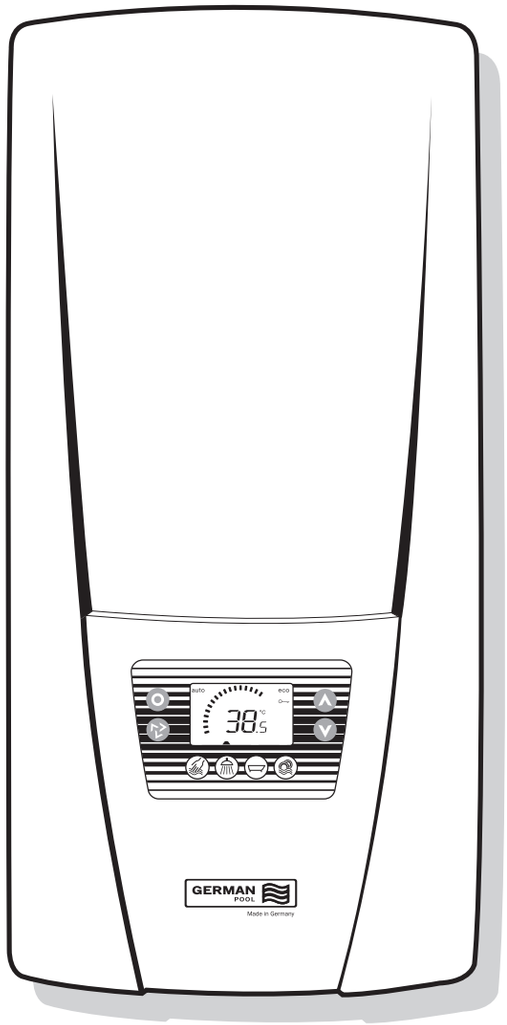
GERMAN POOL 德國寶

即熱式電熱水器｜即热式电热水器
Instantaneous Water Heater

DSX



在使用之前請詳細閱讀「使用說明書」及「保用條例」，並妥為保存。
在使用之前请详细阅读「使用说明书」及「保用条例」，并妥为保存。
Please read these instructions and warranty information carefully before use and keep them handy for future reference.

IP25

使用說明書｜使用说明书｜OPERATING INSTRUCTIONS

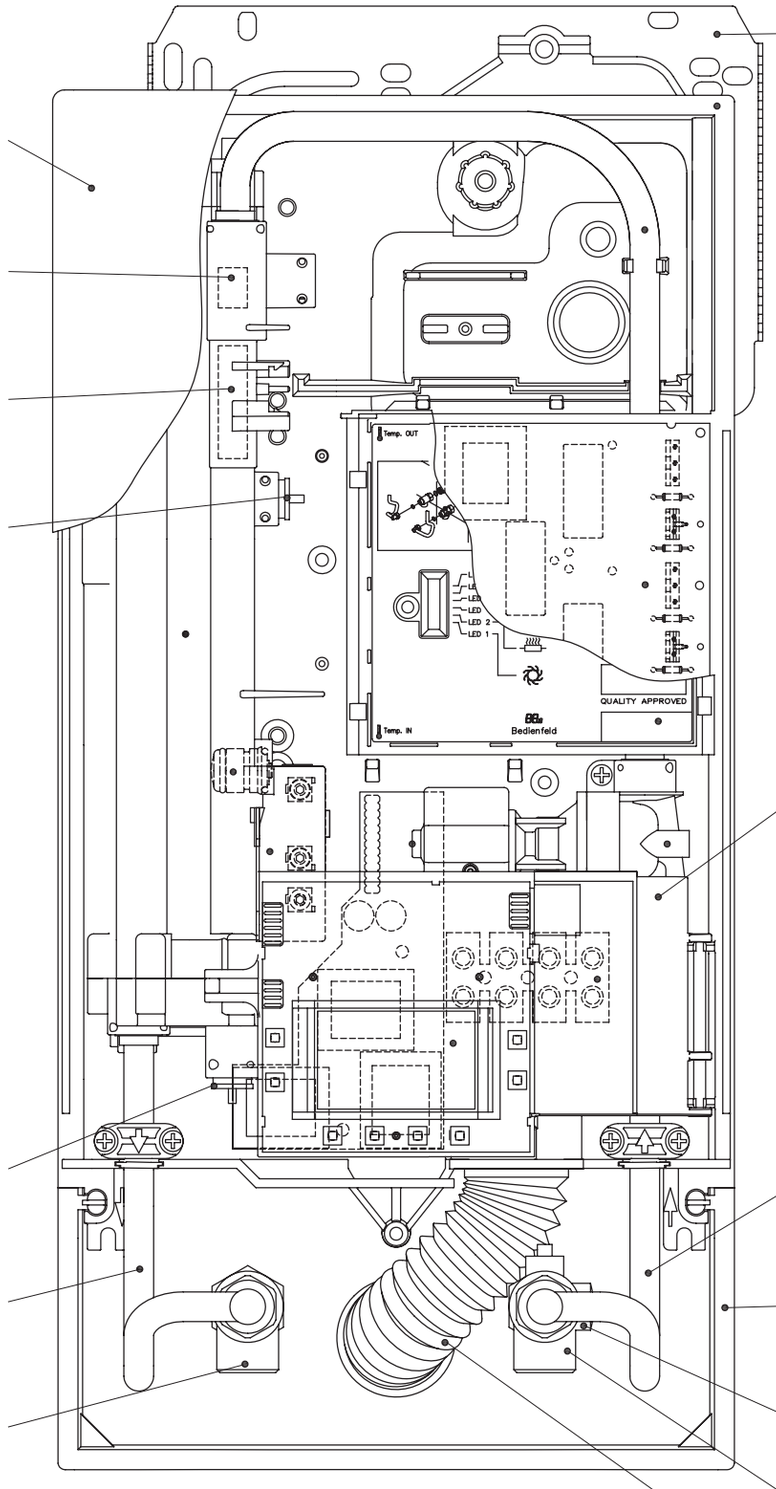
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WH-DSX-M-11(4)

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1. Overview

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



7 wall bracket
82520

DSX hood **6**
82503

non-return valve **5**
82246

flow sensor **4**
82526

thermal sensor set **3**
82512

8 control panel support
82573

temperature sensor set **3**
82512

9 inlet pipe
82531

outlet pipe **2**
82529

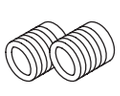
10 frame
82571

hot water connection **1**
82085

11 fine filter
82162

12 cold water connection
82074

13 water splash protection sleeve
82060



15 screw-in nipples 1/2"
82110



14 grommet
82180

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3. Environment and recycling





German Pool is very conscious of environmental protection, and this also includes packaging materials. You can care for the environment by carefully segregating waste.

- The packaging is essential to protect the components whilst in transit. It is made from environmentally-friendly, re-usable corrugated cardboard. The plastic bags are made of recyclable polyethylene (PE).
- The plastic components of the appliance are marked with a material code so that they can be recycled at the end of their useful life. These valuable materials are 100 % recyclable, provided they are correctly segregated.

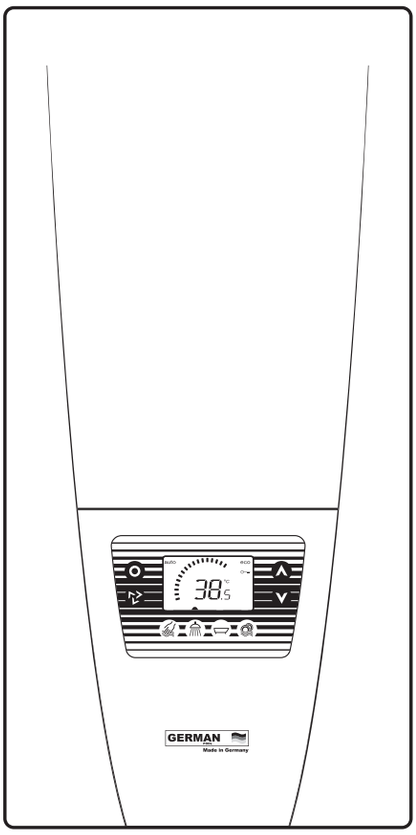
4. Safety instructions

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 only suitable for domestic use and similar applications inside closed, frost-free rooms, and must only be used to heat incoming 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.

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5. Description of appliance



The instantaneous water heater DSX is a microprocessor-controlled, pressure-resistant water heater for a decentralised water supply to one or more tap connections.

Its electronic control regulates the power consumption depending on the selected outlet temperature, the respective inlet temperature and the flow rate, thus reaching the set temperature exactly to the degree and keeping it constant in case of pressure fluctuations. The required outlet temperature can be entered on a keypad within a range between 20 °C and 60 °C and can be read off the digital display.

The maximum inlet temperature can be up to 70 °C so that operation in connection with solar heating systems is possible.

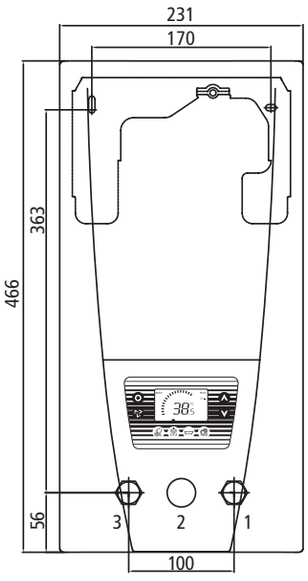
6. Technical specifications

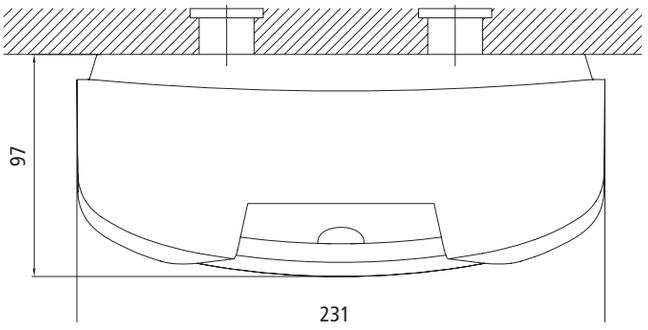
Model	DSX			
Article no.	34347			
Rated capacity / rated current	16.2 kW..27 kW (25A..39A)			
Chosen capacity / current	16.2–19.4 kW (25..27A) ❑	19.0–22.6 kW (29..30A) ❑	21.6–25.8 kW (33..36A) ❑	24.4–27.0 kW (37..39A) ❑
Electrical connection	3/PE 380..415V AC			3/PE 400V AC
Min. required cable size	4.0 mm²	4.0 mm²	6.0 mm²	6.0 mm²
Hot water (l/min) max. at Δt = 28 K max. at Δt = 38 K	9.2 [1] 6.8	10.7 [1] 7.9	12.3 [1] 9.0 [1]	13.8 [1] 10.2 [1]
Rated volume	0.4 l			
Type	Pressure type 1 MPa (10 bar)			
Heating system	bare wire heating system IES®			
Required spec. water resistance @ 15 °C	≥ 1100 Ωcm			
Spec. electrical conductivity	≤ 90 mS/m			
Inlet temperature	≤ 70 °C			
Flow rate to switch on – max. flow rate	2.5 – 8.0 l/min			
Pressure loss	0.2 at 2.5 l/min 1.3 bar at 9.0 l/min			
Temperature choice	20 °C – 60 °C			
Weight (when filled with water)	4.19 kg			
VDE class of protection	1			
Type of protection / safety	IP25 CE CCC			

1) mixed water

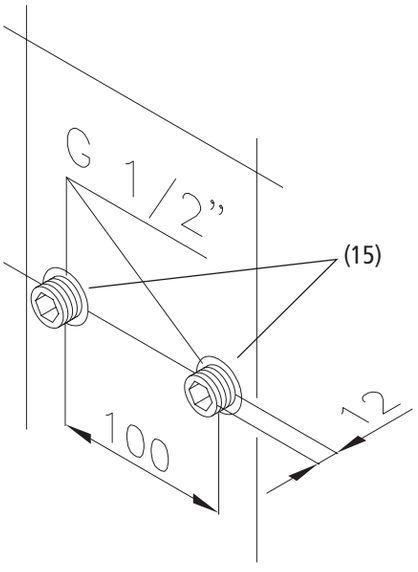
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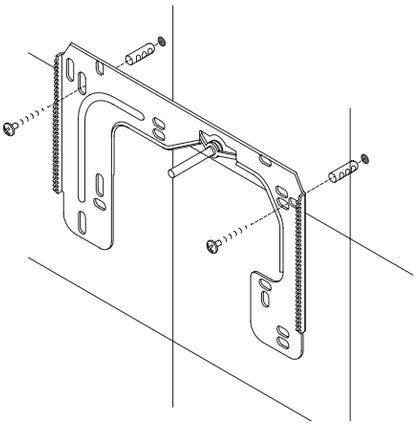
7. Dimensions





8. Installation





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 specifications on the rating plate**
- **Technical specifications**

Installation site

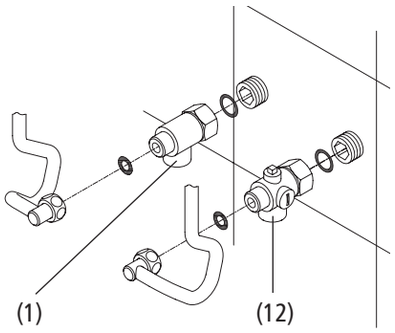
- Appliance must only be installed in frost-free rooms. Never expose appliance to frost.
- The Appliance must be wall mounted and has to be installed with water connectors downward.
- The appliance complies with protect-ion type IP25 and may therefore be installed in protection zone 1 according to VDE 0100 part 701.
- In order to avoid thermal losses, the distance between the instantaneous water heater and the tapping point should be as small as possible.
- For maintenance work, a shut-off valve should be installed in the supply line. The appliance must be accessible for maintenance work.
- Copper or steel connecting pipes may be used. Plastic pipes may only be used if they conform to DIN 16893, Series 2. The hot water pipes must be thermally insulated.
- The specific resistance of the water must be at least 1100 Ω cm at 15°C. The specific resistance can be asked for with your water distribution company.

Installing the wall bracket

If you install the instantaneous water heater DSX instead of a conventional instantaneous water heater, there is generally no need to drill holes for the wall holder. In this case, you only need to screw in the double nipples (15) as described in 2. and to secure the wall bracket.

1. **Thoroughly rinse the water supply pipes before installation to remove soiling from the pipes.**
2. Using a 12 mm hexagon socket screw key, screw the screw-in nipples into the wall connections. After tightening, the double nipples must protrude by 12 mm.

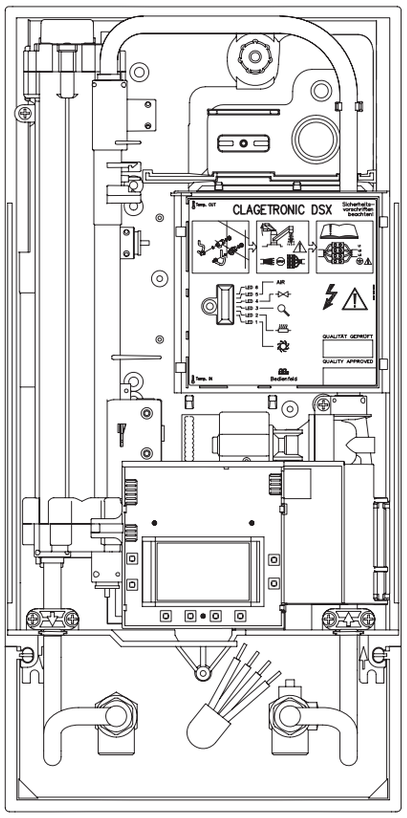
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3. Hold the included mounting template on the wall and align it so that the holes in the template fit over the connections. Mark the drill holes according to the template and drill them using a 6 mm drill. Insert the included dowels and screw in the wall bracket.
4. 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 wall bracket.

Installing connection pieces

1. As shown in the illustration, screw the cold water connection piece (12) 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.

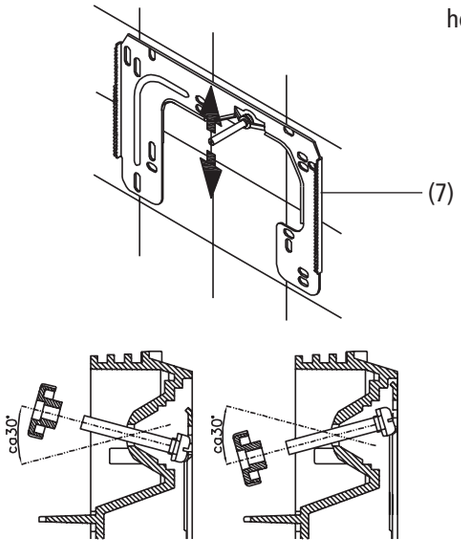


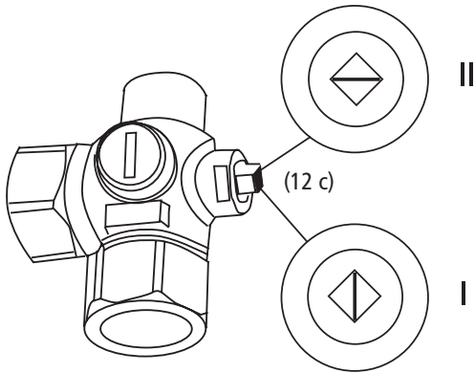
Installing the appliance

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, press against the prepared breaking point (S) with a blunt implement (e.g. screwdriver).
- Slit the grommet (14) 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!
- Strip 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.

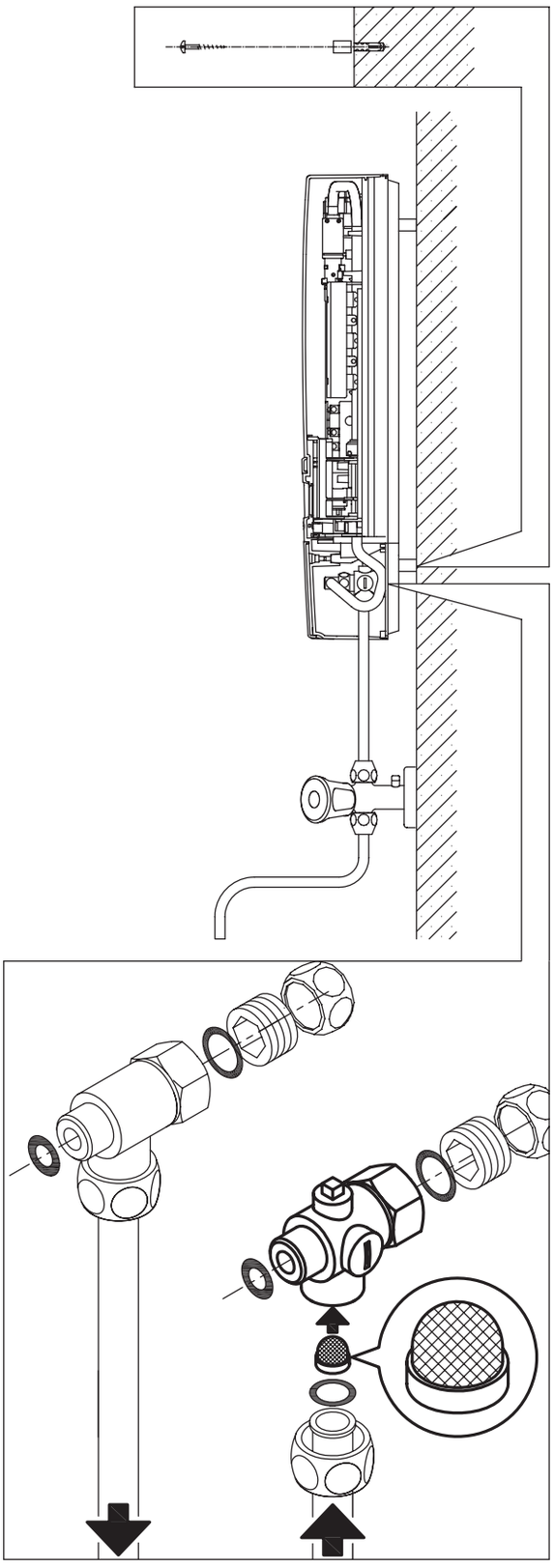
2. Place the appliance on the heater bracket so that the threaded rod of the wall bracket fits in the provided hole of the appliance. If necessary, slight corrections are possible by carefully bending the threaded rod of the wall bracket. However, it must be possible to screw on the water connection pipes of the appliance without applying force.
3. Screw the two 3/8" union nuts of the appliance's water connection pipes, each with the 3/8" 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 the shut-off valve (12c) in the cold water connection piece (12) (Pos.I). Check all connections for leaks.
6. Next, open and close the hot water tapping 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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9. Direct connection



For direct connection, the two 1/2" screw-in nipples (15) and the 1/2" seals must be screwed into the 1/2" union nuts of the hot-water (1) and cold-water (12) connectors. The two 1/2" 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" union nut of the appliance and delivery pipe, together with the 3/8" 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.

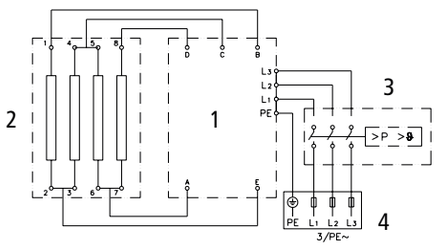
The flared end of the pipes must be screwed into the 1/2" side outlets of the hot-water and cold-water connectors with 1/2" union nuts and 1/2" seals. The holes required for the pipes must then be broken out of the housing with the aid of a blunt implement.

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

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10. Electrical connection (only by a specialist)

Wiring diagram



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

Please observe:

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

Structural prerequisites

- The appliance must be installed via a permanent connection. Heater must be earthed! In case of electrical connection from the upper part, a maximum cable size of 10 mm^2 must be observed.
- The electric wiring should not be injured. 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.

Load shedding relay

If further three-phase appliances are connected, a load shedding relay (82250) can be connected to phase conductor L_2. A special operating mode must be selected on the appliance for this purpose.

LCD	Description
0	Normal operation, manufacturer's setting
1	Operation with normal load shedding relay
2	Operation with sensitive load shedding relay

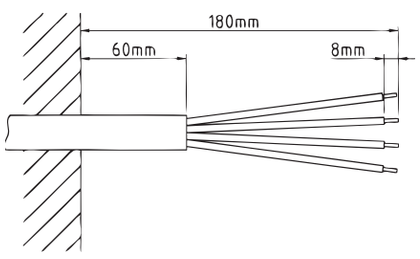
To change the operating mode, call up the setup menu first:

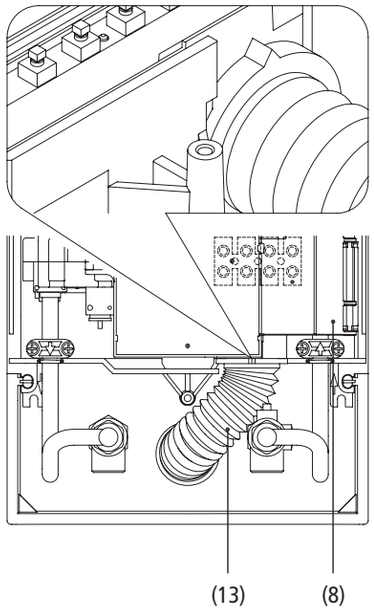
Press the setup key and the service key simultaneously for at least 3 seconds, the display confirms by "Setup".

After pressing the arrow key seven times, you reach the setup menu for the load shedding. The setup mode of the parameter "load shedding" is activated by pressing the setup key , the display is flashing. You can now select between mode "0", "1" and "2" with the aid of arrow key and . A new pressing on the setup key will store the new parameter value.

You will get back to the normal display by pressing the service key .

Operating mode 1 must be selected first, thus to check the correct operation of the load shedding relay at low appliance output (35 degree celsius setpoint and low water flow rate). Mode "2" must be selected if the load shedding relay flickers.





Electrical connection from below

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

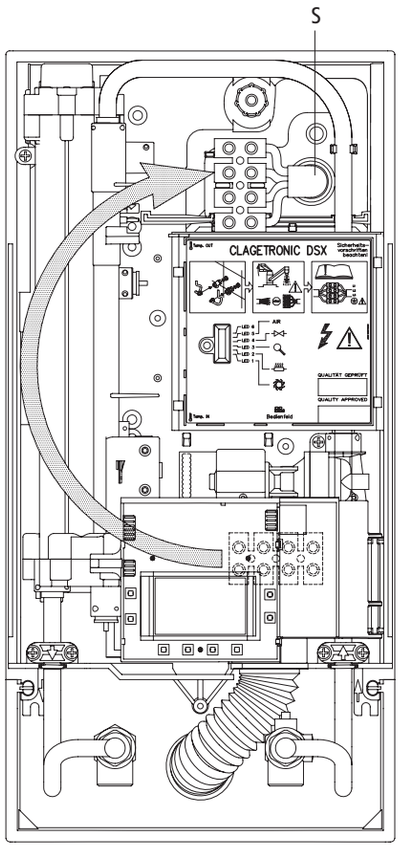
1. Strip approximately 6 cm off the connecting cable above the wall outlet. With the smaller opening ahead, slide the water splash protection sleeve (13) over the connecting cable so that the sleeve is flush with the wall. This prevents any leaking water from coming into contact with the electrical leads. It must not become damaged! The protection sleeve must be used!
2. Open the control panel (8) rightwards.
3. Insulate 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

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the recess of the intermediate panel. Adjust the water splash protection sleeve as illustrated. Reinsert the front part of the intermediate panel. Reinsert the control panel and lock it on the the heating element.

5. Place the hood on the appliance and screw in the fastening screw. After that you can reinsert the faceplate.

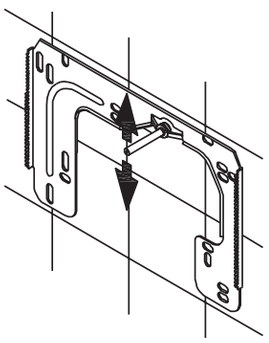
Note:
If necessary, the connecting terminal can be displaced to the upper part of the appliance. If you want to do so, please follow the instructions in the next chapter.

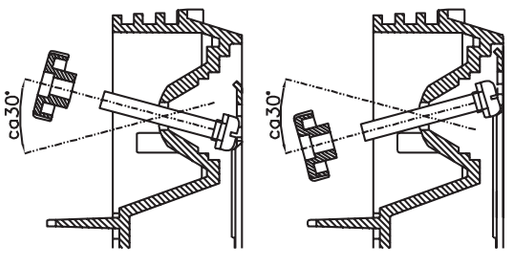


Electrical connection from above

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 (14) 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. Strip 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 (7) so that the threaded rod of the wall bracket fits in the provided hole of the appliance.
5. Unscrew the fastening screw of the connecting terminal. Displace the connecting terminal to the upper foot. Affix the connecting terminal again.
6. Insulate the cables and plug them in the connecting terminals according to the wiring diagram. The appliance must be earthed.
7. Place the hood on the appliance and screw in the fastening screw. After that you can reinsert the faceplate.

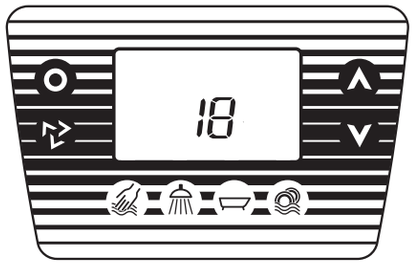




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11. Initial operation

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

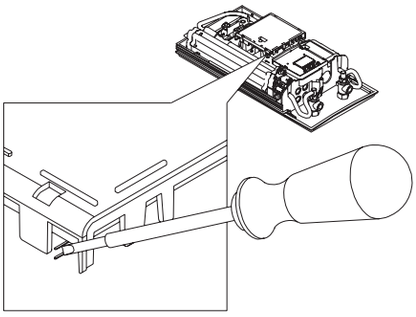


1. Before making the electrical connection, fill the mains and the appliance with water by carefully opening and closing the hot water tap in order to vent completely. After every draining (e.g. after work on the plumbing system or following repairs to the appliance), the heater must be re-vented in this way before starting it up again.

Note "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 those of the local electricity supply company (Germany: DIN VDE 0100).

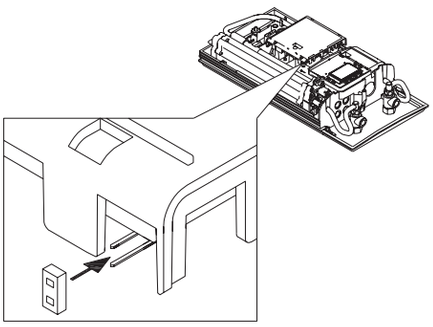
2. Switch on the power supply to the appliance. The digital display on the appliance must light up.
3. When switching on the supply voltage for the first time, the value "18" flashes in the display. If not, please carefully read the below note "Reinstallation".
4. Select the maximum allowable power rating depending on the local situation via the up ∧ and down ∨ arrow keys (18 kW, 21 kW, 24 kW or 27 kW).
5. Press setup key ⊙ to confirm the setting. The appliance starts operating.
6. Mark the set power rating on the rating plate.
7. After having set the maximum allowable power rating, the heating element will be activated after approx. 30 sec of water flow.
8. Open the hot water tap. Check the function of the appliance.
9. Explain the user how the instantaneous water heater works and hand over this manual.
10. Fill in the guarantee registration card and send it to the German Pool Customer Service Centre (see chapter "Trouble shooting and service").



Note "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, e.g. with a screwdriver acc. to EN 60900 (see figure), will reset all heater parameters to works setting and lock the heating. Value "18" flashes in the display until the maximum power rating has been selected. This condition will maintain when activating and deactivating the supply voltage.



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

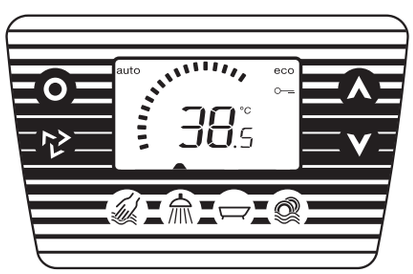
Deactivation of the Lock level:

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

12. Cleaning and maintenance

- Plastic surfaces and fittings should only be wiped with a damp cloth. Never use abrasive cleaners or solvents.
- For a good water supply, the outlet fittings (jet regulators and shower heads) should be unscrewed and cleaned at regular intervals. Every three years, the electrical and plumbing components should be inspected by an authorised professional in order to ensure proper functioning and operational safety at all times.

13. How to use

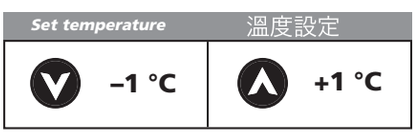


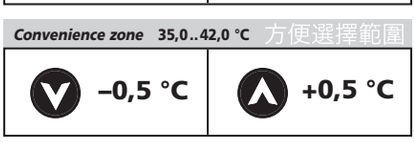
As soon as you open the hot water tap, the instantaneous water heater switches on automatically. When the tap is closed, the appliance automatically switches off.

Temperature setting

- You can set the required temperature gradually to a lower or higher value with the arrow keys ▲ and ▼ . The temperature changes by 1 °C, in the convenience zone between 35 °C and 42 °C even by 0.5 °C, if key is pressed shortly one time. Pressing a key for a longer time changes the temperature continuously. You can select the outlet temperature from 20 °C to 60 °C.
  The display confirms the temperature changes by "warmer" respectively "colder".

Note: If temperature is set below 20 °C with arrow key ▼ the display shows "--" and the appliance switches off the heating function.





Programme buttons

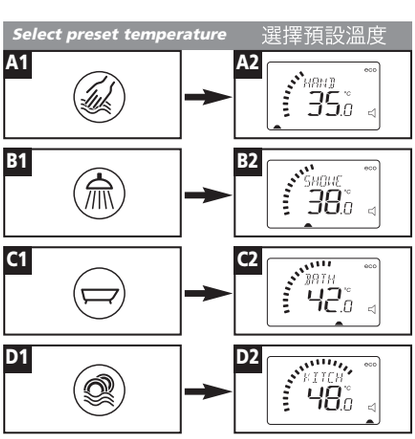
The four programme keys allow to quickly select the preset temperature.

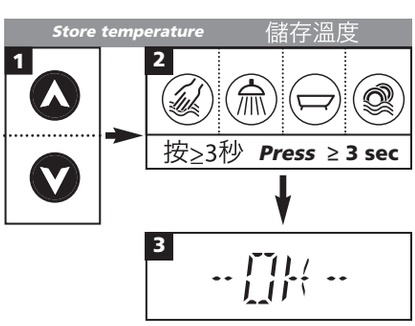
The factory setting for application "hand wash" is 35 °C, for application "shower" it is 38 °C, for application "bath tub" it is 42 °C, and for application "kitchen" it is 48 °C.

You can assign your own settings for the programme keys:

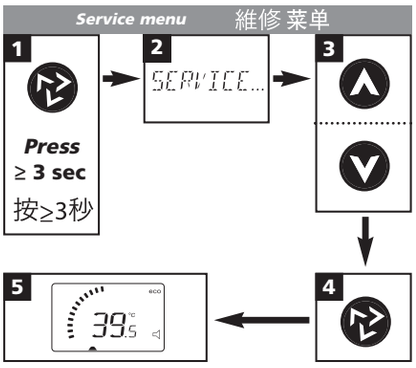
- Select the desired temperature via the arrow keys ▲ and ▼ . Prolonged pressing (at least 3 seconds) of one of the four programme keys stores the previously selected temperature. The display confirms by "-- ok--" and an acoustic signal will resound.

The stored temperature is now available to you each time you press the corresponding programme key.





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Service menu

The service menu offers a variety of display values, that provide information on various parameters.

Press the service key for at least 3 seconds to call up the service menu, the display confirms by "service menu". Using the arrow keys and you can switch over to the individual display information. With service key you will get back to the standard display.

Individual display values as follows:

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

Temperature protection
Information, if temperature protection is activated or deactivated.

Operating cost
Indication of total energy cost consumption.

Operating cost per hour
Indication about the current fixed energy costs given in Euro per hour.

Working time
Indication of total operating time of the heating given in seconds / minutes / days / years.

Standby time
Indication of the operating time since latest connection of the appliance to the supply voltage given in seconds / minutes / days / years.

Lifetime counter
Indication of the total operating time of the appliance given in seconds / minutes / days / years.

Flow
Indication of current flow rate given in l/min.

Temp in
Indication of inlet temperature (°C).

Temp out
Indication of outlet temperature (°C).

Power
Indication of current power consumption (kW).

Control value
Indication of calibration value of the control system.

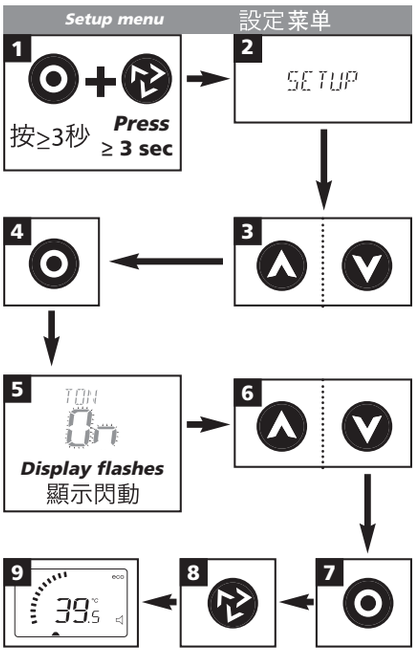
Diagnostics
Indication of the last ten diagnostic messages.

Signal
Indication of the current I2C connection quality in %.

Software version
Information about installed software version.

Note: Values of the service menu cannot be modified or entered. Above mentioned values are only given for your information!

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Setup menu

The setup menu offers a variety of adjustabilities, affecting the performance and the display of the appliance.

Press the setup key ⊙ and the service key ⇄ simultaneously for at least 3 seconds to call up the setup menu, the display confirms by "setup".

Using the arrow keys ∧ and ∨ you can switch over to the individual parameters. The setting mode of the individual parameter (e.g. tone) is activated by pressing the setup key ⊙ , the display flashes. You can now select the new parameter value with the arrow keys ∧ and ∨ .

The new parameter value is stored when pressing the setup key ⊙ again. With service key ⇄ you will get back to the standard display.

Individual parameter as follows:

Language

Operating language can be selected.

Setting options:

"1" German
"0" English

Tone

Activation and deactivation of key tone.

Setting options:

"on" key tone activated
"--" key tone deactivated

Background light

Activation and deactivation of display background light

Setting options:

"on" background light constantly on
"At" background light switches on automatically e.g. when keys are pressed, and switches off
automatically after some time
"--" background light off

Charges per kWh (ct)

The relevant electricity tariff can be entered.

Setting options:

from 0 ct to 199,90 €

Aux display

Activation of additional parameters.

Setting options:

"t1" inlet temperature (°C)
"Po" power (kW)
"FL" flow rate (l/min)
"--" no additional display

Note:

When additional parameters are activated the time cannot be displayed at the same time.

Clock

Time settings can be done

Setting options:

"h" hours
"min" minutes
"s" seconds

The service key ⇄ selects the clock parameter to be changed ("h","min" or "s").

The arrow keys ∧ and ∨ changes the set value shown.

Pressing the setup key ⊙ stores the new value.

With service key ⇄ you will get back to the standard display.

Note: The arrow key ∧ resets the display to zero when mode "s" is chosen.

The arrow key ∨ deactivates the display of the clock.

Load decrease

Setting of load shedding parameters

Setting options

"0" standard operation, factory setting
"1" operation with standard load shedding relay
"2" operation with sensitive load shedding relay

Lock level

Limitation of appliance's operation complexity.

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 (handwash, shower, bathtub, kitchen) not changeable
"4" same as "3", additionally nominal value not changeable

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Flow limit

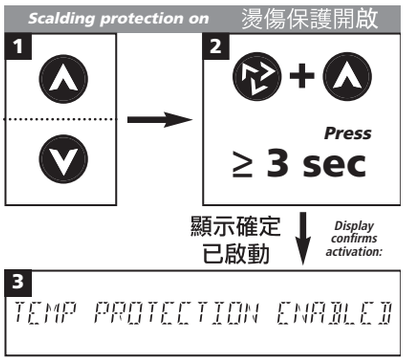
Setting of flow rate limitation.

Setting options:

"--"	no flow rate limitation
"At"	automatic adjustment, i.e. flow rate is limited in a way so that the selected outlet temperature is reached
"Eco"	flow rate limitation to max. 8.0 l/min
e.g. "8.0"	limitation to a selected value

Note:

"Eco" is displayed when operating mode "Eco" is selected and the set temperature is below 43 °C.

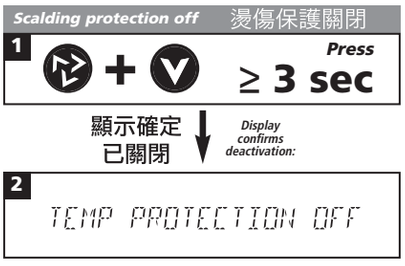


Temperature limitation

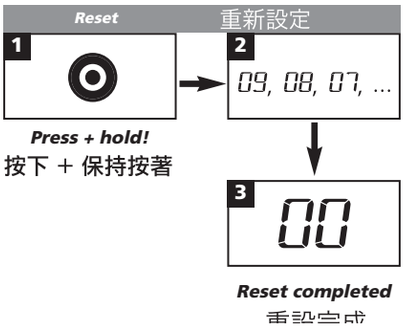
The instantaneous water heater DSX is equipped with an optional temperature limiting function. This scalding protection is deactivated in the works setting.

- Switch on: select the limit temperature with arrow keys ∧ and ∨ , then press service key and arrow key ∧ simultaneously for at least 3 sec. The display briefly confirms the activation by "temp protection enabled".

After activation of the scalding protection it is impossible to select a higher temperature.



- Switch off: press service key and arrow key ∨ simultaneously for at least 3 sec. The display briefly confirms the deactivation by "temp protection off".



Reset to works setting

All factory settings can be recalled:

- Press setup key , the display now counts backwards from "10" to "00" in second intervals. The appliance is reset at value "00" – if you stop pressing the key too early, the process will be canceled.



How to save energy

Set the exact temperature you need on the appliance and open the hot water tap. Once you feel that the water is too hot, do not add any cold water and, instead, enter a lower temperature on the appliance. If you were to add cold water, the water already heated would cool down again and valuable energy would be wasted. Moreover, the cold water added in the tap is not covered by the control range of the electronic circuitry, with the result that temperature constancy is no longer guaranteed when using several taps at once.

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13. How to use

Power limit

If the full output of the instantaneous water heater DSX does not suffice to heat the tapped quantity of water, the control valve automatically reduces the flow rate so that the set temperature is reached.

Operation with solar systems

When operating with solar systems, e.g. an automatic mixing tap must ensure that the inlet temperature does not exceed 70 °C.

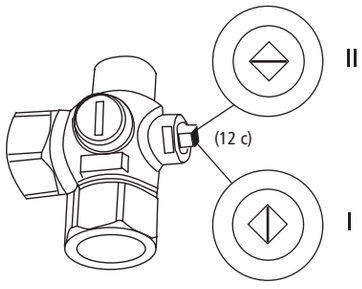
If the inlet temperature is too high as the result of the above reason, the appliance is not providing any output, and the display shows "inlet temp too high".

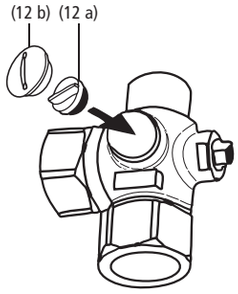
Venting after maintenance work

The instantaneous water heater DSX features an automatic air bubble protection to prevent it from inadvertently running dry. Nevertheless, the appliance must be vented before using it for the first time. Each time the appliance is emptied (e.g. after work on the plumbing system, if there is a risk of frost or following repair work), the appliance must be re-vented before it is used again.

1. Disconnect the instantaneous water heater from the mains by disactivating the fuses.
2. Unscrew the jet regulator on the outlet fitting and open the cold water tap valve to rinse out the water pipe and avoid contaminating the appliance or the jet regulator.
3. 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.
4. Only then should you re-connect the power supply to the instantaneous water heater and screw the jet regulator back in.

14. Maintenance work





Maintenance work must only be conducted by an authorised professional.

Cleaning and replacing the filter strainer

The cold water connection of the instantaneous water heater DSX 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 by means of the house fuses and prevent inadvertent reactivation of them.
2. After opening the hood of the unit, close the shut-off valve (12c) in the cold water connection piece (position II).
3. Unscrew the screw plug (12b) from the cold water connection piece and take out the strainer (12a).
4. The strainer can now be cleaned or replaced.
5. After fitting of the strainer tighten the screw plug.
6. Slowly open the shut-off valve in the cold water connection piece (position I).
7. Vent the unit by carefully opening and closing the affiliated warm water tap valve several times until air no longer emerges from the pipe.
8. Fit the hood of the unit. Then reconnect the voltage to the house fuses.

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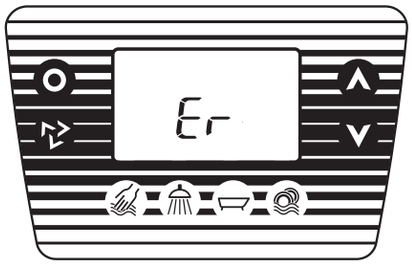
15. Trouble-shooting and service



Your instantaneous water heater DSX was manufactured conscientiously and checked several times before delivery. Should malfunctions nevertheless occur, it is usually only due to a bagatelle. First attempt to switch the house fuses off and on again in order to reset the electronics. Next, try to remedy the problem with reference to the following table. In doing so, you will avoid unnecessary expense of customer service assistance.

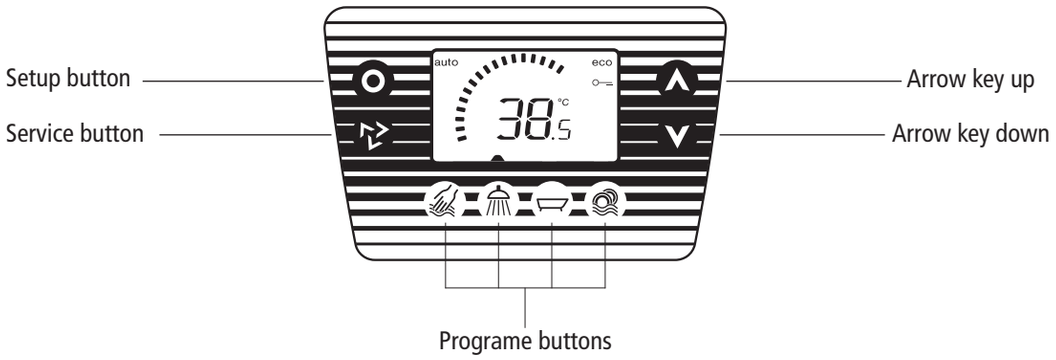
Repairs must only be carried out by authorised professionals.

If a fault in your appliance cannot be rectified with the aid of this table, please contact the Central Customer Service Department at GERMAN POOL. Please have the details of the typeplate at hand.



Problem	Cause	Solution
Water stays cold, digital display does not light up	Master fuse tripped	Renew or activate fuse
Display flashes error symbol "screwdriver"	Control system has switched off	Switch fuse off and on. If "screwdriver" is still flashing contact customer service
Flow rate of hot water too weak	Outlet fitting dirty or calcified	Clean shower head, jet regulator or sieves
	Fine filter dirty or calcified	Let clean fine filter by customer service
Selected temperature is not reached	Water flow rate too high	(Re)activate motor-driven valve
	Cold water has been added via the tap	Tap hot water only; set temperature, check outlet temperature
LCD-display: "inlet temp too high"	Inlet temperature exceeding nominal temperature	Reduce inlet temperature
No response upon key press	Hood is not fitted properly	Refit the hood properly

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Set temperature

–1 °C | +1 °C

Convenience zone 35,0 .. 42,0 °C

–0,5 °C | +0,5 °C

Select preset temperature

A1 → A2 (HAND 35.0) · B1 → B2 (SHOWE 38.0) · C1 → C2 (BATH 42.0) · D1 → D2 (KITCH 48.0)

Store temperature

1 → 2 (Press ≥ 3 sec) → 3 (-- OK --)

Service menu

1 (Press ≥ 3 sec) → 2 (SERVICE...) → 3 → 4 → 5 (39.5)

Setup menu

1 (Press ≥ 3 sec) → 2 (SETUP) → 3 → 4 → 5 (TAN 0) (Display flashes) → 6 → 7 → 8 → 9 (39.5)

Scalding protection on

1 → 2 (Press ≥ 3 sec) → Display confirms activation: → 3 (TEMP PROTECTION ENABLED)

Scalding protection off

1 (Press ≥ 3 sec) → Display confirms deactivation: → 2 (TEMP PROTECTION OFF)

Reset

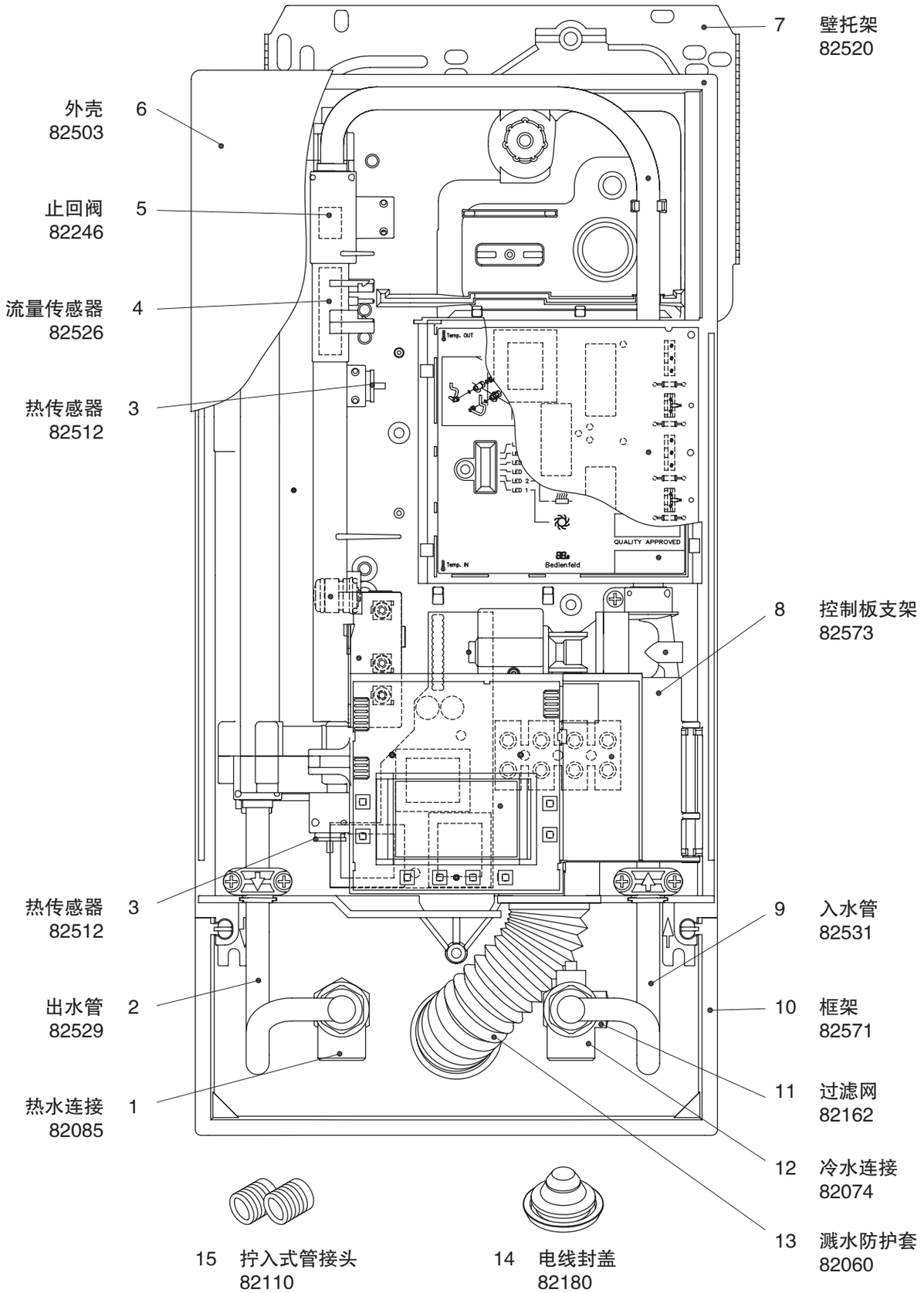
1 (Press + hold!) → 2 (09, 08, 07, ...) → 3 (00) Reset completed

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1. 概观图

订购时请注明热水器型号及机身编号。



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2. 内容

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3. 环保及再循环





德国宝注重环保，选用包装物料方面亦以环保为原则。

- 包装物料对保护热水器免于运送途中受损致为重要。选用的物料为环保可循环再用的纸盒，胶袋亦为可循环再用的 PE 塑料。
- 塑料零件如正确分类，可 100% 循环再用。

4. 安全守则

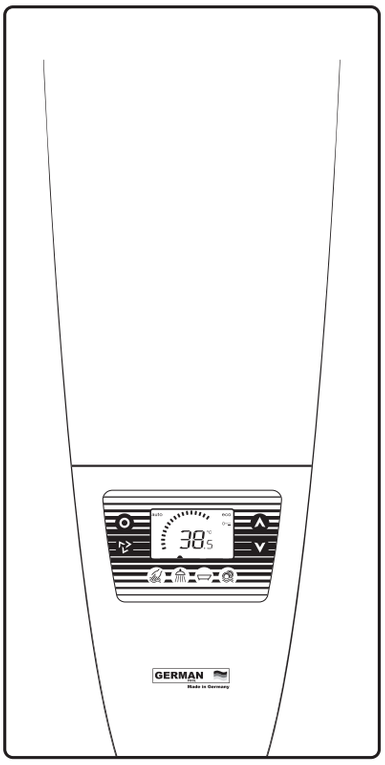


必需由合格技师安装，初始操作及保养本热水器以确保能符合有关安全标准及安装条例。本公司对未遵照此规定而导致损失或问题概不负责。

- 本热水器只适宜用于室内不结霜的环境作家居用途，并只适宜将自来水加热。
- 本热水器必须时刻接地。
- 来水电阻不可低于规格表上列明之数值。
- 最高水压不可高于规格表上列明之数值。
- 初次试机前及每次需要将热水器内的储水排清时(例如：要进行供水系统维修或有结霜可能或维修保养)，需按本说明书内之有关指示，将热水器内空气排出。
- 任何情况下，在关掉电源前，不能打开面盖。
- 切勿对本热水器(包括热水器机体、电线或水管)作出任何技术性改动。
- 请注意温度高于 43 ℃ 的水会被界定为热水(尤其对于儿童)，并可导致烫伤。热水器经使用一段时间后，水龙头配件可能会很热。
- 入水水温不可高于 70 ℃。
- 如遇故障，请立即关掉电源。如有漏水，应立即关掉冷水水源。并必须由总代理的合格技师维修。
- 除有负责其安全的人员监督或收到如何使用本热水器指示，否则任何活动能力有限或情绪、神智有问题的人员不可使用本热水器。必需监督儿童以确保儿童不会把玩热水器。

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5. 本热水器简介



DSX 即热式热水器系列，为微电脑控制中央系统式，可以提供一个或多个出水位。

电子控制系统按选择的出水水温，入水水温及流量调控达到要求出水水温，水压变动亦能保持水温稳定。可通过按键设定出水温度范围20℃–60℃。所选择的水温会以数字显示。

入水水温可高达 70 ℃，可配合太阳能热水系统操作。

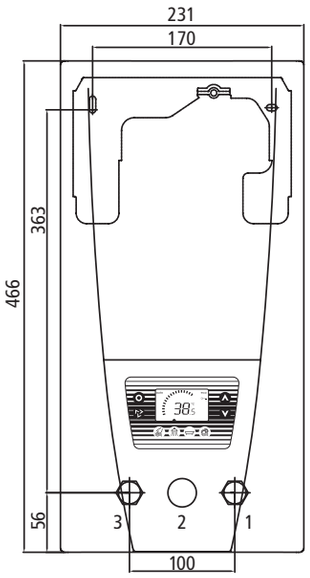
6. 规格

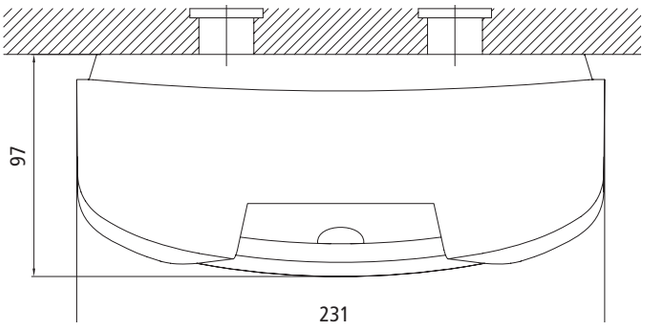
型号	DSX			
编号	34347			
额定功率 (额定电流)	16.2 kW..27 kW (25 A..39 A)			
选择功率/ 电流	16.2 – 19.4 kW (25..27 A) ❑	19.0 – 22.6 kW (29..30 A) ❑	21.6 – 25.8 kW (33..36 A) ❑	24.4 – 27.0 kW (37..39 A) ❑
连接电源	3/PE 380..415V AC			3/PE 400V AC
最低电线尺寸要求	4.0 mm^2	4.0 mm^2	6.0 [1] mm^2	6.0 mm^2
最大热水量(公升/ 分) Δt = 28K Δt = 38K	9.2 6.8	10.7 7.9	12.3 9.0	13.8 10.2
额定容量	0.4 l			
类型	额定压力 1 MPa (10 bar)			
加热系统	裸露电阻丝加热系统 IES®			
要求来水电阻@15℃	⩾ 1100 Ωcm			
导电性能	⩽ 90 mS/m			
入水水温	⩽ 70 ℃			
要求最低流量-最高流量	2.5 - 8.0 l/min			
压力损失	0.2 bar at 2.5 l/min 1.3 bar at 9.0 l/min			
温度选择	20 ℃ – 60 ℃			
水管连接	G 1/2″			
重量(入水后)	4.19 kg			
VDE 防护等级	1			
防护/ 安全类别	IP25 CE CCC			

1) 当更换一部 21KW / 380V 热水器，可采用 4mm^2 电源线

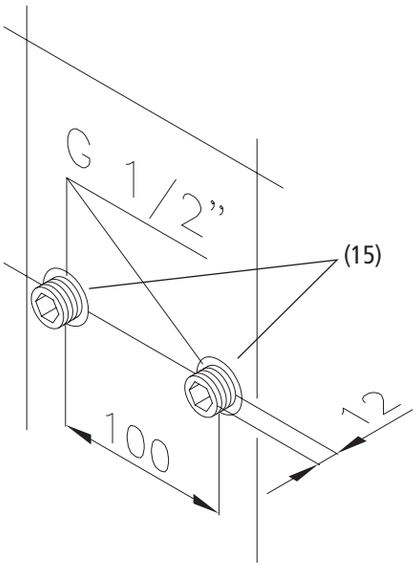
DSX-GMA-GermanPool-EN-ZHTC-ZHSC-05-2011.indd 21 09.06.11 08:39

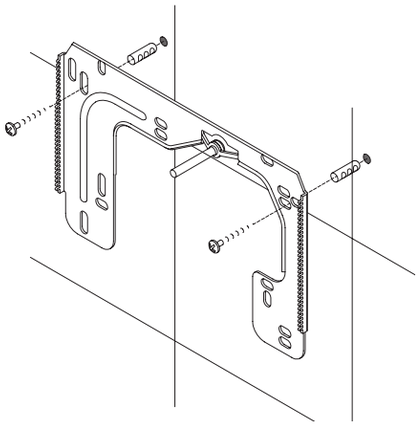
7. 尺寸





8. 安装





安装时必需遵守下列指示：

– 当地有关的电线安装条例及安全标准。

– 电力供货商及自来水公司之安全条例。

– 铭牌上的规格

– 技术规格

安装地点

– 安装地点必须全年都不结霜。

– 此热水器只可作挂墙式安装，出入水连接龙头位向下。

– 热水器的防护等级为 IP25，按照 VDE0100 part 701，必须安装于保护区 1 内。

– 为避免失温，应将热水器安装于最接近出水的位置。

– 为方便保养工作，应在供水龙头位置装上阀门。

– 可选用铜或钢龙头，如选胶龙头，该胶龙头必须符合 DIN16893 Series 2 规格。热水龙头必须有保温保护。

– 来水电阻最少应为 1100 Ωcm 15 ℃。

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安装壁托架

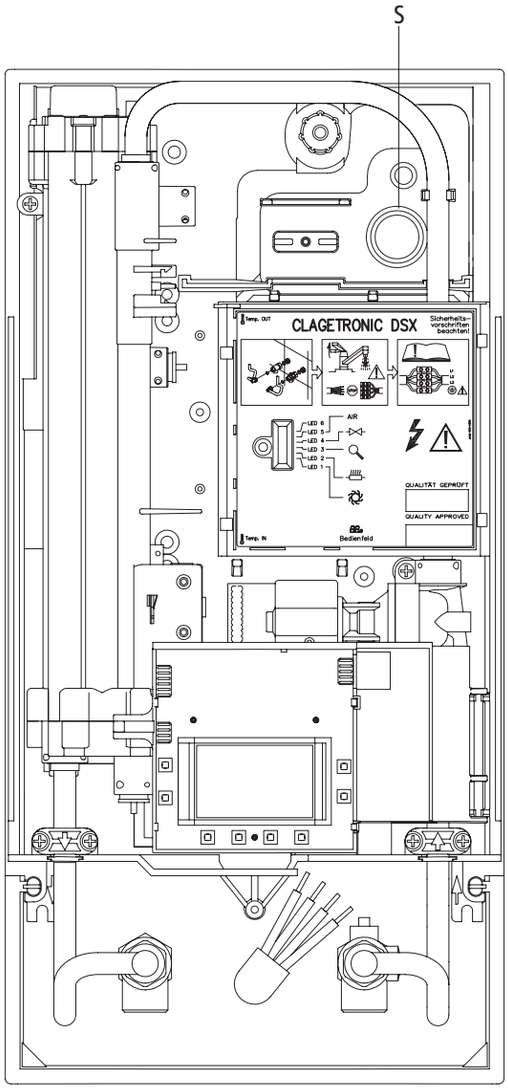
安装此热水器并不需要钻墙装上壁托架，只需将管接头如下列 2. 装上便可。

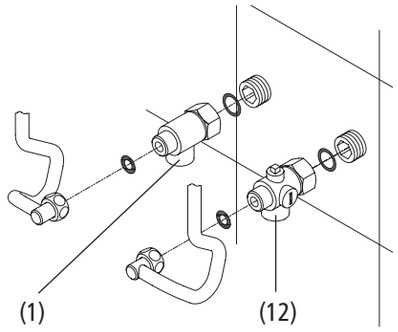
1. 安装前先清洗供水龙头管。

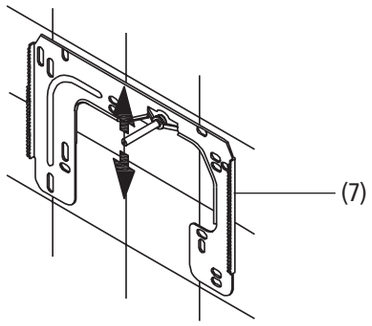
2. 用 12mm 六角螺丝锁匙将管接头 (15) 拧入墙上连接位置，旋妥管接头后，管接头应外露 12mm。

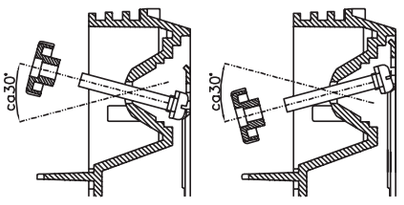
3. 将附上的模板放在墙上适当位置以配合冷热水位置。根据模板位置记下钻孔位置，用 6mm 钻头钻孔，放入合缝钉拧入托架 (7)。

4. 可用附上的水平模板调校墙面不平或倾斜情况达 30mm，视乎程度，水平模板应装在墙壁与托架之间。



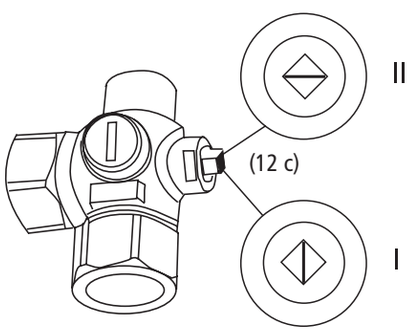






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8. 安装(续上页)



安装连接件

1. 如图所示将紧固螺母密封圈与冷水进水配件连接。
2. 如图所示将紧固螺母密封圈与热水出水配件连接。

安装热水器

1. 拧松螺丝，打开面盖。

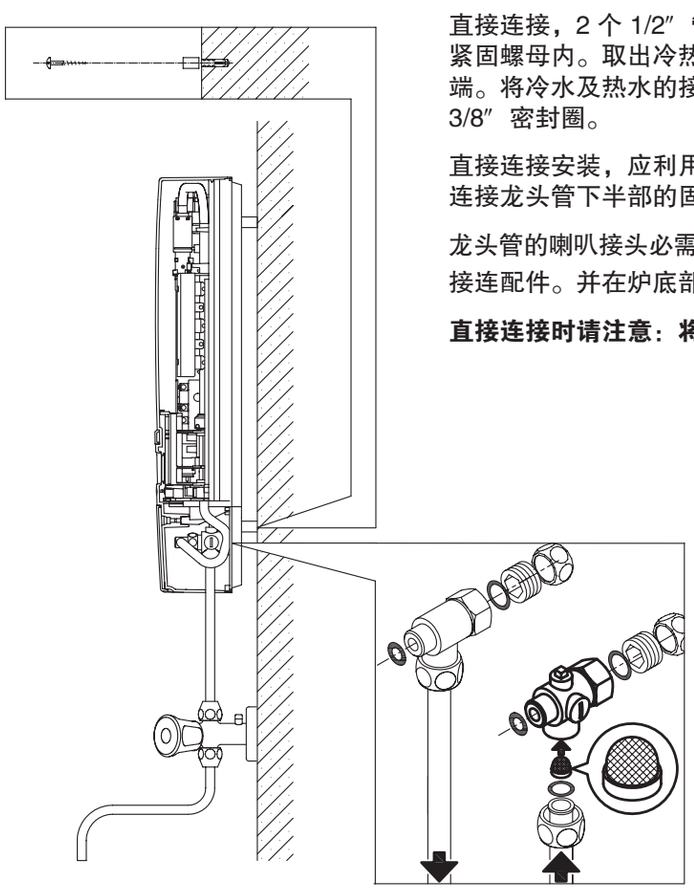
– 当更换热水器时，电源线只可从热水器上半部连接，只在此情况下，以工具(例如螺丝起子)按压预先预备的穿破位置 (S)。

– 切开电线位密封胶盖，切开的面积应略为少于电线的面积以确保最佳的防水性能，将密封胶盖套入入线孔。

– 从墙身电线出线位预留约 6cm 电线，将电线经密封胶盖穿入热水器内。

2. 将热水器挂在挂接背板 (7) 上，如有需要可略为弯曲出水龙头。
3. 将两个 3/8″ 紧固螺母及 3/8″ 密封圈拧入进出入连接配件内。
4. 将胶螺母拧入壁托架螺纹棒上。
5. 打开冷水供水龙头，慢慢拧开阀门 (12c)，查看有否渗漏。
6. 接着连续打开及关闭热水龙头数次将热水器内的空气排出。

9. 直接连接



直接连接，2 个 1/2″ 管接头及 1/2″ 密封圈必需拧入冷热水连接件的 1/2″ 紧固螺母内。取出冷热水连接件的 1/2″ 密封帽，然后拧入管接头的开放一端。将冷水及热水的接连配件拧入热水器机身及送水管的 3/8″ 紧固螺母及 3/8″ 密封圈。

直接连接安装，应利用附上的水平板，尽量垂直紧贴墙身安装，可同时利用连接龙头管下半部的固定孔固定位置。

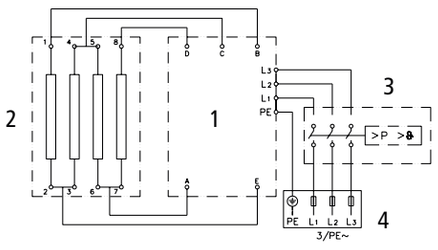
龙头管的喇叭接头必需连 1/2″ 紧固螺母及 1/2″ 密封圈拧入冷热龙头的 1/2″ 接连配件。并在炉底部开孔让冷热水龙头穿过。

直接连接时请注意：将过滤器置于冷水入水连接位!

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10. 电线连接(必须由合格技师负责)

线路图



1. 电子线路
2. 加热元件
3. 安全限压开关/ 安全热熔断路器
4. 接线条

请注意

– 必须按当地的电线安全标准安装。

– 参照卷标上注明的技术规格。

– 热水器必须连接地线。

结构要求

接电前必须检查并确定电源已关上！

– 热水器必须稳固连接安装，供电电压亦必须稳定。如在上半部接电，电源线最大应为 10mm^2。

– 电线不应损坏，安装后电线不应可以直接触摸得到。

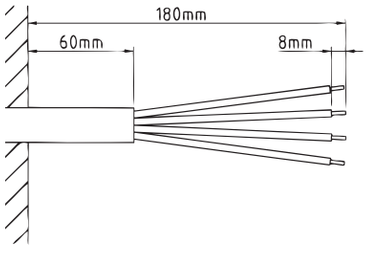
– 电源开关应为全极式开关，两极之间应保持最少 3mm 距离。

– 应安装保险丝。

电量调校继电器

如需进一步连接其它三相电器，可将电量调校继电器 (82250) 连接至导电器 L_2，并需选择特别的操作模式。

LCD显示	内容
0	正常操作 / 生产厂方设定
1	以正常电量调校继电器操作
2	以敏感电量调校继电器操作



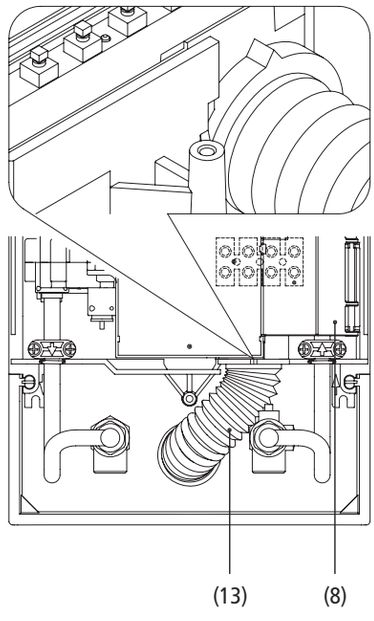
要更换操作模式，先选取设定手册：
同时按设定键 ⊙ 及维修键 ⛭ 最少 3 秒，显示屏会显示“设定”确认。

按方向键 ⌄ 7 次后会达到减低电量的设定菜单。

按设定键 ⊙ 会启动设定减低电量参数的设定模式。

显示屏会闪动。你现在可用方向键 ⌄ 及 ⌃ 选择 “0”、“1” 及 “2”，再新按设定键 ⊙ 再重新按设定键 ⛭ 会返回正常显示。

首先必需选择模式 1，检视低电量操作的电量调校继电器操作正常，如继电器闪动，需选择模式 2。



底部标准电线连接

连接电线前，请必先确定电源已关上。

1. 从墙上插座位预留 6cm 电线，套入溅水防护套，使防护套与墙身齐平，确保如有漏水也不会沾湿电线。
2. 打开控制板。
3. 按线路图接上电线，此热水器必须连接地线。
4. 将电线的防护套拉上并套入中间层板的凹位，再盖上中间层板的面板，再用螺丝将电路板盖面锁紧。
5. 用螺丝将热水器面盖锁紧。

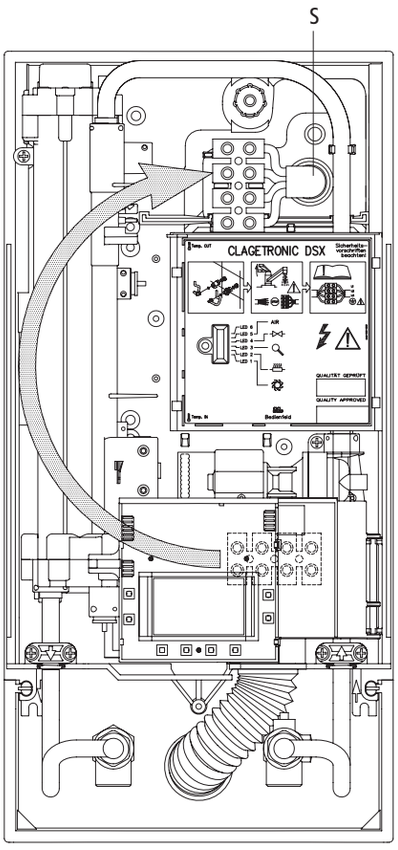
注意：

如有需要，可将接线端子改放置于热水器上半部，如需这样做，请参照下一部份指示。

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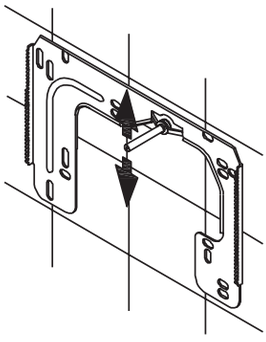
10. 电线连接(必须由合格技师负责)

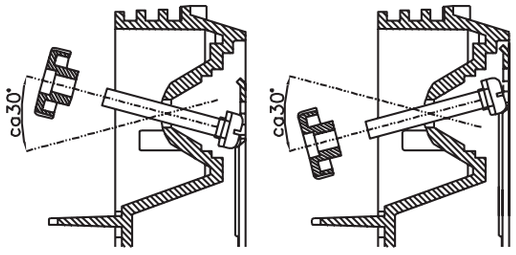
上面部份电线连接



连接电线前，请必先确定电源已关上。

1. 用工具(例如螺丝起子)按压预先预备的开孔位置 (S)。
2. 切开电线位密封胶盖，切开的面积应略为少于电线的面积以确保最佳的防水性能，将密封胶盖套入入线孔。
3. 从墙身电线出线位预留约 6cm 电线，将电线经密封胶盖穿入热水器内。
4. 将热水器挂在托架上，托架有螺纹的支柱应套入热水器的孔内。
5. 拧松电线接线端子的螺丝，将接线端子移往上部位置，再连接接线端子。
6. 按照第 23 页的线路图连接电线，此热水器必需连接地线。
7. 装回及固定外壳，然后装回面板。

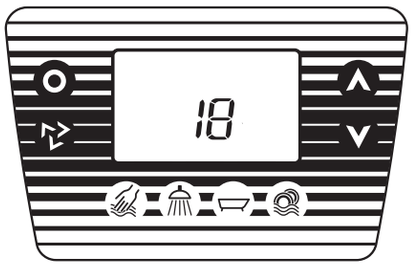




11. 初始操作

多功率系统

额定功率(最高功率)为 27kW/400V 及可调校为 24kW、21kW 或 18kW。



1. 连接电源前，先将水注入热水器内，然后开关热水器龙头数次，以将热水器内的空气排出。每次维修或水龙头工程后，必须将热水器内的空气排出，然后再启动热水器。

注意：功率选择

(必须由注册技师调校，否则保养作废。)初次连接电源后，选择最大功率。

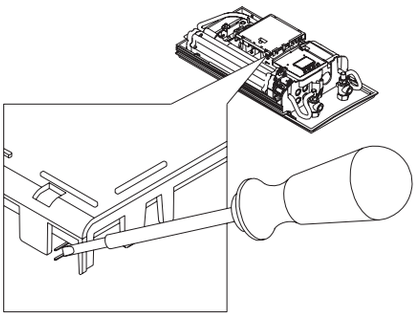
只在设定功率后，热水器进入标准操作模式。最大可容许功率需视乎安装地点情况而定。必需注意技术规格表内所提供的资料，特别是电源线的要求及电线连接的保险丝保护，所有电线连接安装必需遵照安装地点的有关法规条例。

2. 开着热水器后，晶液显示屏会亮着。
3. 当初次开着热水器时数值“18”会在显示屏闪动，否则请细心阅读「重新安装说明」。

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11. 初始操作

4. 按 ⓥ 及 ⓐ 方向键选择安装地点可容许的最大功率 (18、21、24或27kW)。
5. 按 ⓞ 键确定设定，热水器开始操作。
6. 在标签上注明设定的功率。
7. 设定最高容许功率后，加热元件会在水流开始 30 秒后启动。
8. 开启热水龙头，热水器开始操作。
9. 测试热水器性能，将使用说明交给客户，并向客户解释热水器怎样操作。
10. 填妥随机的保用登记卡，并寄回德国宝客户服务部 (详情请参阅“故障处理检查要点”)。



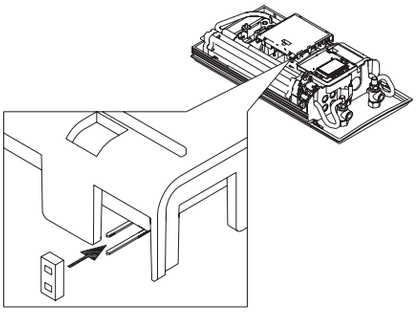
重新安装说明

在不同的安装情况下，初次安装时可能需要修改最大功率。

暂时性的两极短路(例如用符合 EN60900 的螺丝起子如图所示，会重新设定热水器的参数。数值“18”会在显示屏闪动直至选定最大功率。此情况会在启动或关闭电源时维持。

锁定限制操作程度

可以限制热水器的操作模式



启动锁定程度：

1. 通过设定说明(参照第 13 项“如何使用，设定说明”)，选择所需要的锁定程度。
2. 切断电源(例如关掉电源开关)。
3. 如图标在电子组件装上 跳线。
4. 重新操作热水器。

关闭锁定程度：

1. 切断电源(例如关掉电源开关)
2. 拆去 跳线
3. 重新操作热水器

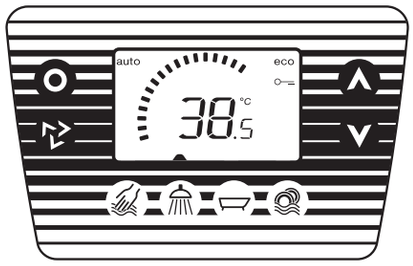
12. 清洁及保养

– 必须使用湿布清洁塑料表面及配件，切勿使用腐蚀性清洁剂或溶剂。

– 要供水系统运作良好，需定时清洗出水龙头配件，每三年应由合格技师检查热水器、电源连接及水龙头配件以确保热水器性能及操作安全。

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13. 使用指示



开启热水龙头，热水器会自动开着，关掉热水龙头，热水器会自动关掉。

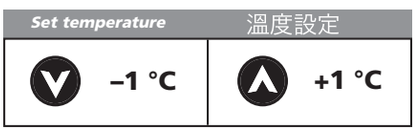
调较温度

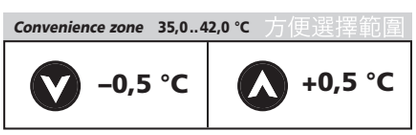
– 可以按 ⌄ 及 ⌃ 键调校所需水温。

轻按按键一次会调校 1 ℃，在最常选择的范围即 35 ℃ 至 42 ℃ 内甚至以 0.5 ℃ 调校，按键时间较长会每次不断更改温度。你可以在 20 ℃ 至 60 ℃ 范围选择出水水温。显示屏以相对较暖“warmer”或较冷“colder”确认温度改变。

注意：

如用方向键 ⌄ 设定温度低于 20 ℃ 会显示 “––”，热水器会停止加热。





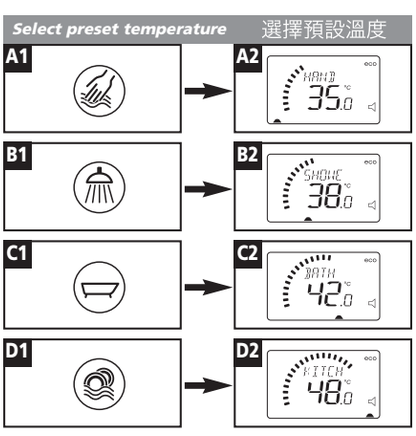
程序按键

四个程序按键让你迅速选择预先设定的温度。

出厂前预设“洗手温度” 为 35 ℃，“花洒淋浴” 为 38 ℃，“浴缸浸浴” 为 42 ℃，“厨房用途” 为 48 ℃。

您可自行设定程序键：

– 通过方向键 ⌄ 及 ⌃ 选择要求的温度。长时间按着 4 个程序键其中 1 个 (最少 3 秒)会贮存之前选择的温度。显示屏会以 “––ok––” 确认及会发出响号。现在每次当你按下程序键，便可提供相对的贮存温度。

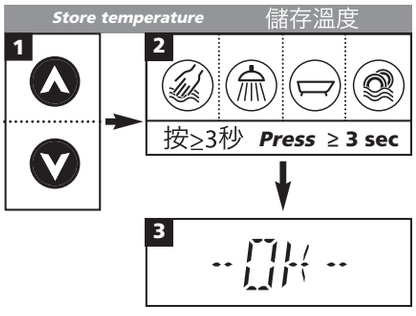


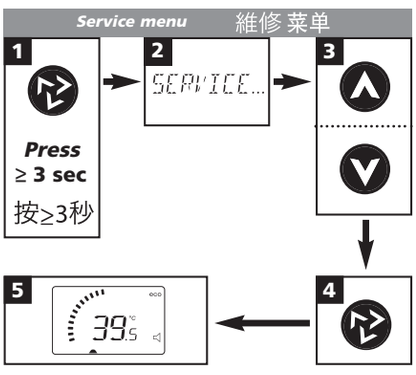
维修菜单

维修菜单一系列的数据显示，提供不同参数的数据。

按维修键 ⚙ 最少 3 秒，开启维修手册，显示屏会显示“service menu”确认。用方向键 ⌄ 及 ⌃，可设换至各项显示数据。按维修键 ⚙，可回复至标准显示。

各项显示数值如下：





电量限制
说明现时热水器的最大电量 (kW)

温度保护
数据，如果温度保护被启动或关闭。

操作费用
指示总能源消耗量

每小时操作费用
指示现时操作每小时的费用(以 Euro 计)

操作时间
指示加热的总操作时间(以年/日/分/秒计)

备用时间
指示从最近一次接上电源起计的操作时间(以年/日/分/秒计)

使用年限统计器
指指示热水器总操作时间(以年/日/分/秒计)

流量
指示现时流量(l/min)

入水温度
指示入水温度 (℃)

出水温度
指示出水温度 (℃)

电量
指示现时耗电量 (kW)

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13. 使用指示

控制数值
指示控制系统的校准标定数值

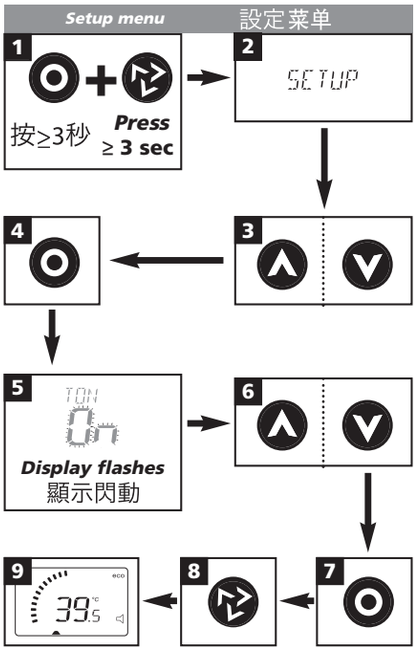
情况判断
指示最后 10 个情况判断讯息

信息
指示现时 I2C 的连接质素(以 % 计)

软件版本
有关安装软件版本

注意：

维修菜单的数值不可更改或输入。以上数值只作为数据提供。



设定菜单

设定菜单提供一系列可调校数值影响热水器的性能及显示。

同时按设定键 ⊙ 及维修键 ⊛ 最少 3 秒启动设定菜单，显示屏显示“setup”确认。

用方向键 ⊻ 及 ⊼，可切换个别参数。按设定键 ⊙ 启动个别参数的设定模式，显示屏会闪动，你现在可以方向键 ⊻ 及 ⊼ 选择新的参数。

再按设定键 ⊙ 会贮存新的参数。按维修键 ⊛ 会返回标准显示。

个别参数如下：

语言
可选择操作语言
设定选择：
“1” 德文
“2” 英文

光度
启动及关闭按键光度
设定选择：
“on” 按键光度启动
“--” 按键光度关闭

背景灯光
启动及关闭显示屏背景灯光
设定选择：
“on” 背景灯光长期亮着
“AT” 背景灯光自动亮着
例如当按键及一段时间后自动关掉
“--” 背景灯光关掉

每kWh电费(ct)
可输入有关电费价格
设定选择：
由 0 ct 至 199.90 £

后备显示
启动附加参数。
设定选择：
“t1” 入水温度 (℃)
“Po” 电量 (kW)
“FL” 流量(公升/ 分钟)
“--” 没有附加显示
注意：

当附加参数启动时，时间不能同时显示。

时钟
可设定时间
设定选择：
“h” 时
“min” 分
“s” 秒
用维修键 ⊛ 选择要更改的时钟参数(时、分、秒)
用方向键 ⊻ 及 ⊼ 更改显示的设定数值。
按设定键 ⊙ 贮存新数值。
用维修键 ⊛ 返回标准显示。
注意：
当显示“s”时，方向键 ⊼ 将显示重设至 0，方向键 ⊻ 关闭时钟显示。

减低电量
设定负载调控参数

设定选择
“0” 标准操作，厂方设定
“1” 以标准负载调控模块操作
“2” 以敏感负载调控模块操作

锁定程度
热水器操作复杂性的限制

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设定选择

“0” 没有限制(厂方设定)

“1” 不可以用按键(倒数)重设厂设定，可看到参数但不可以在设定菜单内更改。

“2”与“1”相同，另外不可开启设定菜单。

“3”与“2”相同，另外名义上的数值记忆(洗手、花洒淋浴、浴缸浸浴、厨房应用)不可更改。

“4”与“3”相同，另外名义上的数值不可以更改。

流量限制

设定流量限制

设定选择

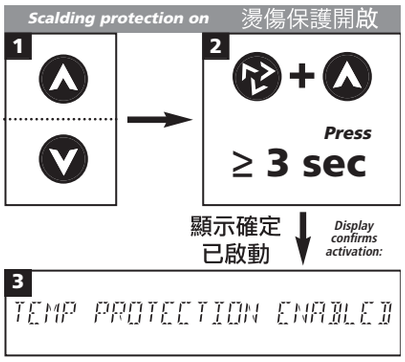
“--” 没有流量限制

“At” 自动调校，即限制流量以达致出水水温为选择温度

“Eco”流量限制最大为所选择数值每分钟8公升 eg.“8.0”

注意：

当选择“Eco”操作形式及设定温度低于 43 ℃时，“Eco” 会显示。



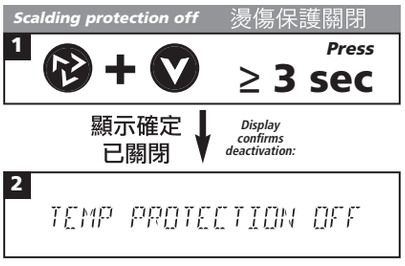
温度限制

DSX 即热式电热水器配备有可选择的温度限制功能。此防止烫伤功能在出厂设定时关闭了。

– 开着：以方向键 ▼ 及 ▲ 选择温度制，然后同时按维修键 及方向键 ▲ 最少 3 秒。

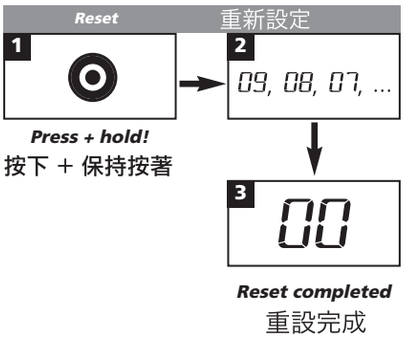
显示屏会显示“temp protection enabled”确认。

当防止烫伤功能启动后，不可以选择更高温度。



– 关闭：同时按维修键 及方向键 ▼ 最少 3 秒。

显示屏会显示“temp protection off”确认。



重设至出厂设定

所有出厂设定均可唤回。

– 按设定键 ，显示屏会以秒计从“10”至“00”倒数。热水器的重设值为“00”。如太早停止按键会取消程序。



如何节省能源

将热水器调校至所需温度，然后开启热水器龙头。当感觉水温过热时，不要加入冷水，而应将温度调低。如加入冷水，已加热的水会被冷却，因而浪费能源。

再者，如同时间开着多个冷水龙头，新加入的冷水并不在电子加热系统的范围内，水温的稳定性就无法控制。

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13. 使用指示

电量限制

如 DSX 热水器的功率未能将热水器加热至所需温度(例如同时打开多个水龙头)，控制阀自动减低流量以达到设定温度。

与太阳能热水系统配合操作

可用热水器的全部功率将水加热，注入浴缸内，与太阳能热水系统配合操作，必需确保入水水温不超过 70 ℃。

如入水水温过高，热水器不会提供热水，显示屏显示“入水水温太高”。

保养工作后的排气程序

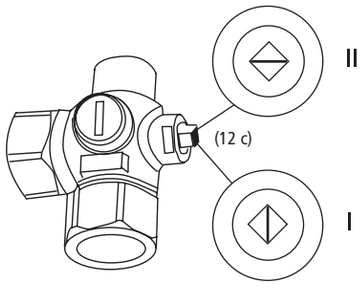


DSX 热水器备有自动气泡保护功能以防止非故意干烧情况。但每次热水器因水龙头工程或维修而需排出储水，必需将热水器内空气排出，然后再使用。

1. 关掉电源总开关。
2. 开启冷水龙头清洗水龙头以免污染热水器及水龙头配件。
3. 开启后再关闭热水开关，直至管内不再排出空气，使热水器内的空气完全排出。
4. 然后再连接电源。

14. 保养

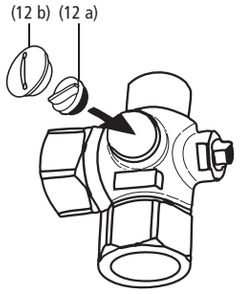
必须由合格技师负责保养。



清洗及更换过滤器

DSX 热水器的冷水入水连接位配备有综合式关闭阀及过滤器，过滤器藏有污垢会减低热水出水量，必须定时清理或更换：

1. 先关掉电源。
2. 打开面盖后，关掉冷水入水龙头内的关闭阀 (12 c)。
3. 拧松螺丝塞子 (12 b) 取出过滤器 (12 a)。
4. 过滤器 (12 a) 可以清洗或更换。
5. 放回过滤器后，拧紧螺丝塞子。
6. 慢慢打开关闭阀。
7. 开关热水龙头数次将热水器内的空气排出。
8. 装回面盖，再连接电源。



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15. 故障处理检查要点



必需由合格技师维修。

如参考列表未能处理有关问题，请联络德国宝客户服务部。



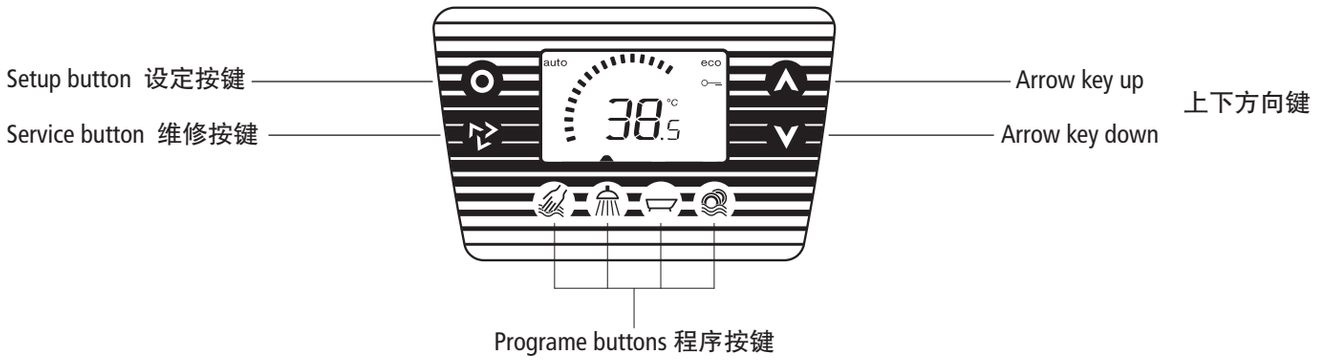
本热水器出厂前经多次反复测试，如有故障，一般由小问题导致。

首先可尝试重新开关电源重设电子设定。其次可参考以下列表措施解决问题，这样可节省不必要的维修费用。

故障	原因	措施
出水为冷水，数字显示没有亮着	总保险丝跳闸	更换或重新启动保险丝
显示屏显示错误标志“螺丝起子”	控制系统关掉	尝试关掉系统，然后再开启。如标志“螺丝起子”仍然显示，请联络客户服务部
热水流量太弱	出水配件肮脏或鈣化	清洗花洒头过滤器等配件
	过滤网肮脏或鈣化	清洗过滤网
不能达到选择温度	出水流量太大	重新启动摩打带动制阀
	开着冷水龙头	只开着热水龙头，调校使用水温，检查出水水温
LCD 显示“入水水温太高”	入水水温高于额定水温	调低入水水温
按键没有反应	面盖未能正确装上	重新正确装上面盖

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16. Quick Reference Guide 快速參考指南



Set temperature 溫度設定

–1 °C | +1 °C

Convenience zone 35,0..42,0 °C 方便選擇範圍

–0,5 °C | +0,5 °C

Select preset temperature 選擇預設溫度

A1 → A2 (HAND 35.0 °C)

B1 → B2 (SHOWE 38.0 °C)

C1 → C2 (BATH 42.0 °C)

D1 → D2 (KITCH 48.0 °C)

Store temperature 儲存溫度

1 → 2 (按≥3秒 Press ≥ 3 sec) → 3 (OK)

Service menu 維修 菜单

1 Press ≥ 3 sec 按≥3秒 → 2 (SERVICE...) → 3 → 4 → 5 (39.5 °C)

Setup menu 設定菜单

1 (按≥3秒 Press ≥ 3 sec) → 2 (SETUP) → 3 → 4 → 5 (TON 0.0) Display flashes 顯示閃動 → 6 → 7 → 8 → 9 (39.5 °C)

Scalding protection on 燙傷保護開啟

1 → 2 (Press ≥ 3 sec) → 顯示確定 已啟動 Display confirms activation: → 3 (TEMP PROTECTION ENABLED)

Scalding protection off 燙傷保護關閉

1 (Press ≥ 3 sec) → 顯示確定 已關閉 Display confirms deactivation: → 2 (TEMP PROTECTION OFF)

Reset 重新設定

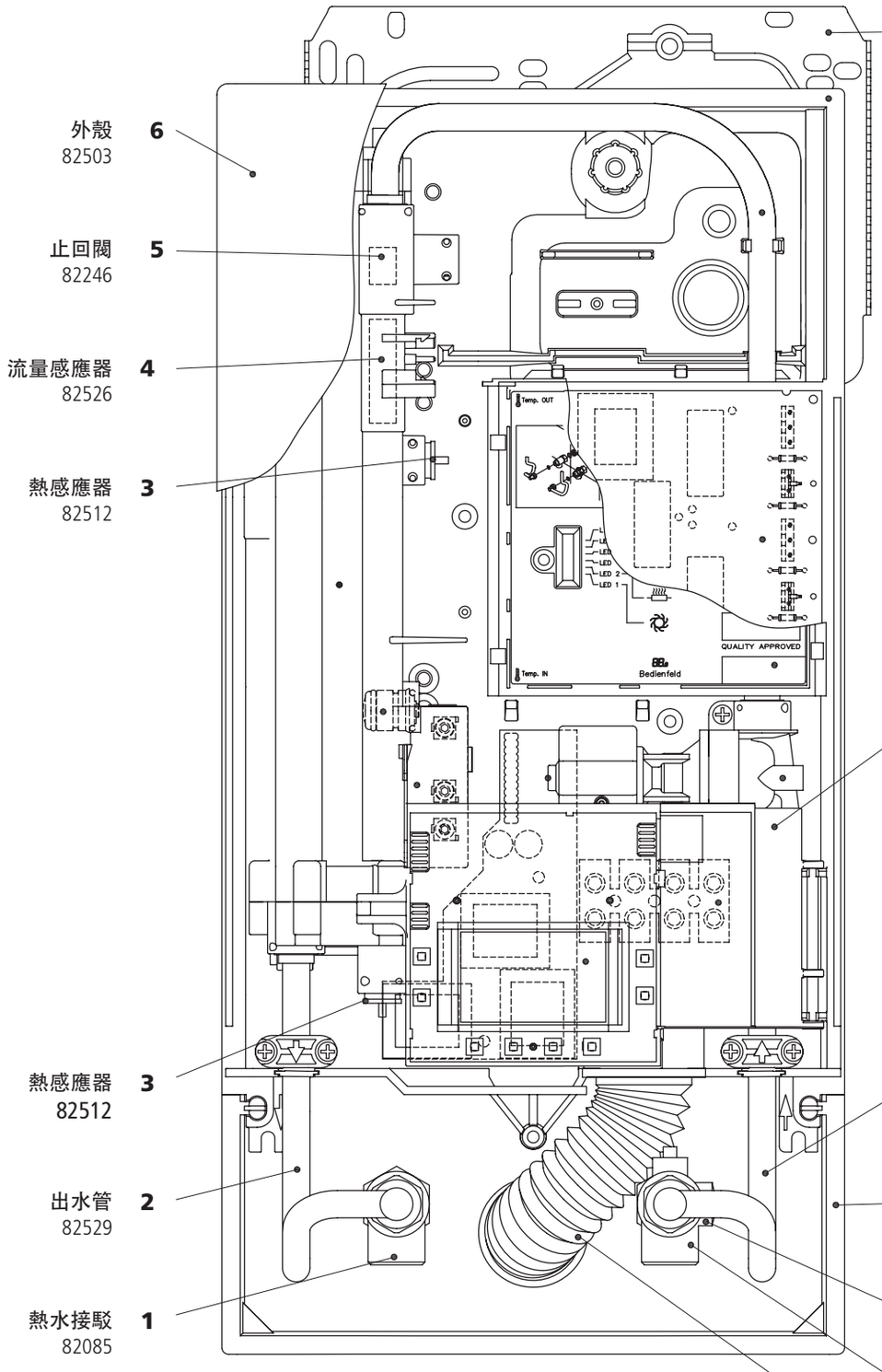
1 (Press + hold! 按下 + 保持按著) → 2 (09, 08, 07, ...) → 3 (00) Reset completed 重設完成

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1. 概觀圖

訂購時請註明熱水器型號及機身編號。



7 掛接背板
82520

外殼 **6**
82503

止回閥 **5**
82246

流量感應器 **4**
82526

熱感應器 **3**
82512

8 控制板支架
82573

熱感應器 **3**
82512

9 入水管
82531

出水管 **2**
82529

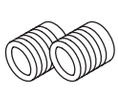
10 框架
82571

熱水接駁 **1**
82085

11 過濾網
82162

12 冷水接駁
82074

13 濺水保護套
82060



15 旋入杭牙
82110



14 電線封蓋
82180

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2. 內容

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7. 尺寸 38
8. 安裝 38–40
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10. 電線接駁 41–42
11. 初步操作/重新安裝/鎖定限制 42–43
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    - 程式按鍵 44
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3. 環保及循環再造





德國寶注重環保,選用包裝物料方面亦以環保為原則。

- 包裝物料對保護熱水器免於運送途中受損致為重要。選用的物料為環保可循環再用的紙盒,膠袋亦為可循環再用的PE塑料。
- 塑膠零件如正確分類,可100%循環再用。



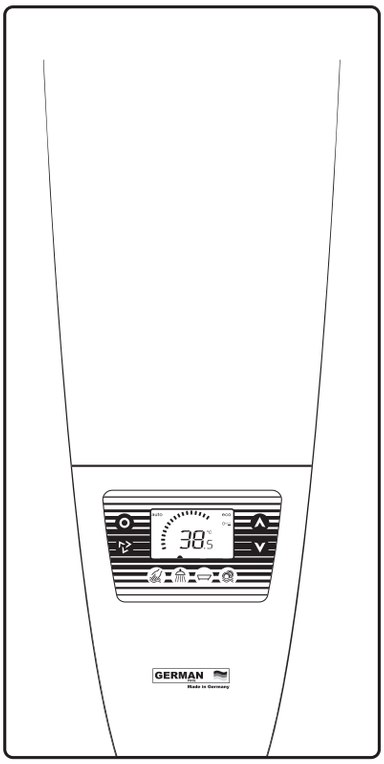
4. 安全守則

必需由合格技師安裝,初部操作及保養本熱水器以確保能符合有關安全標準及安裝條例。本公司對未遵照此規定而引致損失或問題概不負責。

- 本熱水器只適宜用於室內不結霜的環境作家居用途,並只適宜將自來水加熱。
- 本熱水器必須時刻接地。
- 來水電阻不可低於規格表上列明之數值。
- 最高水壓不可高於規格表上列明之數值。
- 初次試機前及每次需要將熱水器內的儲水排清時(例如:要進行供水系統維修或有結霜可能或維修保養),需按本說明書內之有關指示,將熱水器內空氣排出。
- 任何情況下,在關掉電源前,不能打開面蓋。
- 切勿對本熱水器(包括熱水器機體、電線或水管)作出任何技術性改動。
- 請注意溫度高於43 °C的水會被界定為熱水(對於小童尤甚),並可引致燙傷。熱水器經使用一段時間後,水喉配件可能會很熱。
- 入水水溫不可高於70°C。
- 如遇上故障,請即關掉電源。如有漏水,應即關掉冷水水源。並必須由總代理的合格技師維修。
- 除有負責其安全的人士監督或收到如何使用本熱水器指示, 否則任何活動能力有限或情緒、神智有問題的人士不可使用本熱水器。必需監督兒童以確保兒童不會把玩熱水器。

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5. 本熱水器簡介



DSX即熱式熱水器系列,微電腦控制中央系統式,可供應一個或多個出水位。

電子控制系統按選擇的出水水溫,入水水溫及流量調控達至要求出水水溫,水壓變動亦能保持水溫穩定。可通過按鍵設定出水溫度範圍20℃-60℃。所選擇的水溫會以數字顯示。

入水水溫可高達70 °C,可配合太陽能熱水系統操作。

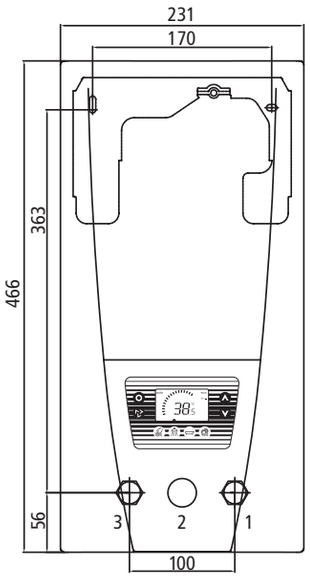
6. 規格

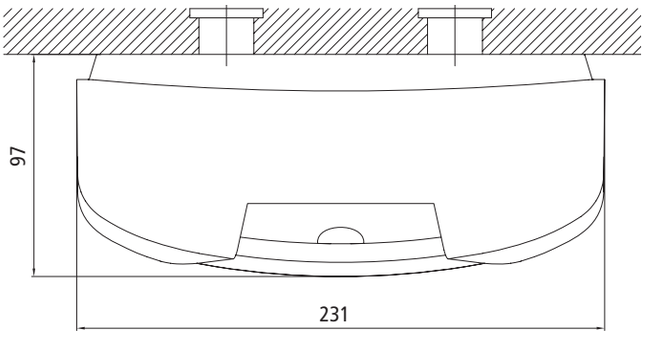
型號	DSX			
編號	34347			
額定功率/ 額定電流	16.2 kW..27 kW (25 A..39 A)			
選擇功率/ 電流	16.2 – 19.4 kW (25..27 A) ❑	19.0 – 22.6 kW (29..30 A) ❑	21.6 – 25.8 kW (33..36 A) ❑	24.4 – 27.0 kW (37..39 A) ❑
接駁電源	3/PE 380..415V AC			3/PE 400V AC
最低電線尺寸要求	4,0 mm²	4,0 mm²	6,0 [1] mm²	6,0 mm²
最大熱水量(公升/ 分) Δt = 28K Δt = 38K	9,2 6,8	10,7 7,9	12,3 9,0	13,8 10,2
額定容量	0,4 l			
類型	額定壓力 1 MPa (10 bar)			
加熱系統	裸露電阻絲加熱系統 IES®			
要求來水電阻@15 ° C	⩾ 1100 Ωcm			
導電性能	⩽ 90 mS/m			
入水水溫	⩽ 70 ° C			
要求最低流量-最高流量	2.5 – 8.0 l/min			
壓力損失	0,2 bar at 2,5 l/min 1,3 bar at 9,0 l/min			
溫度選擇	20 ° C – 60 ° C			
水管接駁	G 1/2″			
重量(入水後)	4,19 kg			
VDE防護等級	1			
防護/ 安全類別	IP25 CE CCC			

1) 當更換一部21KW / 380V 熱水器,可採用4mm² 電源線

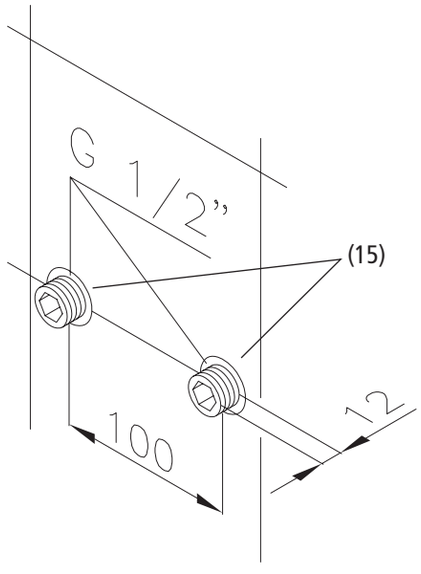
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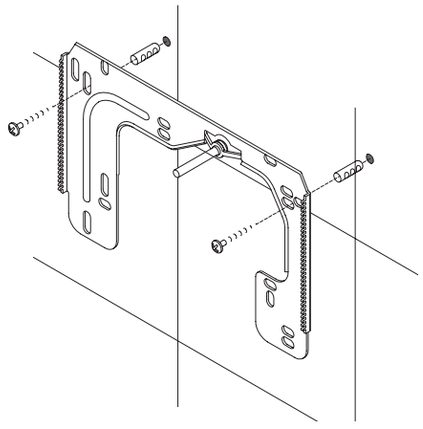
7. 尺吋





8. 安裝





安裝時必需遵守下列指示:

- 當地有關之電線安裝條例及安全標準。
- 電力供應商及水務署之安全條例。
- 標籤上的規格
- 技術規格

安裝地點

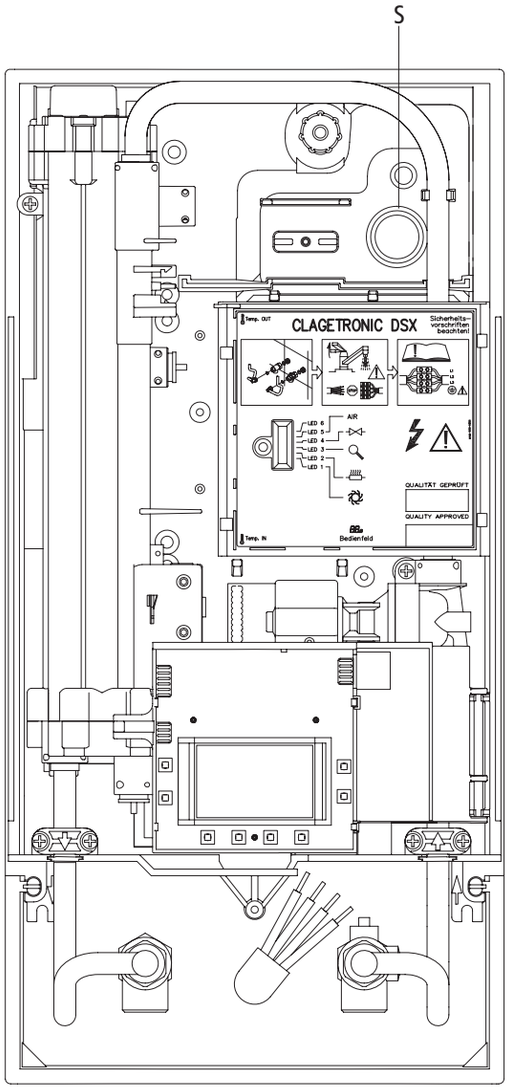
- 安裝地點必須全年都不結霜。
- 此熱水器只可作掛牆式安裝，出入水接駁喉位向下。
- 熱水器的防護等級為IP25,按照VDE0100 part 701,必須安裝於保護區1內。
- 為避免失溫,應將熱水器安裝於最接近出水位置。
- 為方便保養工作,應在供水喉位置裝上閘掣。
- 可選用銅或鋼喉,如選用膠喉,該膠喉必須符合DIN16893 Series 2規格。熱水喉必須有保溫保護。
- 來水電阻最少應為1100 Ωcm 15 °C。

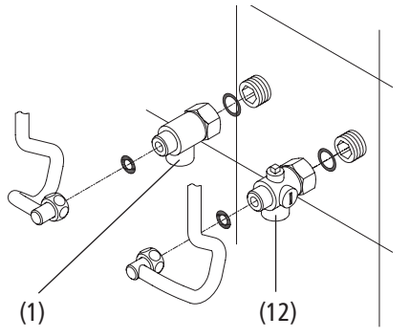
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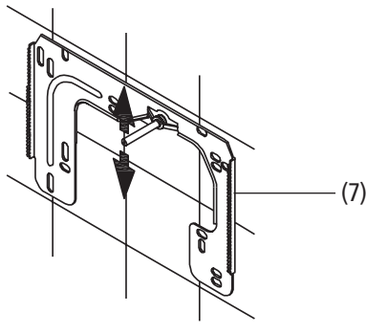
安裝牆上掛碼

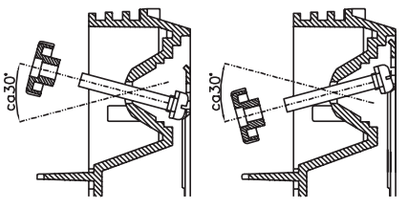
安裝此熱水器並不需要鑽牆裝上牆上掛碼,只需將杭牙如下列2.裝上便可。

1. **安裝前先清洗供水喉管。**
2. 用12mm六角螺絲鎖匙將杭牙(15)旋入牆上接駁位置,旋妥杭牙後,杭牙應外露12mm。
3. 將附上的模板放在牆上適當位置以配合冷熱水位置。根據模板位置記下鑽孔位置,用6mm鑽咀鑽孔,放入合縫釘旋入掛碼(7)。
4. 可用附上的水平板碼調校牆面不平或傾斜情況達30mm,視乎程度,水平板碼應裝在牆壁與掛碼之間。





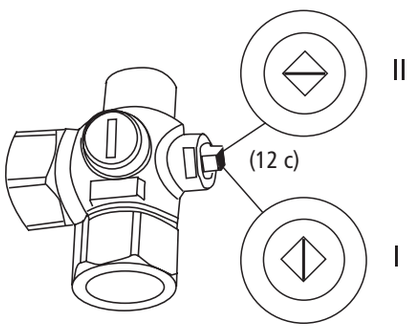




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安裝接駁件

1. 如圖所示將緊固螺母密封圈與冷水進水配件連接。
2. 如圖所示將緊固螺母密封圈與熱水出水配件連接。

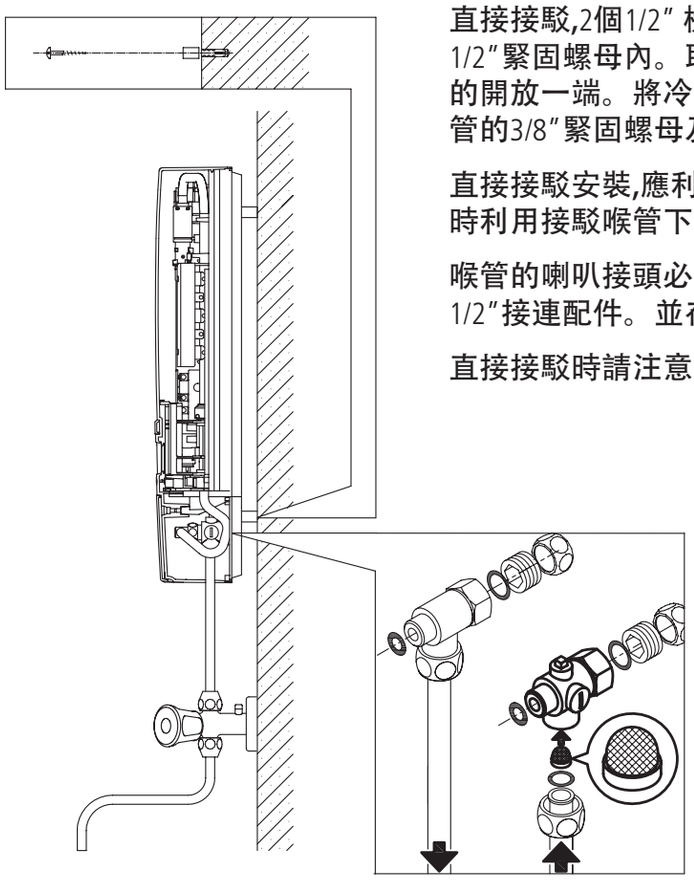


安裝熱水器

1. 旋鬆螺絲,打開面蓋。

- 當更換熱水器時,電源線只可從熱水器上半部接駁,只在此情況下,以工具(例如螺絲批)按壓預先預備的穿破位置(S)。
- 介開電線位密封膠蓋,介開的面積應略為少於電線的面積以確保最佳的防水性能,將密封膠蓋套入入線孔。
- 從牆身電線出線位預留約6cm電線,將電線經密封膠蓋穿入熱水器內。

2. 將熱水器掛在掛接背板(7)上,如有需要可略為彎曲出水喉。
3. 將兩個3/8"緊固螺母及3/8"密封圈旋入進出入連接配件內。
4. 將膠螺母旋入牆上掛碼螺紋棒上。
5. 打開冷水供水喉,慢慢旋開閘掣(12c),查看有否滲漏。
6. 接着連續打開及關閉熱水龍頭數次將熱水器內的空氣排出。



直接接駁,2個1/2" 杭牙及1/2"密封圈必需旋入冷熱水接駁件的1/2"緊固螺母內。取出冷熱水接駁件的1/2"密封帽,然後旋入杭牙的開放一端。將冷水及熱水的接連配件旋入熱水器機身及送水管的3/8"緊固螺母及3/8"密封圈。

直接接駁安裝,應利用附上的水平板,盡量垂直緊貼牆身安裝,可同時利用接駁喉管下半部的固定孔固定位置。

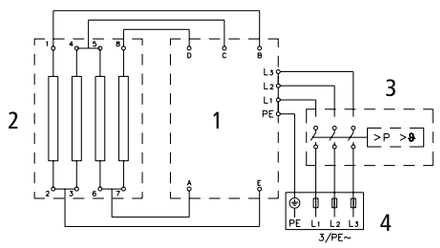
喉管的喇叭接頭必需連1/2"緊固螺母及1/2"密封圈旋入冷熱喉的1/2"接連配件。並在爐底部開孔讓冷熱水喉穿過。

直接接駁時請注意：將沙隔置於冷水入水接駁位!

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10. 電線接駁(必須由合格技師負責)

線路圖



1. 電子線路
2. 發熱線
3. 安全限壓制/ 安全熱切斷器
4. 線排

請注意

- 必須按當地的電線安全標準安裝。
- 參照標籤上註明的技術規格。
- 熱水器必須接駁地線。

結構要求

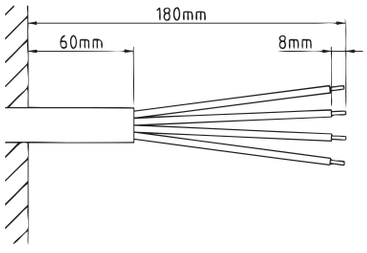
接電前必須檢查並確定電源已關上！

- 熱水器必須穩固接駁安裝,供電電壓亦必須穩定。如在上半部接電,電源線最大應為10mm^2。
- 電線不應損壞,安裝後電線不應可以直接觸摸得到。
- 電源開關應為全極式開關,兩極之間應保持最少3mm距離。
- 應安裝保險絲。

電量調校繼電器

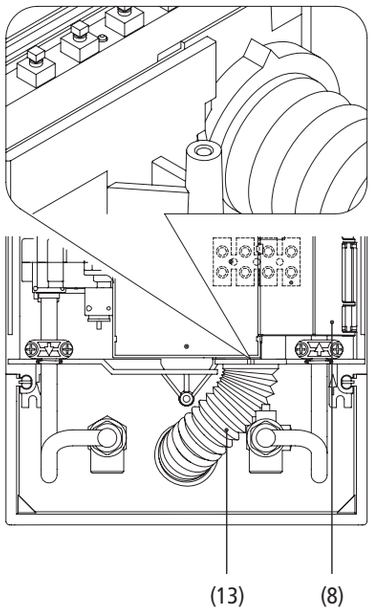
如進一步接駁其它三相電器,可將電量調校繼電器(82250)接駁至導電器L_2,並需選擇特別的操作模式。

LCD顯示	內容
0	正常操作 / 生產廠方設定
1	以正常電量調校繼電器操作
2	以敏感電量調校繼電器操作



要更換操作模式,先選取設定菜單:
同時按設定鍵 ⊙ 及維修鍵 ⊛ 最少3秒,顯示屏會顯示“設定”確認。
按箭咀鍵 ∨ 7次後會達至減低電量的設定手冊。
按設定鍵 ⊙ 會啟動設定減低電量參數的設定模式。
顯示屏會閃動。你現在可用箭咀鍵 ∨ 及 ∧ 選擇“0”,“1”及“2”,再新按設定鍵 ⊙ 再重新按設定鍵 ⊛ 會返回正常顯示。

首先必需選擇模式1,檢視低電量操作的電量調校繼電器操作正常,如繼電器閃動,需選擇模式2。



底部標準電線接駁

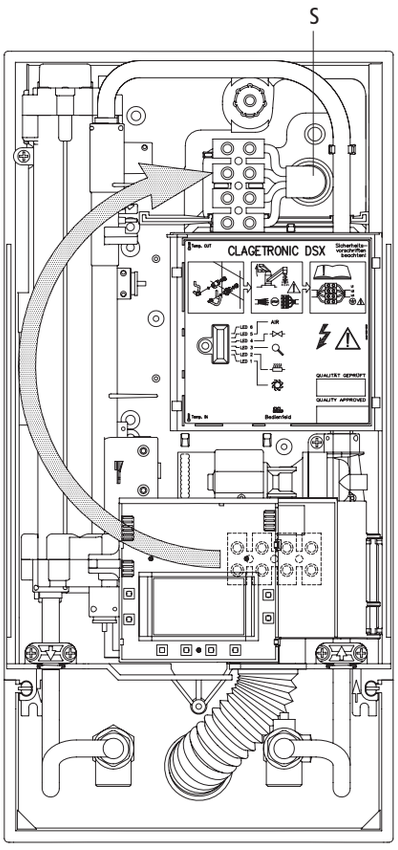
接駁電線前，請必先確定電源已關上。

1. 從牆上插蘇位預留6cm電線,套入濺水保護套,使保護套與牆身齊平,確保如有漏水也不會沾濕電線。
2. 打開控制板。
3. 按線路圖接上電線,此熱水器必須接駁地線。
4. 將電線的保護套拉上並套入中間層板的凹位,再蓋上中間層板的面板,再用螺絲將電路板蓋面鎖緊。
5. 用螺絲將熱水器面蓋鎖緊。

注意:

如有需要,可將接駁線插改放置於熱水器上半部,如需這樣做,請參照下一部份指示。

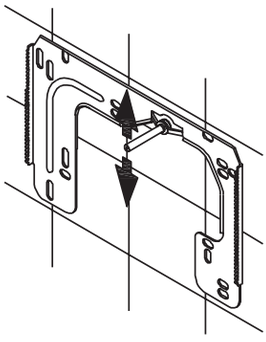
10. 電線接駁(必須由合格技師負責)

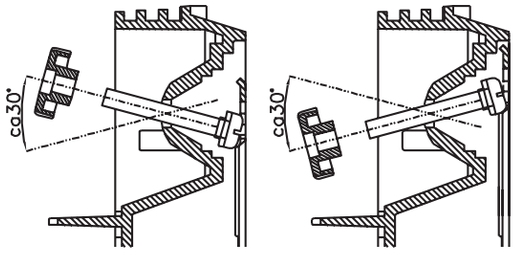


上面部份電線接駁

接駁電線前，請必先確定電源已關上。

1. 用工具(例如螺絲批)按壓預先預備的開孔位置(S)
2. 介開電線位密封膠蓋,介開的面積應略為少於電線的面積以確保最佳的防水性能,將密封膠蓋套入入線孔。
3. 從牆身電線出線位預留約6cm電線,將電線經密封膠蓋穿入熱水器內。
4. 將熱水器掛在背碼上,背碼有螺紋的支柱應套入熱水器的孔內。
5. 旋鬆電線接駁線插的螺絲,將線插移往上部位置,再接駁線插。
6. 按照第23頁的線路圖接駁電線,此熱水器必需接駁地線。
7. 裝回及固定外殼,然後裝回面板。

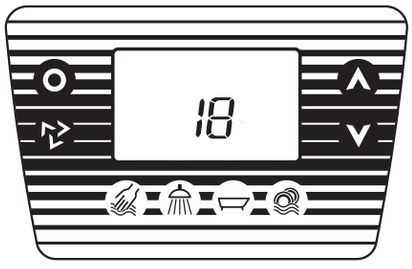




11. 初步操作

多功率系統

額定功率(最高功率)為27kW/400V及可調校為24kW,21kW或18kW。



1. 接駁電源前,先將水注入熱水器內,然後開關熱水器龍頭數次,以將熱水器內的空氣排出。每次維修或水喉工程後,必須將熱水器內的空氣排出,然後再啟動熱水器。

注意:功率選擇

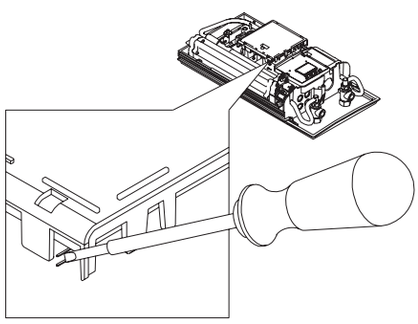
(必須由註冊技師調校,否則保養作廢。)初次接駁電源後,選擇最大功率。

只在設定功率後,熱水器進入標準操作模式。最大可容許功率需視乎安裝地點情況而定。必需注意技術規格表內所提供的資料,特別是電源線的要求及電線接駁的保險絲保護,所有電線接駁安裝必需遵照安裝地點的有關法例。

2. 開著熱水器後,晶液顯示屏會亮著。
3. 當初次開着熱水器時數值"18"會在顯示屏閃動,否則請細心閱讀「重新安裝說明」。

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4. 按 ⌄ 及 ⌃ 箭咀鍵選擇安裝地點可容許的最大功率(18, 21, 24或27kW)
5. 按 ⊙ 鍵確定設定,熱水器開始操作。
6. 在標籤上註明設定的功率。
7. 設定最高容許功率後,發熱線會在水流開始30秒後啟動。
8. 開啟熱水龍頭,熱水器開始操作。
9. 測試熱水器性能,將使用說明交給客戶,並向客戶解釋熱水器怎樣操作。
10. 填妥隨機的保用登記卡，並寄回德國寶客戶服務部 (詳情請參閱“故障處理檢查要點”)。



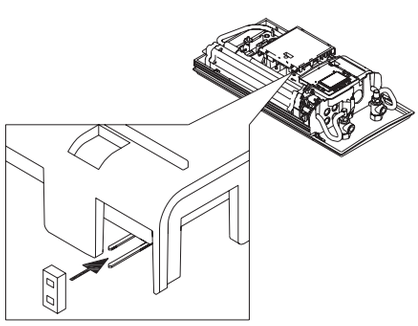
重新安裝說明

在不同的安裝情況下,初次安裝時可能需要修改最大功率。

暫時性的兩極短路(例如用符合EN60900的螺絲批如圖所示,會重新設定熱水器的參數。數值"18"會在顯示屏閃動直至選定最大功率。此情況會在啟動或關閉電源時維持。

鎖定限制操作程度

可以限制熱水器的操作模式



啟動鎖定程度:

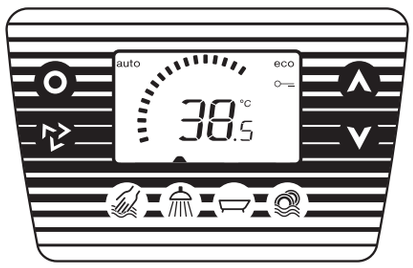
1. 透過設定說明(參照第13項“如何使用,設定說明)選擇需要的鎖定程度。
2. 切斷電源(例如關掉電源開關制)。
3. 如圖示在電子組件裝上 跳線。
4. 重新操作熱水器。

關閉鎖定程度:

1. 切斷電源(例如關掉電源開關制)
2. 拆去 跳線
3. 重新操作熱水器

- 必須使用濕布清潔塑膠表面及配件，切勿使用腐蝕性清潔劑或溶劑。
- 要供水系統運作良好,需定時清洗出水喉配件,每三年應由合格技師檢查熱水器、電源接駁及水喉配件以確保熱水器性能及操作安全。

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開啟熱水龍頭,熱水器會自動開著,關掉熱水龍頭,熱水器會自動關掉。

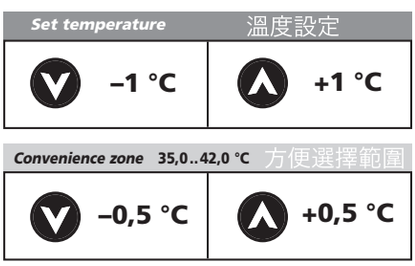
調較溫度

- 可以按 ▼ 及 ▲ 鍵調校所需水溫。

輕按按鍵一次會調校1 °C,在最常選擇的範圍35 °C至42 °C內甚至以0.5 °C調校,按鍵時間較長會每次不斷更改溫度。你可以在20 °C至60 °C範圍選擇出水水溫。顯示屏以相對較暖 "warmer"或較冷"colder"確認溫度改變。

注意:

如用箭咀鍵 ▼ 設定溫度低於20 °C會顯示"--",熱水器會停止加熱。

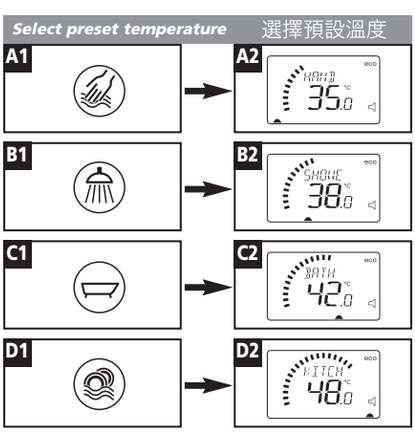


程式按鍵

四個程式按鍵讓你迅速選擇預先設定的溫度。
出廠前預設 "洗手溫度" 為35 °C,"花洒淋浴" 為38 °C, "浴缸浸浴" 為42 °C,"廚房用途" 為48 °C。

你可自行設定程式鍵:

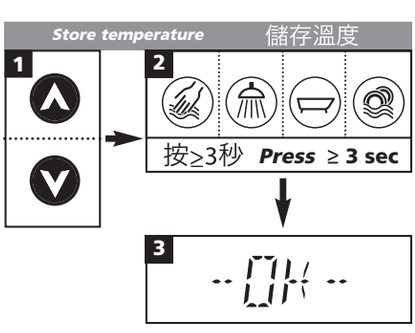
- 透過箭咀鍵 ▼ 及 ▲ 選擇要求的溫度。延長按着4個程式鍵其中1個(最少3秒)會貯存之前選擇的溫度。顯示屏會以"--ok--"確認及會發出響號。現在每次當你按下程式鍵,便可提供相對的貯存溫度。

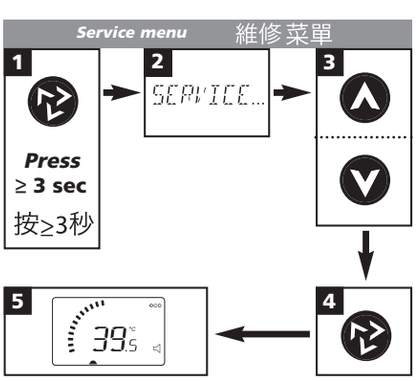


維修菜單

維修菜單一系列的數據顯示,提供不同參數的資料。

按維修鍵 ⚙ 最少3秒,開啟維修手冊,顯示屏會顯示"service menu"確認。用箭咀鍵 ▼ 及 ▲ 你可設換至各項顯示資料。按維修鍵 ⚙ 你可回復至標準顯示。





各項顯示數值如下:

電量限制
說明現時熱水器的最大電量(kW)

溫度保護
資料,如果溫度保護被啟動或關閉。

操作費用
指示總能源消耗量

每小時操作費用
指示現時操作每小時的費用(以Euro計)

操作時間
指示加熱的總操作時間(以年/日/分/秒計)

備用時間
指示從最近一次接上電源起計的操作時間(以年/日/分/秒計)

使用年限統計器
指示熱水器總操作時間(以年/日/分/秒計)

流量
指示現時流量(l/min)

入水溫度
指示入水溫度(°C)

出水溫度
指示出水溫度(°C)

電量
指示現時耗電量(kW)

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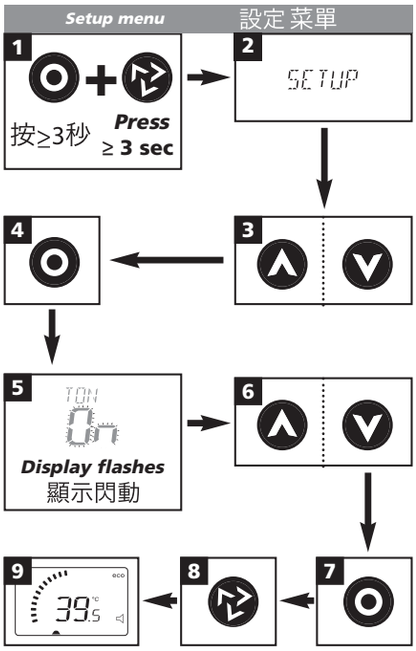
控制數值
指示控制系統的校準標定數值

情況判斷
指示最後10個情況判斷訊息

信息
指示現時 I2C 的接駁質素(以%計)

軟件版本
有關安裝軟件版本

注意:
維修手冊的數值不可更改或輸入。以上數值只作為資料提供



設定菜單

設定菜單提供一系列可調校數值影響熱水器的性能及顯示。

同時按設定鍵 ⊙ 及維修鍵 ⊛ 最少3秒啟動設定菜單,顯示屏顯示"setup"確認。

用箭咀鍵 ⊻ 及 ⊼ 你可切換個別參數。按設定鍵 ⊙ 啟動個別參數的設定模式,顯示屏會閃動,你現在可以箭咀鍵 ⊻ 及 ⊼ 選擇新的參數。

再按設定鍵 ⊙ 會貯存新的參數。按維修鍵 ⊛ 會返回標準顯示。

個別參數如下:

語言
可選擇操作語言
設定選擇:
"1" 德文
"2" 英文

光度
啟動及關閉按鍵光度
設定選擇:
"on" 按鍵光度啟動
"--" 按鍵光度關閉

背景燈光
啟動及關閉顯示屏背景燈光
設定選擇:
"on" 背景燈光長期亮著
"AT" 背景燈光自動亮著
例如當按鍵及一段時間後自動關掉
"--" 背景燈光關掉

每kWh電費(ct)
可輸入有關電費價格
設定選擇:
由0 ct至199.90 £

後備顯示
啟動附加參數。
設定選擇:
"t1" 入水溫度(°C)
"Po" 電量 (kW)
"FL" 流量(公升/ 分鐘)
"--" 沒有附加顯示

注意:
當附加參數啟動時,時間不能同時顯示。

時鐘
可設定時間
設定選擇:
"h" 時
"min" 分
"s" 秒

用維修鍵 ⊛ 選擇要更改的時鐘參數(時、分、秒)
用箭咀鍵 ⊻ 及 ⊼ 更改顯示的設定數值。
按設定鍵 ⊙ 貯存新數值。
用維修鍵 ⊛ 返回標準顯示。

注意:
當顯示"s"時,箭咀鍵 ⊼ 將顯示重設至0,箭咀鍵 ⊻ 關閉時鐘顯示。

減低電量
設定負載調控參數

設定選擇
"0" 標準操作,廠方設定
"1" 以標準負載調控模組操作
"2" 以敏感負載調控模組操作

鎖定程度
熱水器操作複雜性的限制

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設定選擇

"0"　沒有限制(廠方設定)

"1"　不可以用按鍵(倒數)重設廠設定,可看到參數但不可以在設定菜單內更改。

"2"與"1"相同,另外不可以開啟設定菜單。

"3"與"2"相同,另外名義上的數值記憶(洗手,花洒淋浴,浴缸浸浴,廚房應用)不可更改。

"4"與"3"相同,另外名義上的數值不可以更改。

流量限制

設定流量限制

設定選擇

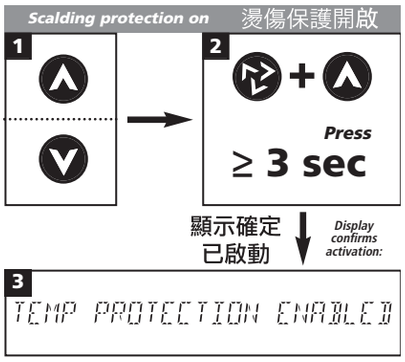
"--"　沒有流量限制

"At"　自動調校,即限制流量以達致出水水溫為選擇溫度

"Eco"　流量限制最大為所選擇數值每分鐘8公升eg."8.0"

注意:

當選擇"Eco"操作形式及設定溫度低於43 °C時,"Eco"會顯示。

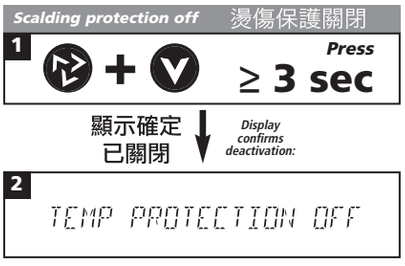


溫度限制

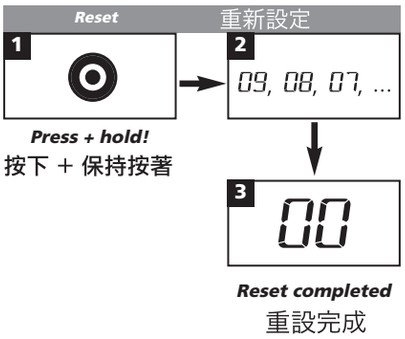
DSX即熱式電熱水器配備有可選擇的溫度限制功能。此防止燙傷功能在出廠設定時關閉了。

- 開着:以箭咀鍵 ▼ 及 ▲ 選擇溫度制,然後同時按維修鍵 ⚙ 及箭咀鍵 ▲ 最少3秒。
  顯示屏會顯示"temp protection enabled"確認。

當防止燙傷功能啟動後,不可以選擇更高溫度。



- 關閉:同時按維修鍵 ⚙ 及箭咀鍵 ▼ 最少3秒。
  顯示屏會顯示"temp protection off"確認。



重設至出廠設定

所有出廠設定均可喚回。

- 按設定鍵 ⊙ ,顯示屏會以秒計從"10"至"00"倒數。熱水器的重設值為"00"。如太早停止按鍵會取消程序。

如何節省能源

將熱水器調校至所需溫度,然後開啟熱水器龍頭。當感覺水溫過熱時,不要加入冷水,應將溫度調低。如加入冷水,已加熱的水會被冷卻,因而浪費能源。

再者,如同時間開著多個冷水龍頭,新加入的冷水並不在電子加熱系統的範圍內,水溫的穩定性就無法控制。



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13. 使用指示

電量限制

如DSX熱水器的功率未能將熱水器加熱至所需溫度(例如同時打開多個水龍頭),控制閥自動減低流量以達至設定溫度

與太陽能熱水系統配合操作

你可用熱水器的全部功率將水加熱,注入浴缸內,與太陽能熱水系統配合操作,必需確保入水水溫不超過70 °C。

如入水水溫過高,熱水器不會提供熱水供應,顯示屏顯示“入水水溫太高”。



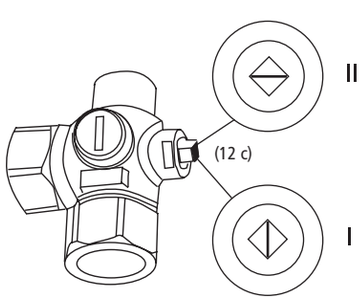
保養工作後的排氣程序

DSX熱水器備有自動氣泡保護功能以防止非故意乾燒情況。但每次熱水器因水喉工程或維修而需排出儲水,必需將熱水器內空氣排出,然後再使用。

1. 關掉電源總掣。
2. 開啟冷水龍頭清洗水喉以免污染熱水器及水喉配件。
3. 開啓再關閉熱水掣，直至管內不再排出空氣，使熱水器內空氣完全排出。
4. 然後再接駁電源。

14. 保養

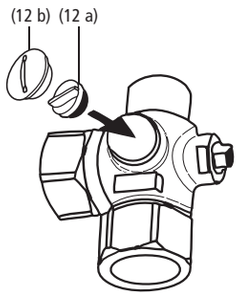
必須由合格技師負責保養。



清洗及更換沙隔

DSX熱水器的冷水入水接駁位配備有綜合式的閘制及沙隔,沙隔藏有污垢會減低熱水出水量,必須定時清理或更換:

1. 先關掉電源。
2. 打開面蓋後,關掉冷水入水喉內的閘制(12c)
3. 旋鬆螺絲塞子(12b)取出沙隔(12a)。
4. 沙隔(12a)可以清洗或更換。
5. 放回沙隔後,旋緊螺絲塞子。
6. 慢慢打開閘制。
7. 開關熱水龍頭數次將熱水器內的空氣排出。
8. 裝回面蓋,再接駁電源。



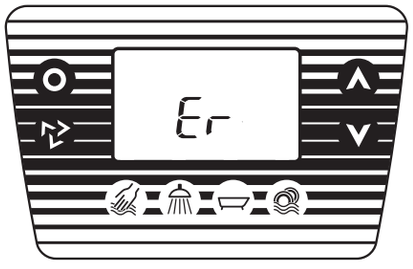
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15. 故障處理檢查要點



必需由合格技師維修。

如參考列表未能處理有關問題,請聯絡德國寶客戶服務部。

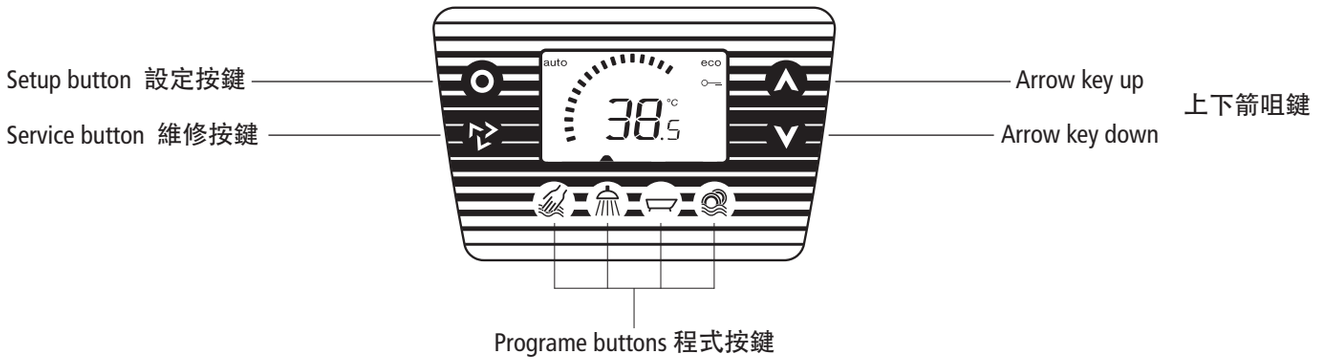


本熱水器出廠前經多次反覆測試,如有故障,一般由小問題引致。

首先可嘗試重新開關電源重設電子設定。其次可參考以下列表措施解決問題,這樣可節省不必要的維修費用。

故障	原因	措施
出水為冷水, 數字顯示沒有亮著	總保險絲跳制	更換或重新啟動保險絲
顯示屏顯示錯誤標誌“螺絲批”	控制系統關掉	嘗試關掉系統,然後再開啟。 如標誌“螺絲批”仍然顯示, 請聯絡客戶服務部
熱水流量太弱	出水配件骯髒或鈣化	清洗花洒頭沙隔等配件
	過濾網骯髒或鈣化	清洗過濾網
不能達致選擇溫度	出水流量太大	重新啟動摩打帶動制閥
	開著冷水龍頭	只開著熱水龍頭,調校使用水溫,檢查出水水溫
LCD顯示“入水水溫太高”	入水水溫高於額定水溫	調低入水水溫
按鍵沒有反應	面蓋未能正確裝上	重新正確裝上面蓋

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Set temperature 溫度設定

–1 °C | +1 °C

Convenience zone 35,0..42,0 °C 方便選擇範圍

–0,5 °C | +0,5 °C

Select preset temperature 選擇預設溫度

A1 → A2 (HAND 35.0 °C)
B1 → B2 (SHOWR 38.0 °C)
C1 → C2 (BATH 42.0 °C)
D1 → D2 (RITER 48.0 °C)

Store temperature 儲存溫度

1 → 2 (按≥3秒 **Press** ≥ 3 sec) → 3 (OK)

Service menu 維修菜單

1 **Press** ≥ 3 sec 按≥3秒 → 2 (SERVICE...) → 3 → 4 → 5

Setup menu 設定 菜單

1 (按≥3秒 **Press** ≥ 3 sec) → 2 (SETUP) → 3 → 4 → 5 (TON ON **Display flashes** 顯示閃動) → 6 → 7 → 8 → 9

Scalding protection on 燙傷保護開啟

1 → 2 (**Press** ≥ 3 sec) → 顯示確定 已啟動 (*Display confirms activation:*) → 3 (TEMP PROTECTION ENABLED)

Scalding protection off 燙傷保護關閉

1 (**Press** ≥ 3 sec) → 顯示確定 已關閉 (*Display confirms deactivation:*) → 2 (TEMP PROTECTION OFF)

Reset 重新設定

1 (***Press + hold!*** 按下 + 保持按著) → 2 (09, 08, 07, ...) → 3 (00)

Reset completed 重設完成

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請填妥以下空格並與發票一併保存，以便維修時核對資料。用戶提供本公司之所有資料必須正確無誤，否則免費保用將會無效。
请填妥以下空格并与发票一并保存，以便维修时核对资料。用户提供本公司之所有资料必须正确无误，否则免费保用将会无效。
Please fill out the form below. This information and the purchase invoice will be required for any repairs. Warranty will be invalid if information provided is found to be inaccurate.

型號｜型号｜Model No.： ☐ DSX

機身號碼｜机身号码｜Serial No.：_____

購買商號｜购买商号｜Purchased From：_____

發票號碼｜发票号码｜Invoice No.：_____

購買日期｜购买日期｜Purchase Date：_____

保用條例

此保用提供德國寶產品之機件在正常使用下壹年保用(自購買日起計算)。

貴戶須在購機十天內，以下列其中一種方式向本公司登記資料，保用手續方正式生效：

1) 填妥本公司網頁內之保用登記表格 www.germanpool.com/warranty
2) 填妥保用登記卡，並連同購機發票之副本一併郵寄到客戶服務總部 (本公司將不發還發票副本或登記卡)。

1. 未能出示購買發票正本者，將不獲免費維修服務。
2. 用戶應依照說明書的指示操作。本保用並不包括：
   - 任何附件及輔助裝置；
   - 因天然與人為意外造成的損壞 (包括運輸及其它)；
   - 電源接合不當、不依說明書而錯誤或疏忽使用本機所引致之損壞。
3. 於下列情況下，用戶之保用資格將被取消：
   - 購買發票有任何非認可之刪改；
   - 產品被用作商業或工業用途；
   - 產品經非認可之技術人員改裝或加裝任何配件；
   - 機身編號被擅自塗改、破壞或刪除。
4. 如用戶自攜熱水器或部份配件到本公司維修部檢查或維修，本公司將會收取檢查或測試費用。
5. 總代理有權選擇維修或更換配件或其損壞部份。
6. 產品一經被轉讓，其保用即被視作無效。
7. 香港客戶：
   保用只在香港、九龍及新界區有效，東涌、愉景灣及離島須額外收取交通費用。

   國內客戶：
   個別區域或會收取額外交通費用，詳情請致電全國服務熱線查詢。

保用条例

此保用提供德国宝产品的机件在正常使用下壹年保用(自购买日起计算)。

用户须在购机十天内，以下列其中一种方式向本公司登记资料，保用手续方正式生效：

1) 填妥本公司网页内的保用登记表格 www.germanpool.com/warranty
2) 填妥保用登记卡，并连同购机发票的副本一并邮寄到客户服务总部 (本公司将不发还发票副本或登记卡)。

1. 未能出示购买发票正本者，将不获免费维修服务。
2. 用户应依照说明书的指示操作。本保用并不包括：
   - 任何附件及辅助装置；
   - 因天然或人为意外造成的损坏 (包括运输及其它)；
   - 电源接合不当、不依说明书而错误或疏忽使用本机所引致的损坏。
3. 于下列情况下，用户之保用资格将被取消：
   - 购买发票有任何非认可的删改；
   - 产品被用作商业或工业用途；
   - 产品经非认可的技术人员改装或加装任何配件；
   - 机身编号被擅自涂改、破坏或删除。
4. 如用户自携热水器或部份配件到本公司维修部检查或维修，本公司将会收取检查或测试费用。
5. 总代理有权选择维修或更换配件或其损坏部份。
6. 产品一旦被转让，其保用即被视作无效。
7. 香港客户：
   保用只在香港、九龙及新界区有效，东涌、愉景湾及离岛须额外收取交通费用。

   国内客户：
   个别区域或会收取额外交通费用，详情请致电全国服务热线查询。

Warranty Terms & Conditions

Under normal operations, the water heater will receive a 1-year full warranty provided by German Pool (effective starting from the date of purchase).

This warranty is not valid until Customer's registration information is returned to and received by our Service Centre within 10 days of purchase via one of the following methods:

1) Visit our website and register online: www.germanpool.com/warranty
2) Complete all fields on the attached Warranty Card and mail it back to our Customer Service Headquarters along with a photocopy of the purchase invoice (Warranty Card and invoice copy will not be returned to Customer)

1. Customer who fails to present original purchase invoice will be disqualified for free warranty.
2. Customer should always follow the operating instructions. This warranty does not apply to:
   - any accessories and auxiliary devices;
   - damages caused by accidents of any kind (including transport and others);
   - operating failures resulted by incorrect voltage, improper operations and unauthorized installations or repairs.
3. This warranty is invalid if:
   - purchase invoice is modified by unauthorized party;
   - product is used for any commercial or industrial applications;
   - product is repaired or modified by unauthorized personnel, or unauthorized parts are installed;
   - serial number is modified, damaged or removed from the product.
4. Regardless of warranty status, all walk-in requests for water heater repair or replacement service at our Customer Service Centre are subject to testing and handling charges.
5. German Pool will, in its discretion, repair or replace any defective part.
6. This warranty will be void if there is any transfer of ownership from the original purchaser.
7. Hong Kong: Service area includes Hong Kong Island, Kowloon and New Territories. Repairs in Tung Chung, Discovery Bay or other outlying islands are subject to extra service charges.

   Mainland China: Repairs in certain regions are subject to extra service charges. Please call our China Customer Service Hotline for enquiries.

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客戶服務部 | 客户服务部 | Customer Service Centre

香港

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GERMAN POOL 德國寶

德國寶（香港）有限公司 | 德国宝（香港）有限公司

German Pool (Hong Kong) Limited

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