



Zip Instantaneous Hot Water



Electronically controlled instantaneous water heater

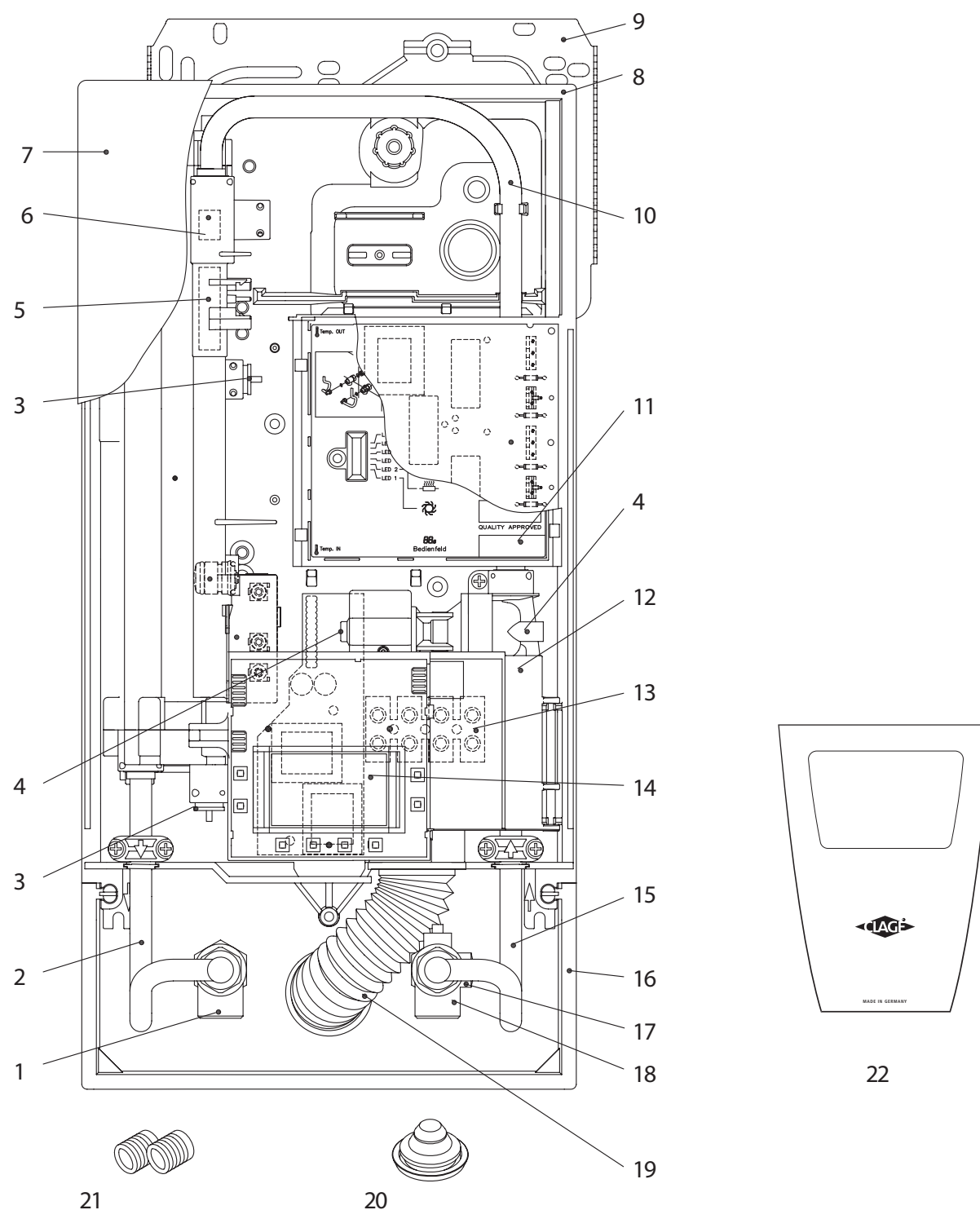
DSX: : 27940 - 50 °C and 27941 - 60 °C models

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	Pos.	Part.-No.	Description
1	801097	Hot water connection	14	801103	DSX control panel
2		Outlet pipe	15		Inlet pipe
3	801098	DSX / DEX thermal sensor set 2.1	16		Frame
4	801099	Servomotor with electronic 2.1	17	801104	Fine filter
5	801099	Flow sensor	18	801105	Cold water connection
6	801101	Non-return valve	19		Water splash protection sleeve
7		DSX hood	20		Grommet
8		Bottom part	21		Screw-in nipples 1/2"
9		Wall bracket	22		Faceplate
10		DSX connecting pipe	not shown:		
11	801102	PCB cover 2.1	23		Set of small spare parts
12		Control panel support			
13		Connecting terminal			

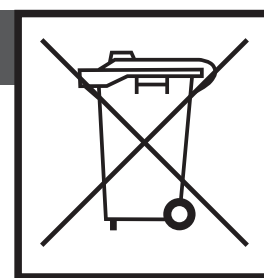
Parts in **Bold Type** are available as **Spare Parts**.
Other parts are available on request.

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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.

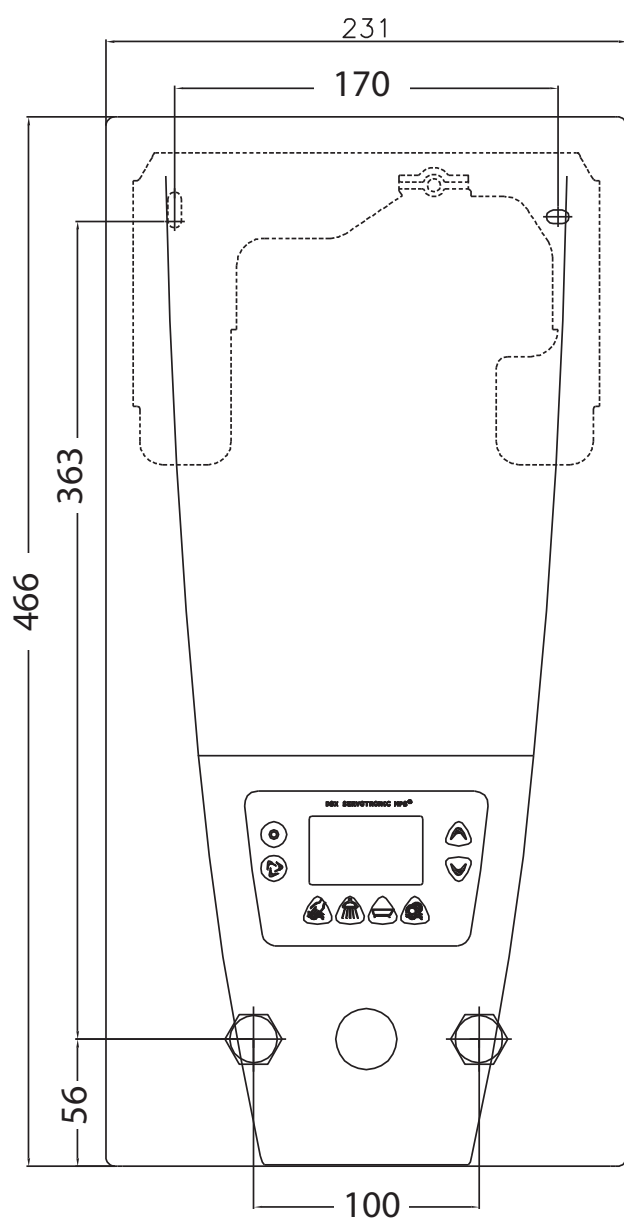


4. Technical specifications

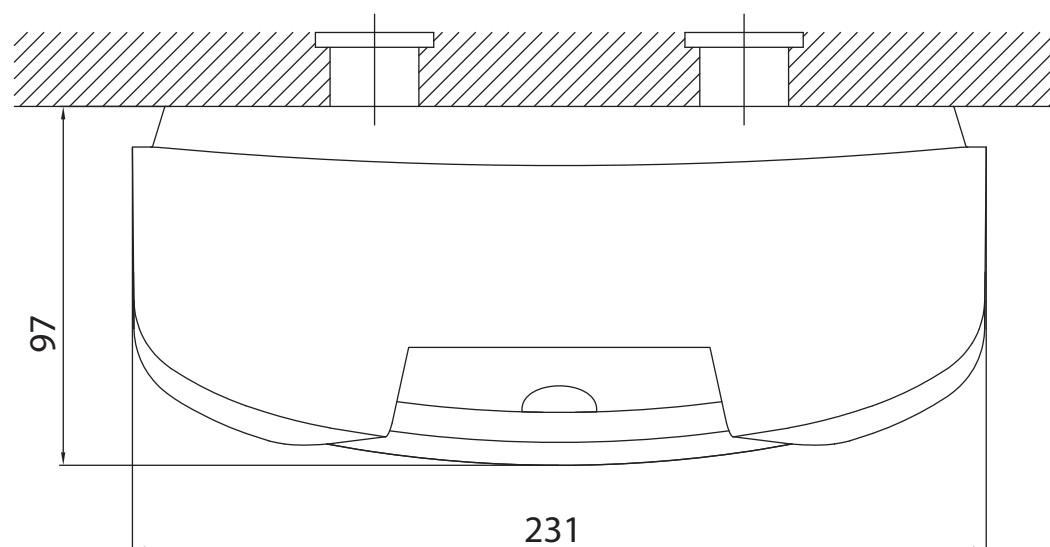
Model	DSX ELECTRONIC MPS®			
Part no.	27940 - 50 °C models 27941 - 60 °C models			
Rated capacity / rated current	18 kW..27 kW (26 A..39 A)			
Chosen capacity / current	18 kW (26 A)	21 kW (30 A)	24 kW (35 A)	27 kW (39 A)
Electrical connection	3/PE 380..415V AC			3/PE 400V AC
Min. required cable size	See note 1)			
Hot water (l/min) max. at $\Delta t = 28$ K max. at $\Delta t = 38$ K	9,2 ²⁾ 6,8	10,7 ²⁾ 7,9	12,3 ²⁾ 9,0 ²⁾	13,8 ²⁾ 10,2 ²⁾
Rated volume	0,4l			
Type	Pressure type 1 MPa (10 bar)			
Heating system	Bare wire heating system IES®			
Required spec. water resistance @ 15 °C Spec. electrical conductivity	$\geq 1100 \Omega\text{cm}$ $\leq 90 \text{ mS/m}$			
Inlet temperature	≤ 70 °C			
Flow rate to switch on	2,5 l/min			
Pressure loss	20kPa at 2,5 l/min 130kPa at 9,0 l/min			
Temperature choice	20 °C – 50 °C (50 °C models) 20 °C – 60 °C (60 °C models)			
Water connection	G 1/2"			
Weight (when filled with water)	4,2 kg			
VDE class of protection	I			
Noise level test certificate	PA-IX 6822/I			
Type of protection / safety	    			

1) 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. Dimensions



Dimensions in mm

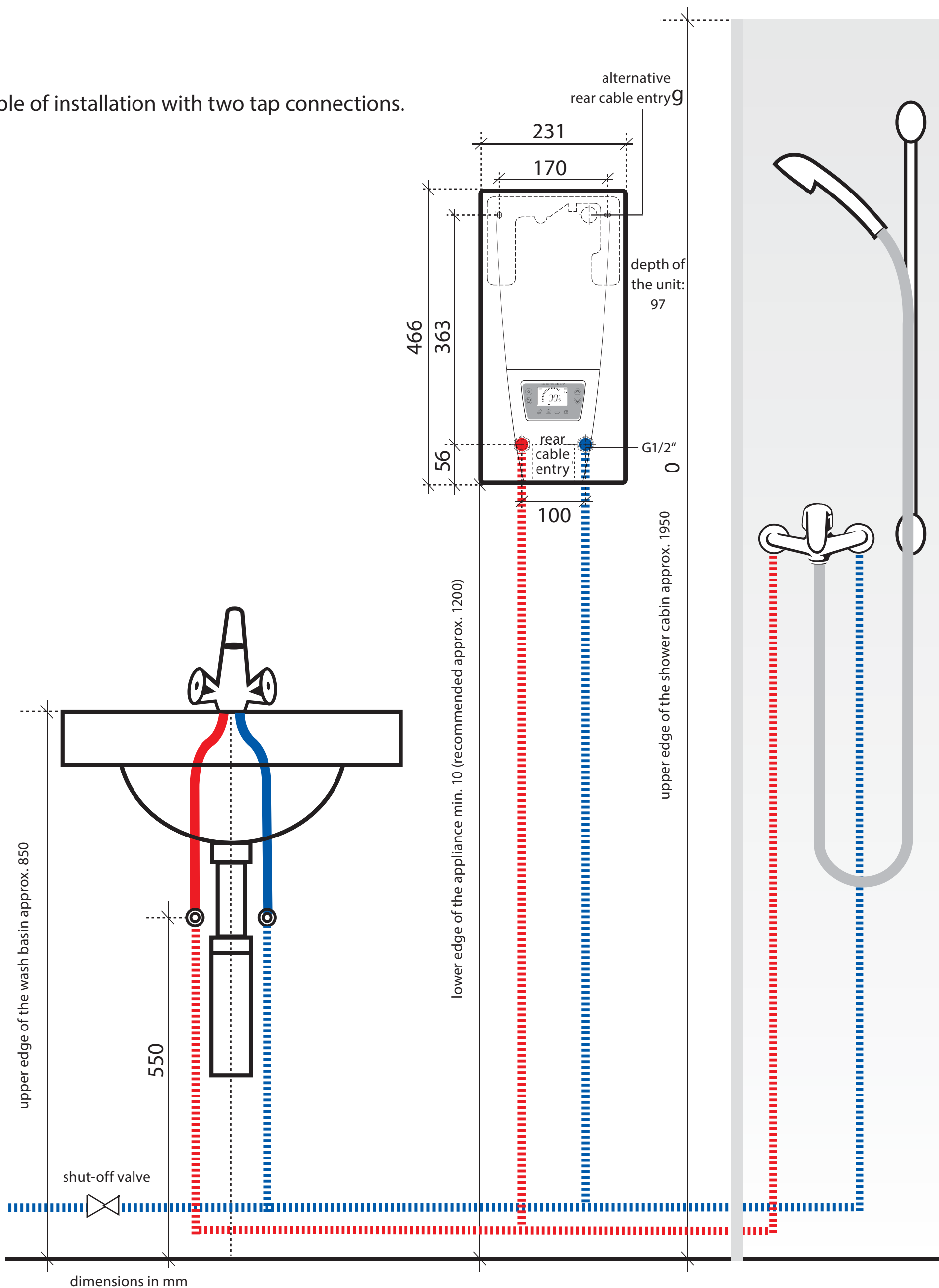


6. Typical installations



6. Typical installations

Example of installation with two tap connections.



7. 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

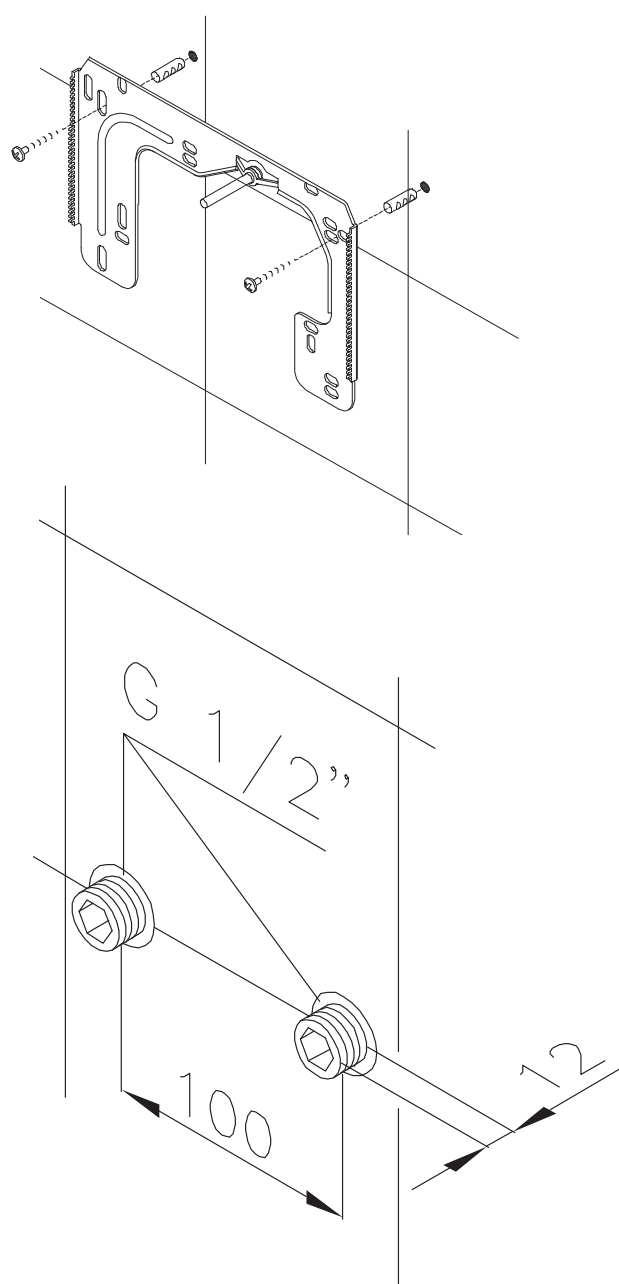
- Appliance must only be installed in frost-free rooms. Never expose appliance to frost.
- The Appliance is designed for wall mounted installation and has to be installed with water connectors downwards.
- The appliance complies with protection class IP 25.
- To avoid thermal losses and dead legs, the distance between the instantaneous water heater and the furthest outlet should be kept as short as possible (<6 meters). In addition all hot water pipe work should be insulated in accordance with AS/NZS 3500.
- 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.

7. Installation

Installing the wall bracket (Fig 1)

1. Thoroughly flush the water supply pipes before installation to remove any water borne debris.
2. If required, using a 12mm hexagon key, screw the screw in nipples 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 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.

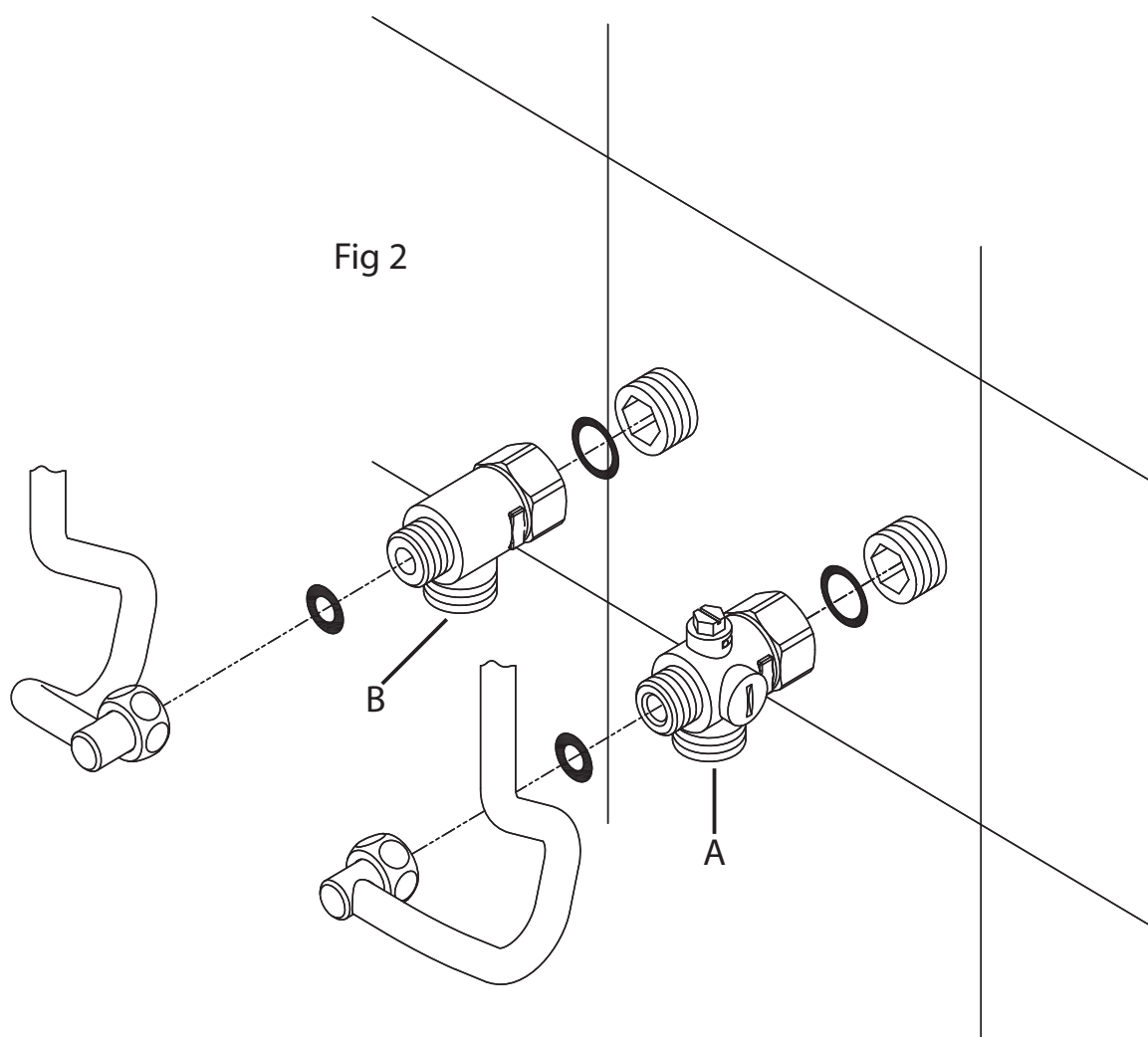
Fig 1



Installing the connection pipes (Fig 2)

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

Fig 2



7. Installation

Installing the appliance

1. Remove the appliance cover by first removing the fascia panel then unscrewing the fixing screw.
2. If the power supply cable is to be connected in the upper part of the appliance follow instructions for "Electrical Connection From Above" on page 13.
3. Place the appliance on the wall bracket with the threaded stud through the fixing hole in the back plate. If necessary the threaded stud can be carefully bent through a maximum of approximately 30° to allow it to align with the fixing hole (see Fig 4). However, it must be ensured that the water connection pipes can be connected to the appliance without applying force.
4. Screw the two 1/2" union nuts on the appliance's water connection pipes, each fitted with a 1/2" seal, onto the fittings.
5. Screw the plastic knurled retaining nut onto the threaded stud of the wall bracket.
6. Open the water supply to the appliance and slowly open the shut-off valve (see Fig 5) in the cold water connection piece to position I. Check all connections for leaks.
7. Ensure that all air is eliminated from the water heater by opening and closing the hot water tap until no more air emerges.

Fig 3

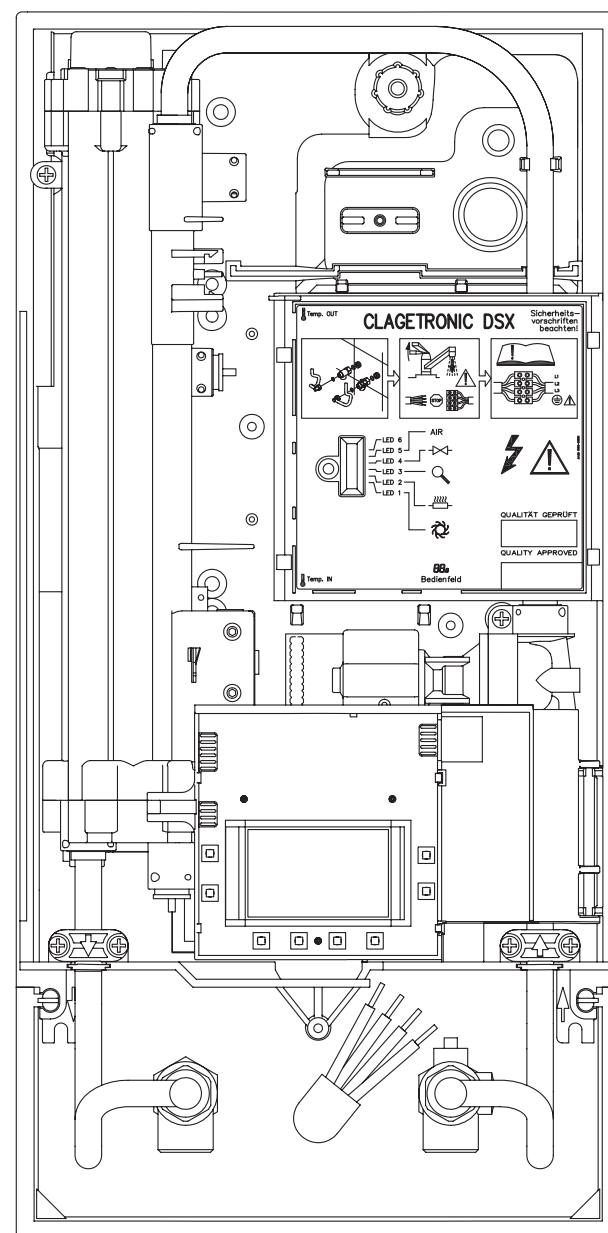


Fig 5

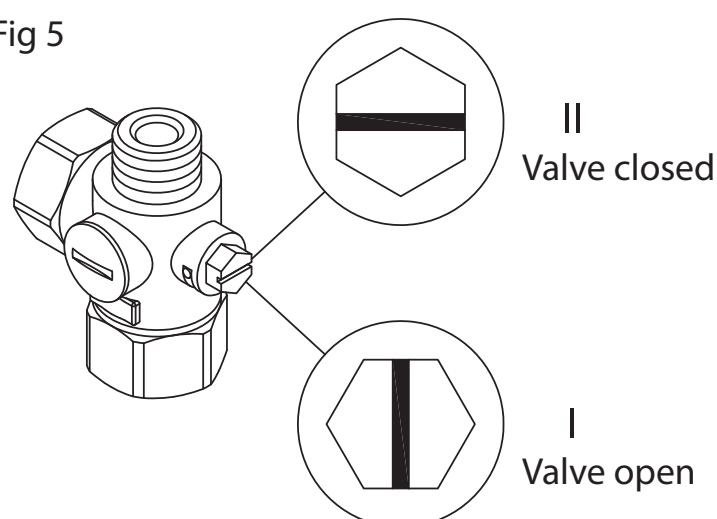
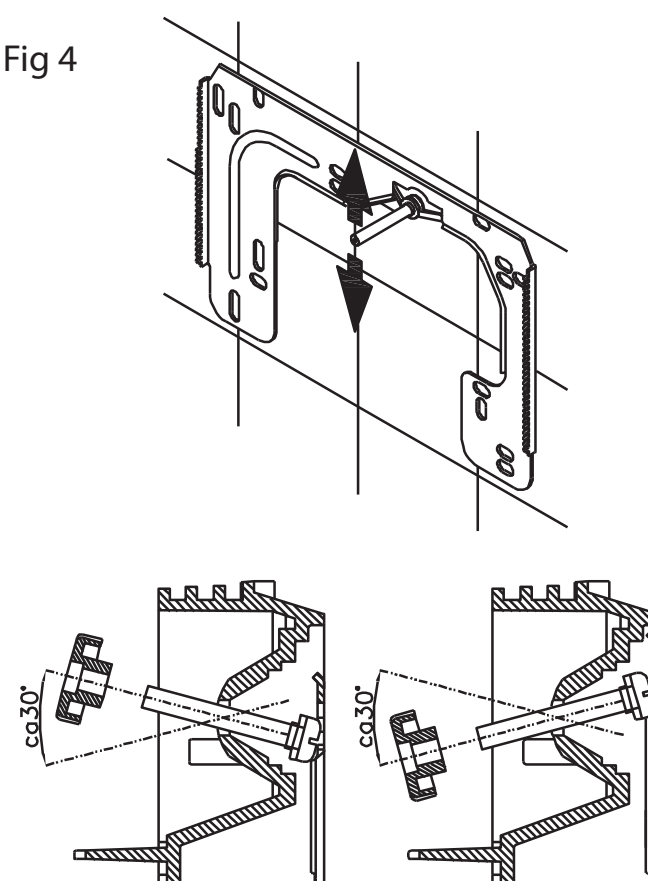


Fig 4

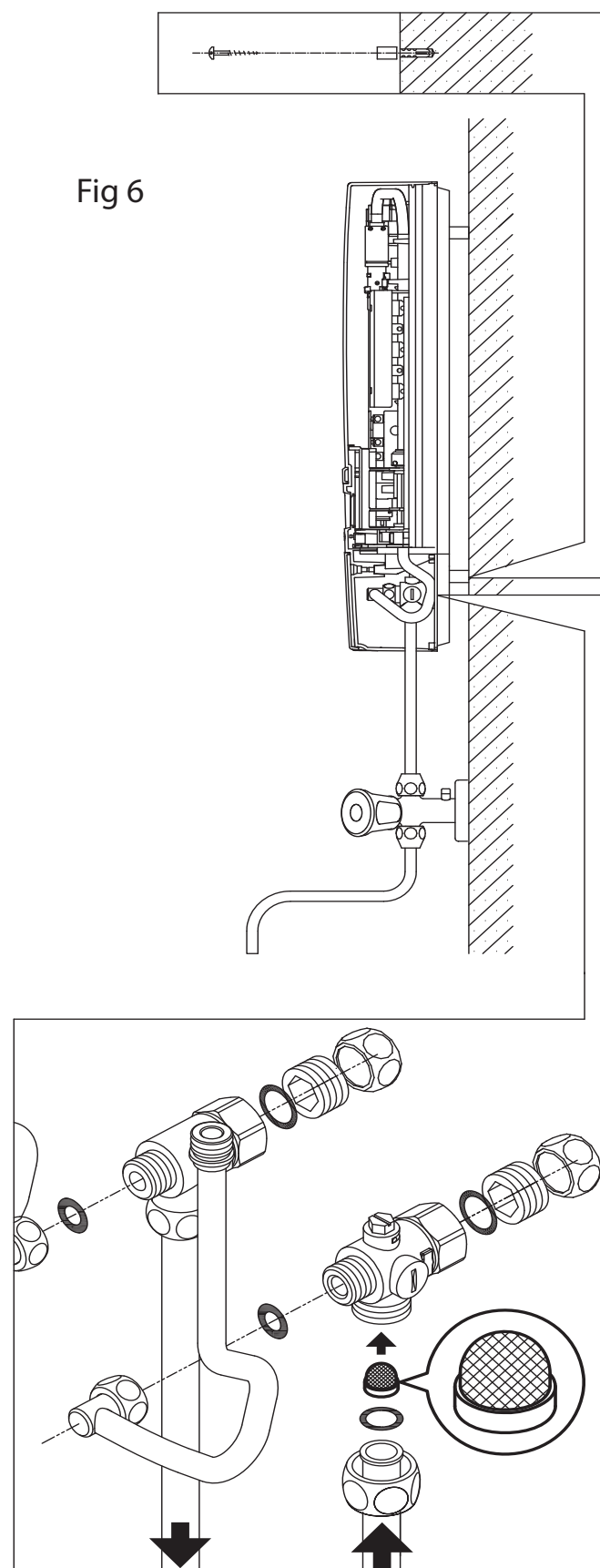


7. Installation

Surface mounted installation

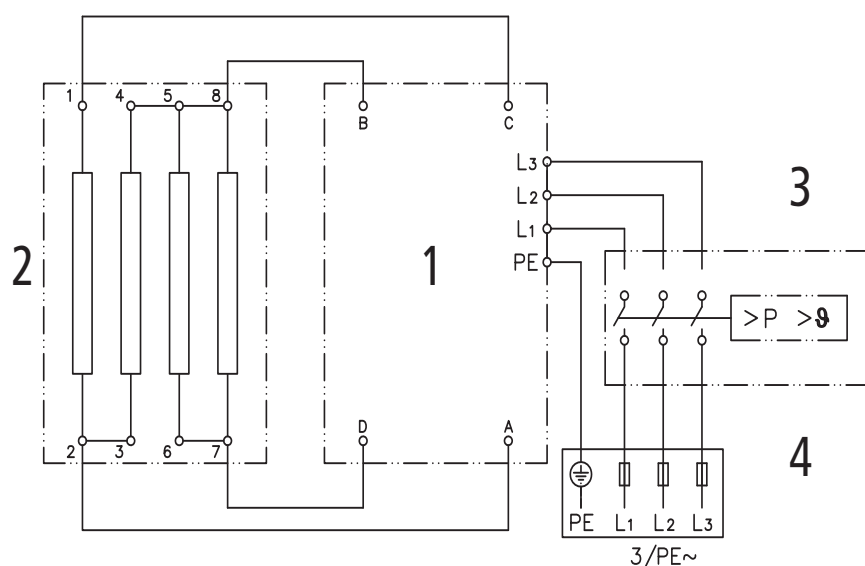
1. If required for surface mounting, the two 1/2" screw-in nipples and the 1/2" seals must be screwed into the 1/2" union nuts of the hot water and cold water connectors. The two 1/2" caps of the side outlets of the hot water and cold water connectors must be removed and screwed into the open end of the screw-in nipples. The hot water and cold water connectors must then be screwed into the 1/2" union nut of the appliance and delivery pipe, together with the 1/2" seals.
2. When surface mounting, it is advisable to install the appliance at a distance from the wall as illustrated in Fig 6 using the spacer sleeves supplied. In this case the two fixing holes near the lower pipe connections should also be used.
3. The flared end of the pipes must be screwed into the 1/2" side outlets of the hot water and cold water connectors with 1/2" union nuts and 1/2" seals. The holes required for the pipes must then be broken out of the housing using a blunt implement.
4. Ensure the line strainer is inserted into the cold water connection.

Fig 6



Electrical connection

Prior to commencing electrical connection take time to re-read the 'Installation Requirements' listed on page 8 and ensure that all requirements pertaining to electrical installation are observed.



Wiring Diagram

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

7. Installation

Electrical connection from below

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

Note: If required, the terminal block can be re-positioned in the upper part of the appliance. In this case the instructions in the following section should be followed.

1. Remove inner and outer insulation from the connecting cable to the lengths shown in Fig 7.
2. With the smaller opening foremost, slide the water splash protection sleeve (A) over the connecting cable until the sleeve is flush with the wall. This prevents any water leaks from coming into contact with the electrical leads. The protection sleeve must be used and free from damage.
3. Open the control panel (B) to the right.
4. Fit the connecting cables into the terminal block (C) according to the wiring diagrams on page 11. Ensure all connections are fully tightened and secure.
5. **The appliance must be earthed.**
6. Pull the protection sleeve over the connecting cables until it fits in the recess of the intermediate panel.
7. Close the control panel.
8. Re-fit the appliance cover and secure with the fixing screw before re-fitting the fascia panel.

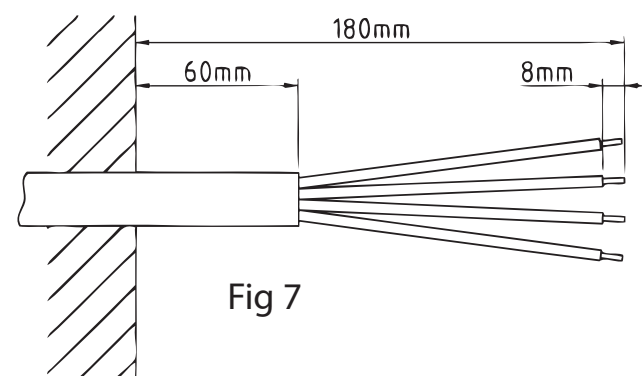
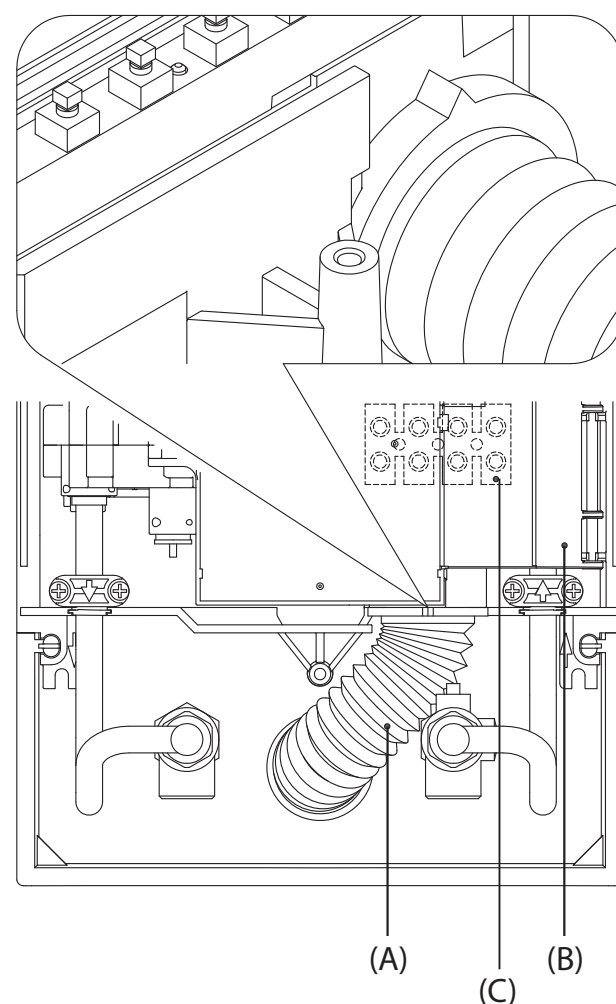


Fig 7

Fig 8



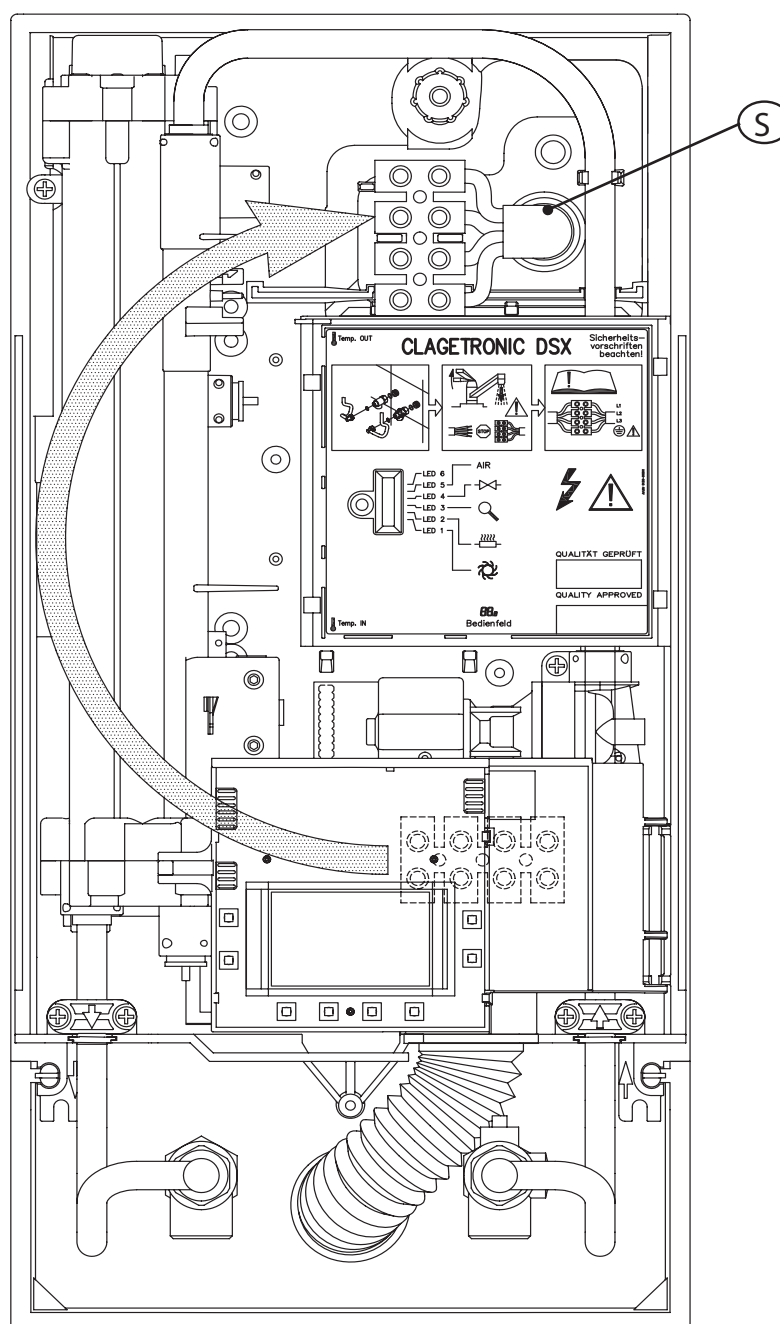
7. Installation

Electrical connection from above

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

1. Open the prepared breaking point (S) in the upper part of the appliance by pressing with a blunt instrument (e.g. Screwdriver). See Fig 9.
2. Open the cable grommet to slightly smaller than the cable size to ensure optimum protection against water ingress. Fit the grommet into the cable opening. N.B. The cable grommet must be used.
3. Strip the cable 6cm above the point where it emerges from the wall. Support the appliance while the cable is routed through the grommet.
4. Unscrew the terminal block fixing screw. Reposition the terminal block on the upper mounting and secure with the fixing screw.
5. Fit the connecting cables into the terminal block according to the wiring diagram on page 11. Ensure all connections are fully tightened and secure.
- 6. The appliance must be earthed.**
7. Re-fit the appliance cover and secure with the fixing screw before re-fitting the fascia panel.

Fig 9



8. Commissioning

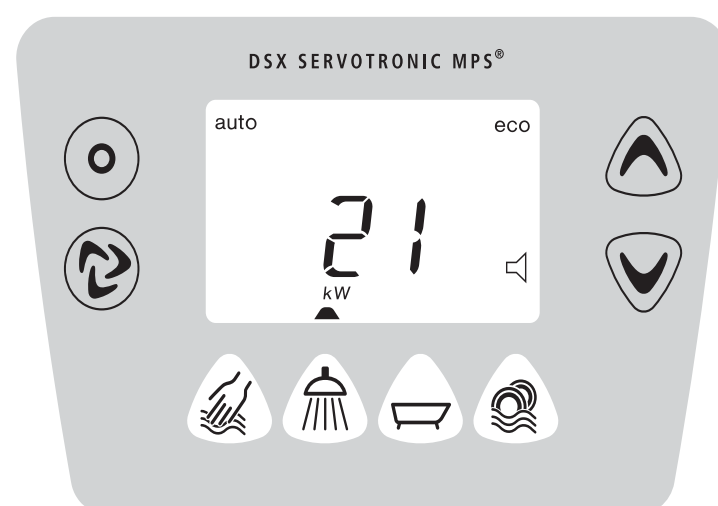
Before switching on the power supply, ensure the appliance is completely filled with water by carefully opening and closing the hot water tap until all air has been eliminated from the water heater and no more air emerges.

Every 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.

The maximum power rating of the appliance can be selected from 18, 21, 24 or 27kW at the time of installation. The maximum power rating should only be selected with reference to the technical data on page 5, after ensuring that correct cable sizing and fuse protection is in place and with regard to local site conditions and AS/NZS 3000 electrical regulations.

This must 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, “21” will flash on the display. If not, please refer to the section “Reinstallation”.
3. Select the required maximum power rating using the up ▼ and down ▲ arrow keys (18, 21, 24 or 27 kW).
4. Press ○ 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 30 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.



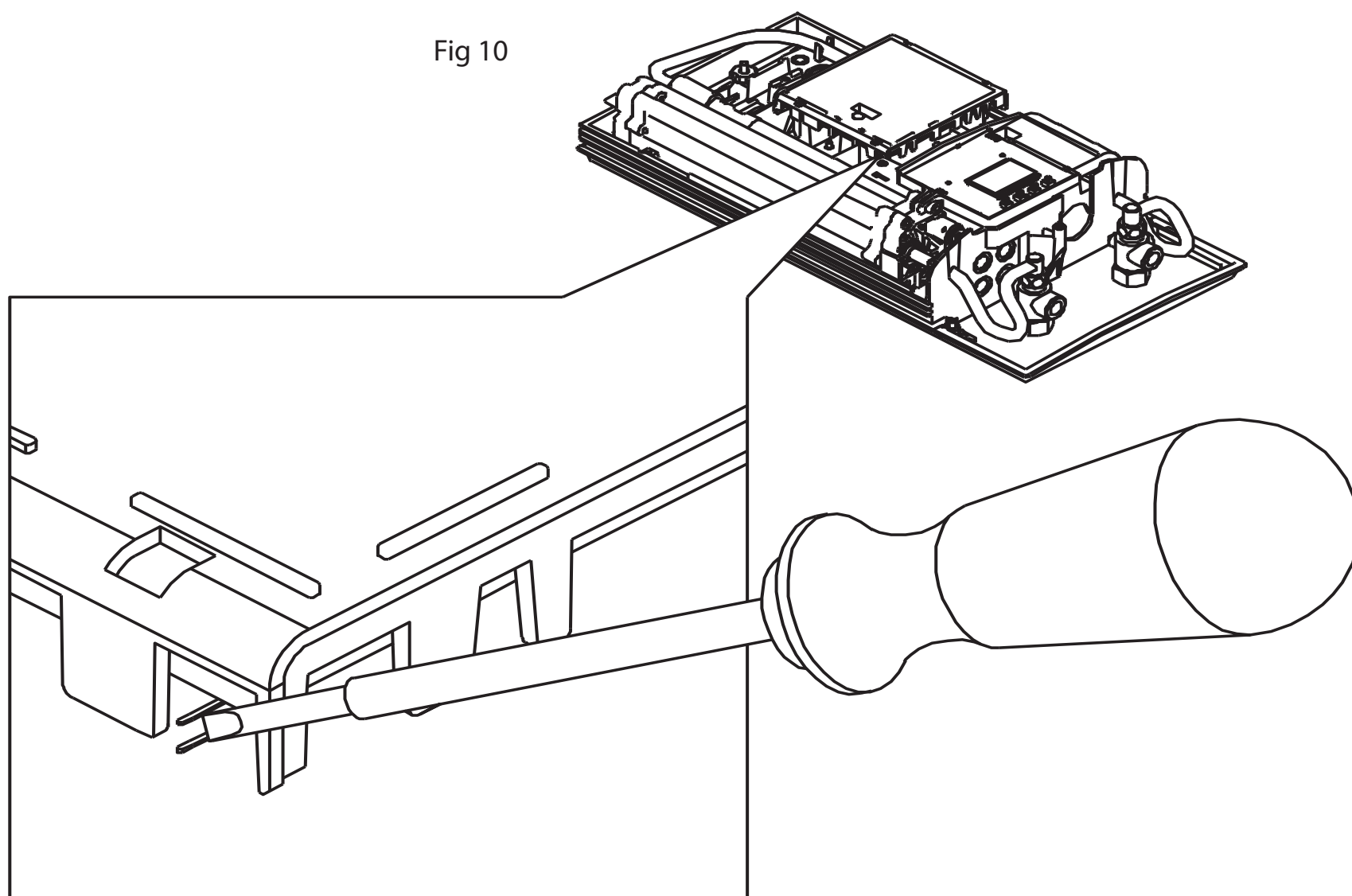
9. Reinstallation

If the appliance is to be re-commissioned under different installation conditions it may be necessary to alter the maximum power rating.

This must only be done by a qualified tradesperson.

To re-set the maximum power rating use a screwdriver to short circuit the two pins as shown in Fig 10. Value '21' will flash in the display panel until the maximum power rating has been selected.

Fig 10



10. Lock level

Lock level

The operating mode of the appliance can be restricted.

This should only be done by a qualified tradesperson.

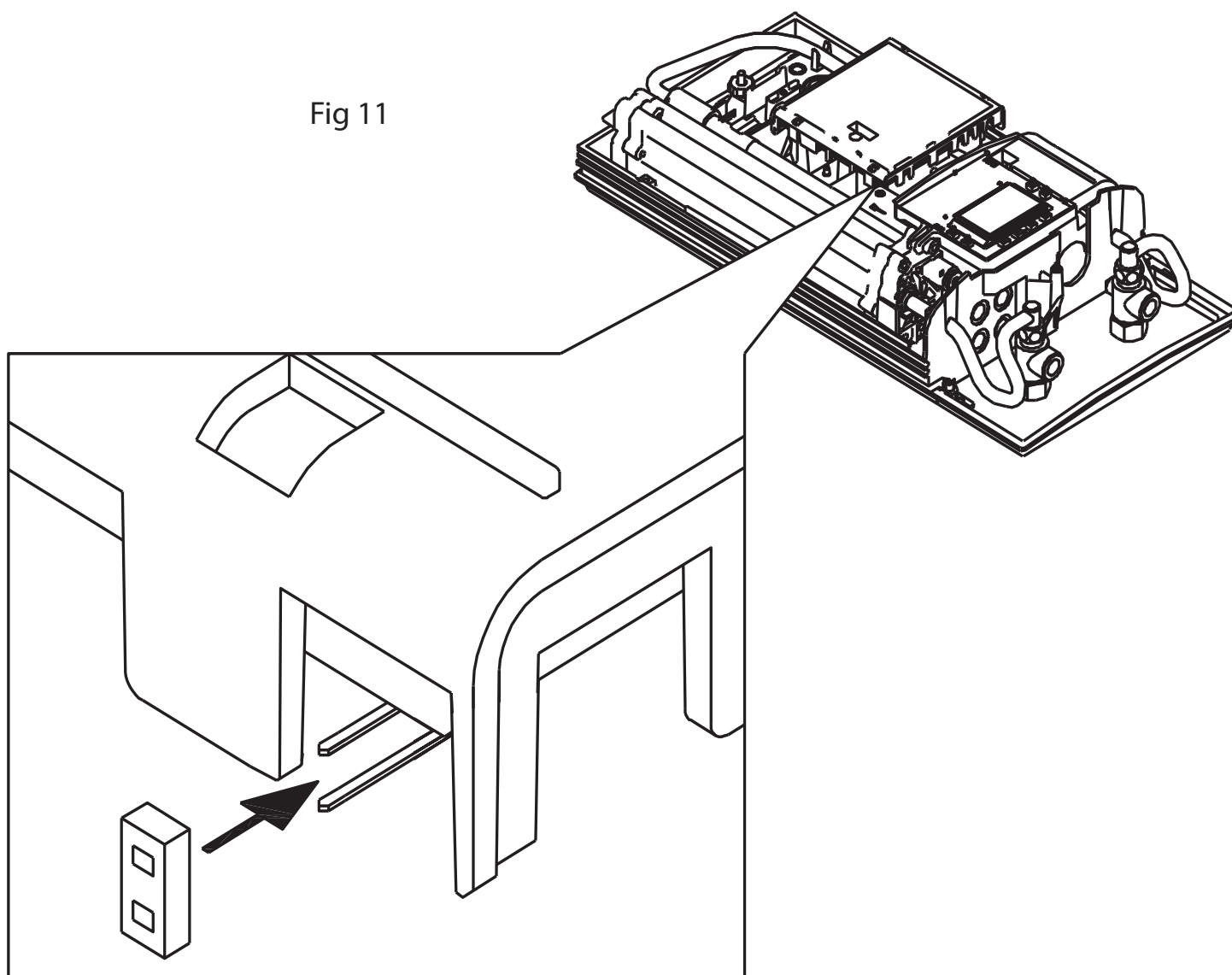
Activation of the Lock level:

1. Set required lock level in the service menu.
2. Disconnect the power supply to the unit.
3. Move the jumper on the main PCB from pin 2 to pin 1 (see Fig 11).
4. Reconnect the power supply to the unit.

Deactivation of the Lock level:



1. Disconnect the power supply to the unit.
2. Remove jumper.
3. Reconnect the power supply to the unit.




Fig 11




10. Lock level

To enter “Lock level” mode, you will need to access the Setup menu.

Press the setup key  and the info key  simultaneously for at least 3 seconds to call up the setup menu, the display confirms by “setup”.

Using the arrow keys  and  to select the available modes. To enter each mode, press the setup key  and the display will flash.

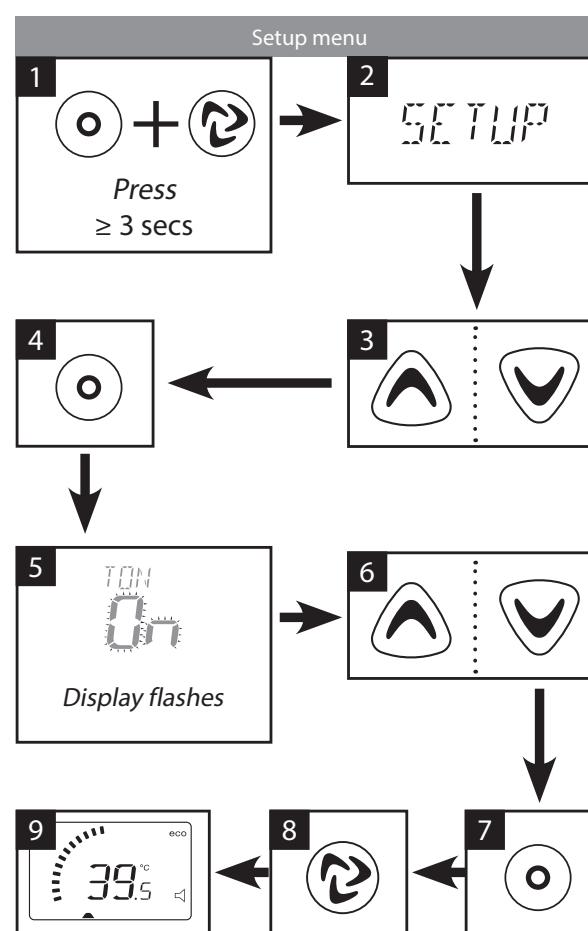
New settings can be selected using the arrow keys  and .

The new settings are stored when the setup key  is pressed again.

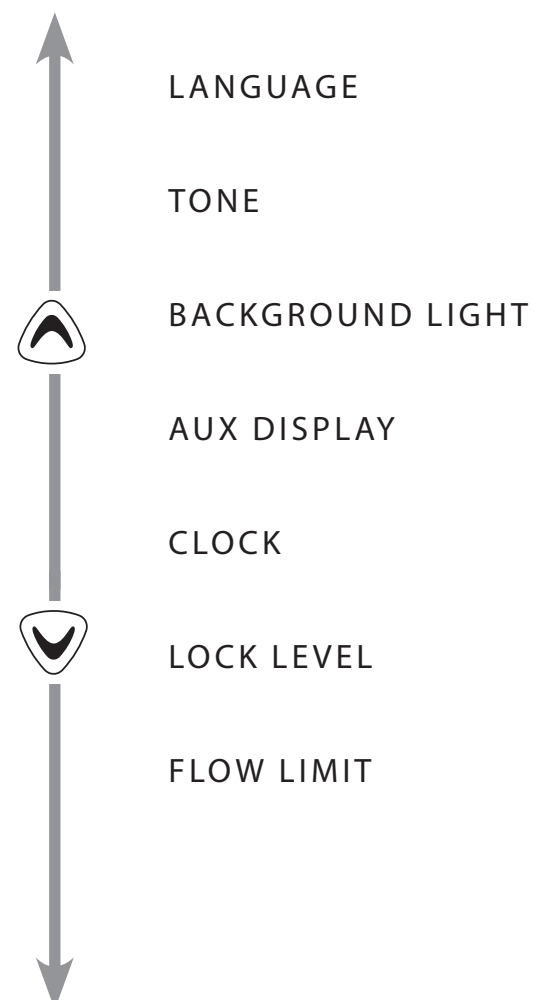
Press the info key  to return to the standard display.

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
- “3” same as “2”, additionally nominal value memory (hand-wash, shower, bathtub, kitchen) not changeable
- “4” same as “3”, additionally nominal value not changeable



Menu item order of “Setup menu”:



11. Maintenance

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

Plastic surfaces and sanitary fittings should only be wiped with a damp cloth.

Never use abrasive or chloric cleaning agents or solvents.

Outlet fittings (tap nozzles and shower heads) should be unscrewed and cleaned at regular intervals.

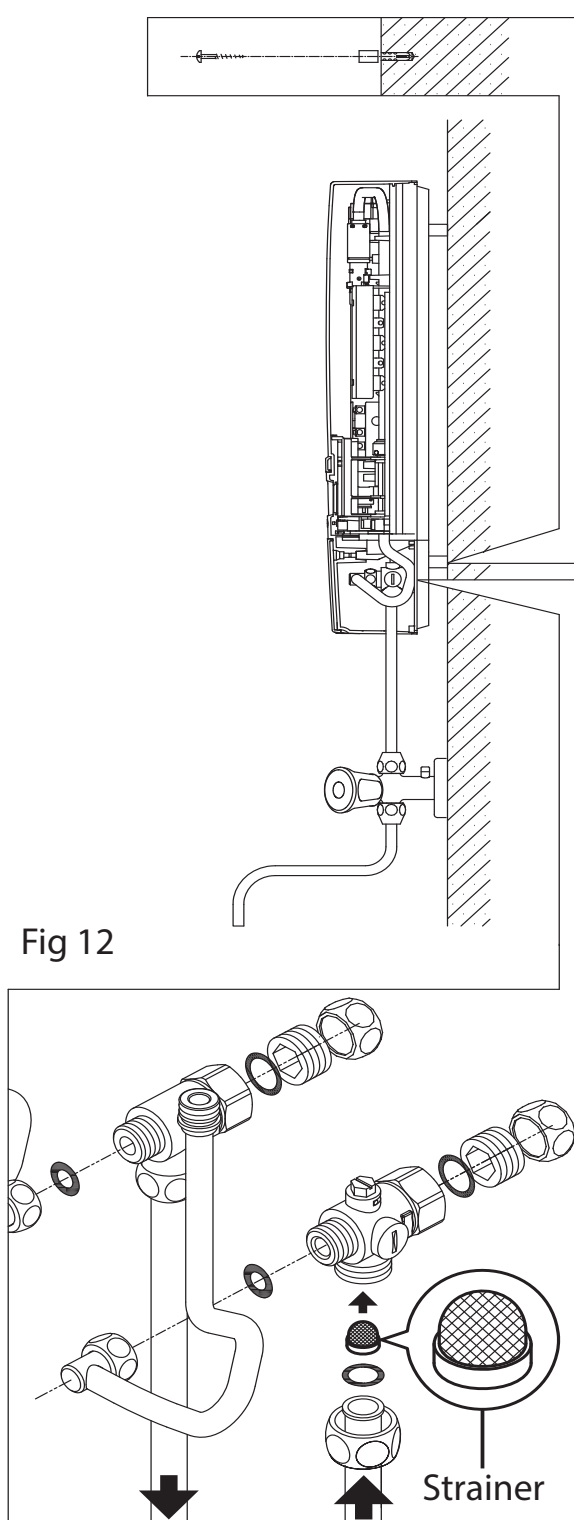
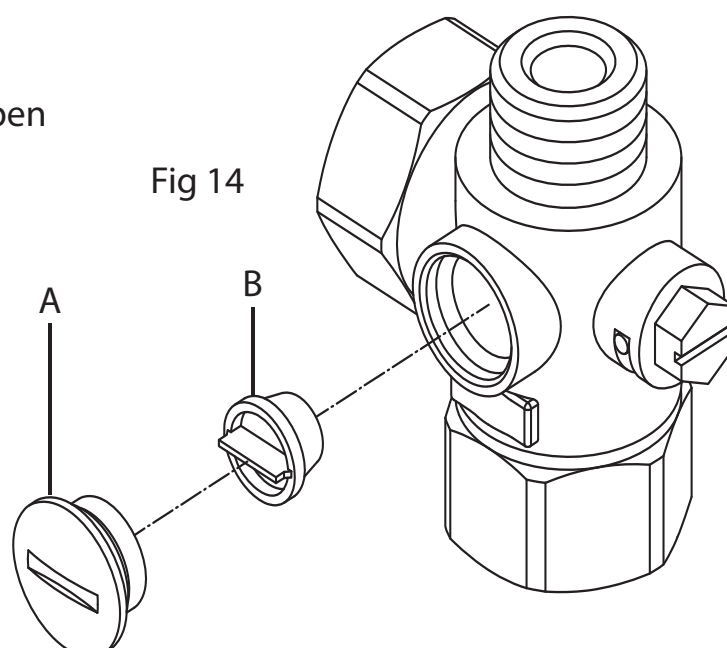
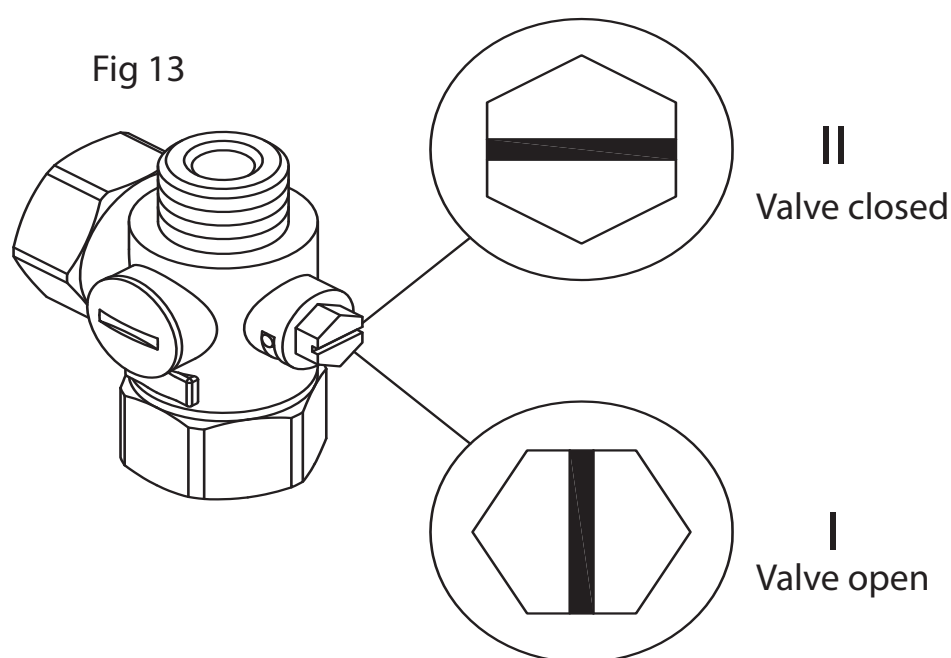
The electrical and plumbing components should be inspected regularly by a competent person to ensure proper functioning and operational safety. Water quality should be considered when determining the frequency of inspection.

Cleaning and replacing the filter strainer

The cold water connection of the appliance is fitted with an integral shut-off valve and filter strainer (See Fig 12). Soiling of the strainer may reduce hot water output from the unit.

The strainer should be cleaned or replaced as follows:

1. Isolate the electrical supply to the unit.
2. Remove the appliance cover and close the shut-off valve (see Fig 13) in the cold water connection piece to position II.
3. Unscrew the screw plug (A) from the cold water connection piece and take out the strainer (B) (see Fig 14).
4. The strainer can now be cleaned or replaced.
5. After re-fitting the strainer tighten the screw plug.
6. Slowly open the shut-off valve in the cold water connection piece to position 1.
7. Vent the unit by carefully opening and closing the hot water tap several times until all air has been eliminated from the water heater and no more air emerges.
8. Re-fit the appliance cover and restore power to the unit.





12. Notes

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Head Office

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Zip[®]



...the innovative hot water solution.

Quick reference guide

