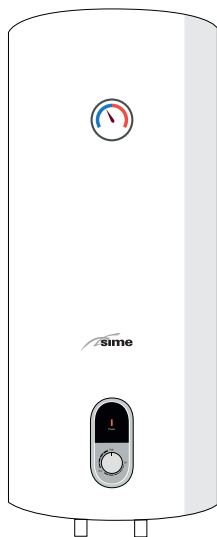




Electric water heaters

# LAGO

USER, INSTALLATION AND MAINTENANCE MANUAL



EN



It is  
compulsory  
to read the  
instructions.

Visit our  
website:  
[www.sime.it](http://www.sime.it)



Fonderie SIME S.p.A.

6328411 - 08/2024 - R5

TRANSLATION OF THE ORIGINAL ITALIAN INSTRUCTIONS



## WARNINGS

- After having removed the packaging, make sure that the supplied product is intact and complete in all its parts. If this is not the case, please contact the Dealer who supplied the product.
- The appliance must be used as intended by **Sime** who is not responsible for any damage caused to persons, animals or things, improper installation, adjustment, maintenance and improper use of the appliance.
- In the event of water leaks, disconnect the appliance from the mains power supply, close the water mains and promptly inform the authorised technical assistance centre.
- In order to ensure optimal efficiency of the appliance, **Sime** recommends performing maintenance/inspections on an **ANNUAL** basis.



## WARNINGS

- If the power cable is damaged, replace it with a cable ordered as a spare part with the same characteristics (type X). Assembly must be carried out by a qualified professional.
- If the water heater is not used for extended periods of time, turn the knob to the minimum temperature position.
- To prevent frost-related damages to the appliance, if the latter is disconnected from the mains power supply for extended periods of time, it must be emptied completely.
- The power cable must not come into contact with very hot parts. If this occurs, the electrical insulation could get damaged.
- Never open the appliance without having first disconnected the power supply to the appliance.
- First make the water connection and only then make the electrical connection.



## WARNINGS

- **All operators should** read this manual carefully in order to use the appliance in a safe and logical manner.
- **This manual** is an integral part of the appliance. It must therefore be stored with care for future reference and must always accompany the appliance whenever the latter is transferred or sold to another owner or user or is installed on another system.
- **Installation and maintenance** of the appliance must be carried out by an authorised company or by professionally qualified personnel, in accordance with the instructions contained in this manual. At the end of installation operations, these subjects must issue a statement of compliance with national and local technical standards and laws in force in the country where the appliance is used.



## WARNINGS

- **Fonderie SIME S.p.A.** reserves the right to make improvements to its products at any time without prior notice, without compromising their essential characteristics. The graphic illustrations and/or images in this document may show optional accessories that vary according to the country in which the appliance is used.
- **Any repairs on the appliance** must be carried out solely by professionally qualified personnel, using original spare parts only. Failure to comply with these instructions can jeopardise the appliance's safety and void the warranty with immediate effect.



## IT IS FORBIDDEN

- To allow children under the age of 8 to use the appliance. The appliance can be used by children at least 8 years old and by people with reduced physical, sensory or mental abilities, or who lack experience or the necessary knowledge, provided that they are supervised or have been instructed on how to use the appliance safely and understand the risks associated with it.
- To allow children to play with the appliance.
- To touch the appliance with bare feet or with any wet part of the body.
- To perform any technical interventions or cleaning without having first disconnected the appliance from the mains power supply.
- To modify the safety or adjustment devices without the necessary authorisation and instructions from the appliance's manufacturer.



## IT IS FORBIDDEN

- To pull, detach or twist the electrical cables coming out of the appliance, even if the latter is disconnected from the mains power supply.
- To expose the product to atmospheric agents. It is designed for working in a protected space.
- To disconnect the mains power supply from the appliance if the outdoor temperature could fall below ZERO (risk of freezing).
- To disperse the packaging material in the environment as it may be a potential source of danger. It must be disposed of according to the laws in force in the country where the appliance is used.

Dear Customer,  
Thank you for having purchased a **LAGO** storage water heater.

We suggest starting up the **LAGO** appliance within 30 days from the date of installation, by professionally qualified personnel, so that you can benefit from both the legal warranty and the conventional **Sime** warranty.

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## RANGE

MODEL	CODE
LAGO 50	8115600
LAGO 80	8115601
LAGO 100	8115602
LAGO 150	8115603

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## COMPLIANCE

The company declares that the **LAGO** electric water heaters conform to the essential requirements of the following European directives:

- Commission Regulation (EU) No. 814/2013
- Commission Regulation (EU) No. 812/2013
- Low Voltage Directive 2014/35/EU
- Electromagnetic Compatibility Directive 2014/30/EU



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## SYMBOLS



### WARNING

To indicate actions which, if not carried out correctly, can result in injury of a general nature or may damage or cause the appliance to malfunction; these actions therefore require particular caution and adequate preparation.



### CAUTION

To indicate particularly important and useful information.



### ELECTRICAL HAZARD

To indicate actions which, if not carried out correctly, could lead to injury of an electrical nature; these actions therefore require particular caution and adequate preparation.



### IT IS FORBIDDEN

To indicate actions which **MUST NOT BE** carried out.

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## CONTENTS

<b>1</b>	<b>MAIN CHARACTERISTICS</b>	<b>7</b>	<b>5</b>	<b>MAINTENANCE INSTRUCTIONS</b>	<b>16</b>
1.1	Description and identification of the most important components . . . . .	7	5.1	Resetting the thermostat manually . . . . .	16
<b>2</b>	<b>GENERAL INSTRUCTIONS AND RECOMMENDATIONS</b>	<b>8</b>	5.2	Power cable . . . . .	16
2.1	Preliminary advice . . . . .	8	5.3	Cleaning . . . . .	16
2.2	Supply . . . . .	8	5.4	General notes . . . . .	16
<b>3</b>	<b>INSTALLATION</b>	<b>9</b>	<b>6</b>	<b>TROUBLESHOOTING</b>	<b>17</b>
3.1	Wall mounting . . . . .	9	<b>7</b>	<b>SPECIFICATIONS</b>	<b>18</b>
3.2	Hydraulic connection . . . . .	10	<b>8</b>	<b>ERP DATA</b>	<b>18</b>
3.3	Components supplied with the electric water heater . . . . .	11	<b>9</b>	<b>REGULATIONS FOR OBSOLETE ELECTRIC AND ELECTRONIC EQUIPMENT</b>	<b>19</b>
3.4	Relief valve . . . . .	11			
3.5	Filling the appliance . . . . .	12			
3.6	Electrical connections . . . . .	12			
3.7	Safety limiter . . . . .	13			
<b>4</b>	<b>INSTRUCTIONS FOR USE</b>	<b>14</b>			
4.1	Start-up . . . . .	14			
4.2	Emptying through the safety valve . . . . .	14			
4.3	Temperature adjustment . . . . .	14			
4.4	Safety limiter components . . . . .	15			
4.5	External cleaning . . . . .	15			
4.6	Checking the correct operation of the safety valve . . . . .	15			
4.7	Emptying the appliance . . . . .	15			

# 1 MAIN CHARACTERISTICS

## 1.1 Description and identification of the most important components

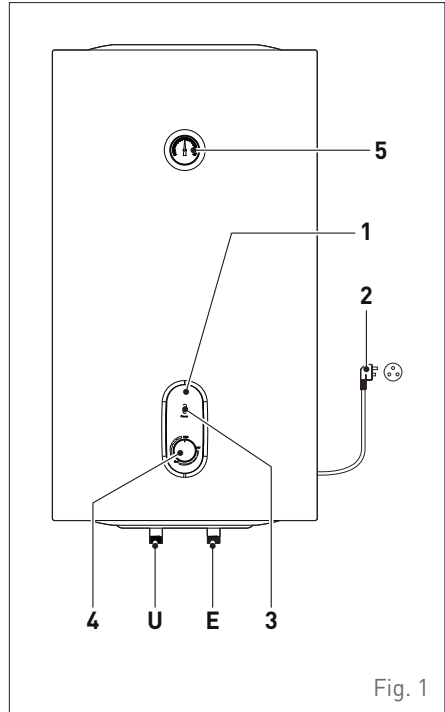
These are the appliance's main characteristics:

- enamelled steel storage tank
- compact personalised design, in line with the latest market trends
- maximum protection against corrosion and electrolytic reactions, guaranteeing a longer working life of the tank
- high resistance to chemical reactions due to water-soluble salts
- no alteration of the water's taste and purity
- thermal insulation layer with high energy saving and temperature maintenance capacity: the use of resin free of amine fluorides on the entire rubber structure of the thermal insulation layers ensures good temperature preservation performances and minimises heat losses. Even in case of a power outage, the appliance will maintain the temperature and continue to deliver hot water for 48 hours.

Moreover, the magnesium anode attracts the salts dissolved in the water, increasing its resistance to corrosion.

Low energy consumption, thanks to the use of the CFC-free polyurethane foam inserted in the space between the storage tank and the water heater's outer shell, thus reducing the loss of heat of the hot water in the tank.

The outer surface of the water heater is coated with a material that is highly resistant to the harshest external conditions, so as to avoid damaging the appliance's outer appearance.



- 1 Control panel
- 2 Power plug
- 3 Power ON light
- 4 Temperature regulation thermostat
- 5 Thermometer

- E** Domestic hot water inlet  
**U** Domestic hot water outlet

## 2 GENERAL INSTRUCTIONS AND RECOMMENDATIONS

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### 2.1 Preliminary advice

The installation is performed by the customer.

The manufacturer or the importer shall not be held liable for damages caused by incorrect installation or failure to observe the instructions contained in this manual and, in particular, for the following cases:

- the installation and maintenance of the appliance must be carried out by qualified personnel, in conformity to the applicable regulations and in compliance with the instructions contained in the manual
- the electrical connection must be made in conformity to the specifications contained in this manual
- it is necessary to verify that the storage tank is full of water before making the connection to the mains power supply
- there must not be any water leaks in the connections before making the connection to the mains power supply
- it is necessary to use the accessories supplied with the appliance
- the water heater must be configured for domestic use (hairdresser shops, gymnasiums and similar environments fall under industrial use)

### 2.2 Supply

- **LAGO**
- Warranty certificate (valid for Spain only)
- 1 safety valve and discharge pipe
- 2 PVC extensions size 1/2"
- 2 screws and wall plugs
- 1 "Environmental labelling of packaging" sheet
- 1 energy efficiency label
- User, installation and maintenance manual

### 3 INSTALLATION

(ONLY FOR QUALIFIED PERSONNEL)

#### 3.1 Wall mounting

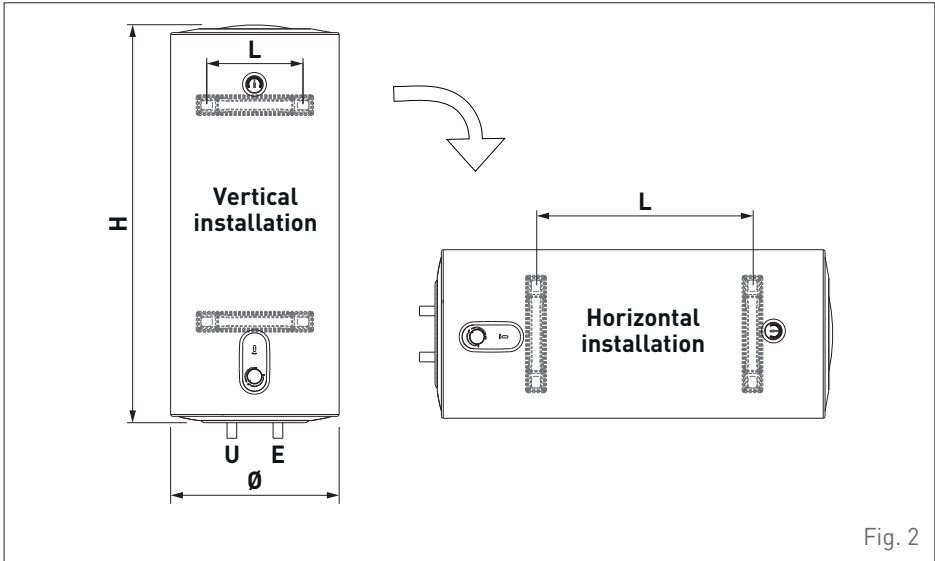


Fig. 2

Dimensions	Capacity (litres)				
	50	80	100	150	
H (mm)	888	860	1020	1380	
L (mm)	Vertical installation	185	210	210	210
	Horizontal installation	470	327	487	856
Ø (mm)	365	460	460	460	
E Domestic hot water inlet	1/2"	1/2"	1/2"	1/2"	
U Domestic hot water outlet	1/2"	1/2"	1/2"	1/2"	

After verifying that the wall is able to withstand the weight of the fully loaded appliance, make sure that the appliance is attached securely. (See "Fig. 3").

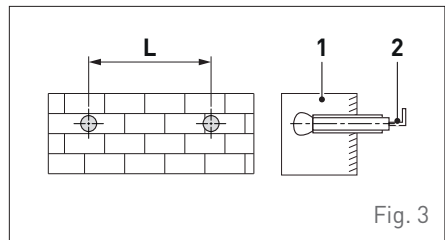


Fig. 3

- 1 Wall
- 2 Expansion bolt

### 3.2 Hydraulic connection

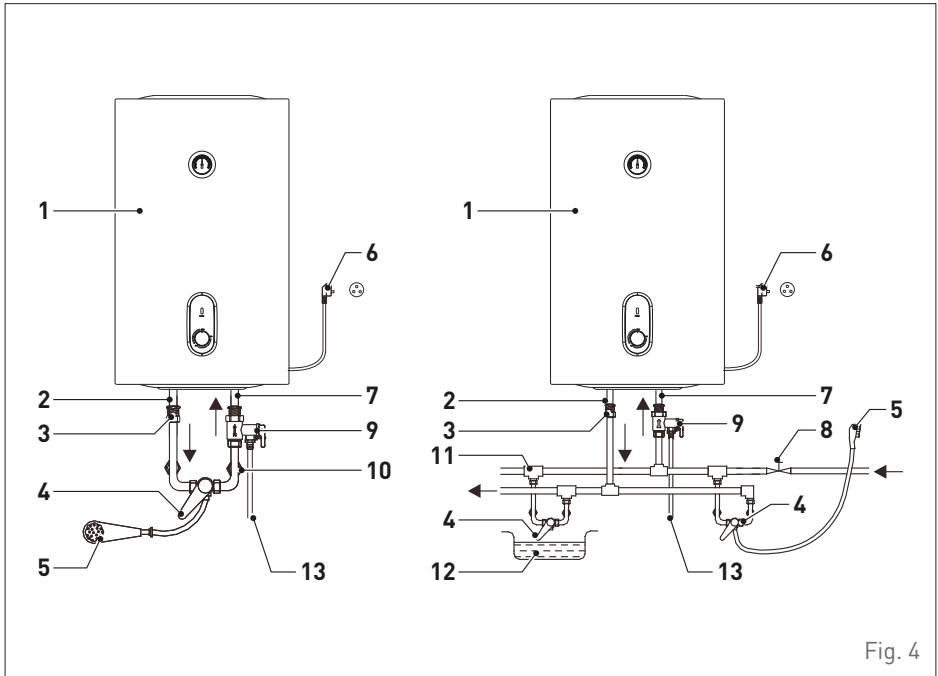


Fig. 4

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>1 <b>LAGO</b></li> <li>2 Domestic hot water (DHW) outlet</li> <li>3 DHW outlet pipe coupling</li> <li>4 DHW mixing valve</li> <li>5 Shower head</li> <li>6 Power cable</li> <li>7 Domestic cold water inlet</li> <li>8 Water inlet valve</li> </ul> | <ul style="list-style-type: none"> <li>9 Safety valve (see "Fig. 5")</li> <li>10 Copper screw of the water inlet bush</li> <li>11 Pipe coupling</li> <li>12 Washbasin</li> <li>13 Safety valve discharge pipe</li> </ul> |
|--|--|

The water inlet and outlet are specifically marked to distinguish them: the inlet is for cold water (IN) and the outlet is for hot water (OUT). We recommend installing the product near a hot water withdrawal point to avoid heat losses due to the excessive length of the pipe, and also near the dis-

charge pipe, so as to facilitate drainage of the tank.

Connect the 2 PVC extensions 1/2" supplied to the water inlet and outlet pipes.

### 3.3 Components supplied with the electric water heater

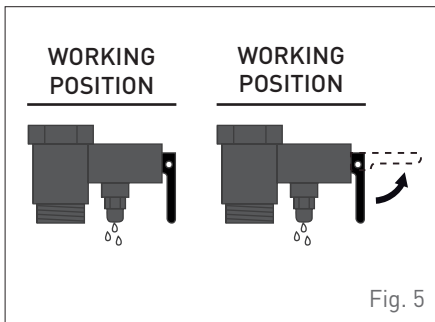
To benefit from the warranty, it is necessary to correctly install the anti-electrolysis connections. Should this not occur, the tank will have a shorter working life and the appliance will not be covered by the warranty, as failing to apply these components qualifies as incorrect installation.

### 3.4 Relief valve

It is necessary to install the safety valve supplied with the appliance.

It must be regulated to a maximum pressure value equal to 0,80 Mpa (8,0 Bar). Upon installation, a discharge pipe must be placed on the valve opening so that, in the event of excessive pressure, the valve can drip and thus lower the pressure in the internal part of the storage tank. Check that the pipes are not obstructed so as to avoid overpressure.

- the water heater is drained by moving the lever of the safety valve
- the pipe must be installed with a continuous inclination and must not be bent, so that the water can flow out freely
- the discharge pipe must be installed in environments that do not run the risk of freezing
- connect the domestic cold water pipe to the safety valve: it is possible to use the flexible PVC hose supplied with the appliance
- verify that the pressure of the water delivered does not exceed 3 bar. If this value is exceeded, water could leak from the valve when the water heater is operating; to overcome this problem, a pressure reducing valve ("Fig. 5") must be installed.



- Install the safety valve on the cold water fitting, marked with a blue-coloured ring, in the lower part of the water heater
- the valve must be opened periodically (at least twice a month) to prevent limescale from building up and blocking it

### 3.5 Filling the appliance



#### **WARNING**

Do not connect the water heater to the mains power supply unless it has been filled completely, so as to avoid damaging the heating element.

- Open the shut-off valve to help water flow into the water heater
- open a hot water tap (bathroom, sink, etc.) to bleed the air inside the water heater and the circuit. The water heater will be full when no more air comes out of the open hot water tap but only water
- check that there are no eater leaks from any of the system's connections.



#### **CAUTION**

The electrical connection must be made only once these operations have been completed.



#### **CAUTION**

If the water has a hardness value above 20° TH (where 1° TH = French degree = 10 mg CaCO<sub>3</sub> / l), a water softener must be installed to reduce limescale build-up inside the water heater, so as to preserve the efficiency of the electrical heating element and of the water safety unit.

### 3.6 Electrical connections

Check that the mains voltage matches the values indicated on the appliance and that the system is able to withstand the power output of the heating element fitted inside the electric water heater.

A three-pin single-phase power socket, conforming to EU specifications, must be used and inserted in the relevant earthing connection; it must be used exclusively for the connection.

### 3.7 Safety limiter

The appliances are equipped with a thermostat with a safety limiter, in conformity to the applicable European regulations. The limiter intervenes in the event of abnormal heating of the water, by automatically disconnecting the system. The system is restarted manually (see “Fig. 6”).



#### CAUTION

The operation must be carried out by qualified personnel.

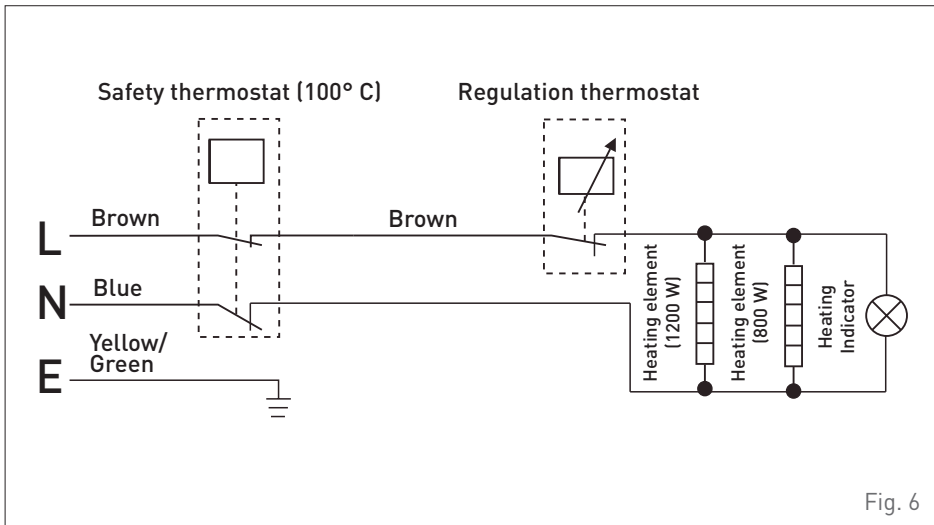


Fig. 6



#### CAUTION

Do not connect the appliance to the mains unless it is completely full of water.



#### CAUTION

Before fitting the cover of the water heater’s control panel, verify that the safety device of the thermostat is in the correct position. There is a small button that might have tripped. In this case, reset the thermostat so that the appliance can work properly.

## 4 INSTRUCTIONS FOR USE

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### 4.1 Start-up

Before connecting the appliance, check that the electrical connections have been made correctly and that the water heater is full of water. The water heater is equipped with a thermostat for regulating the water temperature. The indicator light remains lit while the heating element is working and heating the water.

### 4.2 Emptying through the safety valve

It is normal for the pressure to increase while the water heater is heating water; the water expands and, if the pressure cannot be absorbed by the system, it will have to be reduced. This is done through the safety valve opening, in order to prevent the excess pressure from remaining inside the water heater.

### 4.3 Temperature adjustment



#### CAUTION

Adjusting the temperature through the thermostat optimises energy consumption on the basis of the desired level of comfort. At all events, to prevent Legionnaires' disease, it is preferable not to keep the water at an excessively low temperature.

We recommend observing the following indications:

- the temperature of the water inside the water heater must be above 50°
- if the appliance is not used for an extended period of time, before the thermostat is used again it must be adjusted to its maximum value for at least 24 hours. Drain the water from the water heater from different points and at different times
- thoroughly clean the taps and showers to prevent limescale build-up

The thermostat on the control panel can be used to adjust the temperature through the + or - buttons to increase or decrease it accordingly.

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#### **4.4 Safety limiter components**

The electric water heater is equipped with a safety thermostat, in conformity to the applicable European regulations.

The safety system intervenes in case of abnormal overheating of the water, by automatically interrupting the current delivered to the electric heating element. If this occurs, a small button will trip and rise. To reset the thermostat and get it working again, this button must be pressed down using a pointed object.

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#### **4.5 External cleaning**

Clean the outer body with a cloth and neutral detergent, without using organic solvents or abrasive products (alcohol, petrol, turpentine, etc.).

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#### **4.6 Checking the correct operation of the safety valve**

The safety valve must be checked regularly to avoid overpressure inside the tank, which could damage the storage tank's enamel coating, and to ensure safe use of the appliance. During the inspection, remove any traces of limescale that may have accumulated over time.

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#### **4.7 Emptying the appliance**

The electric water heater should be emptied completely if it is not used for extended periods of time; to do this, proceed as follows:

- disconnect the appliance from the mains power supply
- check that the water inside the storage tank is not too hot. If the temperature is very high, open a hot water tap and mix with cold water to lower the temperature
- shift the safety valve lever to the "empty" position (open)
- the valve must be connected to a drain through a pipe
- attach the appliance only when it has been filled with water once again.

## 5 MAINTENANCE INSTRUCTIONS



### CAUTION

Maintenance and repairs may only be carried out by professionally qualified or authorised personnel, using original spare parts. Before carrying out any repairs or maintenance work, the appliance must be disconnected from the mains power supply.

### 5.1 Resetting the thermostat manually

Once the causes that activated the thermostat safety devices have been removed, the thermostat must be reset as follows:

- disconnect the appliance from the mains power supply
- remove the knob (1)
- remove the screen-printed plate (2)
- loosen the 2 upper screws of the panel and remove the latter from its seat (3)
- rotate the panel (4) and press the reset button (5), while taking care not to detach the cables
- perform the same operations in reverse order to remount the components, while being careful with the cables

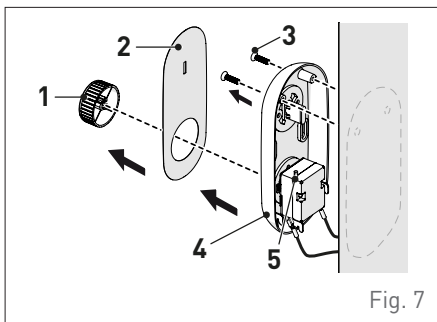


Fig. 7

### 5.2 Power cable

Periodically check (at least once a year) that the connection between the power plug and the power outlet is in perfect condition and that both devices are reliable during the heating phase. Check that the power plug is properly connected to earth.

### 5.3 Cleaning

To ensure the correct operation of the water heater, and also to lower energy consumption, we recommend removing limescale deposits from the appliance's heating element. Cleaning of the heating element will depend on the water's hardness.

To this aim, observe the necessary procedure to empty the water heater. After emptying the storage tank, dismantle the plate using an adequate spanner and remove the limescale deposits that have built up near the heating element, without damaging the latter.

### 5.4 General notes

Use the necessary tools for each operation. We recommend always replacing the seals.

Always use original spare parts.

If the heating element needs to be replaced, check the following:

- the heating element must be very smooth, like the seals
- the thermostat must be housed in the heating element sheath and correctly connected to the heating element terminals
- the terminals of the indicator light must be properly fitted in their seat
- the storage tank must be full of water before proceeding with the connection to the mains power supply

## 6 TROUBLESHOOTING

ANOMALY	POSSIBLE CAUSES	REASONS AND SOLUTIONS
The indicator light fails to light up (but hot water comes out)	<ul style="list-style-type: none"> <li>- Indicator light not connected</li> <li>- Indicator light blown</li> </ul>	<ul style="list-style-type: none"> <li>- Connect the light to the thermostat or replace it</li> </ul>
The indicator light fails to light up (there's no hot water)	<ul style="list-style-type: none"> <li>- Lack of current</li> <li>- The thermostat safety device has intervened</li> </ul>	<ul style="list-style-type: none"> <li>- Restore the power supply</li> <li>- Reset the thermostat</li> <li>- Contact authorised personnel</li> </ul>
The indicator light does not switch off, it is always lit (little hot water)	<ul style="list-style-type: none"> <li>- Water tap open</li> <li>- Possible water leak from the circuit</li> </ul>	<ul style="list-style-type: none"> <li>- Close the hot water tap. Contact authorised personnel to service the system</li> </ul>
The indicator light does not switch off, it is always lit (there's no hot water)	<ul style="list-style-type: none"> <li>- The thermostat terminals are not connected to the heating element</li> <li>- The heating element does not work</li> </ul>	<ul style="list-style-type: none"> <li>- Dismantle the heating element and check the connections</li> <li>- Check the heating element and replace it, if necessary</li> </ul>
The indicator light switches off when the water heater is turned on, the main switch at home automatically trips	<ul style="list-style-type: none"> <li>- Heating element anomaly (it has blown or is worn out), the thermostat safety device might have tripped</li> </ul>	<ul style="list-style-type: none"> <li>- Disconnect the appliance and contact the Service Centre</li> </ul>
The water heater is noisy	<ul style="list-style-type: none"> <li>- High water hardness</li> </ul>	<ul style="list-style-type: none"> <li>- Excessive limescale build-up on the heating element</li> </ul>
Dripping of the safety valve	<ul style="list-style-type: none"> <li>- Internal system pressure exceeding 8 bar</li> </ul>	<ul style="list-style-type: none"> <li>- The system does not absorb the water's expansion</li> <li>- Install an valve capable of withstanding the system's pressure, an expansion vessel or a pressure reducing valve</li> </ul>
Water leak	<ul style="list-style-type: none"> <li>- With rust</li> <li>- With condensate</li> <li>- From the connections</li> <li>- From the heating element</li> </ul>	<ul style="list-style-type: none"> <li>- Storage tank subject to corrosion</li> <li>- Tank too cold</li> <li>- Check the hoses and the connections</li> <li>- Check the seals</li> </ul>

## 7 SPECIFICATIONS

DESCRIPTION	LAGO			
	50	80	100	150
Code	8115600	8115601	8115602	8115603
Rated voltage	220-240V	220-240V	220-240V	220-240V
Rated frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Rated pressure	<b>MPa</b>	0,8	0,8	0,8
Rated water temperature	<b>°C</b>	75	75	75
Protection rating		IPX4	IPX4	IPX4
Rated power	<b>W</b>	2000	2000	2000
Rated current	<b>A</b>	8.7	8.7	8.7
Capacity	<b>l</b>	50	80	100
Heat output	<b>%</b>	>90	>90	>90
Structure	Hermetically sealed water storage tank			
Installation method	Suspended			
Energy efficiency class	C	C	C	C
DHW capacity	M	M	L	L
Weight	<b>kg</b>	22	29	34

## 8 ERP DATA [DIRECTIVES (EU) 812/2013 AND 814/2013]

DESCRIPTION	LAGO			
	50	80	100	150
Code	8115600	8115601	8115602	8115603
Stated load profile	M	M	L	L
Energy efficiency class for water heating	C	C	C	C
Energy efficiency of water heating (nwh)	<b>%</b>	37,5	37,9	37,6
Annual electricity consumption (AEC)	<b>KWh</b>	1370	2701	2719
Thermostat temperature regulations, how it appears on the market	<b>°C</b>	75	75	75
Sound power (LWA)	<b>dB</b>	15	15	15
Daily electricity consumption (Qelec)	<b>kWh</b>	6,358	12,493	12,600
Mixed water at 40°C (V40)	<b>l</b>	98,0	155,3	195,7

## 9 REGULATIONS FOR OBSOLETE ELECTRIC AND ELECTRONIC EQUIPMENT (DIRECTIVE 2012/19/EU - WEEE)



At the end of their life span, the appliance and electrical and electronic devices coming from households or classifiable as household waste, must be delivered to appropriate waste collection systems, in accordance with the law and with Directive 2012/19/EU. This product was designed and manufactured for minimising its impact on the environment and on human health, nonetheless it contains components that could be detrimental if managed improperly. The symbol (crossed-out wheeled bin) depicted here and also appearing on your product indicates that the appliance at the end of its life must be treated in accordance with the law and disposed of as electrical and electronic waste. Before delivering the appliance for its disposal, consult the applicable provisions of the laws in force in the country where the appliance is used and obtain information on the authorised waste collection facilities, by contacting the local offices of the place where the appliance is installed.



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