CLAGE

Zip

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

CLAGE

Zip

Contents

Instructions for installer - DSX - 801051 - November 2018 v1.00 Art.no: 9120-34372

1. Safety instructions

Please read these instructions carefully before installing or using the appliance! Keep the instructions handy with the appliance for future use!

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.
- 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.
- The appliance must be earthed at all times.
- 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.
- The appliance is only suitable for domestic use and similar applications inside closed rooms, and must only be used to heat incoming water from the mains supply.
- The appliance must never be exposed to frost.
- The values stated on the rating plate must be observed.
- In case of malfunction, disconnect the fuses immediately. In case of leaks, cut off the mains water supply instantly. Repairs must only be carried out by the customer service department or an authorised professional.
- This appliance can be used by children aged 3 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be performed by children without supervision.
- If the appliance is factory equipped with a power supply cable, it must be replaced with an original spare cable from the manufacturer in case of damage by an authorised technician in order to avoid any hazards.
- For appliances with direct connection, an all-pole disconnecting device with a contact opening width of ≥ 3 mm per phase must be provided at the installation end, according to Australian wiring rules AS/NZ3000.
- The wall bracket must be secured with the supplied screws and dowels. The appliance must be secured to the wall bracket. The appliance may only be operated if it has been properly mounted on the wall bracket.
- The prescribed nominal pressure stated on the rating plate may not be exceeded at any time.
- The required water resistance may not fall below the value stated on the rating plate at any time.

To observe <u>additionally</u> for pressureless installation:

- The water outlet behind the devices must not be blocked, and the water flow must not be restricted.
- The water outlet facilities, such as shower head, jet control and other outlet unit, must be decalcified regularly. Deposits must be removed in regular intervals.
- Only the fittings recommended by the manufacturer may be used.
- If the appliance is exclusively connected to a single shower, only the shower heads recommended by the manufacturer may be used. No other fittings or appliances which decrease the water flow to the shower may be installed.

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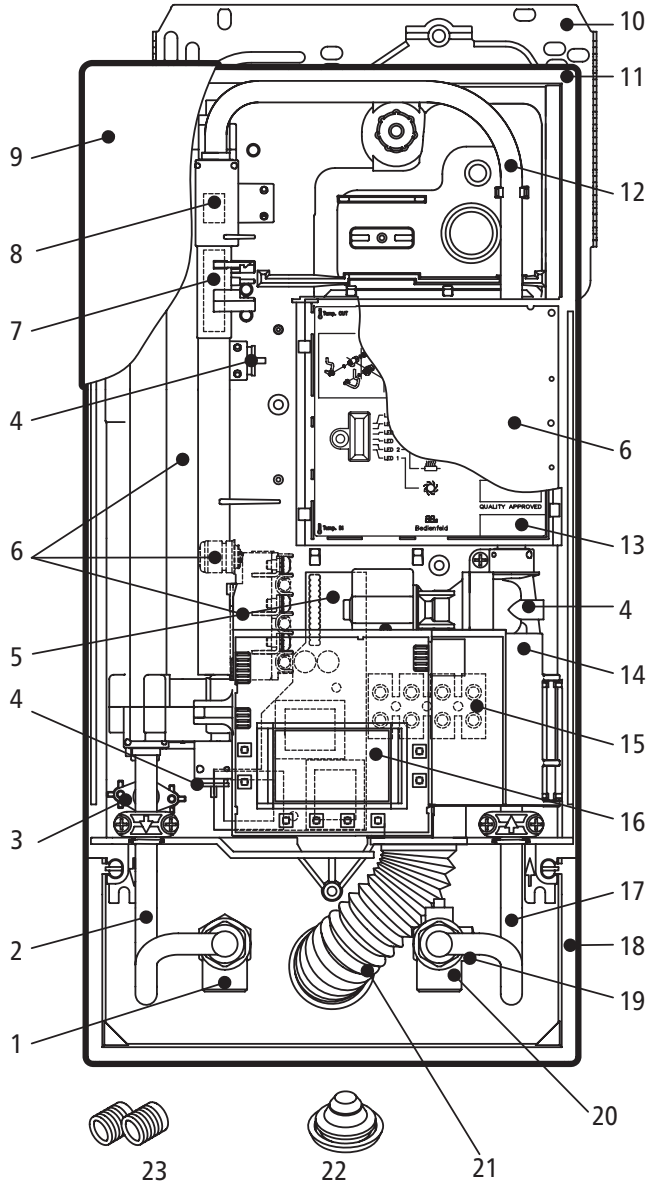
2. Overview

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



Pos.	Part.-No.	Description
1	**99381**	**Hot water connection**
2		Outlet pipe
3		Safety thermal cut-out (STB)
4	**99382**	**DSX / DEX thermal sensor set 2.1**
5	**99383**	**Servomotor with electronic 2.1**
6		Repair kit DSX
7	**99384**	**Flow sensor**
8	**99385**	**Non-return valve**
9		DSX hood
10		Bottom part
11		Wall bracket
12		DSX connecting pipe
13	**99386**	**PCB cover 2.1**

Pos.	Part.-No.	Description
14		Control panel support
15		Connecting terminal
16	**99387**	**DSX control panel**
17		Inlet pipe
18		Frame
19	**99388**	**Fine filter**
20	**99389**	**Cold water connection**
21		Water splash protection sleeve
22		Grommet
23		Screw-in nipples 1/2"
not shown:		
24		Faceplate
25	**99390**	**Fittings kit**
26		Operating foil

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

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3. Technical data

Model	DSX							
Part no.	27940 - 50 °C model				27941 - 60 °C model			
Energy efficiency class	A *)							
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)	18 kW (26 A)	21 kW (30 A)	24 kW (35 A)	27 kW (39 A)
Electrical connection	3~ / PE 380..415 V AC			3~ / PE 400 V AC	3~ / PE 380..415 V AC			3~ / PE 400 V AC
Min. required cable size [1]	see note 1)							
Hot water (l/min) [2] max. at Δt = 28 K max. at Δt = 38 K	9.2 6.8	10.7 7.9	12.3 9.0	13.8 10.2	9.2 6.8	10.7 7.9	12.3 9.0	13.8 10.2
Rated volume	0.4 l							
Rated pressure	1.0 MPa (10 bar)							
Connecting type	pressure-resistant / pressureless							
Heating system	Bare wire heating system IES®							
@ 15 °C: Required spec. water resistance Spec. electrical conductivity	≥ 1,100 Ωcm ≤ 90 mS/m							
Inlet temperature	≤ 70 °C							
Flow rate to switch on – max. flow rate	2.5 l/min – automatic [3]							
Pressure loss	0.2 bar at 2.5 l/min 1.3 bar at 9.0 l/min							
Temperature range	20 – 50 °C				20 – 60 °C			
Water connection	G ½“							
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	IP25 CE WaterMark							

*) The declaration complies with the EU regulation No 812/2013
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
2) Mixed water
3) Electronically controlled depending on the desired temperature and cold water temperature

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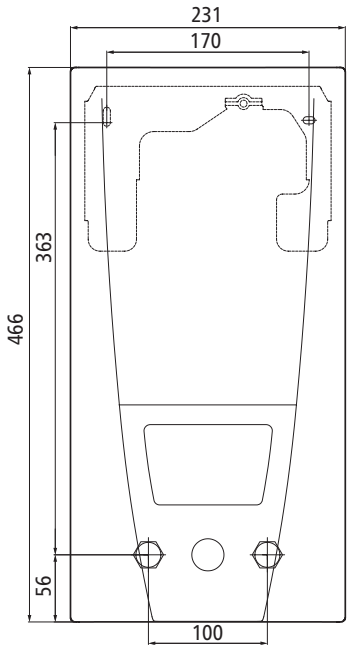
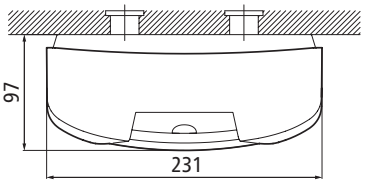
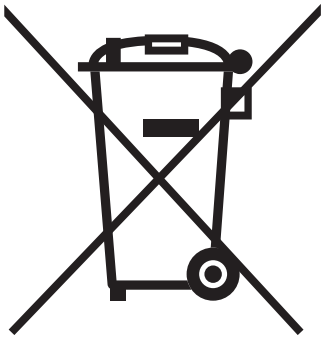
4. Dimensions



Dimensions in mm



5. Environment and recycling



Your product was manufactured from high-quality, reusable materials and components. Please respect in case of discarding that electrical devices should be disposed of separately from household waste at the end of their service life. Therefore, please take this device to a municipal collection point that accepts electronic scrap. Disposing it correctly will support environmental protection and will prevent any potential negative effects on human beings and the environment that could arise from inappropriate handling of these devices at the end of their service life. Please contact your local authority for further details of your nearest designated collection point or recycling site.

Business customers: If you wish to discard equipment, please contact your dealer or supplier for further information.

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The following regulations must be observed:

- **Installation must comply with all statutory regulations, as well as those of the local electricity and water supply companies.**
- **The rating plate and technical specifications**
- **Only intact and appropriate tools must be used**
- **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**
- **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**

Installation site

- Appliance must only be installed in frost-free rooms. Never expose appliance to frost.
- The Appliance must be wall mounted and has to be installed with water connectors downward.
- The appliance complies with protection type IP25.
- 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 supplyline. The appliance must be accessible for maintenance work.
- 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 distribution company.
- **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.

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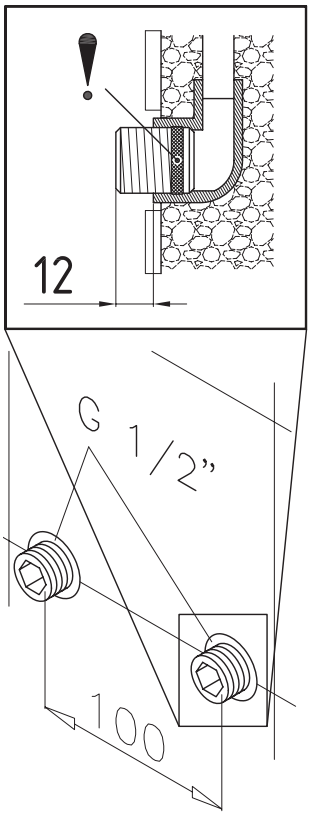
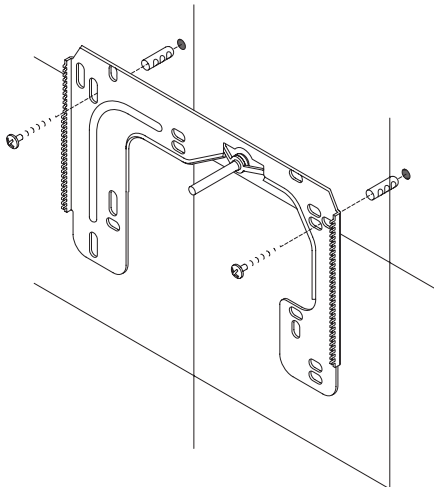
Installing the wall bracket

Note: If you install this instantaneous water heater in exchange for a conventional instantaneous water heater, there is generally no need to drill holes for the wall bracket, in this case step 2 would not be necessary.

Thoroughly rinse the water supply pipes before installation to remove soiling from the pipes.

1. Using a 12 mm hexagon socket screw key, screw the screw-in nipples into the wall connections. The seals must be fully screwed into the thread. After tightening, the double nipples must protrude by at least 12 mm.
2. Hold the included mounting template on the wall and align it so that the holes in the template fit over the connections. Mark the drill holes according to the template and drill them using a 6 mm drill. Insert the included dowels.
3. Screw in the wall bracket. Offset tiling or uneven surfaces can be compensated by up to 30 mm with the aid of the spacers supplied. The spacers are fitted between the wall and the wall bracket.

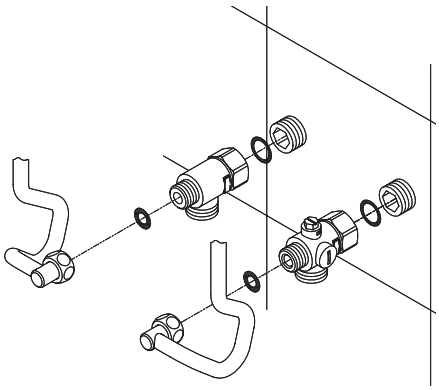




Installing connection pieces

Note: Fasten the screw nuts with caution, to avoid damage to the valves or the piping system.

1. As shown in the illustration, screw the cold water connection piece with the union nut and the ½ inch seal onto the cold water connection.
2. Screw the hot water connection piece with the union nut and the ½ inch seal onto the hot water connection.



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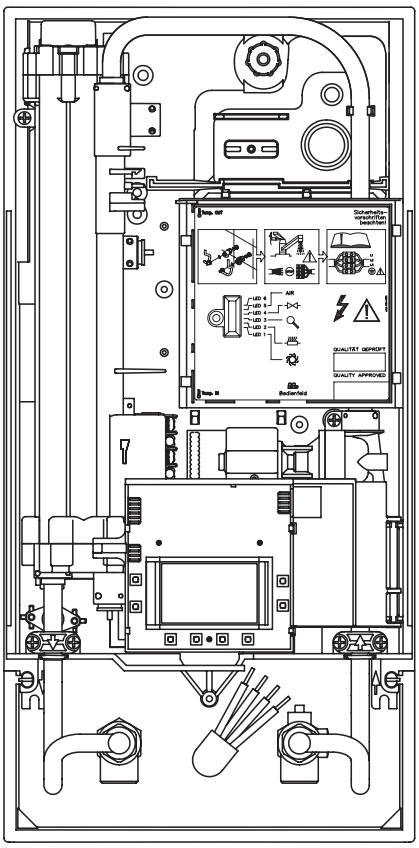
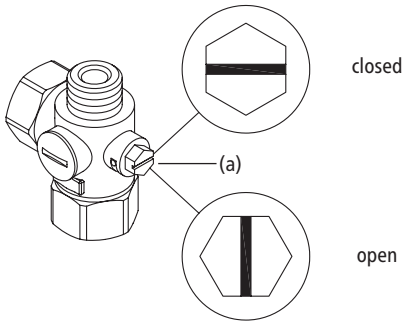


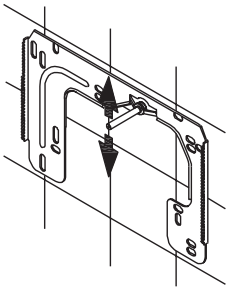


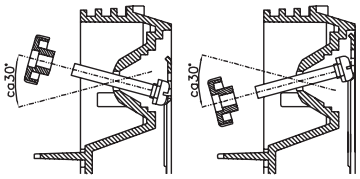
Installing the appliance

1. To open the appliance hood, take off the faceplate and unscrew the main hood screw.

- When replacing an appliance, the electrical power supply cable may be connected in the upper part. Only in such case, follow the instructions “Electrical connection from above”.

2. Place the appliance on the heater bracket so that the threaded rod of the wall bracket fits in the provided hole of the appliance. If necessary, slight corrections are possible by carefully bending the threaded rod of the wall bracket. However, it must be possible to screw on the water connection pipes of the appliance without applying force.





3. Screw the two ⅜ inch union nuts of the appliance’s water connection pipes, each with the ⅜ inch seal, onto the fittings.
4. Screw the plastic knurled nut onto the threaded rod of the wall bracket.
5. Open the water supply line to the unit and slowly open (position “open”) the shut-off valve (a) in the cold water connection piece. Check all connections for leaks.
6. Next, open and close the hot water tap valve several times until no more air emerges from the line and all air has been eliminated from the instantaneous water heater.

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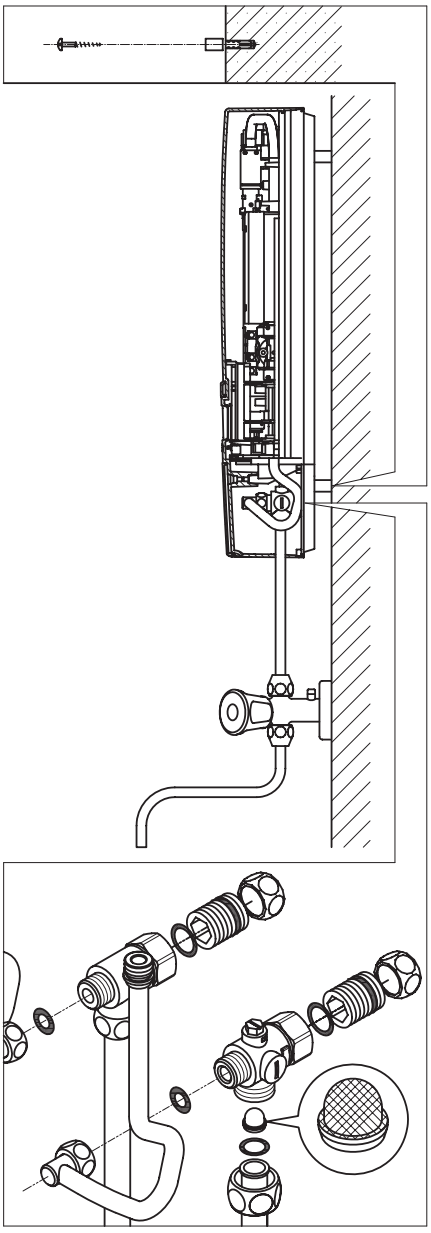

Surface mounted installation

Note: Fasten the screw nuts with caution, to avoid damage to the valves or the piping system.

For direct connection, the two ½ inch screw-in nipples and the ½ inch seals must be screwed into the ½ inch union nuts of the hot-water and cold-water connectors. The two ½ inch caps of the side outlets of the hot-water and cold-water connectors must be removed and screwed onto the open end of the screw-in nipples. The hot-water and cold-water connectors must then be screwed into the $^{3}/_{8}$ inch union nut of the appliance and delivery pipe, together with the $^{3}/_{8}$ inch seals.

For direct connection, it is advisable to mount the appliance at a distance as illustrated alongside, using the spacer sleeves supplied. It should therefore be noted that the two fixing holes near the lower pipe connections are also used.

The flared end of the pipes must be screwed into the ½ inch side outlets of the hot-water and cold-water connectors with ½ inch union nuts and ½ inch seals. The holes required for the pipes must then be broken out of the housing with the aid of a blunt implement.

In case of direct connection please note: Put the strainer into the cold water connection!

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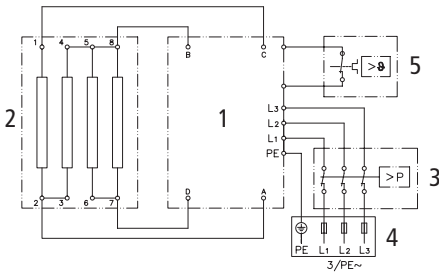
Wiring diagram



1. Electronic circuitry
2. Heating element
3. Safety pressure cut-out
4. Terminal strip
5. Safety thermal cut-out

Only by a specialist!

Please observe:

- **The installation must comply with current IEC and national local regulations or any particular regulations, specified by the local electricity supply company**
- **The rating plate and technical specifications**
- **The appliance must be earthed!**

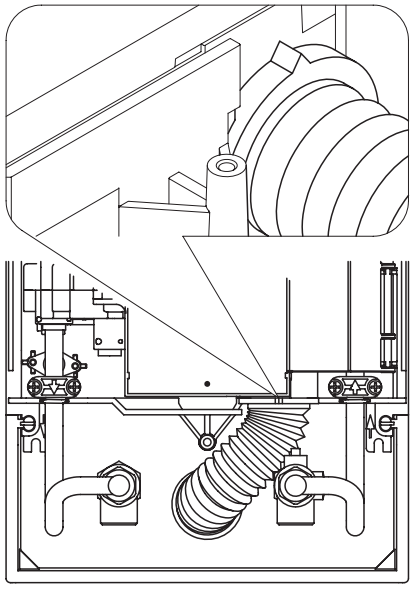
Structural prerequisites

- 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.
- The appliance must be permanently connected to the electrical supply through an isolation switch as per AS/NZS 3000.
- The electric wiring should not be damaged. After mounting, the wiring must not be direct accessible.
- An all-pole disconnecting device (e.g. via fuses) with a contact opening width of at least 3 mm per pole should be provided at the installation end.
- To protect the appliance, a fuse element must be fitted with a tripping current commensurate with the nominal current of the appliance.

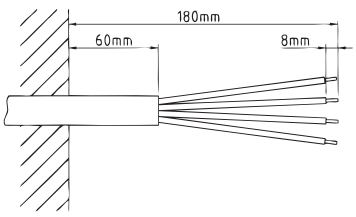
Electrical connection from below

Note: If necessary, the connecting terminal can be displaced to the upper part of the appliance. If you want to do so, please follow the instructions in the next chapter.

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



1. Dismantle approximately 6 cm off the connecting cable above the wall outlet. With the smaller opening ahead, slide the water splash protection sleeve over the connecting cable so that the sleeve is flush with the wall. This prevents any leaking water from coming into contact with the electrical leads. It must not become damaged! The protection sleeve must be used!
2. Open the control panel rightwards.
3. Strip the cables and plug them in the connecting terminals according to the wiring diagram. The appliance must be earthed.
4. Pull the protective sleeve over the connecting cables until the sleeve fits perfectly in the recess of the intermediate panel. Adjust the water splash protection sleeve as illustrated. Reinsert the control panel and lock it on the heating element.
5. Place the hood on the appliance and screw in the fastening screw. After that you can reinsert the faceplate.



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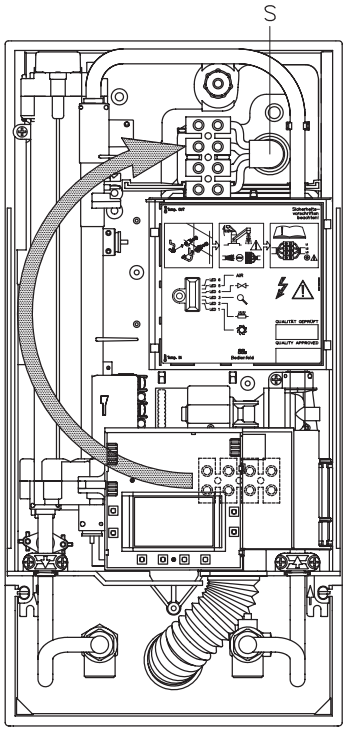

Electrical connection from above

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 implement (e.g. srewdriver).
2. Slit the grommet to match the cable size. The opening in the grommet 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. The protection grommet must be used!
3. Dismantle the cable roughly 6 cm above the point where it emerges from the wall. Hold the prepared appliance so that you can route the cable into the grommet with the other hand.
4. Place the appliance on the heater bracket so that the threaded rod of the wall bracket fits in the provided hole of the appliance.
5. Open the control panel rightwards.
6. Unscrew the fastening screw of the connecting terminal. Displace the connecting terminal to the upper foot. Affix the connecting terminal again.
7. Strip the cables and plug them in the connecting terminals according to the wiring diagram. The appliance must be earthed.
8. Reinsert the control panel and lock it on the heating element.
9. Place the hood on the appliance and screw in the fastening screw. After that you can reinsert the faceplate.

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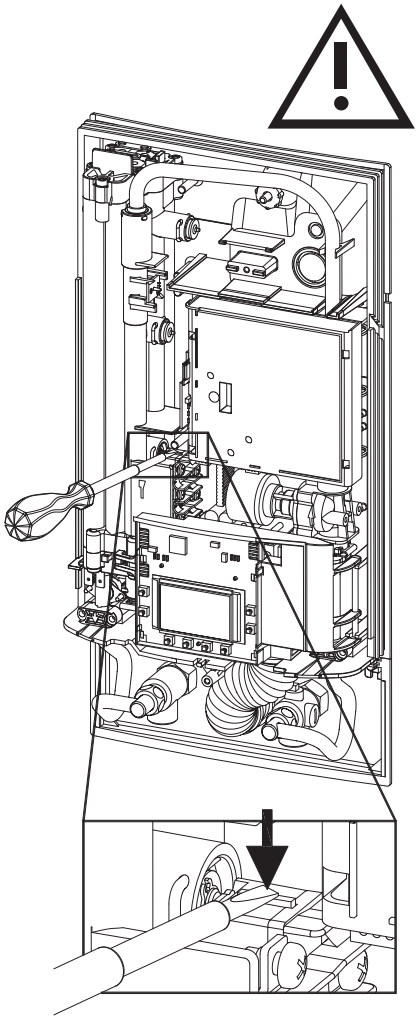

Before making the electrical connection, fill the mains and the appliance with water by carefully opening and closing the hot water tap in order to vent completely.

To ensure a maximum flow, remove any existing aerator from the faucet. Flush the warm and cold water pipes each at least for one minute.

After every draining (e.g. after work on the plumbing system or following repairs to the appliance), the heater must be re-vented in this way before starting it up again.

If the water heater cannot be put into operation, the temperature cut-out or the pressure cut-out may have tripped during transport. If necessary, reset the cut-out.

Selection of power rating

Only by authorised specialist, otherwise lapse of guarantee!

Upon first connection of the appliance to the supply voltage, select the maximum power rating. Only after having set the power rating, the heater provides its standard operation mode.

The maximum allowable power rating at installation site depends on the local situation. It is imperative to observe all data shown in the table "Technical specifications", in particular the required cable size and fuse protection for the electrical connection. Moreover, the electrical installation must comply with the statutory regulations of the respective country and and AS/NZS 3000 electrical regulations.

1. Switch on the power supply to the appliance. The LCD display on the appliance must light up.
2. When switching on the supply voltage for the first time, the value "21" flashes in the display. If not, please follow the below note "Reinstallation".
3. Select the maximum allowable power rating depending on the local situation via the up ⌄ and down ⌃ arrow keys (18, 21, 24 or 27 kW).
4. Press key ⊙ to confirm the setting. The appliance starts operating.
5. Mark the set power rating on the rating plate.
6. After having set the maximum allowable power rating, the heating element will be activated after approx. 10 - 30 sec of continuous water flow.
7. Open the hot water tap. Check the function of the appliance.
8. Explain the user how the instantaneous water heater works and hand over the operating instructions for the user.
9. Fill in the guarantee registration card and send it to Zip Heaters or use the online registration on our website.

Multiple Power System MPS®:

The rated capacity (max. power consumption) is 27 kW / 400 V and can be changed internally to 24 kW, 21 kW or 18 kW.

Sower application (only for 60 °C models)

The water heater's temperature must be limited to 55 °C, if it is connected to a shower. The service menu parameter "Temperature Limit" ("tL") must be set to a value less or equal 55 °C, in consultation with the customer and the lock level must be activated.

When the device is operated with preheated water, it must be ensured that this temperature is limited to 55 °C as well.

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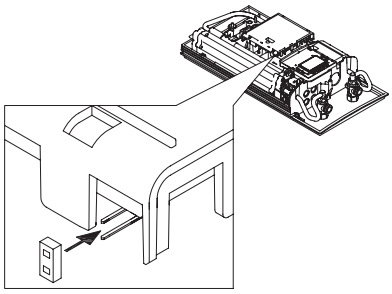
Lock level

The operating mode of the appliance can be restricted.



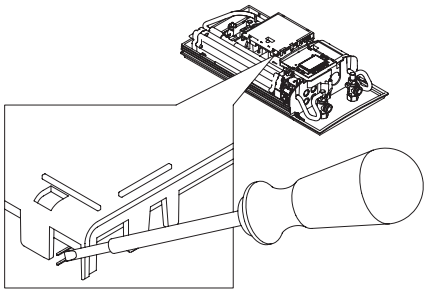
Activation of the lock level

1. Select required level of Lock level via the setup menu (see chapter "How to use, Setup menu")
2. Disconnect the appliance from the power supply (e.g. by switching off the fuses)
3. Insert the jumper on the power electronics (see picture)
4. Put the appliance into operation again

Deactivation of the lock level

1. Disconnect the appliance from the power supply (e.g. by switching off the fuses)
2. Remove jumper
3. Put the appliance into operation again

Reinstallation



In case the appliance will be commissioned again under different installation conditions than during its initial operation, it may be necessary to adapt the maximum power rating.

A temporary short-circuit of the two pins (see figure), will reset all heater parameters to works setting and lock the heating. Value "21" flashes in the display until the maximum power rating has been selected. This condition will maintain when activating and deactivating the supply voltage.

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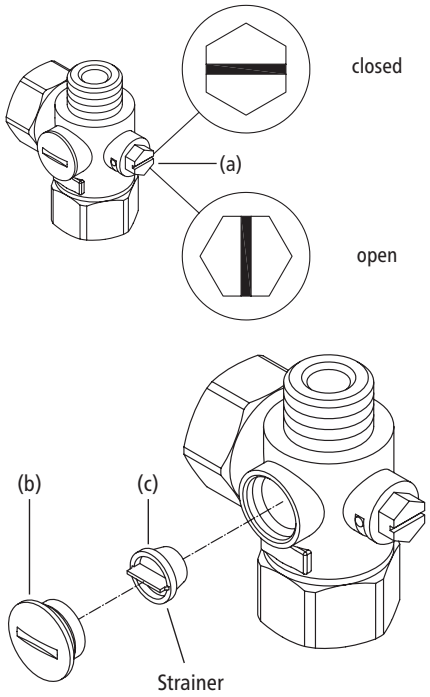
Maintenance work must only be conducted by an authorised professional.

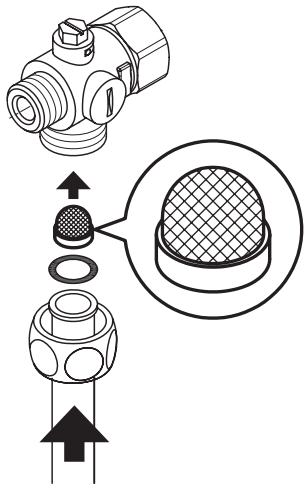
Cleaning and replacing the filter strainer



The cold water connection of this instantaneous water heater 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. De-energize the instantaneous water heater (e.g. via deactivating the fuses) and prevent inadvertent reactivation of them.
2. To open the hood, take off the small face plate, loose the screw behind this cover and detach the hood.
3. Close the shut-off valve (a) in the cold water connection piece (position “closed“).
4. Unscrew the screw plug (b) from the cold water connection piece and take out the strainer (c).
5. The strainer can now be cleaned or replaced.
6. After fitting of the clean strainer tighten the screw plug.
7. Slowly reopen the shut-off valve in the cold water connection piece (position “open“).
8. Vent the unit by carefully opening and closing the affiliated warm water tap valve several times until air no longer emerges from the pipe.
9. Fit the hood of the unit. Then switch on the power again (e.g. via activating the fuses).

Cleaning and replacing the filter strainer if direct connected



The cold water connection of this instantaneous water heater is equipped with a strainer. Soiling of the strainer may reduce the warm water output. Clean or replace the strainer as follows:

1. De-energize the instantaneous water heater (e.g. via deactivating the fuses) and prevent inadvertent reactivation of them.
2. Close the shut-off valve in the mains water supply of the instantaneous water heater.
3. To open the hood, take off the small face plate, loose the screw behind this cover and detach the hood.
4. Unscrew mains water inlet from connection piece and take out the strainer.
5. The strainer can now be cleaned or replaced.
6. After refitting the clean strainer reconnect the mains water inlet to the connection piece.
7. Slowly reopen the shut-off valve in the mains water supply.
8. Vent the unit by carefully opening and closing the affiliated warm water tap valve several times until air no longer emerges from the pipe.
9. Fit the hood of the unit. Then switch on the power again (e.g. via activating the fuses).

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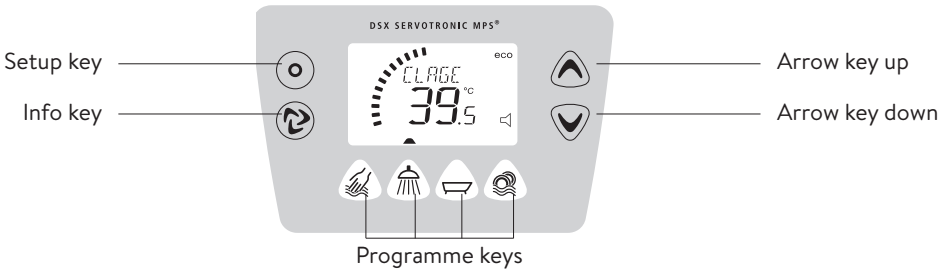
As Zip's policy is one of continuous product improvement, changes to specifications may be made without prior notice. Images in this booklet have been modified and may not be true representations of the finished goods.

WaterMark

Quick reference guide



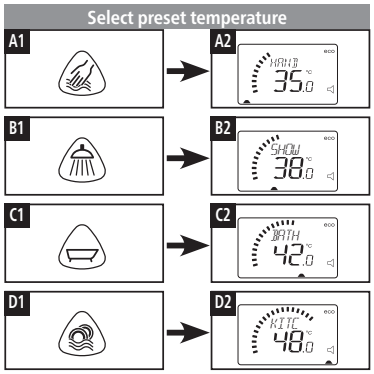
Set temperature

–1 °C | +1 °C

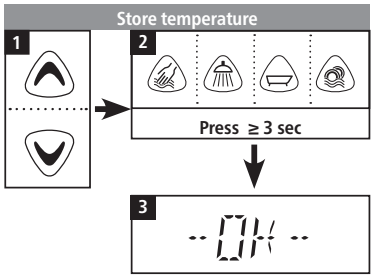
Convenience zone 35,0..42,0 °C

–0,5 °C | +0,5 °C

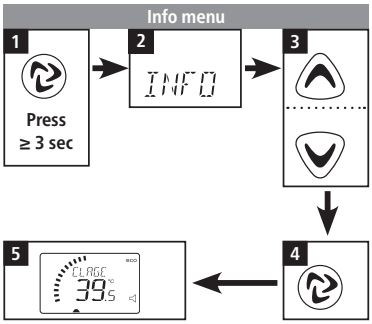
Select preset temperature



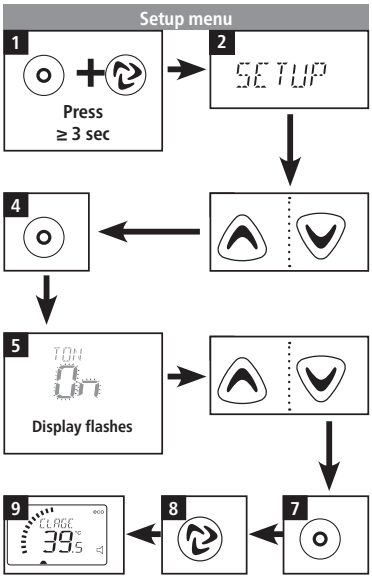
Store temperature



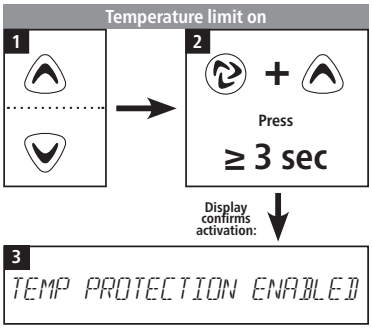
Info menu



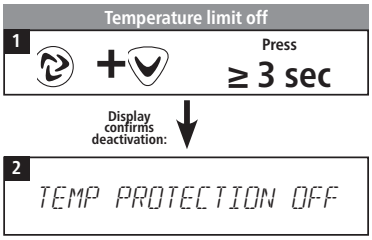
Setup menu



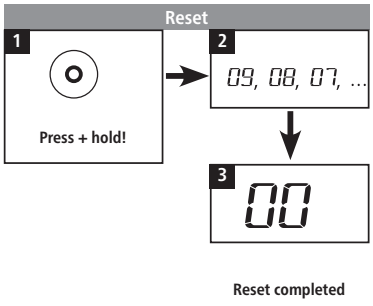
Temperature limit on



Temperature limit off



Reset



Reset completed

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