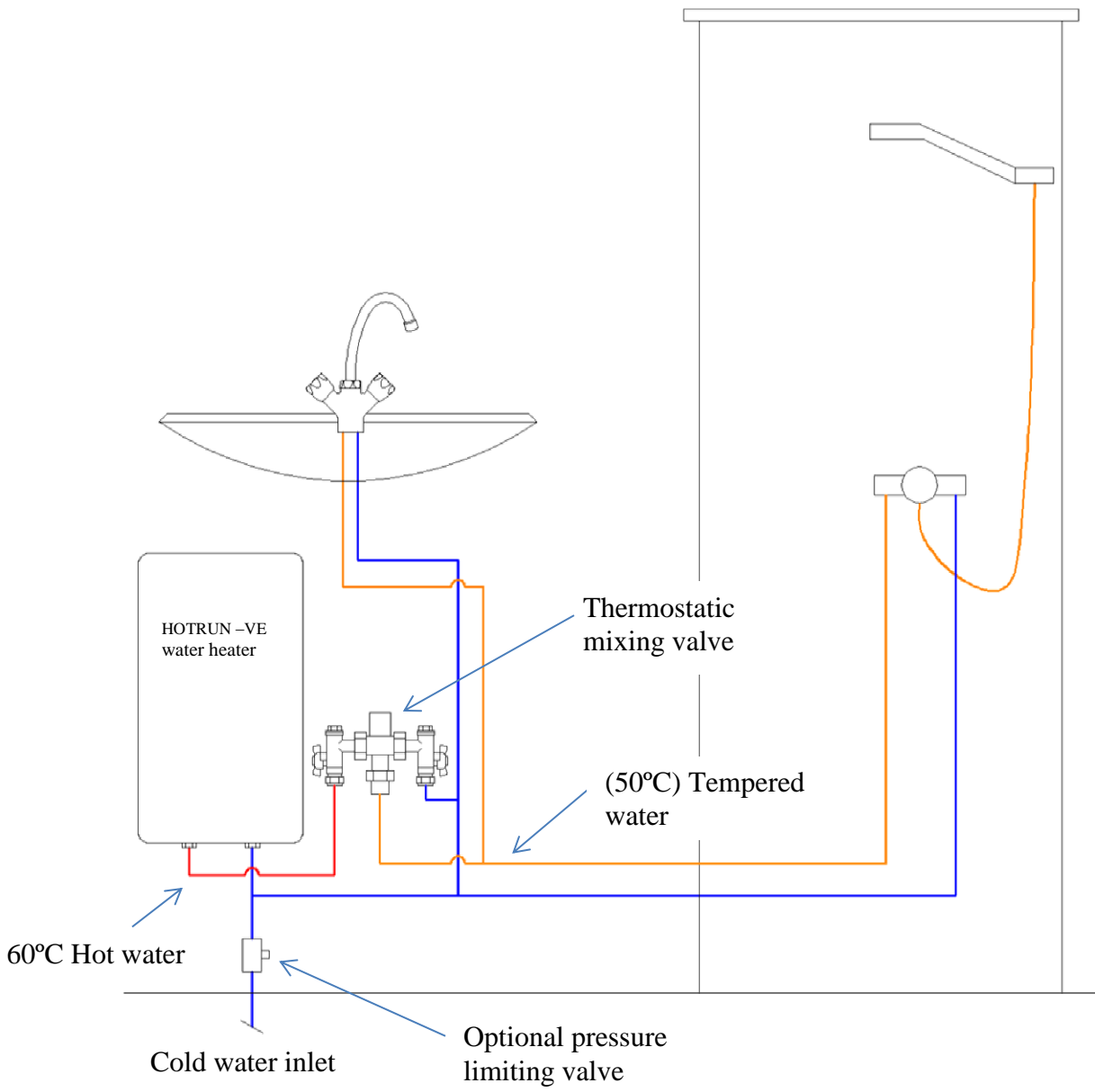
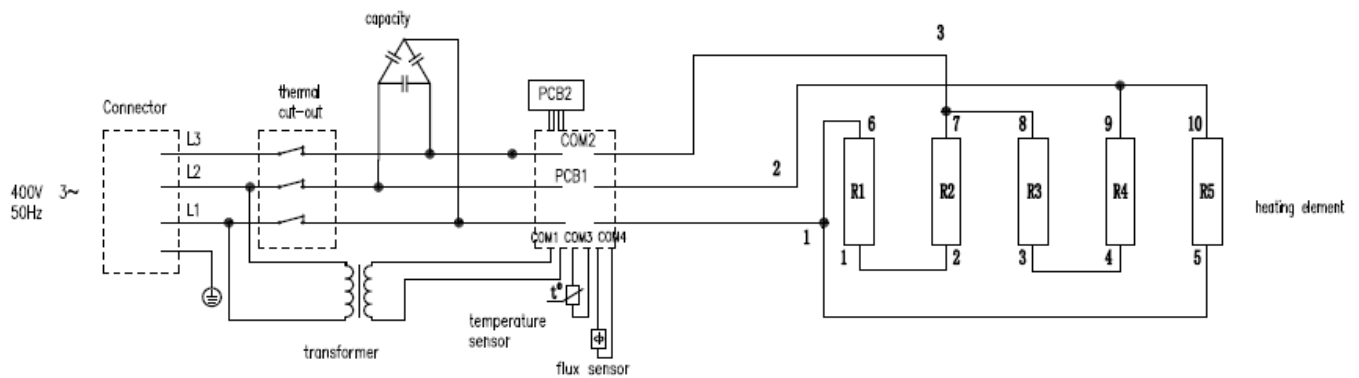


Figure 1

Electrical connections

1. Australian and New Zealand Standards wiring rules AS3000 and local guidelines must be adhered. A 3-phase power supply is required for all the Hotrun VE models.
2. It is required to provide a dedicated circuit direct from the switchboard to each Hotrun-VE.
3. The Hotrun-VE has to be connected according to the applicable wiring diagram
4. Check Earth resistance and make sure there is a proper earth continuity.
5. Fill the unit with water first and make sure there is no air left inside the heat exchanger, and only then, switch the power on.



Attention: Avoid overheating

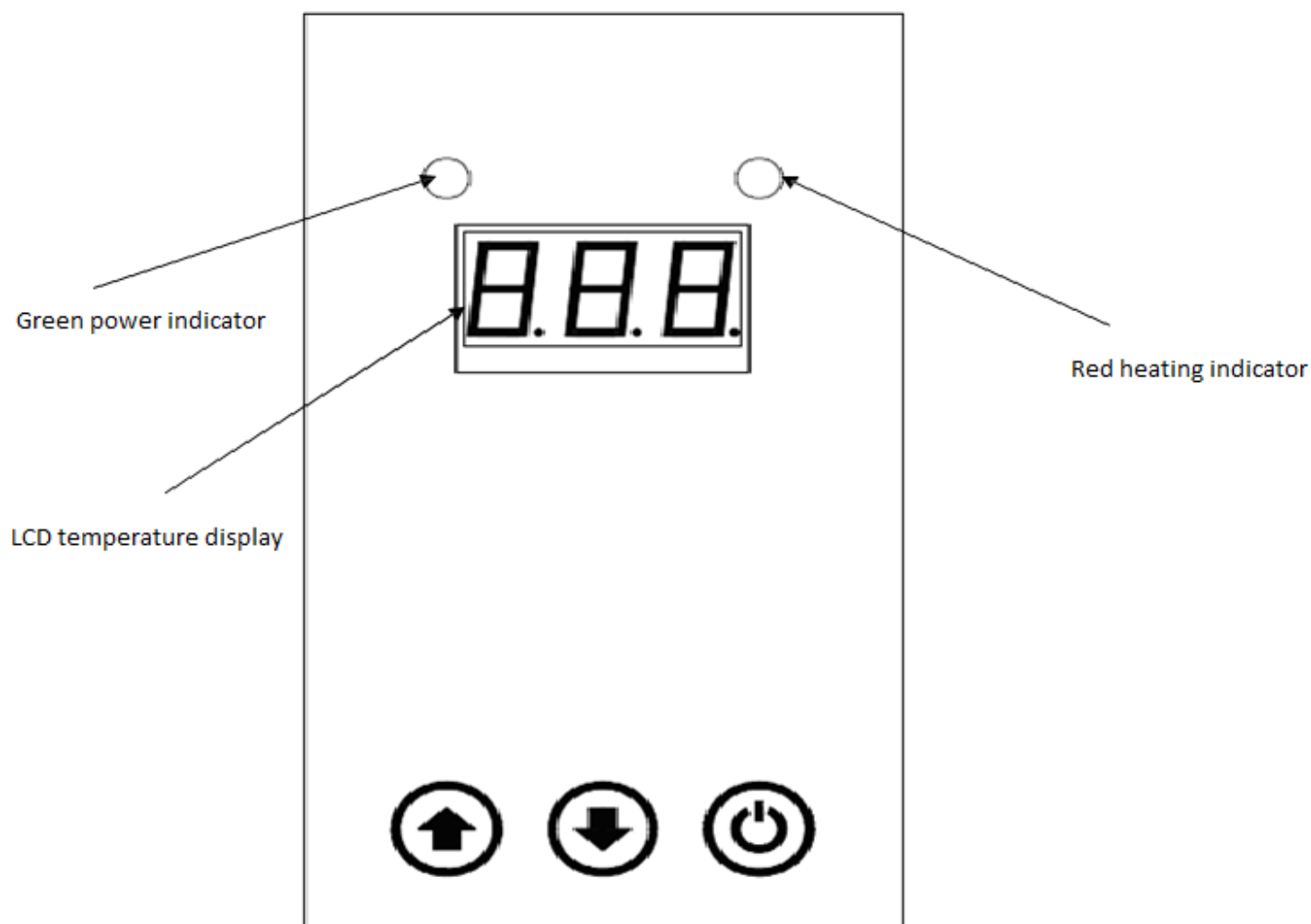
Fill the unit completely with water before turning on the mains power supply. For that purpose:

- Open the tap and wait until the water flows out from the spout without any air bubbles.
- Close the tap.
- Switch-on the mains supply.
- Hotrun is ready to use.

Operation the control panel

The green light is the power indicator; the red light is a heating indicator light

The LCD display shows the actual water temperature



Press (\uparrow or \downarrow) the key to set the temperature required. To change 1 degree push the buttons for a short time, a buzzer confirms every step. To quickly adjust the temperature in 5 degree steps hold the arrow button pushed in. The red indicator will flash while you set temperature, the display show the required temperature flashing before reach set temperature. On initial start-up and after a power disconnection the temperature setting will be 38°C and needs to be re-set to the required temperature again. The temperature ranges from 35°C to 60°C. If there is not enough water flowing through the water heater it will not turn on. If the temperature drops below 3°C, the screen will display LL and if over 80°C, it will display HH. The water heater will lock itself out and beep alarming.

Maintenance

Due to its advanced design the Hotrun does not require any maintenance.

A moist rag will do for cleaning the cover.

Scouring and dissolving agents are not suitable.

Regularly clean scale building up in shower heads and in tap-aerators

Troubleshooting

Initial observations

The adequate supply and pressure of the water (min. 90kPa).

- 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 is minimal 2.5 ltr/min (adequate for the installed Hotrun)

Problem example 1

- The Hotrun does not switch on when opening the tap fully.

Causes

- Usually attributed to water flow problems. Ensure the pressure on the cold water supply is more than 100kPa, while the Hotrun is in use and the flow rate at least 2.5 ltr/min
- Too much back pressure in tap-outlets or shower heads after the Hotrun causing lack of pressure differential over the Hotrun (backpressure through the cold)
- Maximum temperature/overpressure cut-out switch is activated. Due to air in the Hotrun not cleared before switching on the electrical supply.

Remedy

- Fix the water pressure problems; remove any flow restrictors in outlets.
- Switch the electric power supply off, check that there is no power on any of the terminals,
- Access to the thermal cut-out can only be conducted by a suitable qualified tradesperson to reset the push-button on cut-out switch.
- Seek electrical assistance to check power all the way to the elements

Problem example 2

- The water that is coming out of the Hotrun is not warm enough.

Cause

- The incoming water is very cold (below 12°C)
- The total flow is too high.

Remedy

- A flow restrictor can be installed or an inline additional ball valve in the cold water supply to the Hotrun can enable you to reduce the flow and so increase the temperature to the maximum temperature programmed in the temperature limiter

Problem example 3

- The heating of water stops when trying to set the required temperature to a colder setting.

Cause

- Aerator/restrictor in nozzle of outlet causing too much back pressure
- incorrectly balanced flow restrictor in the supply line.
- flow from the cold supply line is less than the requirements for the Hotrun

Remedy

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

Problem example 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 90 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.

If the tests above indicate a fault then contact Elwa Technical Support

Terms of warranty

On the provision that the installation instructions have been followed, Elwa gives a warranty of two years on the Hotrun. The warranty starts at the date of purchase.

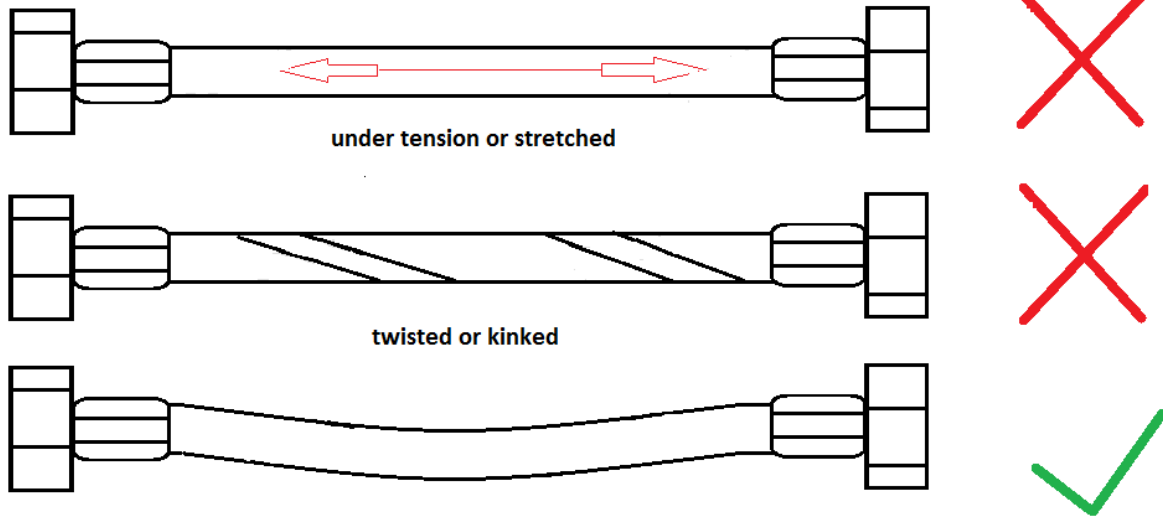
If despite our extensive products control complaints arise, you should inform your installer. Before you contact the installer, we advise you to read the directions for use. You can avoid needless discomfort and possible costs.

You can also fill in a service request form on our web-site www.elwa.com.au/service

Condition:

1. The warranty is valid only on presenting an original invoice, mentioning the date of purchase, the name of the supplier/installer and the type of the heater.
2. Elwa may void the warranty if the invoice is not legible.
3. If the production date is missing, the warranty will be voided.
4. The warranty will be voided from the moment the appliance has been tampered with or has been modified in any way.
5. Damage caused as a result of improper use, or faulty installations are not covered by this warranty.
6. Incorrect fitting, such as blocked filters in aerators and low supply pressure are not warrantable items and may result in a charge from contractor responsible for the call out service.
7. Warrantee is void if the supplied flexible hoses are not used for exposed water connections or when too much force has damaged the water connections inside the water heater when connected from the wall.

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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