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These instructions should be read carefully and understood before commencing the installation. Do not proceed if any part is unclear or if requirements cannot be fully met.

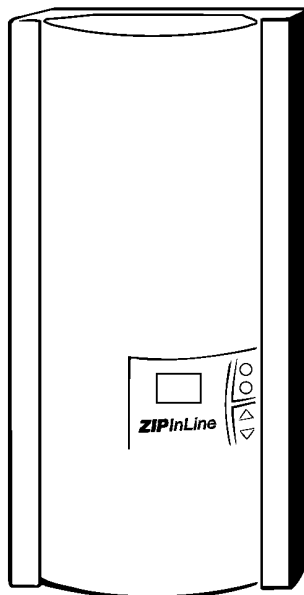
Please leave these instructions with the end user after installation.

Product Description

The ILX 18 & 24 is a pressure-type, micro-processor-controlled, instantaneous water heater for supplying hot water at one or more outlets situated in close proximity to one another.

Its electronic control regulates power consumption based on the selected outlet temperature, the inlet temperature and the flow rate, maintaining a constant flow rate at exactly the temperature selected. The required outlet temperature can be entered on the keypad, within a range between 30°C and 60°C and can be read off the digital display.

The Inlet temperature may reach 50°C, enabling operation of the appliance as an after-heater in solar installations.



Approvals

The ILX18 & 24 have been examined, tested, and found, when correctly fitted, to comply with the requirements of the United Kingdom Water Regulations/Byelaws (Scotland). The product, therefore, is listed under the WRAS (Water Regulations Advisory Scheme) Water Fitting and Materials Directory-**Certificate No. 0209073**. The ILX 18 & 24 are CE endorsed.

Warranty

Your ILX is precision-built from the finest materials available and should give many years of trouble-free service. Zip Heaters (UK) Ltd warrants that, should any part of the heater fail within 12 months of installation, that part or parts will be repaired or replaced by Zip Heaters (UK) Ltd or its accredited distributor or service engineer, free of charge, except as set out below, provided that the failure is not due to incorrect use, incorrect installation, dirt in the inlet or outlet pipes, non-compliance with operating instructions, condition of water used or unauthorised modification of the heater.

All water heaters are susceptible to lime-scale formation, the degree of which will depend on local water conditions. Where excessive scale formation is likely to occur, the use of a scale reduction device is recommended.

The heater should only be returned to Zip or their accredited distributor with the agreement of Zip Heaters (UK) Ltd, whereupon the only charges payable by the customer are the cost of removal, re-installation and transport.

This warranty excludes damage resulting from failure of the water heater or consequential damage to any other goods, furnishings or property.

This warranty does not replace any statutory warranty in relation to the heater, but any liability of Zip Heaters (UK) Ltd under any statutory warranty, other than in the case of a person 'dealing as a consumer' as defined in section 12 of the Unfair Contract Terms Act 1977, will be limited to a replacement or repair at the option of Zip Heaters (UK) Ltd

Warnings

Installation, commissioning 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.

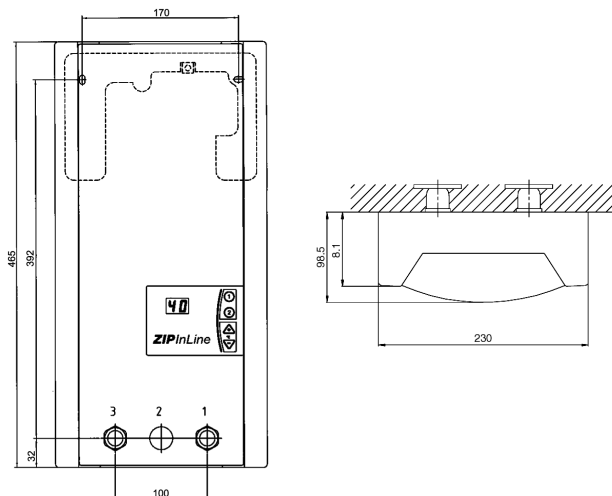
The ILX18 & 24 are for connection to mains supply only. In any other case please contact Zip Customer Service on 0870 608 8888 for advice. We cannot be liable for any damages caused by failure to observe these instructions.

- Do not use the appliance until it has been correctly installed and it is in perfect working order.
- Before commissioning and each time the appliance is emptied, it should be vented in accordance with later instructions.
- Always switch off the mains electrical supply before removing the front cover.
- Never make technical modifications, either to the appliance itself or to electrical leads and water pipes.
- Caution! Water temperature in excess of 43°C are perceived as hot, especially by children, and may cause scalding. Please note that the fittings and connecting pipework may be very hot when the appliance has been in use and should not be touched.
- In case of malfunction, disconnect the fuses immediately. Repairs must only be carried out by competent persons familiar with instantaneous electric water heaters.

Specification

Product Type	ILX18	ILX24
Capacity:.	3 litre	
Pressure type (rating pressure):	10 bar	
Heating system:	Bare wire	
Nominal rating:	18kW	24kW
Rated voltage (50/60) Hz	3/PE~400V	3/PE~400V
Required spec. water resistance @ 15°C	:≥1100Ω cm @ 15°C	
Max. hot water (l/ min) @:		
Temp. rise of 28°C	9.2*	12.0*
Temp rise of 38°C	6.8	9.0
Switch-on flow rate:	2.5 l/ min	
Inlet temperature:	≤50°C	
Pressure loss:	.3 bar @ 2.5/ min	
Water connection:	1/2" BSP	
Net weight:	4.1 kg	
Dimensions (h x w x d):	470 x 300 x 100	
Class / Degree of protection (IEC 529):	1 / IP25	
Approvals:	As detailed on Page 1	

* mixed water



Installation

The following must be observed:

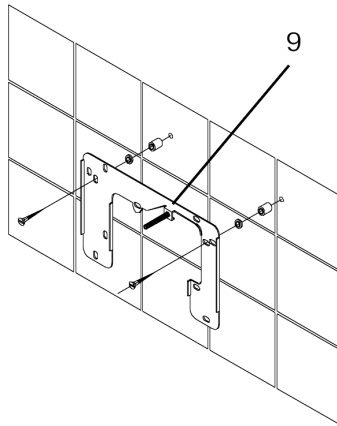
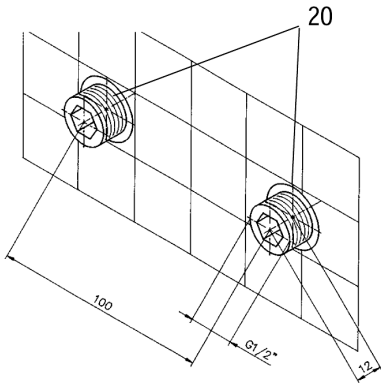
- The appliance must be installed in accordance with current IEE regulations.
- Note the specifications on the rating plate and the technical specifications.
- The unit must be earthed.
- The appliance must be permanently connected to the electrical supply through an isolation switch having a contact separation of at least 3mm in all poles.
- The cross sectional area of the connection cable must be in accordance with the power rating.
- Care should be taken to ensure that the electric wiring is not damaged. After installation the wiring must not be directly accessible.
- Do not proceed if any stage of installation is unclear.

Installation site

- The installation site must be free from frost at all times.
- The appliance complies with protection type IP25.
- In order to minimise thermal losses, the distance between the heater and the outlet tap should be as short as possible (<2m).
- **Best performance is achieved at a flow pressure of ≥ 3 bar, the rated pressure of 10 bar must not be exceeded as failure to observe this will invalidate the warranty.**
- For maintenance work, a shut-off valve should be installed in the supply line
- Hot and cold water pipes should be WRAS approved and of copper or plastic construction. The hot water pipes must be thermally insulated.
- The specific resistance of the water must be at least $\geq 1100 \Omega \text{cm}$ at 15°C.

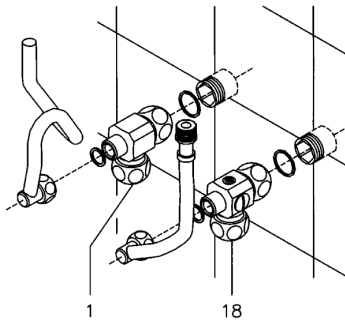
Installing the wall bracket

1. Thoroughly flush the water supply pipes before installation to remove any water borne debris.
2. Using a 12mm hexagon key, screw the screw-in nipples (20) into the wall connections. After tightening, the double nipples must protrude by 12mm.
3. Hold the mounting template on the wall and align it so that the holes in the template fit over the connections. Use the template to locate the drilling positions and drill them with a 6mm bit, ensuring that there are no hidden cables or pipe-work. Attach the wall bracket (9) using the fixings and screws supplied.
4. Offset tiling or uneven surfaces can be compensated for by up to 30mm with the aid of the spacers supplied. The spacers are fitted between the wall and the wall bracket. Use either long or short screws depending on the magnitude of the offset.



Installing the connection pieces

1. Screw the cold water connection piece (18) with the union nut and the 1/2" seal onto the cold water connection.
2. Screw the hot water connection piece (1) with the union nut and the 1/2" seal onto the hot water connection.



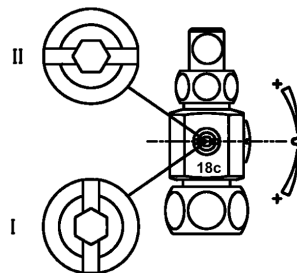
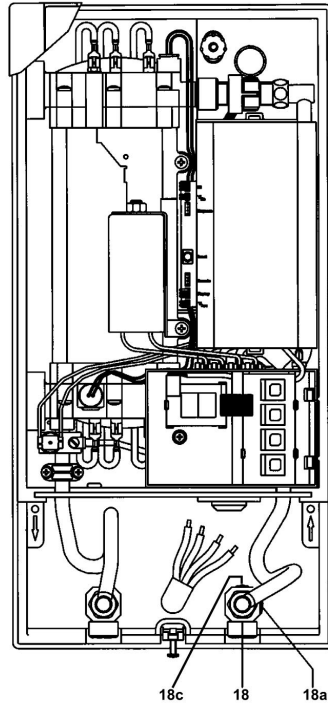
Plumbing (concealed pipe-work)

1. Undo the cover securing screw to open the appliance cover.
 - a. When replacing an appliance, the electrical power supply cable may be already be connected in the upper part of the appliance. In such a case, but only then, press against the prepared breaking point with a blunt implement (e.g. screwdriver).
 - b. Slit the grommet to match the cable size. The opening should be slightly smaller than the cross-section of the cable in order to ensure optimum protection against water. Fit the grommet into the opening.
 - c. Strip the cable approx. 6cm above the point where it emerges from the wall. Hold the appliance so that you can route the cable into the grommet with the other hand.
2. Place the appliance on the wall bracket so that the threaded stud of the wall bracket fits in the hole of the appliance. If necessary, slight corrections are possible by carefully bending the outlet pipe. However, it must be ensured that the water connection pipes of the appliance can be screwed on without using force.
3. Screw the two 3/8" union nuts of the appliance's water connection pipes, each with a 3/8" seal, onto the fittings.

4. Screw the plastic knurled nut onto the threaded stud of the wall bracket.
5. Open the water supply to the unit and slowly open the shut-off valve (18c) in the cold water piece to position I. Carefully check all connections for leaks.
6. Next, vent the appliance by opening and closing the hot water tap several times until no more air emerges from the tap, and all air has been evacuated from the heater.

Plumbing (surface mounting)

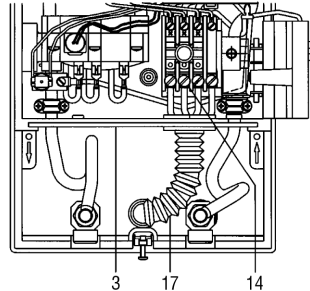
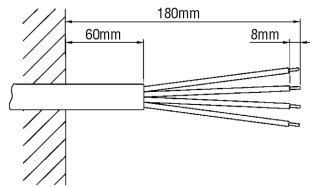
1. Screw the two 1/2" screw-in nipples with the 1/2" seals into the 1/2" union nuts of the hot water (1) and cold water (18) connectors.
2. Remove the two 1/2" caps of the side outlets of the hot water and cold water connectors and screw onto the open ends of the screw-in nipples.
3. Screw the hot water and cold water connectors into the 3/8" union nuts of the appliance water connection pipes with 3/8" seals.
4. It is advisable when mounting the appliance at a distance to use the spacer sleeves supplied. Also the two fixing holes near the lower pipe connections should be used.
5. The flared ends of the pipes must be screwed into the 1/2" side outlets of the hot water and cold water connections with the 1/2" union screws and seals. Punch out the holes required for the pipes to emerge from the heater using a blunt instrument (e.g. screwdriver).



Electrical (from below)

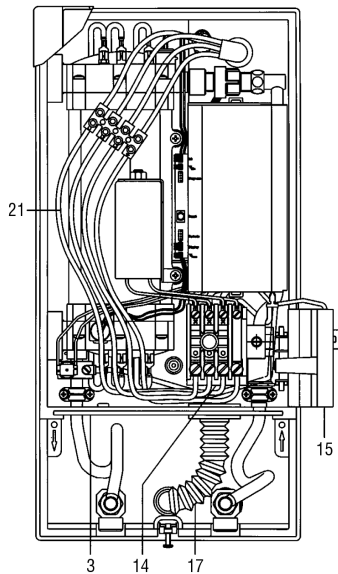
1. Strip the outer insulation from the connecting cable to approx. 6cm above the wall outlet. Slide the water splash protection sleeve over the cable so that the sleeve is flush with the wall. As this prevents any leaking water from coming into contact with the electrical leads, it must not be damaged.

2. Undo the screw on the cover of the PCB support and tilt the cover to the side. Detach the front part of the intermediate panel (3).
3. Connect the cable to the safety pressure limiter (14) ensuring that the leads are connected to the correct terminals. The appliance must be earthed.
4. Pull the protective sleeve over the connecting cables until it fits perfectly in the recess of the intermediate panel. Re-insert the front part of the intermediate panel and lock the cover of the PCB board support with the securing Screw.
5. Refit the cover of the appliance and tighten the securing screw.



Electrical (from above - up to 10mm²)

1. Undo the screw on the cover of the PCB support and fold the cover to the side. Insert the free ends of the wiring set into the holes in the terminals of the safety pressure limiter, ensuring that the leads are connected to the correct terminals and screw tight. Lock the PCB support with the securing screw.
2. Secure the wiring set (21) to the terminal holder by fixing the terminal on the left to the guide lug and screw it into position with the M4 x 20 screw on the right.
3. Strip approx. 8mm of insulation from the wiring and carefully connect it to the terminal block ensuring that the leads are connected to the correct terminals. This appliance must be earthed.
4. Check all electrical connections for tightness.
5. Refit the protection sleeve (17) and intermediate panel in order to maintain IP25 protection.
6. Refit the cover of the appliance and tighten the securing screw.



Please observe:

The appliance must be installed in accordance with current IEE regulations.

Note the specifications on the rating plate.

Commissioning

1. Before switching on the power supply, fill the system and the appliance with water by carefully opening and closing the hot water tap in order to vent the appliance completely.
2. Switch on the power supply to the appliance. The digital display will illuminate.
3. Open the hot water tap. The appliance will start to operate.
4. Check the function of the instantaneous water heater.
5. Give these operating instructions to the end user and explain how the system works.
6. Please return the enclosed registration card and fill in details of model/serial number in the box at the end of this booklet, for future use.

Operation

The appliance switches itself on automatically when you open the hot tap and switches itself off when the hot tap is closed.

Setting the temperature:

You can set the required temperature in increments to a higher or lower value with the arrow keys + and -. The temperature changes by 1°C when you press the key briefly and by 5°C when the key is pressed for a longer period.


Program keys

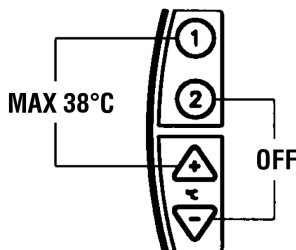
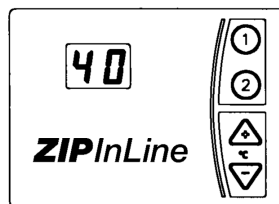
The two program keys allow you to quickly select a preset temperature. When you press a program key, the preset temperature is selected and displayed. The factory setting for program ① is 38°C and for program ②, 45°C. You can assign your own settings to the programme keys.

Prolonged pressing of the program keys stores the previously selected temperature. The display changes from P1 or P2 to the newly stored temperature value. The new temperature is now available to you each time you press the corresponding program key.


Temperature limiting

The ILX 18/24 is equipped with an optional temperature limiting function. There are two ways of setting a temperature limit.

1. 38°C (scaling protection): Press the program key ① and  simultaneously.
2. Individual temperature limit (only possible if limiting to 38°C is not



activated): Select the limit temperature and the press program key ② and  simultaneously.

To switch off this function: Press the program key ② and  simultaneously.

N.B. The program key temperature settings have to be restored after deactivating the temperature limit.

Energy saving

Set precisely the required temperature on the appliance and only open the hot water tap. If the water is too hot, set a lower temperature on the appliance instead of adding cold water. If you add cold water, the heated water is cooled again and energy is wasted. The cold water added through the tap cannot be controlled by the electronics and a constant temperature can no longer be guaranteed.

Power limit

The right LED indicates if the full power of the appliance is insufficient to heat the water to the required temperature. This may occur, for example, when opening several taps at once. The LED will stop indication when the flow rate has been reduced to a level where the output of the appliance is sufficient to reach the set temperature.

The full output can be used to fill a bath, for instance. In this case, the appropriate amount of cold water should be used.

Operation with solar powered systems

When operating with pre-heated water no output is provided under the following conditions:

1. The inlet temperature exceeds 50°C
2. The inlet temperature exceeds the selected nominal value

The red dot between the digits of the display indicates that the unit is not providing any output if the inlet temperature is too high as a result of one of the above reasons.

Venting after maintenance work

The appliance features an automatic air bubble protection to prevent it from inadvertently running dry. Nevertheless it must be vented before using it for the first time and each time it is emptied.

1. Disconnect the appliance from the mains
2. Unscrew the aerator from the hot water tap and open the cold tap to rinse out the water pipe and avoid contaminating the appliance or aerator.
3. Open and close the hot water tap several times until no more air emerges from the tap and all air has been evacuated from the heater.
4. Only then should you re-connect the power supply and screw the aerator back into the hot water tap.

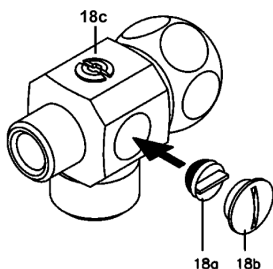
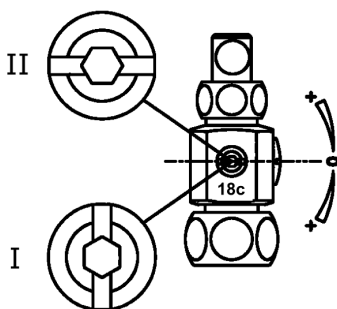
Routine Preventative Maintenance

N.B. Maintenance work must only be carried out by a competent person familiar with instantaneous water heaters.

- Plastic surfaces and fittings may only be wiped with a damp cloth. Never use abrasive cleaning agents or solvents.
- For a good water supply, any aerators and shower-heads should be separated and cleaned or renewed at regular intervals.
- The electrical and plumbing components should be inspected by a competent person at least every three years to ensure correct performance and operational safety at all times.

Cleaning and replacing the line strainer

The cold water connection of the appliance is equipped with an integrated shut-off valve and a strainer. Soiling of the strainer may reduce the warm water output. Clean or replace the strainer as follows:



1. Disconnect the appliance from the mains.
2. After removing the front cover, close the shut-off valve (18c) in the cold water connection piece by rotating to position II.
3. Unscrew the screw plug from the cold water connection piece and take out the strainer (18a).
4. The line strainer can be cleaned or replaced.
5. After replacing the strainer tighten the screw plug.
6. Slowly open the shut-off valve by rotating to position I.
7. Vent the unit carefully (see maintenance instructions above).
8. Refit the front cover.
9. Re-connect the power supply.

N.B. The shut-off valve is not accessible in surface mounted installations and should be left in the fully open position.

Repairs may only be carried out by competent persons familiar with instantaneous water heaters.

Always disconnect the electrical supply before removing the outer cover.

Fault Finding

Problem	Possible cause	Solution
Water stays cold, digital display does not light up.	Mains fuse tripped. Thermal cut-out tripped	Renew or reset fuse. Contact Zip Customer Service.
LED display flashes error message.	Control system has switched off.	Switch mains fuse off and on. Contact Zip Customer Service if (Er) continues to flash
Hot water flow rate is less than expected.	Outlet fitting dirty or calcified. Line strainer dirty or calcified.	Clean tap fitting or shower head. Clean line strainer.
Selected temperature is not achieved, right LED lights up.	Flow rate is too high. (Winter?)	Reduce water flow rate at the outlet.
Selected temperature is not achieved, right LED does not light up.	Cold water has been added at the tap.	Use the hot tap only; set the required temperature on the appliance.
Left LED lights up.	Inlet temperature more than 50°C or nominal temperature.	Reduce inlet temperature.
No response upon key press.	Front cover is not fitted properly.	Refit front cover properly.

Technical Support

If a fault in your appliance cannot be rectified with the aid of this table, please contact Zip Heaters who will either assist you directly or put you in touch with a service engineer in your area. Always specify the appliance model and serial numbers. Use this chart to record the number during installation.

*Model No.	*Serial No.	Date of Installation

Zip Heaters (UK) Ltd
Tel: 0870 608 8888 Fax: 01362 692448
e-mail: service@zipheaters.co.uk

Spare Parts

