

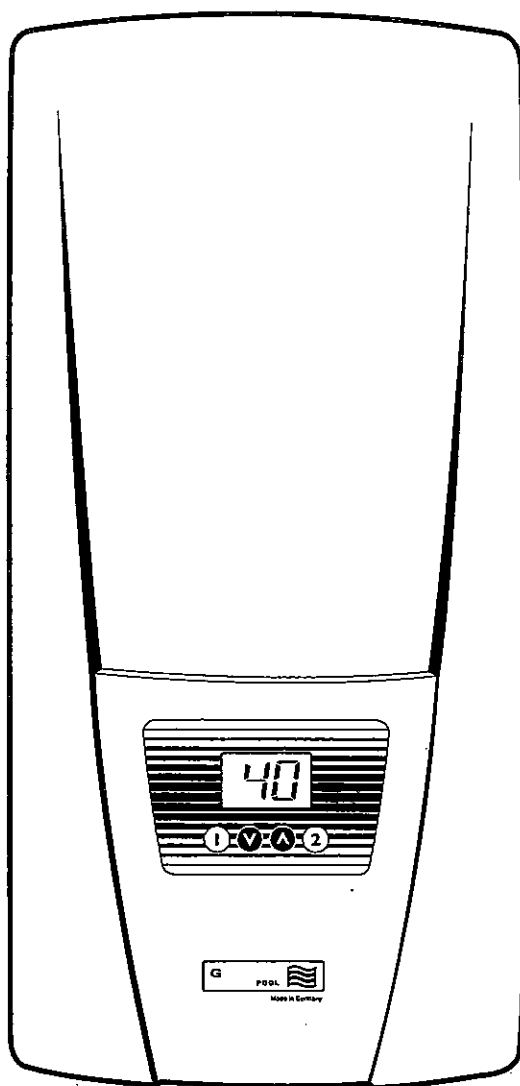
GERMAN
POOL



德國寶

即熱式電熱水器 Instantaneous Water Heater

DEX



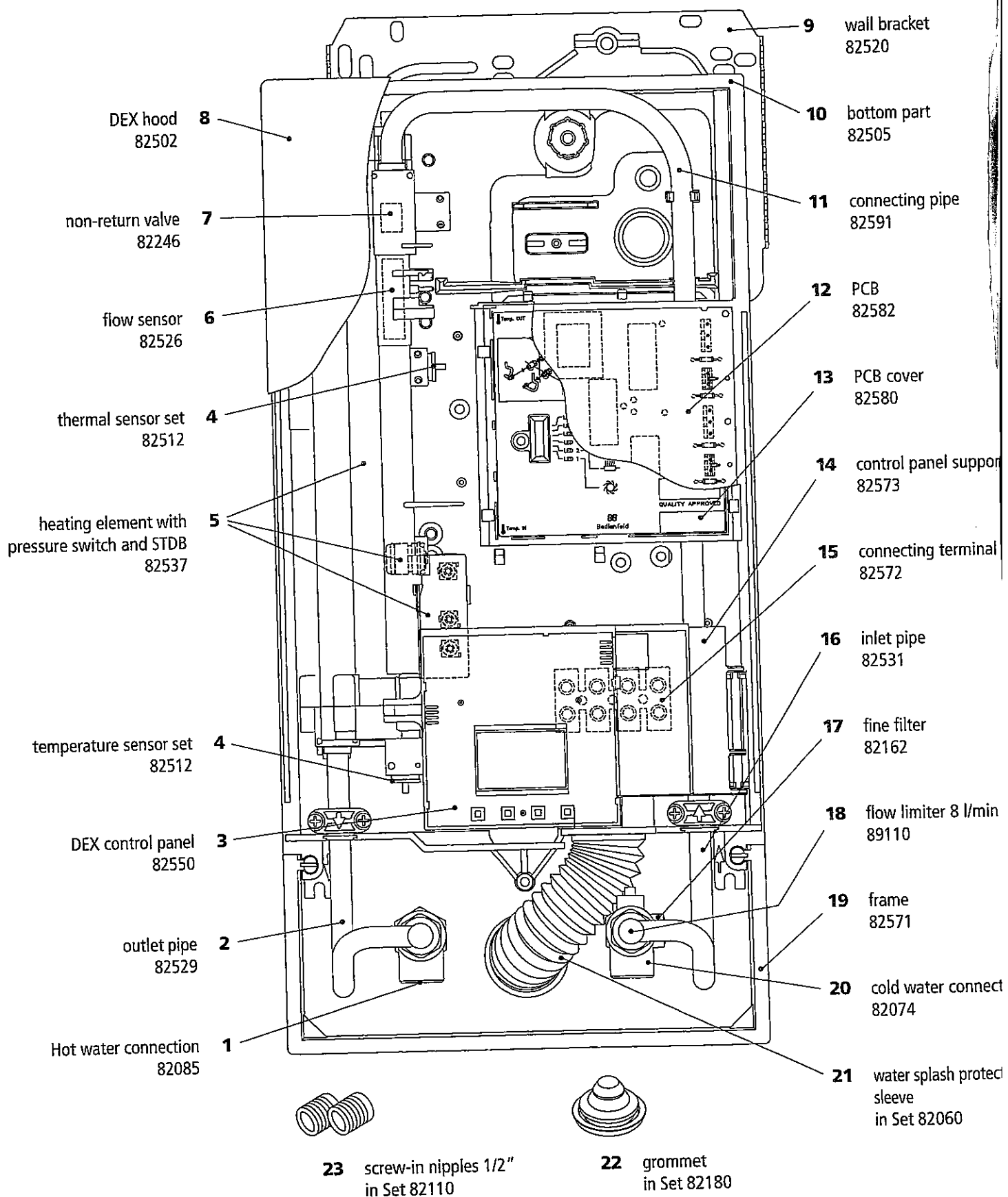
在使用之前請詳細閱讀「使用說明書」及「保用條例」，並妥為保存。
Please read these instructions and warranty information carefully before use and keep them handy for future reference.

IP25



使用說明書 OPERATING INSTRUCTIONS

1. Overview



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

2. Contents

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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

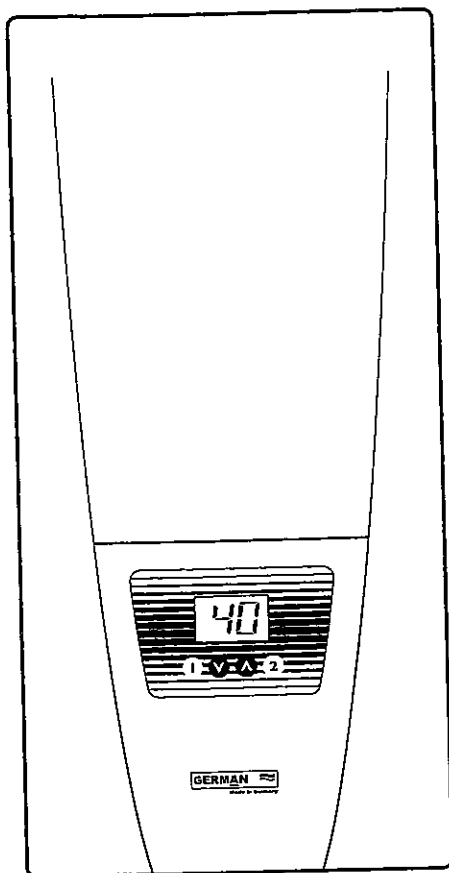


Installation, initial operation and maintenance of this appliance must only be conducted by an authorised professional, who will then be responsible for adherence to applicable standards and installation regulations.

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.
- 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 frost or in case of maintenance), the appliance must be vented in accordance with the instructions on page 12.
- 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 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.
- Pay attention to the fact that water temperatures in excess of 43 °C are perceived as hot, especially by children, and may cause a feeling of burning. Please note that the fittings may be very hot when the appliance has been in use for some time.
- 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.

5. Description of appliance






The instantaneous water heater DEX 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.

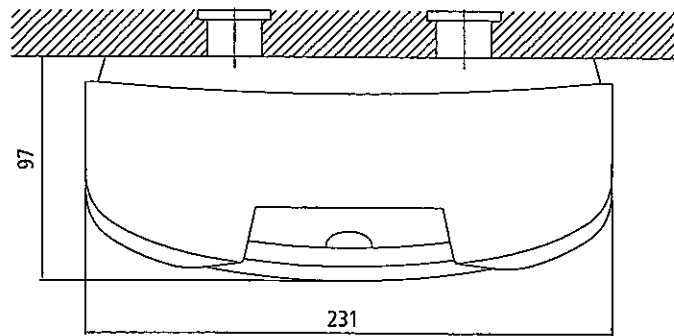
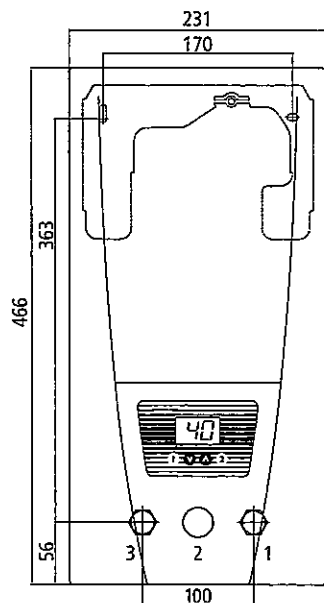
The maximum inlet temperature can be up to 70°C so that operation in connection with solar heating systems is possible.

6. Technical specifications

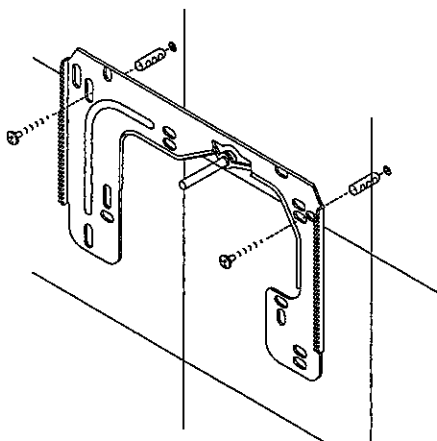
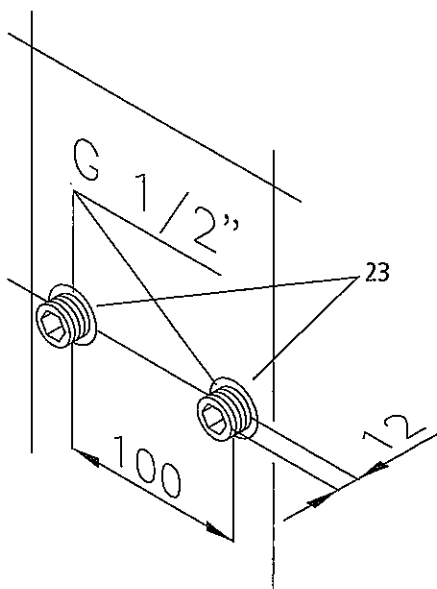
| Model | | DEX | | | |
|---|---------------------------|--|---------------------|---------------------|---------------------|
| Article no. | | 34247 | | | |
| Rated capacity / rated current | | 18 kW..27 kW (26A..39A) | | | |
| Chosen-capacity / -current | | 18 kW (26A) | 21 kW (30A) | 24 kW (35A) | 27 kW (39A) |
| Electrical connection | | 3/PE 380..415 V AC | | | |
| Min. required cable size | | 4,0 mm ² | 4,0 mm ² | 6,0 mm ² | 6,0 mm ² |
| Hot water (l/min) | max. at $\Delta t = 28$ K | 9,2 ¹⁾ | 10,7 ¹⁾ | 12,3 ¹⁾ | 13,8 ¹⁾ |
| | max. at $\Delta t = 38$ K | 6,8 | 7,9 | 9,0 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 | | | |
| Specific 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) | | 3,70 kg | | | |
| VDE class of protection | | I | | | |
| Type of protection / safety | |    IP25 CE CCC | | | |

1) mixed water

7. Dimensions



8. Installation



The following regulations must be observed:

- EC or national regulations (Germany: VDE 0100 and EN 806-2)
- The regulations of the local power and water supply utilities
- The specifications on the rating plate
- Technical specifications

Installation site

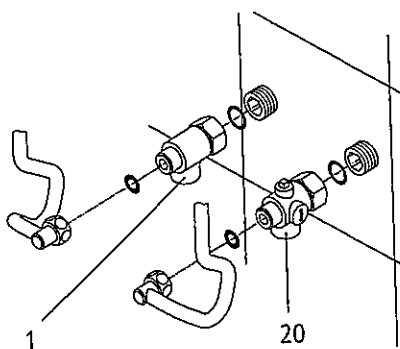
- Appliance must only be installed in frost-free rooms. Never expose appliance to frost.
- The Appliance must be wall mounted and has to be installed with water connectors downward.
- The appliance complies with protection type IP25 and may therefore be installed in protection zone 1 according to VDE 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 DEX 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 (23) 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 (23) into the wall connections. After tightening, the double nipples must protrude by 12 mm.

8. Installation



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 (9).

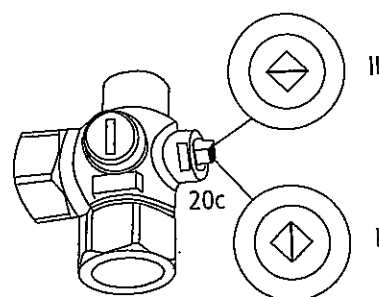
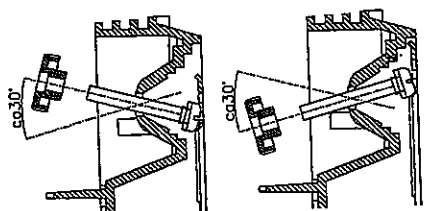
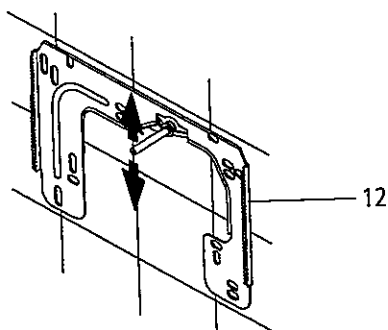
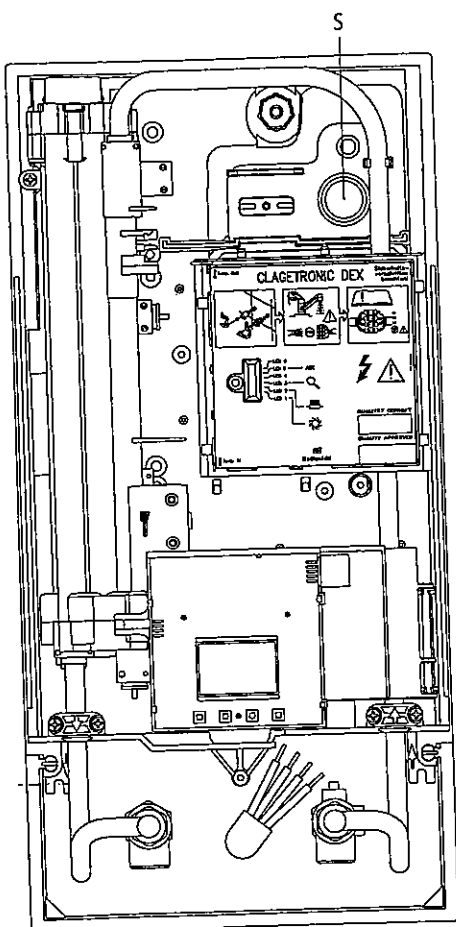
4. Offset tiling or uneven surfaces can be compensated by up to 30 mm with the aid of the spacers supplied. The spacers are fitted between the wall and wall bracket (9).

Installing connection pieces

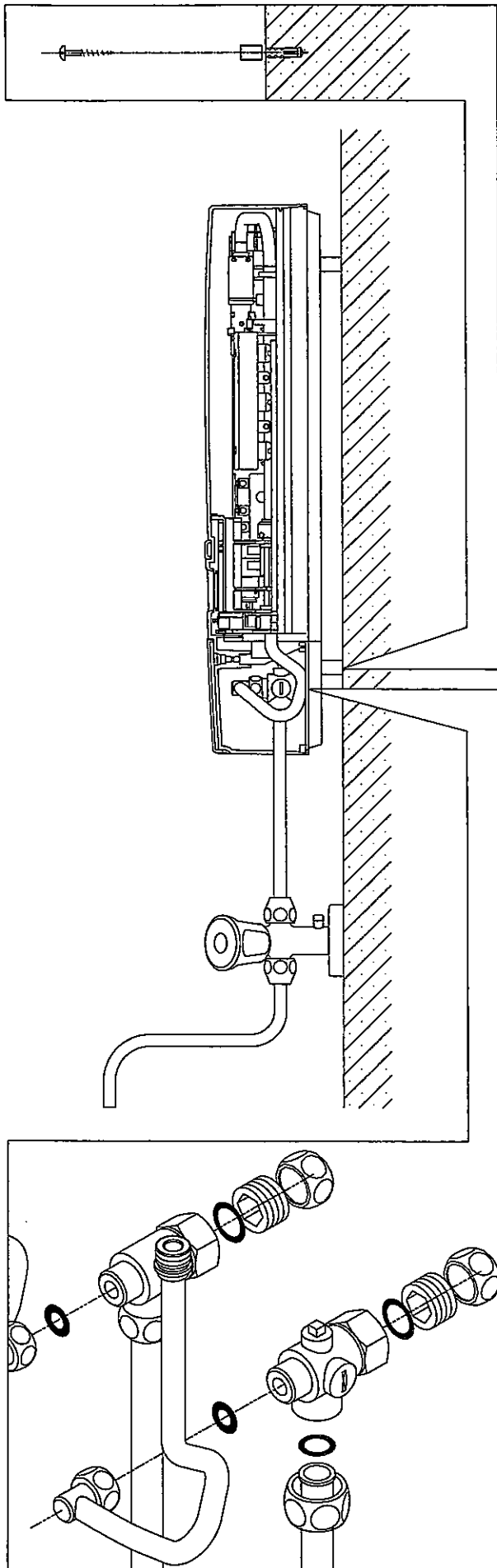
1. As shown in the illustration, screw the cold water connection piece (20) with the union nut and the 1/2" seal onto the cold water connection.
2. Screw the hot water connection piece (1) with the union nut and the 1/2" seal onto the hot water connection.

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, follow the instructions on page 9 "Electrical connection from above".
 - Slit the grommet (22) 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 (9) 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 (20c) in the cold water connection piece (20) (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.



9. Direct connection



For direct connection, the two 1/2" screw-in nipples (23) and the 1/2" seals must be screwed into the 1/2" union nuts of the hot-water (1) and cold-water (20) connectors. The two 1/2" caps of the side outlets of the hot-water (1) and cold-water (20) connectors must be removed and screwed onto the open end of the screw-in nipples (23). 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.

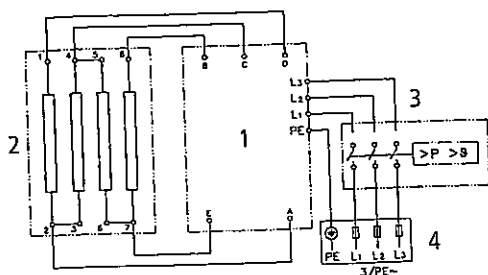
For direct connection, it is advisable to mount the appliance at a distance as illustrated alongside, using the spacer sleeves supplied. It should therefore be noted that the two fixing holes near the lower pipe connections are also used.

The flared end of the pipes must be screwed into the 1/2" side outlets of the hot-water (1) and cold-water connectors (20) 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.

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:

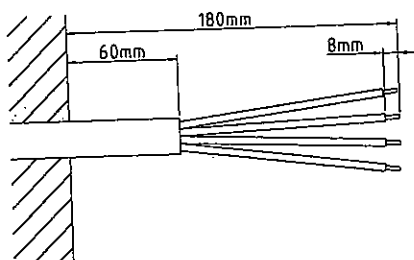
- The installation must comply with current IEC or national local regulations or any particular regulations, specified by the local electricity supply company
- Observe the rating plate and technical specifications on page 4
- The unit must be earthed!

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 mm² 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 L₂. 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 |

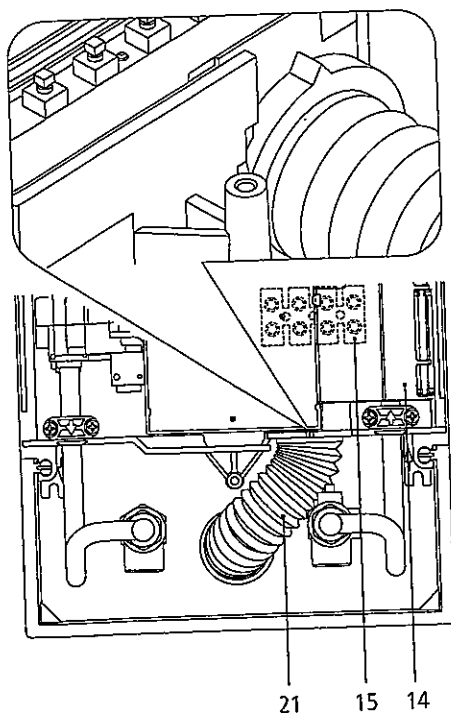
To change the operating mode, press the four keys ① ▼ ▲ ② simultaneously and wait until the desired mode (0, 1 or 2) is shown on the display, then release the keys.

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

Electrical connection from below

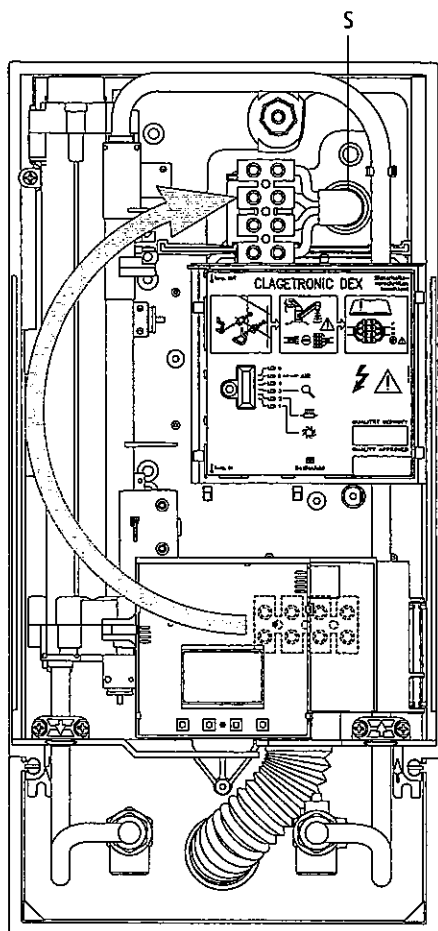
1. Strip approximately 6 cm off the connecting cable above the wall outlet. With the smaller opening ahead, slide the water splash protection sleeve (21) over the connecting cable so that the sleeve is flush with the wall. This prevents any leaking. A protection sleeve must be used!
2. Open the control panel (14) rightwards.
3. Insulate the cables and plug them in the connecting terminals (15) according to wiring diagram at the top of this page. 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 front part of the intermediate panel. 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.

Note: If necessary, the connecting terminal (15) can be displaced to the upper part of the appliance. If you want to do so, please follow the instructions in the next chapter.



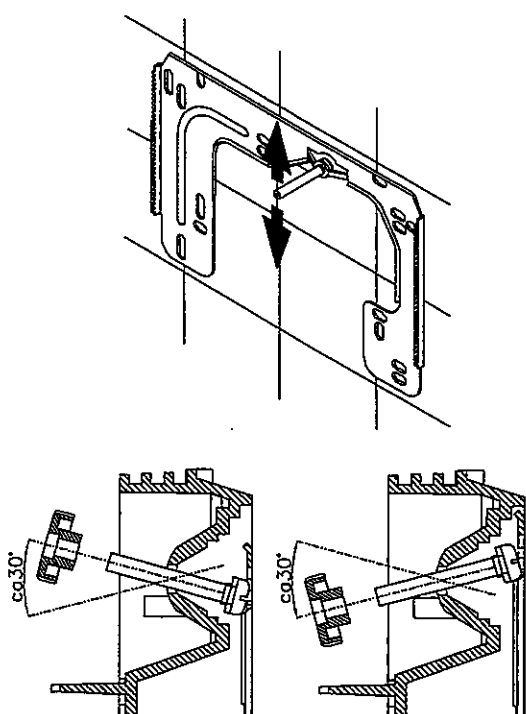
21 15 14

10. Electrical connection (only by a specialist)



Electrical connection from above

1. Open the prepared breaking point (S) in the upper part of the appliance by pressing with a blunt implement (e.g. screwdriver).
2. Slit the grommet (22) 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 (9) 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 on page 8. 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.

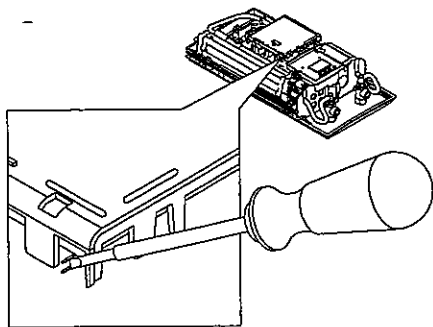
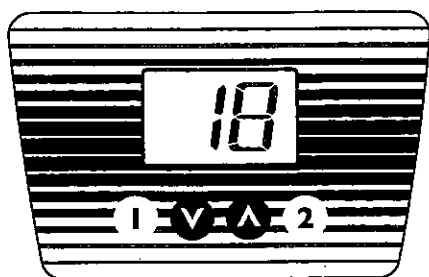


11. Initial operation



Multiple Power System:

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



12. Cleaning and maintenance

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 key ① 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 or use the online registration on our website www.germanpool.com

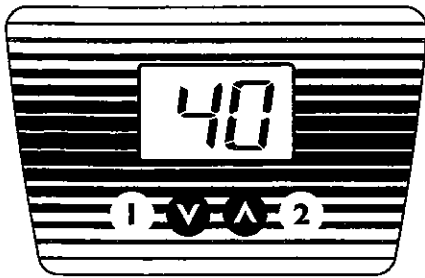
Note „Reinstallation“

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.

- Wipe off plastic surfaces and sanitary fittings with a moist cloth only. Never use abrasive cleaning agents or solvents.
- For a good water supply, the outlet fittings (perlaters 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

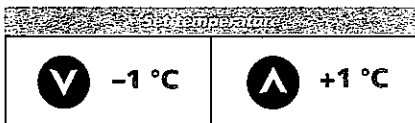


As soon as you open the hot water tap, the instantaneous water heater switches on automatically. When the tap is closed, the appliance automatically switches off.

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 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.

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

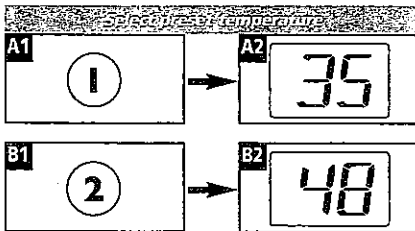


Programme buttons

The two programme buttons allow to quickly select the preset temperature. When pressing a programme key, the preset temperature is selected and displayed.

The factory setting for programme **1** is 35 °C and for programme **2** it is 48 °C. You can assign your own settings for the programme keys:

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

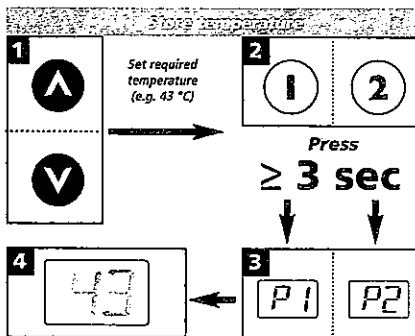


Temperature limitation

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

- Switch on: Select the limit temperature, then press **1** and **▲** simultaneously for at least 3 sec. The display briefly confirms the activation by „HI“.
- Switch off: press program key **1** and **▼** simultaneously for at least 3 sec. The display briefly confirms the deactivation by „--“.

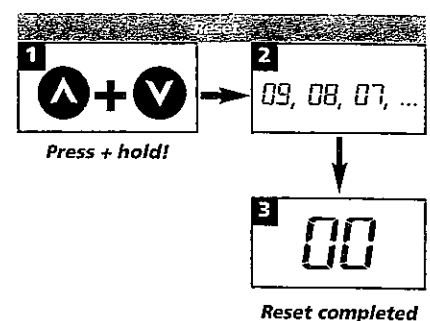
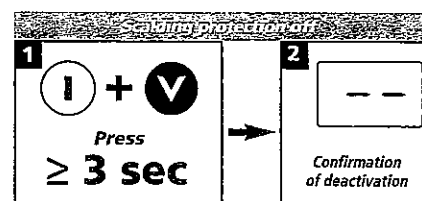
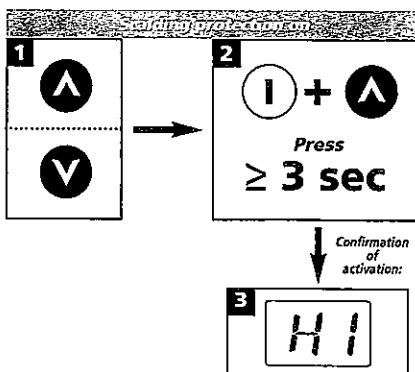
Note: By activation of the temperature limit also the programme keys are limited. Therefore, the fixed values of the programme keys must be set again after deactivation of the temperature limitation.



Reset to works setting

All factory settings can be recalled:

- Press **▲** and **▼** simultaneously. The display now counts backwards from „10“ to „00“ in second intervals. The appliance is reset at value „00“ – if you stop pressing the keys too early, you will cancel the process.



13. How to use



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.

Power limit

If the full output of the instantaneous water heater DEX does not suffice to heat the tapped quantity of water, this will be indicated by the LCD decimal point (e.g. when opening several taps at once). When you reduce the hot water flow rate, the LCD point stops indicating because the output of the appliance is again sufficient to reach the set temperature.

You can use the full output to fill a bathtub, for instance.

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.

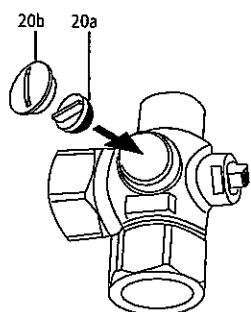
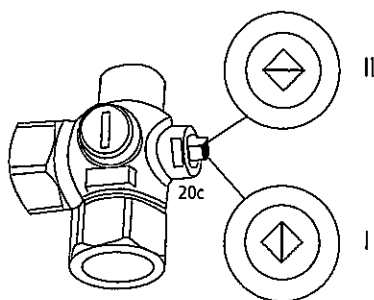
If the inlet temperature is too high as the result of the above reason, the flashing decimal point of the digital display indicates that the unit is not providing any output.

Venting after maintenance work

The instantaneous water heater DEX 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 perlator on the outlet fitting and open the cold water tap valve to rinse out the water pipe and avoid contaminating the appliance or the perlator.
3. Next, open and close the hot water tap valve several times until no more air emerges from the pipe and all air has been eliminated from the instantaneous water heater.
4. Only then should you re-connect the power supply to the instantaneous water heater and screw the perlator 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 DEX 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:

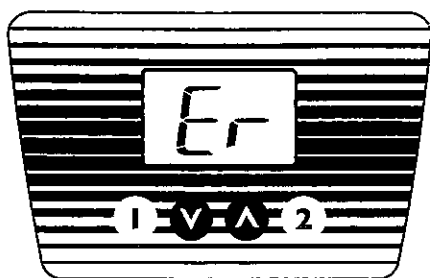
1. De-energize the instantaneous water heater by means of the house fuses and prevent inadvertent reactivation of them.
2. After opening the hood of the unit, close the shut-off valve (20c) in the cold water connection piece (position II).
3. Unscrew the screw plug (20b) from the cold water connection piece and take out the strainer (20a).
4. The strainer (20a) can now be cleaned or replaced.
5. After fitting of the strainer tighten the screw plug (20b).
6. Slowly open the shut-off valve (20c) 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.

15. Trouble-shooting and service



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.



German Pool Customer Service
Room 2-4, Upper G/F,
Newport Centre,
116 Ma Tau Kok Road, Tokwawan,
Kowloon, Hong Kong

Tel: +852 2333 6249

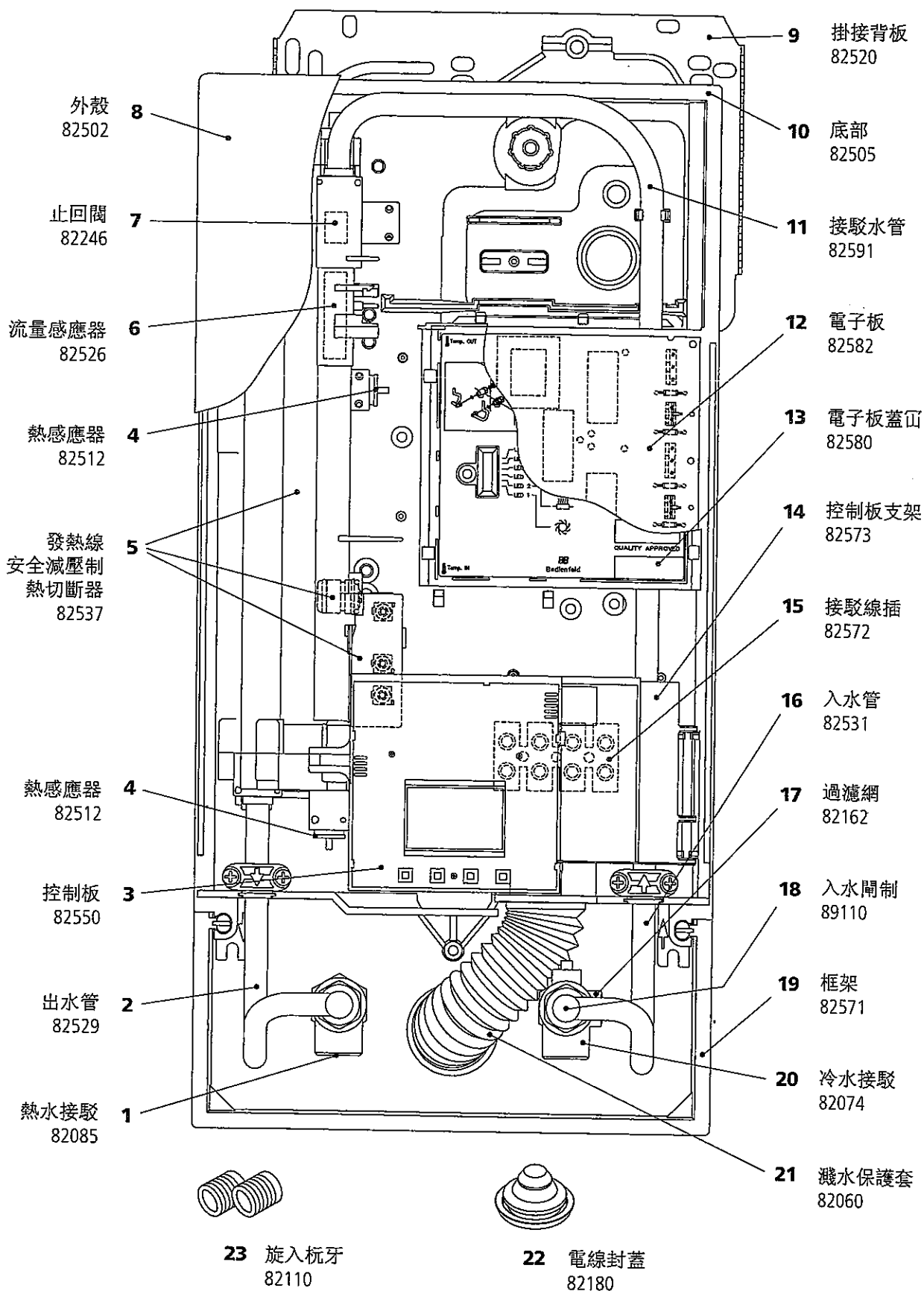
Fax: +852 2355 7100

Email: info@germanpool.com

Your instantaneous water heater DEX 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.

| Problem | Cause | Solution |
|---|---|--|
| Water stays cold, digital display does not light up | Master fuse tripped | Renew or activate fuse |
| Display flashes error message "Er" | Control system has switched off | Switch fuse off and on. If "Er" is still flashing contact customer service |
| Flow rate of hot water too weak | Outlet fitting dirty or calcified | Clean shower head, perlator or sieves |
| | Fine filter dirty or calcified | Let clean fine filter by customer service |
| Selected temperature is not reached, decimal point lights up | Water flow rate too high | Reduce water flow rate at the outlet |
| Selected temperature is not reached, decimal point does not light | Cold water has been added via the tap | Tap hot water only; set temperature for use |
| Decimal point flashes | Inlet temperature exceeding nominal temperature | Reduce inlet temperature |
| No response upon key press | Hood is not fitted properly | Refit the hood properly |

1. 概觀圖



訂購時請註明熱水器型號及機身編號。

2. 內容

| | | | |
|------------------|-------|--------------------|----|
| 1. 概觀圖 | 15 | 溫度設定 | 23 |
| 2. 內容 | 16 | 程式按鈕 | 23 |
| 3. 環保及循環再造 | 16 | 溫度限制 | 23 |
| 4. 安全守則 | 16 | 重設回出廠前設定 | 23 |
| 5. 本熱水器簡介 | 17 | 如何節約能源 | 24 |
| 6. 規格 | 17 | 電量限制 | 24 |
| 7. 尺寸 | 18 | 與太陽能熱水系統配合操作 | 24 |
| 8. 安裝 | 18-19 | 保養工作後的排氣程序 | 24 |
| 9. 直接接駁 | 20 | 14. 保養 | 25 |
| 10. 電線接駁 | 20-21 | 15. 快速參考指引 | 25 |
| 11. 初步操作 | 22 | 16. 故障處理檢查要點 | 26 |
| 12. 清潔及保養 | 22 | 17. 保用條款 | 27 |
| 13. 使用指示 | 23-25 | | |

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

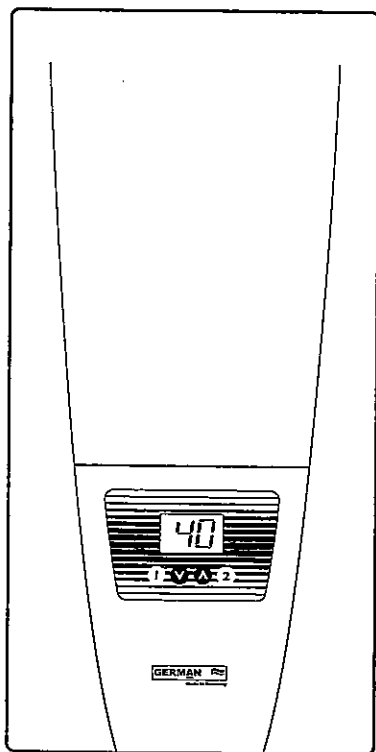


必需由合格技師安裝, 初部操作及保養本熱水器以確保能符合有關安全標準及安裝條例。

本公司對未遵照此規定而引致損失或問題概不負責。

- 在熱水器正確安裝妥當及正常操作前切勿使用。
- 初次試機前及每次需要將熱水器內的儲水排清時(例如: 要進行水喉工程或有結霜可能或維修保養), 需按第25頁內之指示, 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。
- 切勿技術性改動熱水器機體、電線及水管。
- 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。
- 請注意高於43°C的水溫會被認為是熱水, 對孩童尤甚, 並可引致被燙傷的感覺。當使用熱水器一段時間後, 水喉配件可能會很熱。
- 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弄熱水器。

5. 本熱水器簡介






DEX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。可將所需出水水溫按鍵盤在20°C及60°C範圍內輸入。所選擇的水溫會以數字顯示。

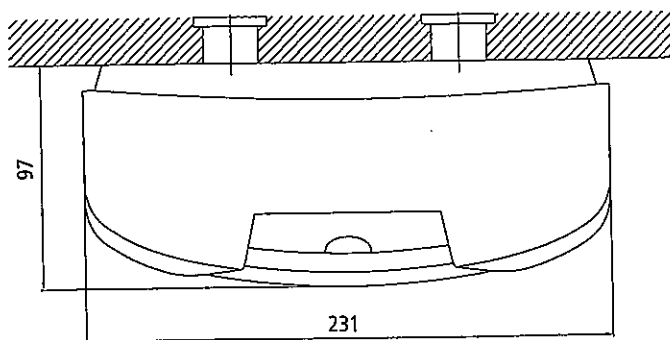
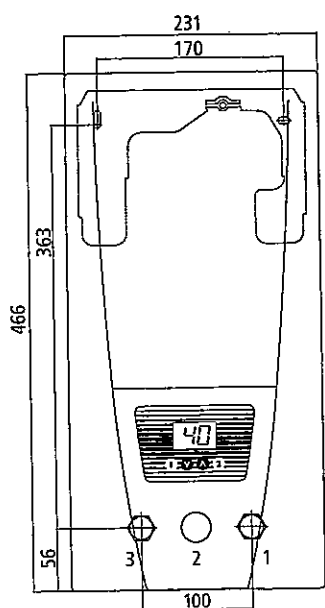
入水水溫可高達70°C, 可配合太陽能熱水系統操作。

6. 規格

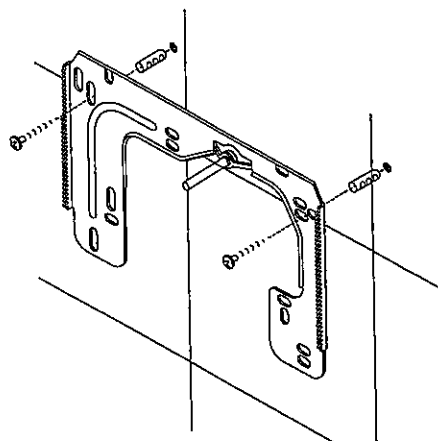
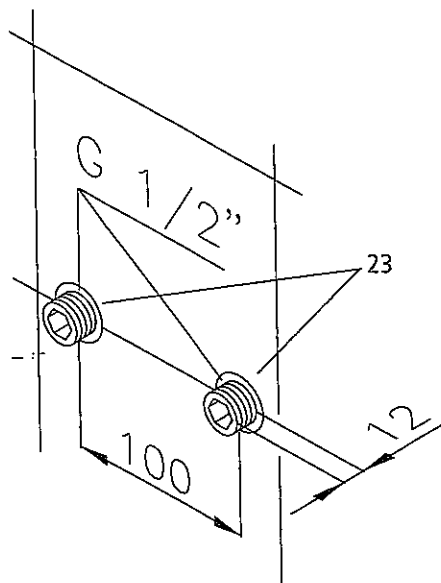
| | | | | |
|--------------|--|--------------------|--------------------|--------------------|
| 型號 | DEX | | | |
| 編號 | 34247 | | | |
| 額定功率/ 額定電流 | 18kW..27kW (26A..39A) | | | |
| 選擇功率/ 電流 | 18kW (26A) | 21kW (30A) | 24kW (35A) | 27kW (39A) |
| 接駁電源 | 3/PE 380..415V AC | | | 3/PE 400V AC |
| 最低電線尺寸要求 | 4,0mm ² | 4,0mm ² | 6,0mm ² | 6,0mm ² |
| 最大熱水量(公升/ 分) | | | | |
| Δt = 28K | 9,2 ¹⁾ | 10,7 ¹⁾ | 12,3 ¹⁾ | 13,8 ¹⁾ |
| Δt = 38K | 6,8 | 7,9 | 9,0 ¹⁾ | 10,2 ¹⁾ |
| 額定容量 | 0,4l | | | |
| 類型 | pressure type 1 MPa (10 bar) | | | |
| 加熱系統 | Blankdraht IES® / bare wire heating system 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 ½" | | | |
| 重量(入水後) | 3,70 kg | | | |
| VDE防護等級 | I | | | |
| 防護/ 安全類別 |    IP25 CE CCC | | | |

1) 冷熱水混合

7. 尺寸



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

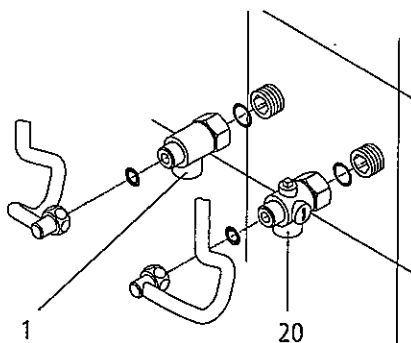
- 安裝地點必須全年都不結霜。
- 此熱水器只可作掛牆式安裝，出入水接駁喉位向下。
- 熱水器的防護等級為IP25, 按照VDE0100 part 701, 必須安裝於保護區1內。
- 為避免失溫, 應將熱水器安裝於最接近出水位置。
- 為方便保養工作, 應在供水喉位置裝上閘掣。
- 可選用銅或銅喉, 如選用膠喉, 該膠喉必須符合DIN16893 Series 2規格。熱水喉必須有保溫保護。
- 來水電阻最少應為1100Ω cm 15°C。

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。

8. 安裝(續上頁)



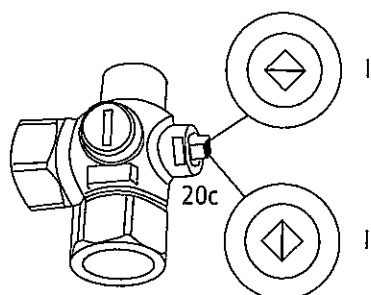
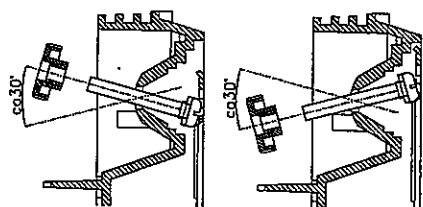
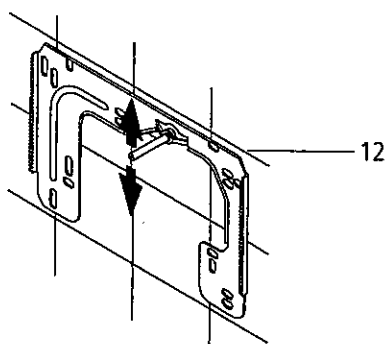
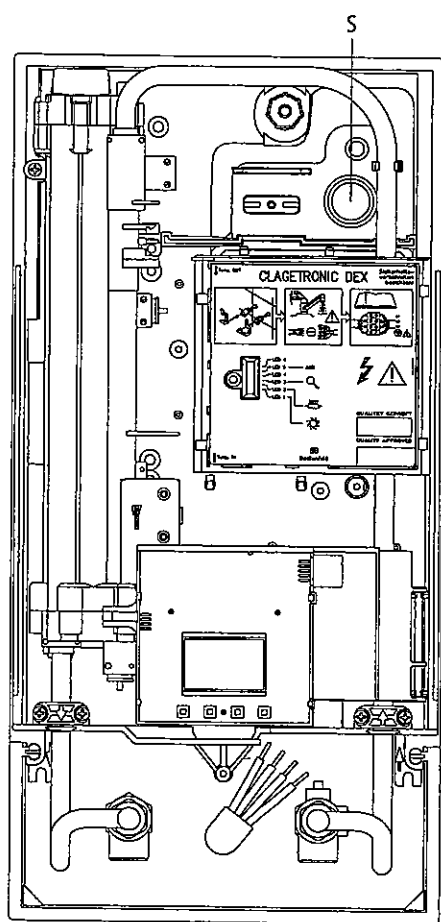
2. 用12mm六角螺絲鎖匙將杙牙(23)旋入牆上接駁位置, 旋妥杙牙後, 杙牙應外露12mm。
3. 將附上的模板放在牆上適當位置以配合冷熱水位置。根據模板位置記下鑽孔位置, 用6mm鑽咀鑽孔, 放入合縫釘旋入掛碼(12)。
4. 可用附上的水平板碼調校牆面不平或傾斜情況達30mm, 視乎程度, 水平板碼應裝在牆壁與掛碼之間。

安裝接駁件

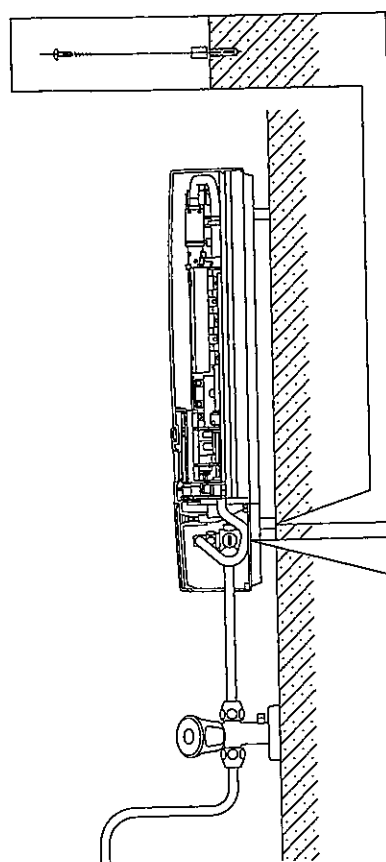
1. 如圖所示將緊固螺母密封圈與冷水進水配件連接。
2. 如圖所示將緊固螺母密封圈與熱水出水配件連接。

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, 參考第21頁“上面部份電線接駁”。
 - 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(12)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 20C, 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。



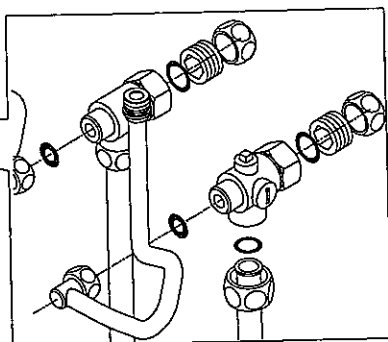
9. 直接接駁



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。

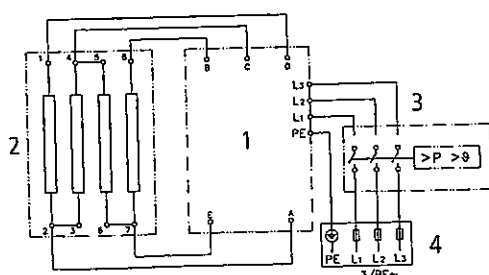
直接接駁安裝, 應利用附上的水平板, 盡量垂直緊貼牆身安裝, 可同時利用接駁喉管下半部的固定孔固定位置。

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



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

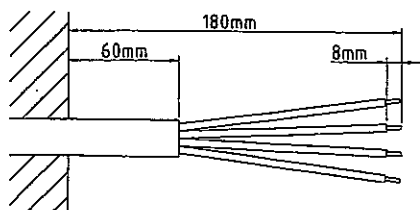
- 熱水器必須穩固接駁安裝, 供電電壓亦必須穩定。如在上半部接電, 電源線最大應為10mm²。
- 電線不應損壞, 安裝後電線不應可以直接觸摸得到。
- 電源開關應為全極式開關, 兩極之間應保持最少3mm距離。
- 應安裝保險絲。

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L2, 並需選擇特別的操作模式。

要更換操作模式, 需同時按著4個按鍵(① ● ▲ 及 ②)直至要求的模式顯示, 然後放開按鍵。

10. 電線接駁(必須由合格技師負責)



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。

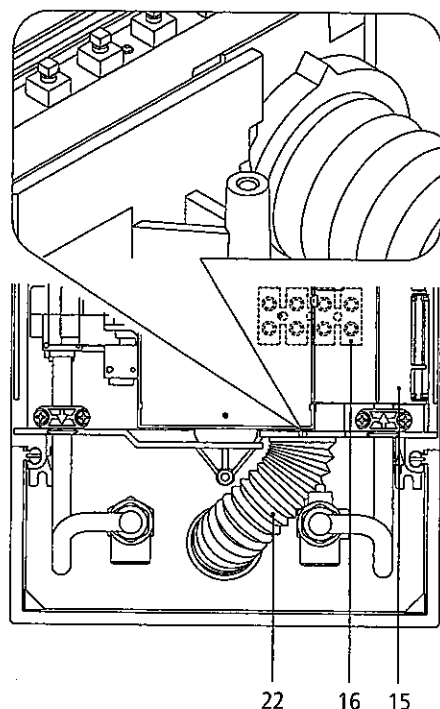
| LCD顯示 | 內容 |
|-------|---------------|
| 0 | 正常操作 / 生產廠方設定 |
| 1 | 以正常電量調校繼電器操作 |
| 2 | 以敏感電量調校繼電器操作 |

底部標準電線接駁

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。

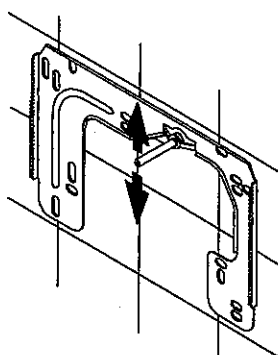
注意:

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。

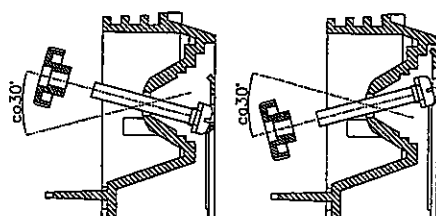


上面部份電線接駁

1. 用工具(例如螺絲批)按壓預先預備的開孔位置(5)
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21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。

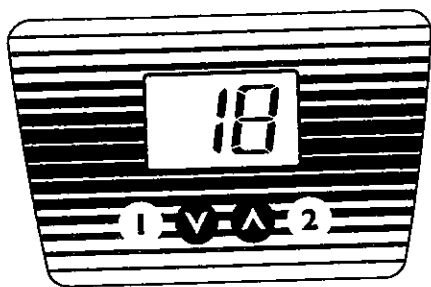


11. 初步操作



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, 電子數字顯示會亮著。

3. 當初次開著熱水器時數值"18"會在顯示屏閃動, 否則請細心閱讀「重新安裝說明」。

4. 按UP ▲ 及DOWN ▼ 箭咀鍵選擇安裝地點可容許的最大功率(18kW, 21kW, 24kW 或 27kW)

5. 按 ① 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。

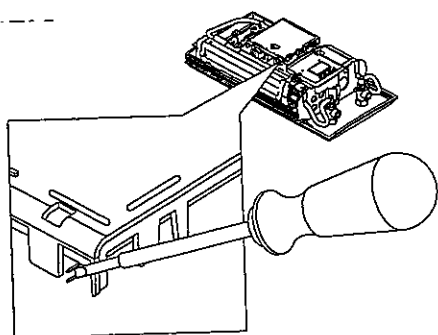
9. 測試熱水器性能, 將使用說明交給客戶, 並向客戶解釋熱水器怎樣操作。

10. 初步操作妥當後, 請填妥及寄回保用証。

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。

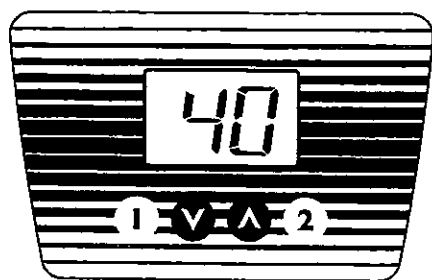
暫時性的兩極短路(例如用符合EN60900的螺絲批如圖所示, 會重新設定熱水器的參數。數值"18"會在顯示屏閃動直至選定最大功率。此情況會在啟動或關閉電源時維持。



12. 清潔及保養

- 用濕布揩抹塑膠表面及水喉配件, 切勿用腐蝕性清潔劑清潔。
- 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。

13. 使用指示



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，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。

注意：

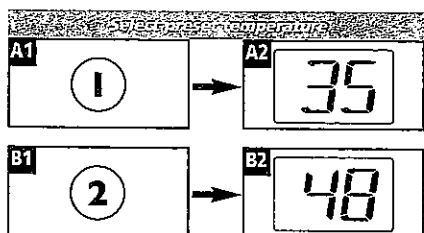
如用箭咀鍵 **▼** 設定溫度低於 20°C 會顯示 “--”，熱水器會停止加熱。



程式按鍵

兩個程式按鍵讓你迅速選擇預先設定的溫度。當按下程式鍵，預設溫度便會顯示。出廠前 ① 的設定溫度為 35°C，② 為 48°C，你亦可將自己選擇的溫度設定於程式按鍵。

- 延長按著程式按鍵會儲存選擇的溫度，新的數值顯示可會從 P1 然後轉到 P2。再按有關程式按鍵時會顯示新設定的溫度。



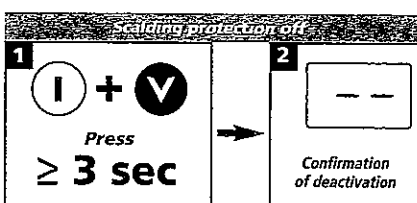
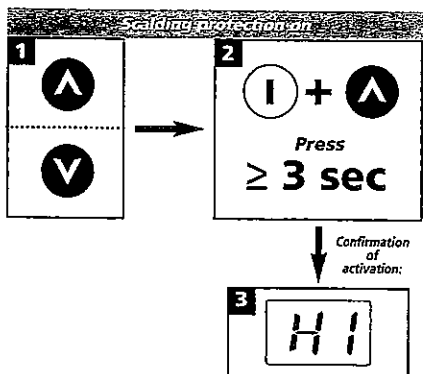
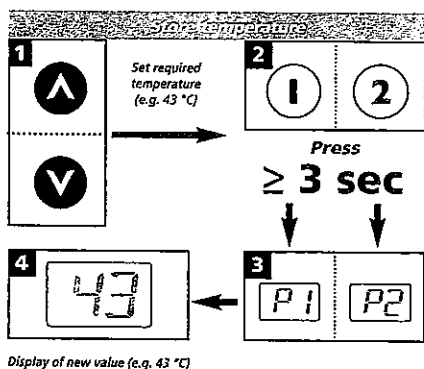
溫度限制

DEX 系列即熱式熱水器備有可選擇的溫度限制功能，此防燙傷保護在出廠前預設關閉了。

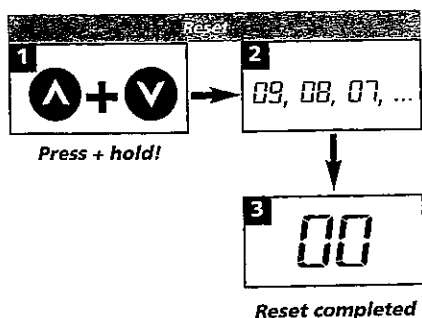
- 開啟：選擇溫度限制，然後同時按 **①** 及 **▲** 鍵最少 3 秒，顯示屏會顯示 “HI” 作確認。
- 關閉：同時按程式鍵 **①** 及 **▼** 最少 3 秒，顯示屏會顯示 “--” 確認關閉。

注意：

啟動溫度限制後會同時限制程式鍵的數值。因此在關閉溫度限制後需重新設定程式鍵的固定數值。



13. 使用指示



重設至出廠設定

所有出廠設定均可喚回。

- 同時按 ▲ 及 ▼ 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。

電量限制

如DEX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), LCD會以右邊圖點顯示, 當你調低水流量, LCD圖點會熄滅, 表示功率已足夠將水加熱至所需溫度。

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, 顯示屏會顯示“—”表示熱水器不會提供熱水供應。

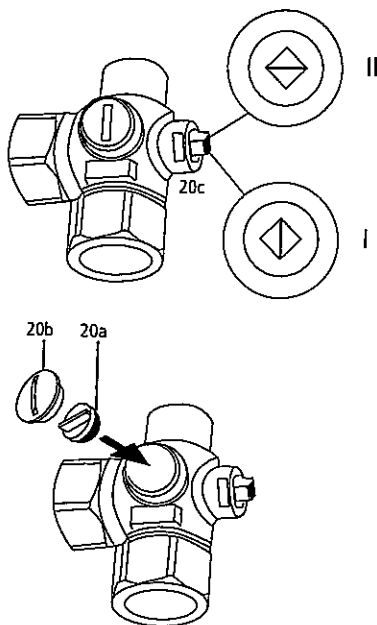
保養工作後的排氣程序

DEX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. 開關冷水龍頭數次, 將熱水器內的空氣排出。
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

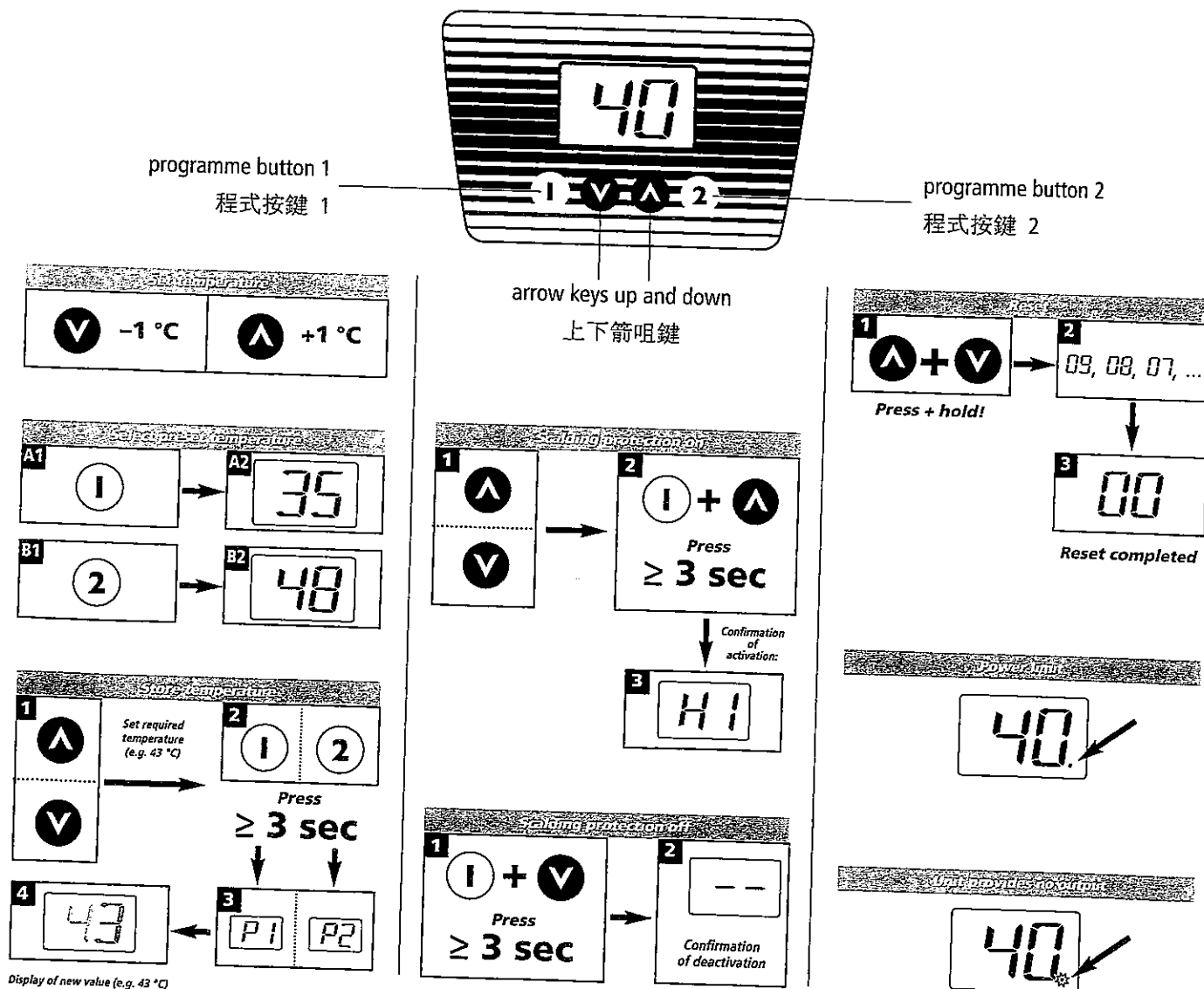
DEX熱水器的冷水入水接駁位配備有綜合式的閘制及沙隔，沙隔藏有污垢會減低熱水出水量，必須定時清理或更換：

1. 先關掉電源。
2. 打開面蓋後，關掉冷水入水喉內的閘制(20c)
3. 旋鬆螺絲塞子(20c)取出沙隔。
4. 沙隔可以清洗或更換。
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。

15.

Quick Reference Guide

快速参考指引

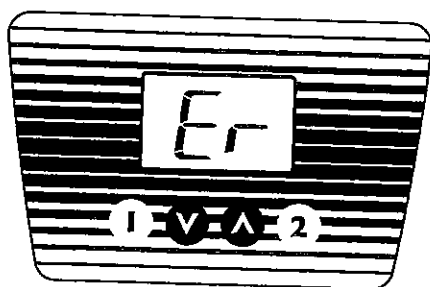


16. 檢查要點



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 (ER) 閃動 | 控制系統關掉 | 嘗試關掉系統, 然後再開啟。如ER仍然閃動, 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 “—” 顯示亮著 | 出水流量太大 | 減低出水流量 |
| 不能達致選擇溫度, 沒有 “—” 顯示亮著 | 開著冷水龍頭 | 只開著熱水龍頭, 調校使用水溫 |
| “—” 顯示閃亮著 | 入水水溫高於額定水溫 | 調低溫水水溫 |
| 按鍵沒有反應 | 面蓋未能正確裝上 | 重新正確裝上面蓋 |

總代理:

德國寶(香港)有限公司

香港九龍土瓜灣馬頭角道116號新寶工商中心高層地下2-4室

服務部電話: 2333 6249

傳真: 2365 6009

營業部電話: 2333 6245

傳真: 2765 8215

電郵: info@germanpool.com

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。
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 Model No.: ☐ DEX

機身號碼 Serial No

Type: DEX 16.2-27kW

Art. No.: 3200-34247

S.No: 509225-184537



發票號碼 Invoice No.:

購買商號 Purchase



Appliance must be earthed!

CE
IP25

購買日期 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)，根據下列條例，總代理有權選擇維修或更換熱水器或其損壞部份。

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維修及客戶

服務部 (本公司將不發還發票副本或登記卡)

- 此保用不包括：非家庭性質用途；因意外而造成的損壞(包括運輸及其它)；任何附件及輔助裝置；以及一切因人為、電源接合不當、不依說明書而錯誤或疏忽使用本機、經非本公司認可之安裝及不適當維修等所引致之損壞。

- 於下列情況下，用戶之保用資格將會被取消：維修時未能出示購買發票正本及保用證明書；購買發票或保用證明書有任何非認可之刪改；產品經非本公司認可之技術人員改裝或被加裝任何未經許可之配件；機身編號被擅自塗改、破壞或刪除。

- 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。

- 保用只在香港、九龍、新界區有效，東涌、愉景灣及離島須額外收取交通費用。

客戶服務部

德國寶(香港)有限公司

香港九龍土瓜灣馬頭角道116號

新寶工商中心高層地下2-4號室

電話：+852 2333 6249

傳真：+852 2355 7100

電郵：repairs@germanpool.com

Warranty Terms & Conditions

Our Repairs & Customer Service Centre will provide rectification of any defect of manufacturing materials free of charge given that such defect is reported within 12 months from purchase date.

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 Repairs & Customer Service Centre along with a photocopy of the purchase invoice (Warranty Card and invoice copy will not be returned to Customer)

- Product must be used solely for domestic purposes. Customer should always follow the operating instructions. This warranty does not apply to: replacement of accessories and parts; damages caused by incorrect voltage, improper operations, unauthorized installation or repairs as well as accidents.

- This warranty will be considered invalid if: original invoice and warranty passport are not presented; original invoice and/or warranty passport is altered or modified by unauthorized party; product is installed or repaired by any unauthorized technician; non-standard part is used; serial number on product body is removed, destroyed or altered by any unauthorized party.

- 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.

- 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 charge.

Customer Service Centre

German Pool (Hong Kong) Limited

Room 2-4, Upper G/F,

Newport Centre, 116 Ma Tau Kok Road,
Tokwawan, Kowloon, H.K.

Tel : +852 2333 6249

Fax : +852 2355 7100

Email : repairs@germanpool.com

此保用證只適用於香港

This warranty card is valid only in Hong Kong

GERMAN
POOL



德國寶

德國寶(香港)有限公司 German Pool (Hong Kong) Limited

香港九龍土瓜灣馬頭角道116號新寶工商中心高層地下2-4號室
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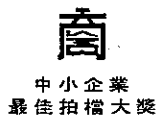
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www.germanpool.com