



Zip Instantaneous Hot Water

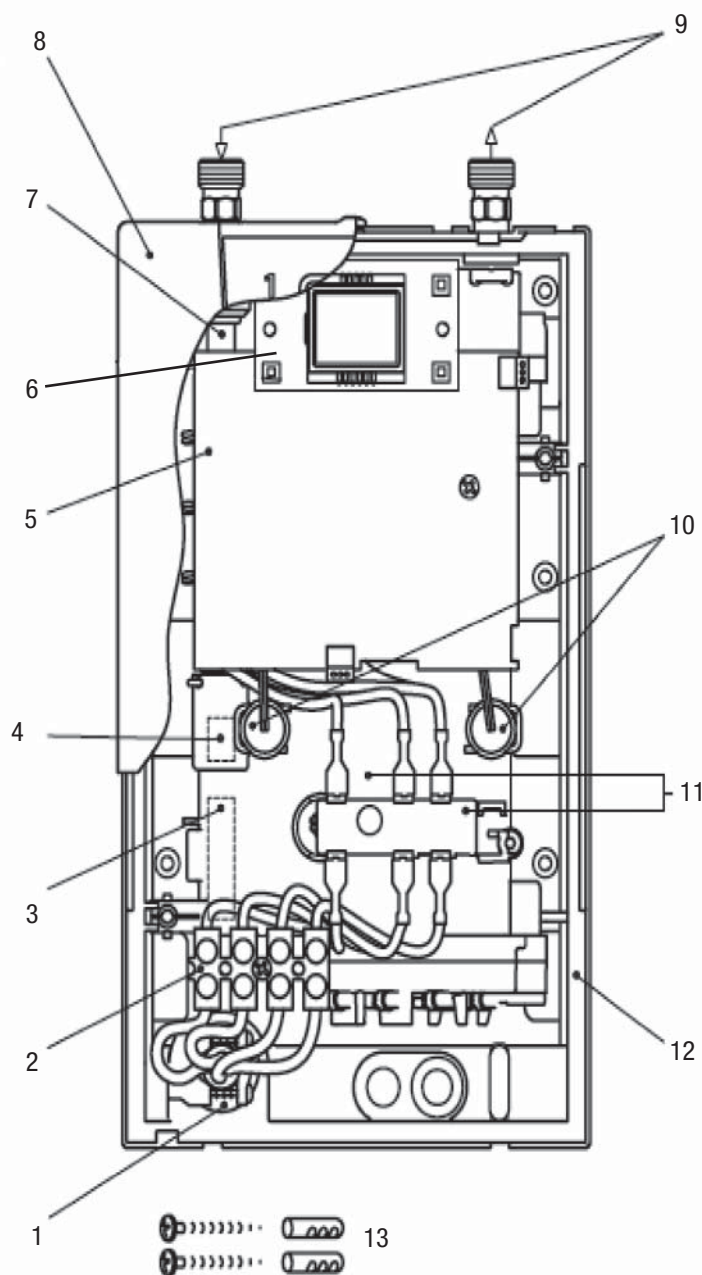


Electronically controlled instantaneous water heater
CEX-U: 27921 - 50 °C and 27920 - 60 °C models
Installation instructions

For 50 °C models, the appliance delivers water not exceeding 50 °C in accordance with AS3498.

1. Overview

When ordering spare parts, please always specify the appliance model and serial number.



Pos.	Part.-No.	Description
1		Grommet
2		Connection terminal
3	801110	Flow sensor
4	801101	Non-return valve
5	801111	PCB CEX / CFX
6	801112	CEX-U control panel
7		Inlet pipe
8		CEX-U cover

Pos.	Art.-No.	Description
9		Connection piece 1/2"
10		Thermal sensor set
11		Heating element
12		Bottom part
13	801113	Screws and dowels

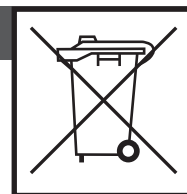
Parts in **Bold Type** are available as **Spare Parts**.
Other parts are available on request.

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2. Environment and recycling

This symbol on the products and / or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take these products to designated collection points. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product. Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation. If you are a business user and you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information. This symbol is only valid in the European Union.



3. Safety instructions

Installation, initial operation and maintenance of this appliance must only be conducted by an authorised professional, who will then be responsible for adherence to applicable standards and installation regulations. We assume no liability for any damages caused by failure to observe these instructions.

- Do not use the appliance until it has been correctly installed and unless it is in perfect working order.
- The appliance is suitable but not limited to domestic use and similar applications inside closed, frost-free rooms, and must only be used to heat potable water from mains supply.
- The appliance must never be exposed to frost.
- The appliance must be earthed at all times.
- The minimal specific water resistance must not fall below the value stated on the label.
- The maximum water pressure must not exceed the value on the label.
- Before commissioning for the first time and each time the appliance is emptied (e.g. due to work on the plumbing system, if there is a risk of freezing or in case of maintenance), the appliance must be vented correctly in accordance with the instructions in this manual.
- Do not remove the front cover under any circumstances before switching off the mains electrical supply to the unit.
- Never make technical modifications, either to the appliance itself or the electrical leads and water pipes.
- Pay attention to the fact that water temperatures in excess of approx. 43 °C are perceived as hot, especially by children, and may cause a feeling of burning. Please note that the fittings and taps may be very hot when the appliance has been in use for some time.
- Water inlet temperature must not exceed 70 °C.
- In case of malfunction, disconnect the fuses immediately. In case of leaks, cut off the cold water supply instantly. Repairs must only be carried out by the customer service department or an authorised professional.
- This appliance must not be used by any person (including children) with limited physical, sensorial or mental abilities or failing experience and/or knowledge unless they are supervised by a person responsible for their safety or received instructions about how to use the appliance. Children should be supervised in order to make sure that they do not play with the appliance.



4. Technical specifications

Model	CEX-U	
Part no.	27921 - 50 °C models 27920 - 60 °C models	
Rated capacity / rated current	11..13,5 kW (16..19,5 A)	
Chosen capacity @ 400V	11 kW (16 A)	13,5 kW (19,5 A)
Electrical connection	3/PE 380..415 V AC	
Min. required cable size ³⁾	See note 3)	
Hot water (l/min) max. at $\Delta t = 25$ K	4,8	5,8 ¹⁾
Rated volume	0,3 l	
Type	Pressure type 1000kPa (10 bar)	
Heating system	bare wire heating system IES [®]	
Required spec. water resistance @ 15 °C Spec. electrical conductivity	$\geq 1000 \Omega\text{cm}$ $\leq 100 \text{ mS/m}$	
Inlet temperature	≤ 70 °C	
Flow rate to switch on – max. flow rate	2,0 – 5,0 l/min ²⁾	
Pressure loss	20kPa (0,2 bar) at 2,5 l/min 130kPa (1,3) bar at 9,0 l/min	
Temperature range	20 °C – 50 °C (50 °C models) 20 °C – 60 °C (60 °C models)	
Water connection	G 1/2"	
Weight (when filled w. water)	2,7 kg	
VDE class of protection	I	
Type of protection / safety	IP24	

1) Flow rate limited to achieve optimum temperature rise

2) Without flow regulator

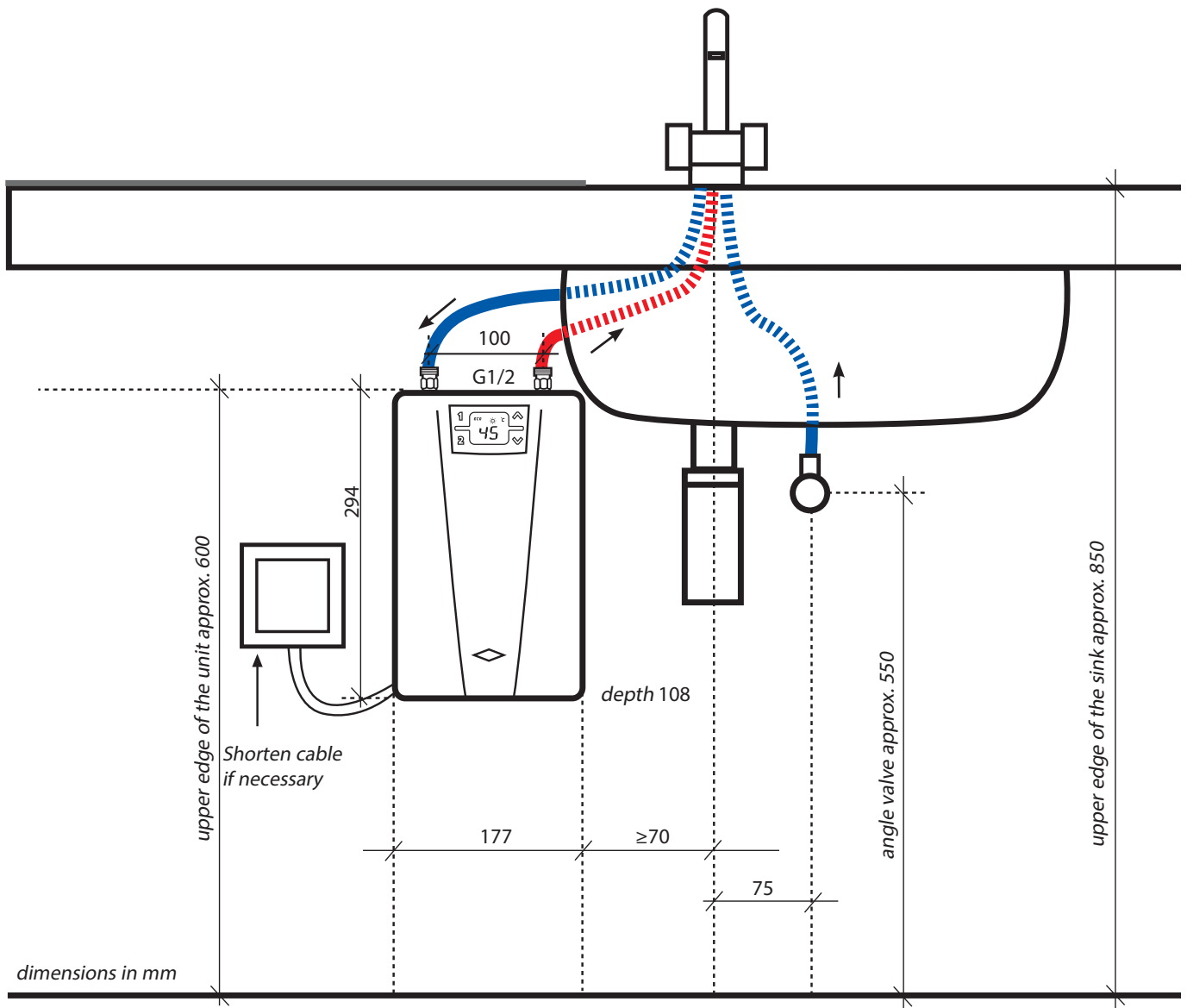
3) The cross sectional area of the connection cable must be in accordance with the power rating of the appliance and the specific requirements of AS/NZS 3000.

5. Typical installations

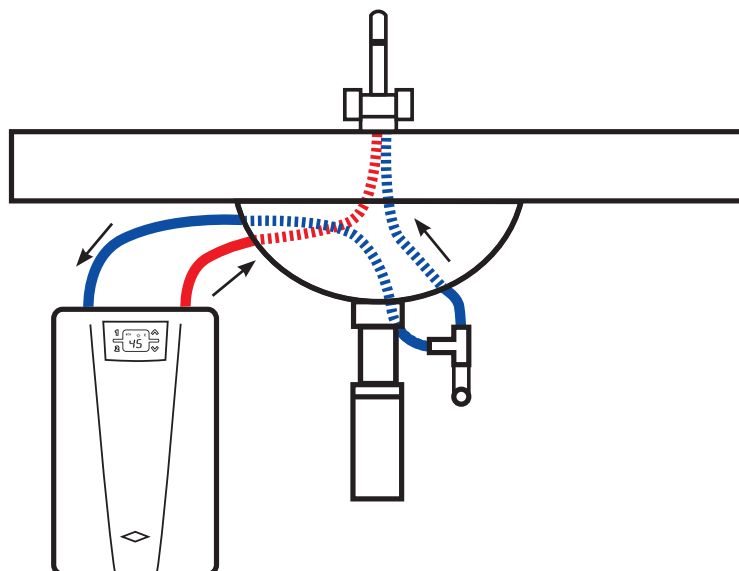


5. Typical installations

Example of an open-outlet installation with special tap:



Example of a closed-outlet installation:



6. Installation

The following regulations must be observed:

- Installation must comply with all statutory regulations, AS/NZS 3000, AS/NZS 3500, as well as those of the local electricity and water supply companies.
- The specifications on the rating plate.
- Technical specifications.
- These instructions must be read and fully understood before commencing the installation. If in doubt, or in need of further guidance please ring Zip on 1800 638 633.
- Zip Instantaneous Hot Water heaters must be installed by a competent person familiar with electric instantaneous water heaters.
- Zip Instantaneous Hot Water heaters must be installed according to the specification on the rating plate and the technical specifications.
- The appliance must be permanently connected to the electrical supply through an isolation switch as per AS/NZS 3000.
- To protect the appliance, a circuit breaker must be fitted with a rating suitable for the nominal current of the appliance.
- The cross sectional area of the connection cable must be in accordance with the power rating of the appliance and the specific requirements of AS/NZS 3000.
- Take care to protect the wiring from damage during installation and ensure that the wiring is not directly accessible after installation.
- Check that the power supply is switched off prior to electrical connection.
- **This appliance must be earthed.**
- **For 50 °C models**, the appliance delivers water not exceeding 50 °C in accordance with AS3498.
- **For 60 °C models**, the appliance may be able to be used with a Thermostatic Mixing valve or where serving a fixture that does not require temperature limitation such as a commercial Kitchen sink or Cleaners sink. Refer to AS/NZS 3500.4..

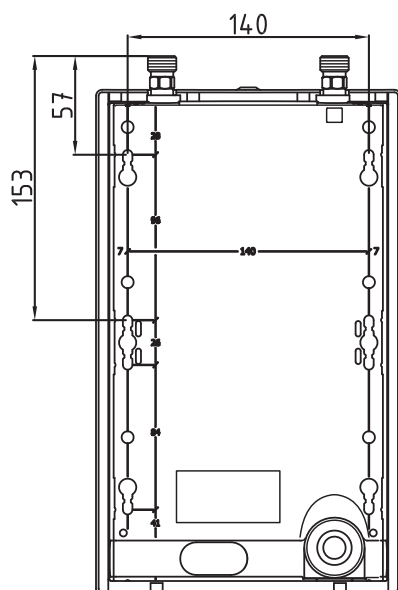
Installation site

- Appliance must only be installed in frost-free rooms. Never expose appliance to frost.
- The Appliance is designed for wall mounted installation and has to be installed with water connectors upwards.
- The appliance complies with protection class IP 24.
- In order to avoid thermal losses, the distance between the instantaneous water heater and the tapping point should be as small as possible (< 2m).
- For maintenance work, a shut-off valve should be installed in the supply line. The appliance must be accessible for maintenance work.
- The hot water pipes must be thermally insulated.
- The specific resistance of the water must be at least 1100 Ωcm at 15 °C. The specific resistance can be asked for with your water supply company.

6. Installation

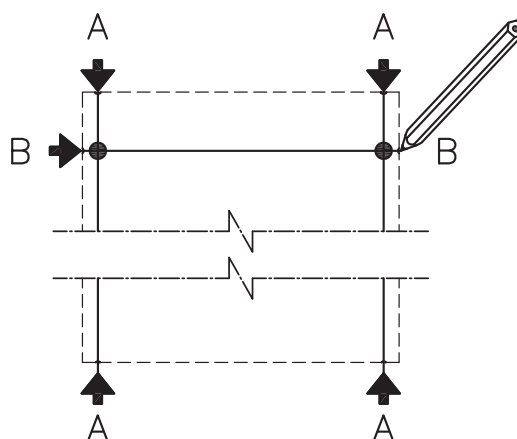
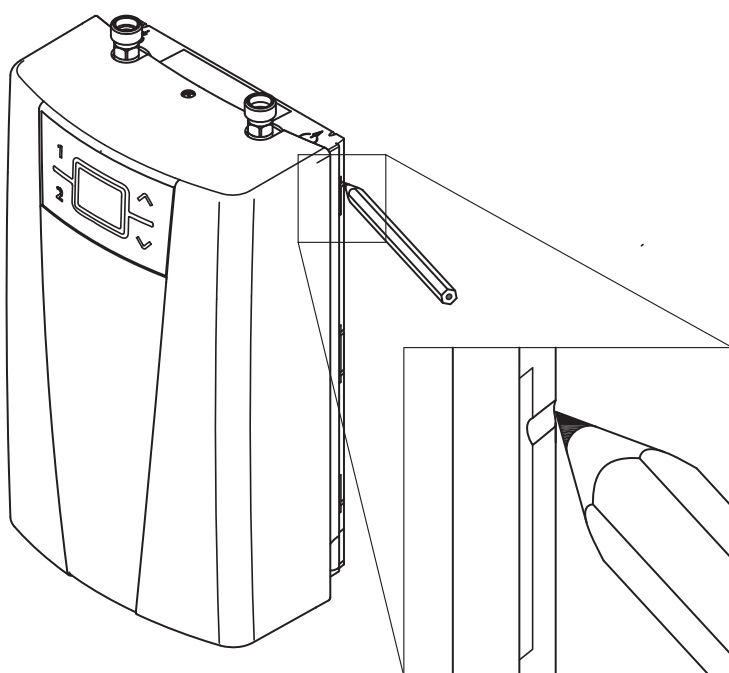
Mounting the appliance

1. Thoroughly rinse the water supply pipes before installation to remove soiling from the pipes.
2. Hold the appliance on the wall, and mark the drill lines at top and bottom, right and left, corresponding to the small notches at the edge of the appliance hood (see bottom figure).
3. Connect the top and bottom marks vertically with each other (A-A).
4. Connect the right and left marks horizontally with each other (B-B).
5. The intersections of these lines are the drill points.
6. Drill the holes using a 6 mm drill. Insert the included dowels and screws. The screws have to protrude 5 mm.
7. Hang up the appliance into the rear hanging openings and slide it downwards until it clicks into place.



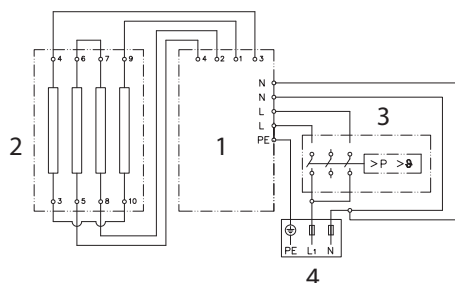
Installing the appliance

1. Attach the water connection pipes to the appliance's water connection. Use ½" seal.
2. Open and close the hot water tap until no more air emerges from the pipe and all air has been eliminated from the water heater.



7. Electrical connection

Fig.1 Wiring diagram



- 1 Electronic board
- 2 Heating element
- 3 Safety pressure switch and Safety thermal cut-out
- 4 Terminal block

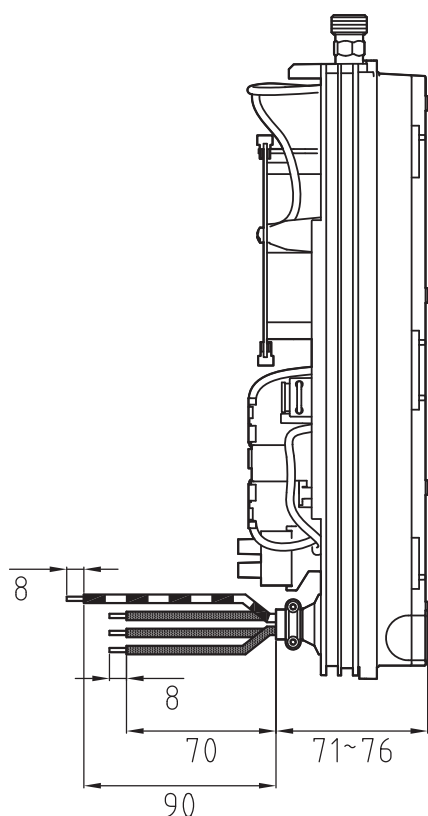


Fig.2

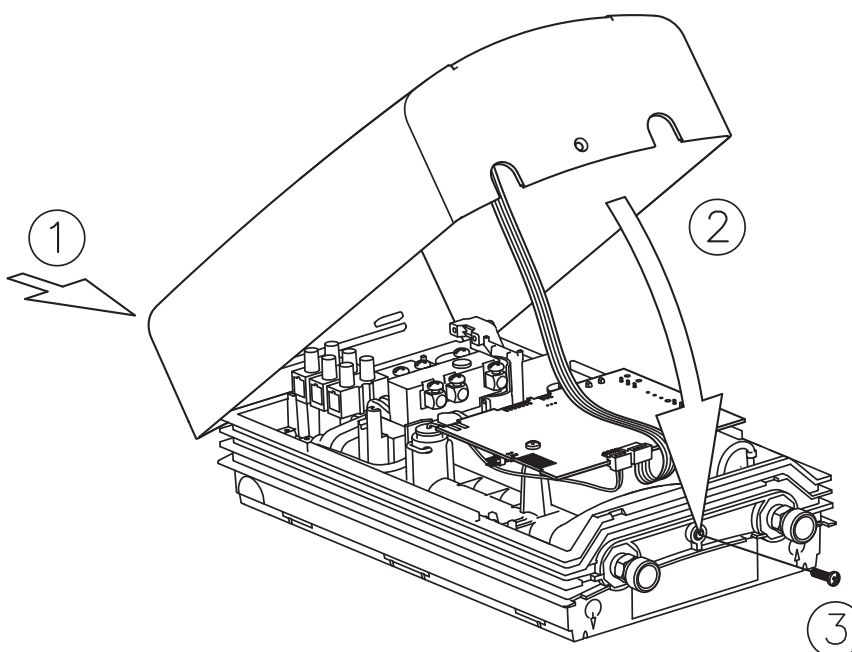


Fig.3

- The electrical installation should comply with current regulations, AS/NZS 3000 and any Local Authority requirements.
- The appliance must be installed according to the specification on the rating plate and the technical specifications.
- **The appliance must be earthed.**
- The appliance must be permanently connected to the electrical supply through an isolation switch.
- The cross sectional area of the connection cable must be in accordance with the power rating of the appliance, the specific requirements of the installation site as per AS/NZS 3000.
- Take care to protect the wiring from damage during installation and ensure that any uninsulated wiring is not directly accessible after installation.
- To protect the appliance, a circuit breaker must be fitted with a rating suitable for the nominal current of the appliance.

Electrical connection (only by a qualified tradesperson)

Check that the power supply is switched off prior to electrical connection!

1. With the appliance cover removed insert the power cable through the water splash protection grommet in the backplate. The splash protection grommet must be used and free from damage.
2. Remove inner and outer insulation from the connecting cable to the lengths shown in Fig.2.
3. Secure the cable using the cord grip. The cord grip must be used.
4. Fit the connecting cables into the terminal block according to the wiring diagram in Fig.1. Ensure all connections are fully tightened and secure.
5. Re-fit the appliance cover taking care not to trap the cable from the display panel and secure the cover with the fixing screw shown in Fig.3.

8. Initial operation

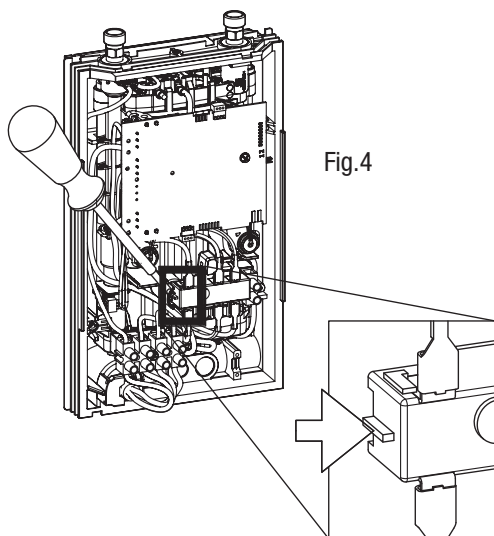
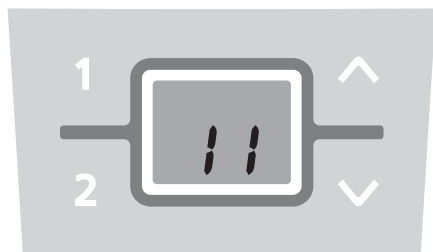


Fig. 4



Multiple Power System:

The rated capacity (max. power consumption) is 13.5kW / 415V and can be reduced to 11kW.



Commissioning

Before switching on the power supply, ensure the appliance is completely filled with water by carefully opening and closing the hot water tap until all air has been eliminated from the water heater and no more air emerges.

Each time the appliance is drained (e.g. after work on the plumbing system or following repairs to the appliance), the heater must be re-vented in this way before reconnecting the power supply.

If the appliance does not operate after connecting the power supply check that the safety thermal cut-out (STCO) did not trip during transportation. To do this open the cover and, if necessary, re-set the STCO by pushing the switch in. (see Fig. 4)

Note: Power Rating Selection

The maximum power rating of the appliance can be selected as either 13.5kW or 11kW at the time of installation. The unit will only commence normal operation after selection of the power rating. The maximum power rating should only be selected with reference to the technical data on page 4, after ensuring that correct cable sizing and fuse protection is in place and with regard to local site conditions and electrical regulations.

This should only be done by a qualified tradesperson.

1. Switch on the power supply to the appliance. The digital display will light up.
2. When switching on power for the first time "11" will flash on the display. If not, please refer to the section "Reinstallation".
3. Use the arrow up and arrow down keys to select the required maximum power rating. Display "11" for 11kW at 415V or display "13" for 13.5kW at 415V.
4. Press program key 1 to confirm the selection after which the appliance will start to operate.
5. Mark the set power rating on the product rating plate.
6. After selecting the maximum power rating, the heating element will activate after approximately 10 seconds of continuous water flow.
7. Open the hot water tap and check the appliance is functioning correctly.
8. Explain operation of the appliance to the end user and leave the operating instructions for their reference.
9. Complete the product registration card and return it to Zip Heaters or register the product on line.

8. Initial operation

Note “Reinstallation”

If the appliance is to be re-commissioned under different installation conditions it may be necessary to alter the maximum power rating. This should only be done by a competent installer.

To re-set the maximum power rating use a screwdriver to short circuit the two pins as shown in Fig.5.

This will reset all heater parameters to factory settings.

Value “88” will flash in the display panel until the maximum power rating has been selected.

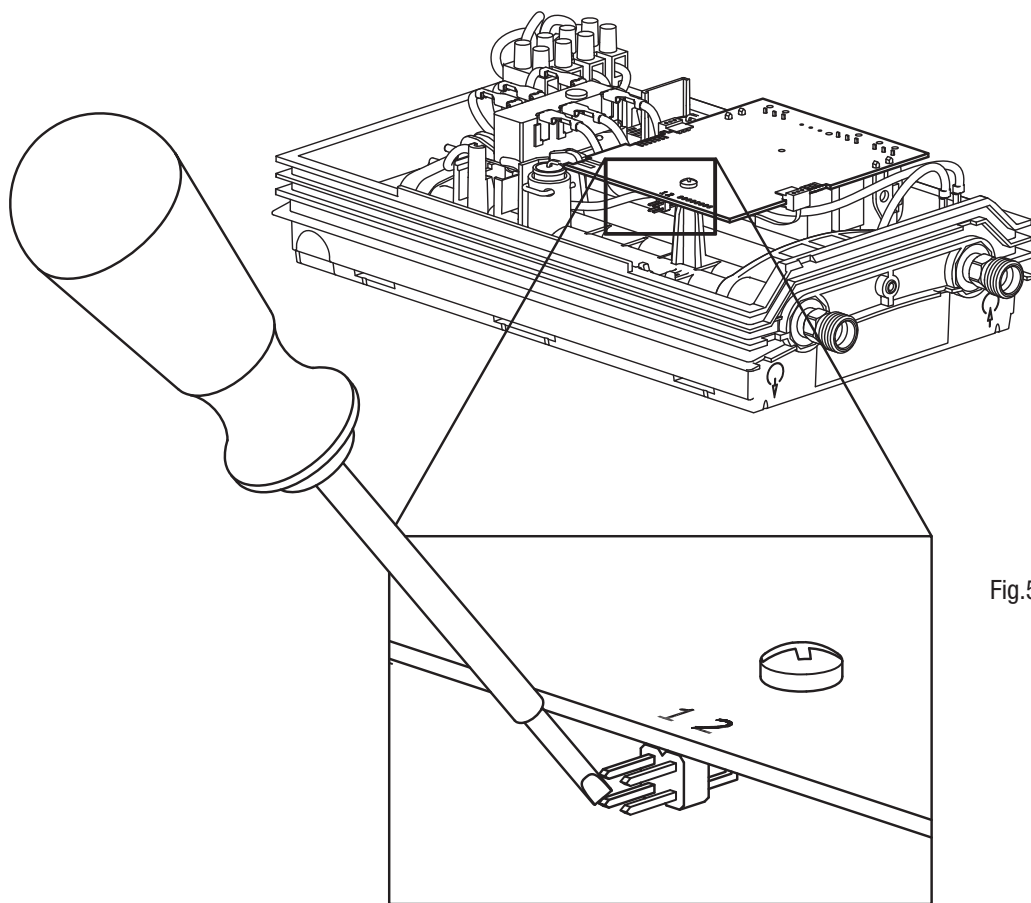


Fig.5

8. Initial operation

Lock level

The operating mode of the appliance can be restricted. Refer to instructions under “Service Menu” to set the lock level.

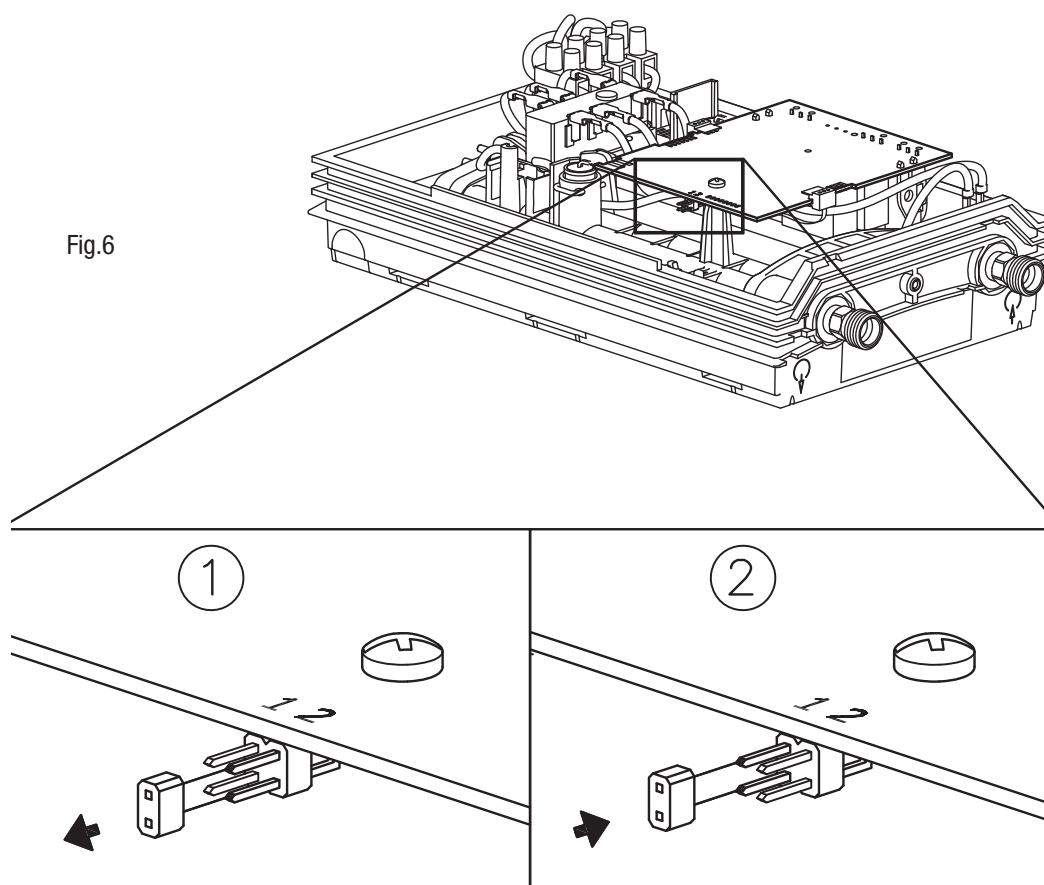
This should only be done by a qualified tradesperson.

Activation of the Lock level:

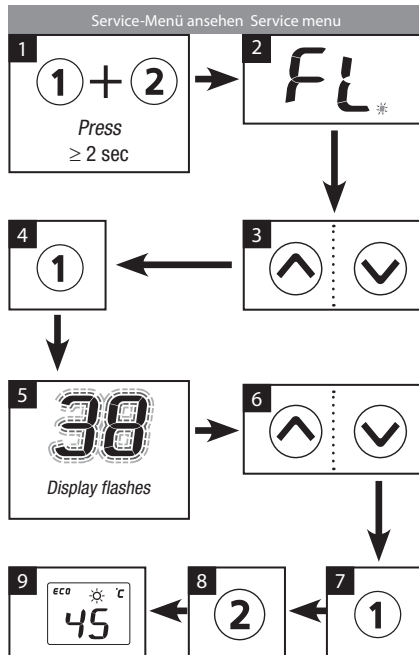
1. Disconnect the power supply to the unit.
2. Move the jumper on the main PCB from pin 2 to pin 1 (see figure 6).
3. Reconnect the power supply to the unit.

Deactivation of the Lock level:

1. Disconnect the power supply to the unit.
2. Move jumper from pin 1 to pin 2.
3. Reconnect the power supply to the unit.



9. Service menu



Menu item order of "Service menu":

	<i>FL</i>	<i>Flow</i>
	<i>PO</i>	<i>Power</i>
	<i>t1</i>	<i>Temp in</i>
	<i>t2</i>	<i>Temp out</i>
⬆	<i>CA</i>	<i>Control value</i>
	<i>PL</i>	<i>Power limit</i>
	<i>Er</i>	<i>Diagnostics</i>
⬇	<i>LL</i>	<i>Lock level</i>
	<i>rv</i>	<i>Software version</i>
	<i>ch</i>	<i>Radio channel</i>
	<i>rs</i>	<i>Received strength</i>
	<i>llc</i>	<i>Signal</i>

The service menu offers an overview of system parameters and is used for diagnostics.

Press key ① and key ② simultaneously for at least 2 seconds to call up the service menu, the display confirms by "FL" and by a flashing point. Using the arrow keys ⬆ and ⬇, you can switch between the individual menus.

Press key ① to see the value of the currently selected menu. The value flashes in the display. (The values of some menus can be switched over by using the arrow keys ⬆ and ⬇.) You will get back to the drop-down-menu when pressing key ① again. With key ② you will get back to the standard display (nominal value). After two minutes without any key stroke the system automatically switches back to the standard display.

Individual menu items as follows:

"FL": Flow

Indication of current flow rate given in l/min.

"Po": Power

Indication of current power consumption (kW).

"t1": Temp in

Indication of inlet temperature (°C).

"t2": Temp out

Indication of outlet temperature (°C).

"CA": Control value

Indication of calibration value of the control system. Regular range: 40 – 60.

"PL": Power limit

Informs about the current maximum power rating (kW) of the appliance.

"Er": Diagnostics

Indication of the last ten diagnostic messages.

The error code is indicated by the first displayed value after pressing key ① (refer to "Abstract for Trouble-Shooting & Diagnostics" in the hood). By using the arrow keys ⬆ and ⬇ the last 10 error codes are displayed chronologically. Thereby the display indicates in turns the error numbers from "0" to "9" and the corresponding error. The last error will be recorded at position "0" and the former ones each shifted 1 position backwards.

"LL": Lock level

The operating mode of the appliance can be restricted.

Setting Options:


"0" no restriction (factory setting)

"1" factory reset via key (countdown) not possible, parameters can be seen, but not be modified in setup menu

"2" same as "1", additionally the setup menu cannot be opened

9. Service menu

Menu item order of "Service menu":



FL	Flow
PO	Power
t1	Temp in
t2	Temp out
CR	Control value
PL	Power limit
Er	Diagnostics
LL	Lock level
nr	Software version
Ch	Radio channel
rS	Received strength
IIC	Signal

"3" same as "2" additionally nominal value memory 1 and 2 not changeable

"4" same as "3", additionally nominal value not changeable

Note: When the setting "1", "2", "3" or "4" was chosen, the system parameters can no longer be modified in the service menu.

In order to modify these system parameters, it is necessary to remove the jumper on the power electronics, as specified in the chapter "Deactivation of the lock level". (Page 13)

"nr": Software version

Information about installed software version.

"Ch": Radio channel

Information about the current radio channel of the water heater and its remote control.

"rS": Received strength

Information about the current signal quality of the remote control as percentage. Depending on the distance between remote control and water heater the value varies between 10 % and 100 %.

"IIC": Signal

Information about the quality of the radio contact when a diagnostic display is connected.

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As Zip policy is one of continuous product improvement, changes to specifications may be made without prior notice. Images in this booklet have been modified and may not be true representations of the finished goods.



...the innovative hot water solution.

Quick reference guide

