

en Operating instructions
en Installation instructions
zht 使用說明
zht 安裝說明
int Country specifics



electronicVED pure

VED E ../8 BB INT

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Operating instructions

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1 Safety

1 Safety

1.1 Intended use

There is a risk of injury or death to the user or others, or of damage to the product and other property in the event of improper use or use for which it is not intended.

This product

- Must only be used to heat up potable water.
- Is only suitable for household use within enclosed, frost-free rooms.
- Is not suitable for operation in secondary return pipes.

Intended use includes the following:

- observance of the operating instructions included for the product and any other installation components
- compliance with all inspection and maintenance conditions listed in the instructions.

This product can be used by children aged from 3 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the product in a safe way and understand the hazards in-

involved. Children must not play with the product. Cleaning and user maintenance work must not be carried out by children unless they are supervised.

Any other use that is not specified in these instructions, or use beyond that specified in this document, shall be considered improper use. Any direct commercial or industrial use is also deemed to be improper.

Caution.

Improper use of any kind is prohibited.

1.2 General safety information

Live lines and connections may cause a potentially lethal electric shock.

- ▶ Never remove the casing.
- ▶ Never attempt to carry out maintenance or repair work on the product yourself.
- ▶ Faults and damage should be immediately eliminated by a competent person.
- ▶ Adhere to the maintenance intervals specified.
- ▶ Carefully read the enclosed instructions and all other applicable documents, particularly the **Safety** section and the warnings.





- ▶ Only carry out the activities for which instructions are provided in these operating instructions.

1.3 Risk of scalding caused by hot water

The outlet temperatures at the draw-off points can be up to approx. 55 °C.

- ▶ When using the product, ensure that you do not scald yourself.
- ▶ If you want to be protected from scalding, ask your competent person to activate the product's scald protection function.



2 Notes on the documentation

2 Notes on the documentation

- ▶ Always observe all operating instructions enclosed with the installation components.
- ▶ Store these instructions and all other applicable documents for further use.





These instructions apply only to:

Product article number

Validity: Hong Kong
OR Hong Kong
OR India

VED E 18/8 BB INT	0010027049
VED E 21/8 BB INT	0010027050
VED E 24/8 BB INT	0010027051
VED E 27/8 BB INT	0010027052

3 Information on the data plate

Symbol	Meaning
	The VDE GS mark confirms that the unit complies with standards and has been tested for safety.
	Symbol confirming conformity with the electromagnetic compatibility standard
	Read all of the instructions.
 21054500100028300006000001N4	Barcode with serial number, The 7th to 16th digits of the serial number form the article number

4 CE marking



The CE marking shows that the products comply with the basic requirements of the applicable directives as stated on the declaration of conformity.

The declaration of conformity can be viewed at the manufacturer's site.

5 Start-up and operation

5.1 Starting up the product

- ▶ Only start up the product once the casing has been completely closed.

5.2 Operating the product

When you open a domestic hot water draw-off point, the product automatically switches on and heats up the potable water to 55 °C or 40 °C, depending on what the competent person has set.

In accordance with the applicable standards, the maximum permissible outlet temperature for electric instantaneous water heaters is 55 °C. The maximum outlet temperature for the product has been restricted to 55 °C.

The product regulates the temperature but does not regulate the volume of water that is drawn.

- ▶ If the product does not reach the set water temperature at low temperatures when drawing a large volume of water, temporarily reduce the water volume at the draw-off point.
 - ◁ The product increases the water temperature very quickly.

6 Faults

There are no faults in the product that you are able to eliminate yourself.

- ▶ In the event of any product fault, inform your heating specialist company immediately.

- ▶ In this case, dispose of the batteries at a collection point for batteries.

7 Maintenance and care

7.1 Maintenance

An inspection every three years and maintenance of the product carried out by a competent person is a prerequisite for ensuring that the product is permanently ready and safe for operation, reliable, and has a long working life.

7.2 Caring for the product

- ▶ Clean the casing with a damp cloth and a little solvent-free soap.
- ▶ Do not use sprays, scouring agents, detergents, solvents or cleaning agents that contain chlorine.

8 Recycling and disposal

- ▶ The competent person who installed your product is responsible for the disposal of the packaging.



■ If the product is labelled with this mark:

- ▶ In this case, do not dispose of the product with the household waste.
- ▶ Instead, hand in the product to a collection centre for waste electrical or electronic equipment.



■ If the product contains batteries that are labelled with this mark, these batteries may contain substances that are hazardous to human health and the environment.

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Installation instructions

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1 Safety

1.1 Intended use

There is a risk of injury or death to the user or others, or of damage to the product and other property in the event of improper use or use for which it is not intended.

This product

- Must only be used to heat up potable water.
- Is only suitable for household use within enclosed, frost-free rooms.
- Is not suitable for operation in secondary return pipes.

Intended use includes the following:

- observance of accompanying operating, installation and maintenance instructions for the product and any other system components
- installing and setting up the product in accordance with the product and system approval
- compliance with all inspection and maintenance conditions listed in the instructions.

Intended use also covers installation in accordance with the IP code.

Any other use that is not specified in these instructions, or



use beyond that specified in this document, shall be considered improper use. Any direct commercial or industrial use is also deemed to be improper.

Caution.

Improper use of any kind is prohibited.

1.2 General safety information

1.2.1 Risk

caused by inadequate qualifications

The following work must only be carried out by competent persons who are sufficiently qualified to do so:

- Set-up
- Dismantling
- Installation
- Start-up
- Inspection and maintenance
- Repair
- Decommissioning
- ▶ Proceed in accordance with current technology.

Validity: Hong Kong
OR Hong Kong

In these instructions, the registered gas installer is referred to throughout as "competent person".

In these instructions, the registered electrical worker is re-



1 Safety

ferred to throughout as "qualified electrician".

1.2.2 Risk of material damage caused by frost

- ▶ Do not install the product in rooms prone to frost.

1.2.3 Risk of death from electric shock

There is a risk of death from electric shock if you touch live components.

Before commencing work on the product:

- ▶ Disconnect the product from the power supply by switching off all power supplies at all poles (electrical partition with a contact gap of at least 3 mm, e.g. fuse or circuit breaker).
- ▶ Secure against being switched back on again.
- ▶ Check that there is no voltage.

1.2.4 Risk of death from electric shock from live lines and connections

The potable water that is used must demonstrate a specific resistance of $\geq 900 \Omega \text{ cm}$ at 15°C . Otherwise, the product must not be used.

- ▶ Before installing the unit, ask your water company to inform

you about the water resistance and conductivity.

1.2.5 Risk of death due to incorrect electrical installation

- ▶ The product must be connected to the protective conductor.
- ▶ The product must be permanently connected to fixed wiring.

1.2.6 Risk of scalding caused by hot water

If a solar thermal energy installation is connected upstream, hot water temperatures of over 42°C could be generated even if the scald protection function is set.

If a solar thermal energy system is connected upstream of the product, the inlet temperature must be limited by including precautionary features in the design (e.g. a mixing valve).

Condition: VED 18 - 24/8

- ▶ Install a mixing valve to limit the inlet temperature to 55°C .

Condition: VED 27/8

- ▶ Install a mixing valve to limit the inlet temperature to 25°C .





1.2.7 Risk of being burned or scalded by hot components

- ▶ Only carry out work on these components once they have cooled down.

1.2.8 Risk of material damage caused by using an unsuitable tool

- ▶ Use the correct tool.

1.3 Regulations (directives, laws, standards)

- ▶ Observe the national regulations, standards, directives, ordinances and laws.



2 Notes on the documentation

2 Notes on the documentation

- ▶ Always observe all operating instructions enclosed with the installation components.
- ▶ Store these instructions and all other applicable documents for further use.

These instructions apply only to:

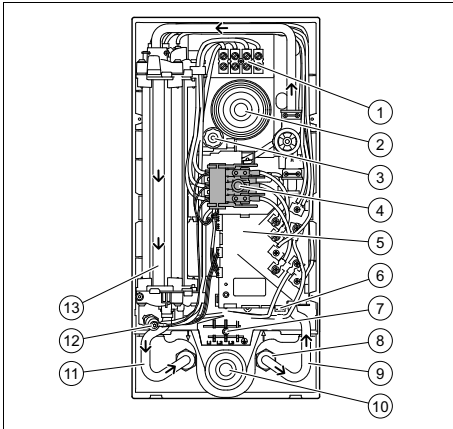
Product article number

Validity: Hong Kong
OR Hong Kong
OR India

VED E 18/8 BB INT	0010027049
VED E 21/8 BB INT	0010027050
VED E 24/8 BB INT	0010027051
VED E 27/8 BB INT	0010027052

3 Product description

3.1 Design



- | | |
|-------------------------|---|
| 1 Power supply terminal | 6 Temperature cut-out (plug connector) |
| 2 Top grommet | 7 Optional space underneath for the power supply terminal |
| 3 Adjustment spindle | 8 Strainer |
| 4 Safety switch | |
| 5 Electronics | |

- | | |
|-------------------------|----------------------------------|
| 9 Cold water connection | 11 Domestic hot water connection |
| 10 Bottom grommet | 12 Safety cut-out |
| | 13 Heating block |

3.2 Function

The product heats up potable water via a bare wire in the heating block using the flow-through principle.

The electronics measure the temperature of the water in the cold water supply and the water volume flow. At the factory, the temperature is fixed at 55 °C using a plug connector. Alternatively, you can replace it with the supplied plug connector to fix it at 40 °C.

If the set domestic hot water temperature is not reached, reduce the water volume.

3.3 Information on the data plate

Symbol	Meaning
	The VDE GS mark confirms that the unit complies with standards and has been tested for safety.
	Symbol confirming conformity with the electromagnetic compatibility standard
	Read all of the instructions.
	Barcode with serial number, The 7th to 16th digits of the serial number form the article number

3.4 CE marking



The CE marking shows that the products comply with the basic requirements of the applicable directives as stated on the declaration of conformity.

The declaration of conformity can be viewed at the manufacturer's site.

4 Set-up

4.1 Checking the scope of delivery

Quantity	Designation
1	Product
1	Operating and installation instructions
1	Bag containing fixing material (2 bolts, 2 wall plugs, 3 seals, 1 special fixing screw)
1	G 1/2" cold water connector with a cold-water isolation valve
1	G 1/2" domestic hot water connector
1	Strainer for the cold water inlet
2	Double nipple
1	12 l/min flow rate limiter
1	40 °C temperature cut-out
1	Mounting plate
1	Mounting template

4.2 Selecting an installation location

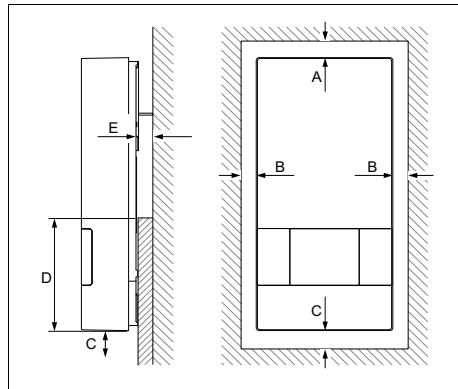
- Install the product as close as possible to the draw-off points that are used most frequently.



Note

The product may also be installed above baths or in a shower area.

4.3 Installation clearances

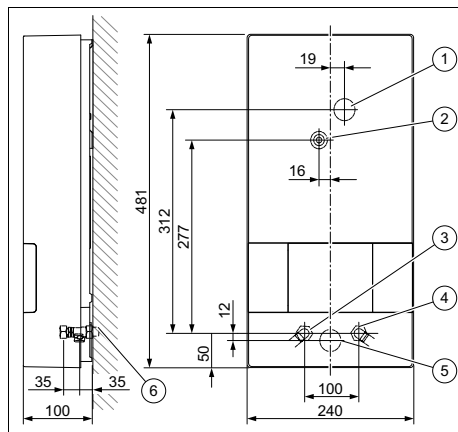


- A ≥ 50 mm
- B ≥ 50 mm
- C ≥ 120 mm
- D ≥ 130 mm
- E ≤ 22 mm

The bottom section of the product (**D**) must be level with the product's bearing area on the wall;

4.4 Installing the product on the wall

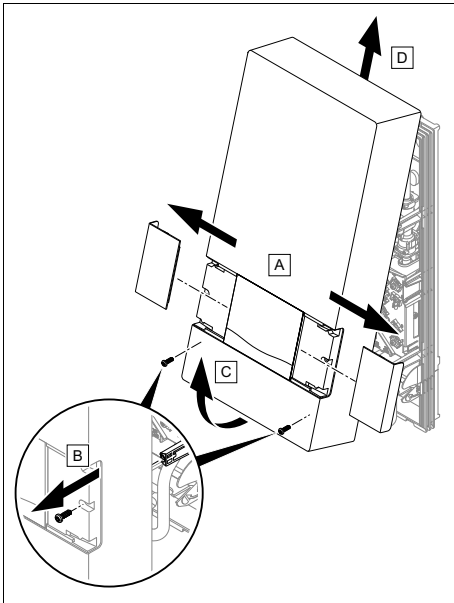
4.4.1 Dimensions



- 1 Top grommet
- 2 Central attachment
- 3 G 1/2" domestic hot water connection
- 4 G 1/2" cold water connection
- 5 Bottom grommet
- 6 G 1/2" outside thread

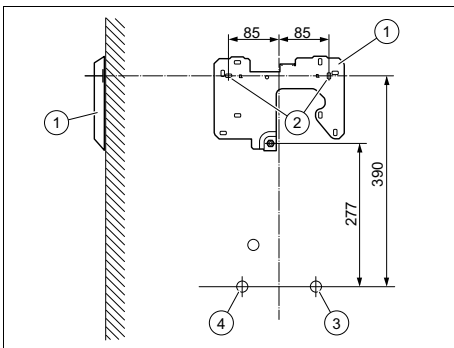
4 Set-up

4.4.2 Removing the product casing



- ▶ Remove the product casing as shown.

4.4.3 Installing the product

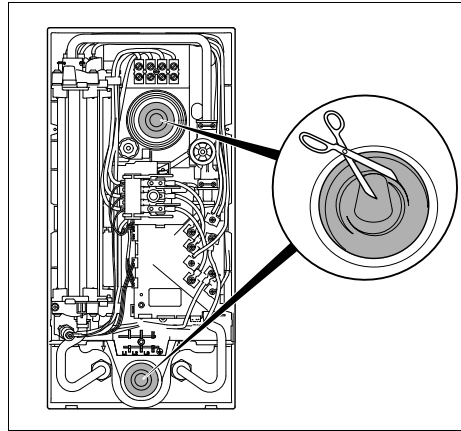


- | | |
|------------------|---------------------------------|
| 1 Mounting plate | 3 Cold water connection |
| 2 Fixing points | 4 Domestic hot water connection |

1. Hold the mounting template against the wall and mark the fixing points (2).

- Product alignment: Vertically on the wall

2. Use wall plugs and screws to secure the mounting plate (1) to the fixing points.



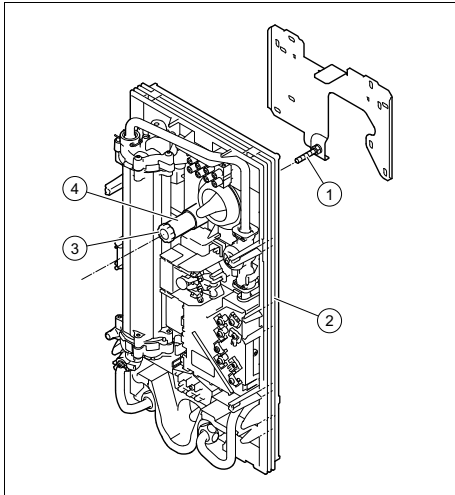
Danger! Risk of electric shock caused by penetrating water

The grommet prevents water from penetrating along the power supply cable and into the product.

- ▶ Never cut off the grommet completely.
- ▶ Cut the end of the grommet in such a way that the sleeve tightly surrounds the power supply cable.

3. Fold the grommet up or down depending on the location of the power supply cable.
4. Feed the cable through the grommet and into the product's interior.

Installation 5



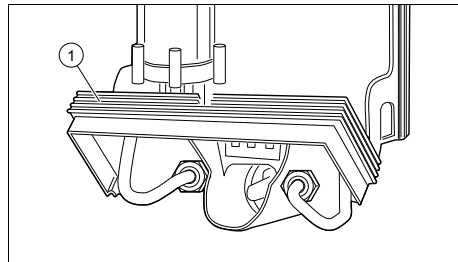
5. Fit the product (2) to the retaining screw (1) on the mounting plate.
6. Use the adjustment spindle (4) to adjust the product.
7. Use the fixing screw (3) to secure the product.

5 Installation

1. If you are using plastic pipes, only use those that are approved for normal operating mode at 65 °C.
2. If you are using plastic pipes, only use those that maintain a maximum temperature of 95 °C and a maximum pressure of 1 MPa (10 bar) for at least one hour (check the manufacturer details).
3. Flush the cold water pipes thoroughly before installation.

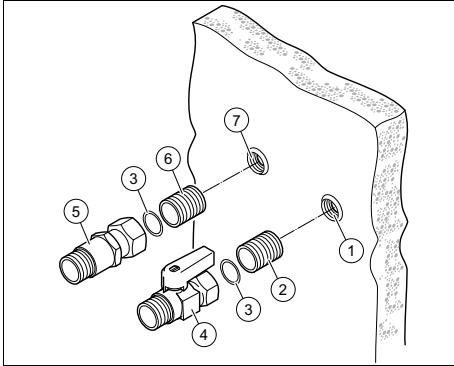
5.1 Setting up the domestic hot and cold water connection

1. Note the water connections for the installation:
 - An expansion relief valve on the cold water pipe is not required.
 - All hot and cold water pipes can be made of steel, copper or plastic.
 - The product must be permanently connected to permanently installed water pipes. It must not be temporarily connected to hose lines.
 - You must not connect any water supply pipes from other water-heating systems to the product's cold water connection.
 - You must not directly connect water taps or similar to the product's domestic hot water connection.



2. To simplify installing the water connection, the bottom section of product frame can be folded up (1).
 - **Do not remove the folding frame.**

5 Installation



Caution.
Risk of damage caused by leaks.

Mechanical stress on connection pipes may cause leaks and damage to the product.

- ▶ Avoid mechanical stress on connection pipes.

3. Put hemp on the two double nipples (2) and (6) and use the connections to screw the double nipples to the wall (1) and (7).
4. Insert the seals (3) in the union nuts of the cold water (4) and domestic hot water connections (5).
5. Screw the cold water connector (4) to the cold water connection double nipple (2) in the wall (1).
6. Screw the domestic hot water connector (5) to the domestic hot water connection double nipple (6) in the wall (7).
7. Insert a seal into the union nut of the domestic hot water connection on the boiler side.



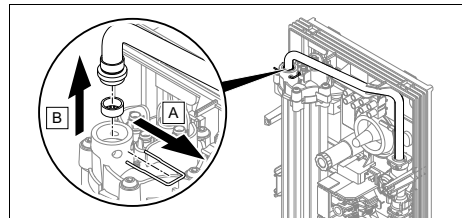
Caution.
Risk of damage due to pipes being blocked by foreign bodies in the water.

The product must not be used without a strainer in the cold water inlet.

- ▶ When you set up the cold water connection, install the supplied filter strainer in the product's cold water inlet.

8. Screw the unit connections to the domestic hot and cold water connections.
9. Hinge the lower section of the product frame back until it engages.

5.2 Installing a 12 l/min flow rate limiter (optional)



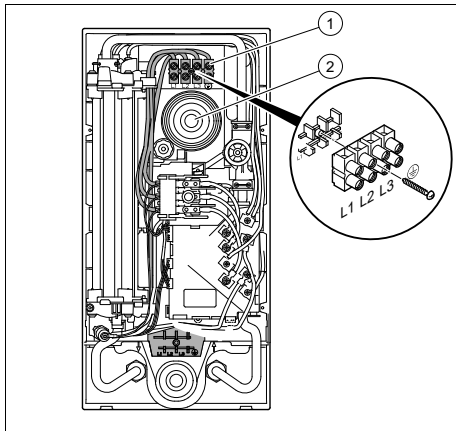
- ▶ Install the flow rate limiter as shown.

5.3 Connecting the product to the electricity supply

1. Note the specifications on the data plate when carrying out the electrical installation.
2. You must comply with the following requirements:
 - The product must be installed using a permanent connection.
 - It must be possible to switch off the permanent connection at all poles via an on-site partition (e.g. via a circuit breaker) that has a contact gap of at least 3 mm.
 - The product must be connected to the protective conductor.

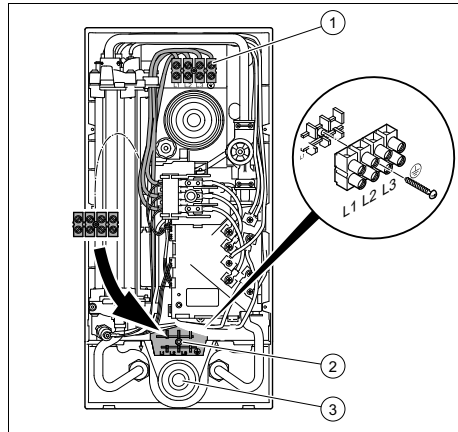
- When using the lower grommet, the power supply terminal that was installed at the top at the factory can be routed for the electrical connection in the lower section.

5.3.1 Carrying out the top electrical connection



1. Guide the connection cable through the upper grommet **(2)**.
2. Connect the individual phases to L1, L2, and L3 on the power supply terminal **(1)**.
3. Connect the PE protective conductor to \oplus .

5.3.2 Carrying out the bottom electrical connection



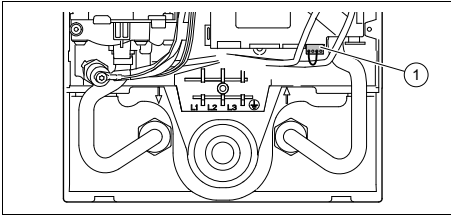
1. Guide the connection cable through the lower grommet **(3)**.
2. Unscrew the power supply terminal **(1)**.
3. Route the power supply terminal, including the internal cable, to the lower position **(2)** in the product.
4. Screw the power supply terminal tightly to the lower position.
5. Check whether the cables for the power supply terminal are routed correctly.
6. Connect the individual phases to L1, L2, and L3 on the power supply terminal.
7. Connect the PE protective conductor to \oplus .

5.3.3 Installing scald protection

1. Clarify with the end user whether they would like the outlet temperature to be limited to 40 °C.

6 Start-up

Condition: The outlet temperature should be limited to 40 °C.



- ▶ Replace the plug (1) at the X9 terminal with the plug (for the temperature cut-out) from the bag of small parts.

5.3.4 Installing an optional load-shedding relay

If required, a load-shedding relay that conforms with current standards can be connected to the product. The role of the relay is to switch off other power consumers while hot water is being drawn off via the product so that the house installation is not overloaded. The load-shedding relay must fulfil the following criteria:

- Pull-in current < 15 A
- Continuous current > 50 A
- ▶ Install the load-shedding relay in the L2 outer conductor.
- ▶ If the product is a replacement product, also replace the load-shedding relay.

6 Start-up

6.1 Removing air pockets from the product



Caution.
Risk of damage from heating wire dry fire

Air pockets in the pipes may lead to dry fire on the heating wires during start-up.

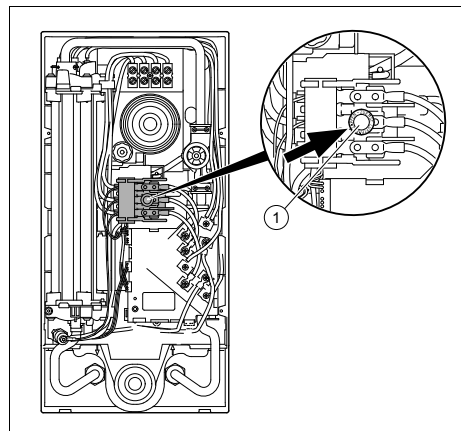
- ▶ Draw off water using the product to remove any air pockets before starting up.

1. Disconnect the product from the power supply.
2. Open the cold-water isolation valve in the cold water pipe.
3. Open the domestic hot water isolation valve for at least one minute.
4. Close and open the domestic hot water draw-off valve several times.



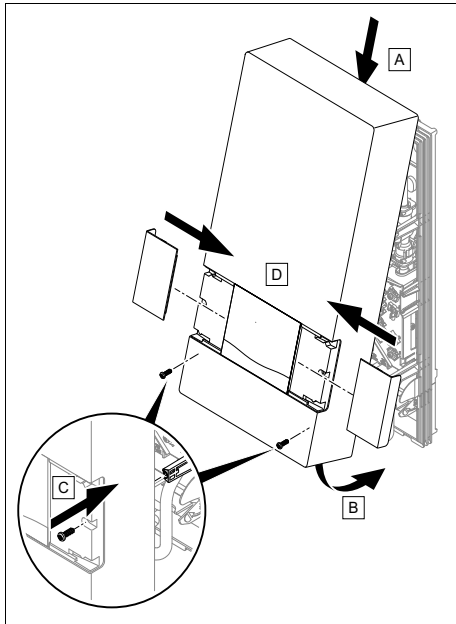
Note

In normal operating mode, the product will not need to be purged again.



5. Press the safety switch (1).

6.2 Fitting the product casing



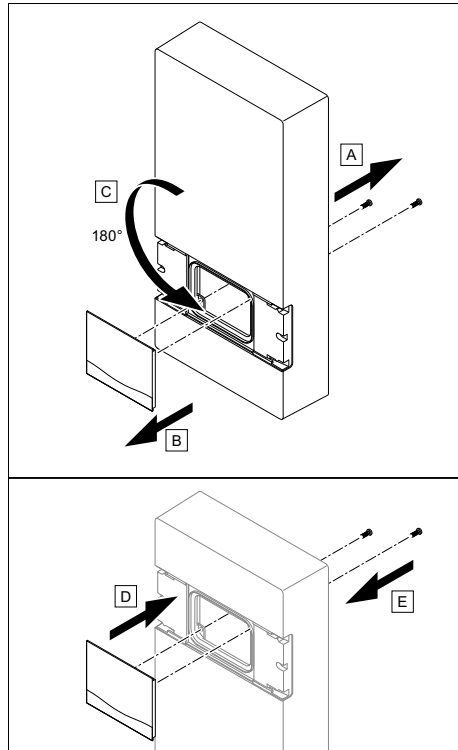
► Refit the product casing as shown.



Note

Check whether the product casing has been installed correctly.

6.3 Attaching the product casing so that it is rotated by 180°



- Remove the control panel from the product casing.
- Turn the product casing by 180°.
- Install the control panel in the product casing.
- Attach the product casing. (→ Page 17)

6.4 Checking the function

1. Connect the product to the power grid (switch on the circuit breaker).
2. Check the product's power while water is running at a draw-off point.

7 Handing over to the end user

7 Handing over to the end user

1. Provide the end user with all relevant instructions and unit documentation for safe-keeping.
2. Go through the operating instructions with the end user and answer any questions.
3. Draw special attention to the safety warnings that the end user must follow.
4. Inform the end user that there is a risk of scalding when the domestic hot water temperature exceeds 43 °C.
5. Inform the end user that they must not remove the product casing and must not attempt to repair the product under any circumstances.
6. Inform the end user of the necessity to ensure that the installation is regularly inspected/maintained by a competent person (inspection and maintenance contract).

8 Recycling and disposal

Disposing of the packaging

- ▶ Dispose of the packaging correctly.
- ▶ Observe all relevant regulations.

9 Troubleshooting

The "Troubleshooting" table can be found in the appendix.

Troubleshooting (→ Page 20)

9.1 Procuring spare parts

The original components of the product were also certified by the manufacturer as part of the declaration of conformity. If you use other, non-certified or unauthorised parts during maintenance or repair work, this may void the conformity of the product and it will therefore no longer comply with the applicable standards.

We strongly recommend that you use original spare parts from the manufacturer as this guarantees fault-free and safe operation of the product. To receive information about the available original spare parts, contact the contact address provided on the back page of these instructions.

- ▶ If you require spare parts for maintenance or repair work, use only the spare parts that are permitted for the product.

10 Inspection and maintenance

- ▶ Carry out a function check and visual inspection of the product every three years.
- ▶ If the water is extremely calciferous, you must de-scale the product more frequently.

If the water has a large volume of suspended matter, the water filter in the cold water flow must be replaced more frequently. At the same time, the water filter has a sealing function.

- ▶ Replace the water filter in the cold water flow. For the sealing function, ensure that it is positioned correctly in the pipe.
- ▶ Check for deposition in the domestic hot water pipe between the heating block and the domestic hot water connection.
- ▶ When re-assembling the product, insert a new flat seal into the domestic hot water connection.
- ▶ Check whether it is necessary to de-scale the product. De-scale the product as required.
- ▶ If the product needs to be completely descaled, attach a descaling pump between the domestic hot and cold water connection.
- ▶ After descaling the product, flush it thoroughly with water.

- ▶ After descaling, draw off water using the product to remove any air pockets.
(→ Page 16)

11 Decommissioning

11.1 Temporarily decommissioning the product

1. Disconnect the product from the power supply.
2. Close the cold water stop valve.

11.2 Permanently decommissioning the product

1. Disconnect the product from the power supply.
2. Close the cold water stop valve.
3. Loosen the cold water and hot water connections.
4. Capture the residual water (up to 0.4 litres) that is left inside the product using a suitable vessel.
5. Remove the product.

Appendix

Appendix

A Troubleshooting

Symptom	Possible cause	Measure
Product disconnected from the power supply	Building's fuse has been tripped	► Replace the electronics.
	The safety switch in the product has been triggered	► Replace the electronics.
No hot water; the water remains cold	Product is disconnected from the power supply	► Check L1, L2 and L3 against PE (230 V) and L1, L2 and L3 (400 V). 1. If you do not measure any power, proceed as described under the fault "Product disconnected from the power supply".
	The measured value on the heating block (connection 1 against connection 4) is greater than 200 Ω	► Replace the heating block.
	No relay clicking on the electronics when the draw-off starts	► Replace the impeller.
	Other cause	► Replace the electronics.
The water does not become hot enough	The target temperature or volume flow are not set correctly	► Set the target temperature to approx. 40 °C and the volume flow to approx. 5 l/min.
	The measured value on the heating block (connection 1 against connection 4) is greater than 200 Ω	► Replace the heating block.
	The relay does not click on the electronics when there is more than 4 l/min	► Replace the impeller.
	Other cause	► Replace the electronics.

B Technical data

Technical data – General

	VED E 18/8 BB INT	VED E 21/8 BB INT	VED E 24/8 BB INT	VED E 27/8 BB INT
Temperature setting	Fixed temperature, 55 °C or 40 °C	Fixed temperature, 55 °C or 40 °C	Fixed temperature, 55 °C or 40 °C	Fixed temperature, 55 °C or 40 °C
Heating system heat generator	Bare wire heating coil	Bare wire heating coil	Bare wire heating coil	Bare wire heating coil
Nominal capacity	0.4 l	0.4 l	0.4 l	0.4 l

	VED E 18/8 BB INT	VED E 21/8 BB INT	VED E 24/8 BB INT	VED E 27/8 BB INT
Domestic hot and cold water connection, boiler side	G 1/2"	G 1/2"	G 1/2"	G 1/2"
Unit dimensions, width	240 mm	240 mm	240 mm	240 mm
Unit dimensions, height	481 mm	481 mm	481 mm	481 mm
Unit dimensions, depth	100 mm	100 mm	100 mm	100 mm
Weight when filled, approx.	4.4 kg	4.4 kg	4.4 kg	4.4 kg
IP rating	IP 25	IP 25	IP 25	IP 25

Technical data – Domestic hot water mode

	VED E 18/8 BB INT	VED E 21/8 BB INT	VED E 24/8 BB INT	VED E 27/8 BB INT
Max. permissible inlet temperature, T_{in} max.	55 °C	55 °C	55 °C	25 °C
Minimum start-up pressure	0.015 MPa	0.015 MPa	0.015 MPa	0.015 MPa
Minimum start-up flow	3 l/min	3 l/min	3 l/min	3 l/min
Switch-off water volume	2.5 l/min	2.5 l/min	2.5 l/min	2.5 l/min
Max. flow rate quantity	8 l/min	8 l/min	8 l/min	10 l/min
Max. flow rate quantity with limiter 12 l	12 l/min	12 l/min	12 l/min	12 l/min
Permitted excess pressure	1.0 MPa	1.0 MPa	1.0 MPa	1.0 MPa

Technical data – Electrics

	VED E 18/8 BB INT	VED E 21/8 BB INT	VED E 24/8 BB INT	VED E 27/8 BB INT
Rated voltage	400 V	400 V	400 V	400 V
Nominal output	18 kW	21 kW	24 kW	27 kW
Nominal current	26 A	31 A	35 A	39 A
Fuse protection	32 A	32 A	40 A	40 A
Specific resistance $\rho_{15} \geq$ (when ϑ cold \leq 35 °C)	$\geq 900 \Omega \cdot \text{cm}$	$\geq 900 \Omega \cdot \text{cm}$	$\geq 900 \Omega \cdot \text{cm}$	$\geq 900 \Omega \cdot \text{cm}$
Specific conductivity $\sigma_{15} \leq$ (when ϑ cold \leq 35 °C)	$\leq 1,111.0 \mu\text{S/cm}$	$\leq 1,111.0 \mu\text{S/cm}$	$\leq 1,111.0 \mu\text{S/cm}$	$\leq 1,111.0 \mu\text{S/cm}$
Electrical connection	3~PE, 400 V/50 Hz	3~PE, 400 V/50 Hz	3~PE, 400 V/50 Hz	3~PE, 400 V/50 Hz

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使用說明

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1 安全性

1.1 符合產品設計的目的

不當或不符合產品設計使用可能對使用者或他人的身體或生命造成危險，或對產品及其他財產造成影響。

本產品

- 只可用於加熱食水。
- 只適於家用及密閉式和無結霜的空間內。
- 不適合商業用途。

符合規定的用途包含：

- 細閱隨附產品及所有其他設備組件的使用說明
- 遵守所有在說明書內列舉的檢查與保養條件。

3 歲以上的兒童、身心與精神功能有限或對產品缺乏經驗與知識的人士，在旁人看管或已被教導如何使用本產品及明白其可能引起的危險的情況下，可以使用本產品。兒童不許使用本產品玩耍。兒童不可在無旁人看管的情況下清潔和進行保養產品的工作。

在本說明書中未提及的應用，或超越所描述的應用範圍，皆屬不符合產品設計用途。任何直接的商業或工業用途也屬不當使用範圍內。

注意！

禁止任何不當使用。

1.2 一般安全提示

導電的線路和接頭可能造成致命的電擊風險。

- ▶ 切勿移除外殼。
- ▶ 切勿嘗試自行保養或維修本產品。
- ▶ 如發現故障或損壞，應立即通知合資格人員進行修正。
- ▶ 遵守規定的保養周期。
- ▶ 請詳閱本說明書以及所有參考資料，特別是安全章節和警告提示。
- ▶ 僅可進行本使用說明書裡所指示的工作。

1.3 熱水可能造成燙傷危險

出水口的出水溫度最高可能達到約 55 °C。

- ▶ 使用本產品時，請注意不要燙傷自己。
- ▶ 若要確保不被燙傷，請委任合資格的人員啟動產品的防燙傷保護。

2 文件說明

2 文件說明

- ▶ 請必需細閱所有隨附於產品的使用說明。
- ▶ 請保存本說明書以及所有相關文件，以供後續使用。

此說明書僅適用於：

產品 - 貨號


適用性: 香港

或 香港

或 印度

VED E 18/8 BB INT	0010027049
VED E 21/8 BB INT	0010027050
VED E 24/8 BB INT	0010027051
VED E 27/8 BB INT	0010027052

3 型號銘牌上的資料

符號	意義
	VDE-GS 標示證明產品已通過測試和符合安全標準。
	電磁兼容性標準符合標記
	詳閱所有說明書。
 2105450010002830006000001N4	條碼及序號，物料編號由第 7 至第 16 個數字組成

4 CE 標示



CE 標示證明本產品根據符合標準聲明符合相關指令的基本要求。

可向製造商查閱此產品的符合標準聲明。

5 啟用及操作

5.1 啟動產品前注意事項

- ▶ 面板完全關閉時，才能操作此產品。

5.2 產品操作

若打開熱水出水口，產品會自動啟動，並根據由合資格人員的設定加熱食水至 55 °C 或 40 °C。

根據現行標準，即熱式電熱水器的最高允許出口溫度為 55 °C。產品的最高出口溫度限制在 55°C。

本產品可調整出水溫度，但無法調整出水量。

- ▶ 若本產品在低溫和大出水量時無法達到所設定的溫度，則可暫時將出水口的水量減低。
 - ◁ 本產品能快速將水加熱。

6 故障

本產品的故障無法由使用者自行排除。

- ▶ 產品發生任何故障時，請立即通知您的專業技術人員。

7 保養和維護

7.1 保養

由合資格的人員進行每三年一次的檢查及保養是保持產品長久良好狀態，操作安全可靠和產品壽命的先決條件。

7.2 產品保護

- ▶ 使用濕布和不含溶劑的肥皂清潔產品外殼。
- ▶ 不可使用噴霧器、研磨劑、洗潔精、溶劑或含氯清潔劑。

8 回收及廢棄處理

- ▶ 請將包裝材料交由安裝本產品的合資格人員棄置。



■ 若本產品附有此標記：

- ▶ 請勿在此情況下將本產品當作家用垃圾棄置。
- ▶ 而應將本產品交給舊電器或電子收集商處理。



■ 若本產品含有附此標記的電池，這些電池就可能含有危害健康及環境的物質。

- ▶ 在此情況下，請將這些電池交給電池收集商處理。

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安裝說明

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1 安全性

1.1 符合產品設計的用途

不當或不符合產品設計使用可能對使用者或他人的身體或生命造成危險，或對產品及其他財產造成影響。

本產品

- 只可用於加熱食水。
- 只適於家用及密閉式和無結霜的空間內。
- 不適合商業用途。

符合規定的用途包含：

- 細閱隨付的產品及所有其他設備組件的運作、安裝和維護說明
- 符合產品及系統許可的安裝及裝配
- 遵守所有在說明書內列舉的檢查與保養條件。

此外，符合產品設計的用途也包括按 IP 編號（防水保護）要求的安裝。

在本說明書中未提及的應用，或超越所描述的應用範圍，皆屬不符合產品設計用途。任何直接的商業或工業用途也屬不當使用範圍內。

注意！

禁止任何不當使用。

1.2 一般安全提示

1.2.1 專業人員資格不符可能造成危險

以下工作只可由相關專業的合資格人員執行：

- 安裝
- 拆卸
- 安裝
- 啟動產品
- 檢查與保養
- 維修
- 停止運行
- ▶ 依照最新的技術水準操作。

**適用性: 香港
或 香港**

在本說明書中，註冊氣體裝置技工一律稱為「合資格的人員」。在本說明書中，註冊專業電工一律稱為「專業電工」。

1.2.2 因結霜而造成的損害風險

- ▶ 不可將本產品安裝在可能結霜的空間。

1.2.3 致命電擊危險

當碰觸導電組件時，會有致命電擊危險。

當您在產品上進行工作之前：

- ▶ 切斷所有電源（配有至少 3 mm 觸點間距的電子分離裝置，如保險絲或斷路器），以將產品設為無電壓狀態。
- ▶ 防止產品重新啟動。
- ▶ 檢查是否已關掉電源。

1 安全性

1.2.4 在導電的電線和接頭上可能有致命的電擊危險

所用的食水在 15 °C 時必須具有特定電阻 $\geq 900 \Omega$ 。否則不可使用本產品。

- ▶ 在安裝前，請向當地供水單位查詢水的阻值和導電性。

1.2.5 安裝電氣錯誤可能危及生命安全

- ▶ 本產品必須連接至接地線。
- ▶ 本產品必須持續連接到固定鋪線。

1.2.6 熱水可能造成燙傷危險

由於有前置的太陽能光熱能源系統，設定防燙傷保護時，熱水溫度也可能超過 42 °C。

產品若有前置的太陽能光熱能源系統，則進氣溫度必須透過結構性防範措施（例如：混合閥）來加以限制。

條件: VED 18 - 24/8

- ▶ 安裝可將進氣溫度限制在 55 °C 的混合閥。

條件: VED 27/8

- ▶ 安裝可將進氣溫度限制在 25 °C 的混合閥。

1.2.7 高溫零件可能造成灼傷或燙傷危險

- ▶ 請等待零件冷卻才開始對該零件進行工作。

1.2.8 使用不合適的工具有損壞物品的風險

- ▶ 請使用專業工具。

1.3 規定（準則、法律、標準）

- ▶ 請遵守國家規定、標準、準則、條例和法律。

2 文件說明

- ▶ 請必需細閱所有隨附於產品的使用說明。
- ▶ 請保存本說明書以及所有相關文件，以供後續使用。

此說明書僅適用於：

產品 - 貨號

適用性: 香港

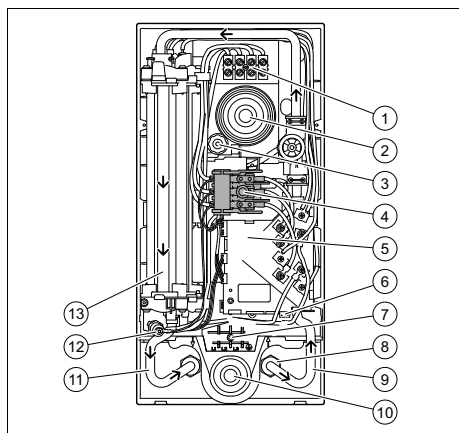
或 香港

或 印度

VED E 18/8 BB INT	0010027049
VED E 21/8 BB INT	0010027050
VED E 24/8 BB INT	0010027051
VED E 27/8 BB INT	0010027052

3 產品說明

3.1 結構



- | | |
|-----------------|----------------|
| 1 電路接線端子 | 7 下方電路接線端子選用位置 |
| 2 上電纜導套 | 8 濾網 |
| 3 調整軸 | 9 冷水接頭 |
| 4 安全開關 | 10 下電纜導套 |
| 5 電子裝置 | 11 熱水接頭 |
| 6 溫度限制器 (插接器) | 12 安全溫度限制器 |
| | 13 加熱元件 |

3.2 功能

本產品以直流原理透過加熱塊內的一條裸導線加熱食水。

電子裝置測量冷水入口的水溫和流量。出廠溫度透過插接器固定設定為 55 °C。您也可透過更換隨附的插接器將溫度固定設定為 40 °C。

若無法達到所設定的熱水溫度，請減少水量。

3.3 型號銘牌上的資料

符號	意義
	VDE-GS 標示證明產品已通過測試和符合安全標準。
	電磁兼容性標準符合標記
	詳閱所有說明書。
	條碼及序號，物料編號由第 7 至第 16 個數字組成

3.4 CE 標示



CE 標示證明本產品根據符合標準聲明符合相關指令的基本要求。

可向製造商查閱此產品的符合標準聲明。

4 安裝

4.1 檢查裝箱內容

數量	名稱
1	產品
1	使用和安裝說明
1	內含安裝固定零件的小袋子 (2 x 螺栓、2 x 爆炸螺絲、3 x 密封件、1 x 特殊固定螺栓)
1	冷水連接件 G 1/2 和冷水截止閥
1	熱水連接件 G 1/2"
1	冷水入口的濾網
2	雙螺紋接套

4 安裝

數量	名稱
1	限流器 12 l/min
1	溫度限制器 40 °C
1	安裝掛板
1	安裝掛圖

4.2 選擇安裝地點

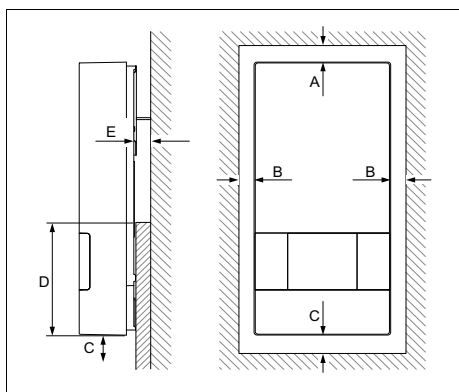
- ▶ 請將本產品儘量安裝在最常用的出水口的附近位置。



注意事項

不可將本產品安裝在浴缸上方或淋浴處。

4.3 安裝距離

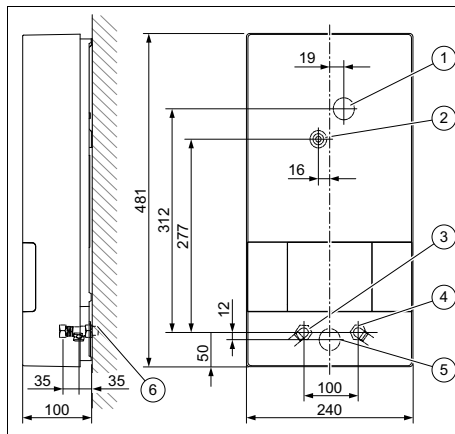


- A ≥ 50 mm D ≥ 130 mm
 B ≥ 50 mm E ≤ 22 mm
 C ≥ 120 mm

本產品在牆上的支撐面及產品下方的位置 (D) 必須平坦。

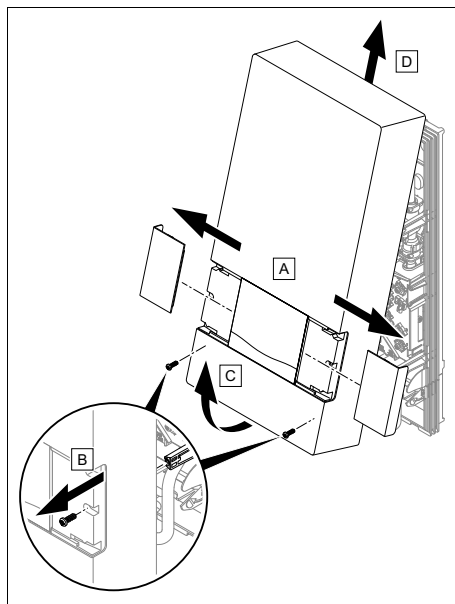
4.4 將產品安裝到牆上

4.4.1 內部結構



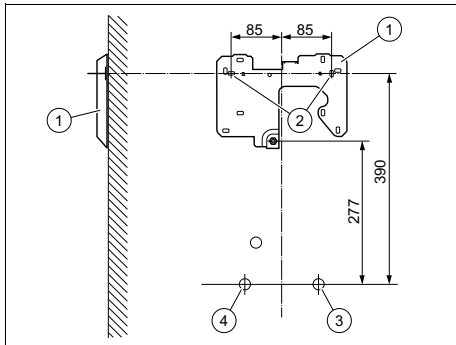
- 1 上電纜導套 4 冷水接頭 G 1/2"
 2 中央固定 5 下電纜導套
 3 熱水接頭 G 1/2" 6 外部螺紋 G 1/2"

4.4.2 取下產品外殼



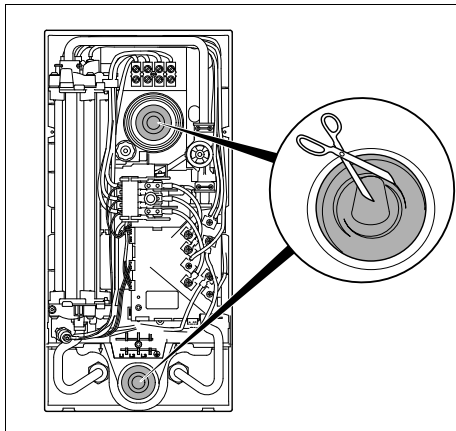
- ▶ 如圖所示拆除產品外殼。

4.4.3 裝配產品



- 1 安裝掛板 3 冷水接頭
2 固定點 4 熱水接頭

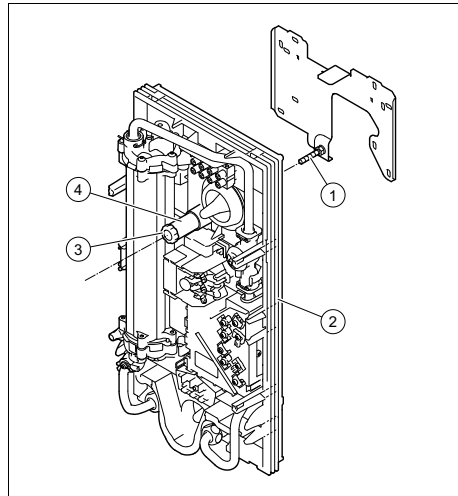
1. 用手拿著安裝掛圖，並在牆上標註固定點（2）。
– 產品定位：垂直於牆上
2. 使用爆炸螺絲和螺栓將安裝掛板（1）安裝於固定點上。



危險！
產品滲水可能造成電擊的風險
電線套管可防止水沿電源線滲入本產品。

- ▶ 切勿完全切掉電線套管。
- ▶ 切掉電線套管的頂端，直到管口可牢固地包圍電線。

3. 視乎電線的位置而定，將切割電線套管向上或向下折彎。
4. 將電線穿過電線套管並伸入產品內部。



5. 將本產品（2）安裝到安裝掛板上的固定螺栓（1）。
6. 使用調整軸校準本產品的位置（4）。
7. 使用固定螺栓（3）將產品固定。

5 安裝

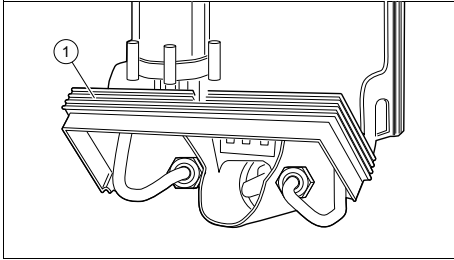
1. 若使用塑膠管，只可使用適用於 65 °C 的塑膠管。
2. 若使用塑膠管，只可使用在最高溫度 95 °C 和最大壓力 1 MPa (10 bar) 下能承受至少一小時的塑膠管（查閱製造商提供的資訊）。
3. 安裝前徹底沖洗冷水管。

5.1 裝設冷水和熱水接頭

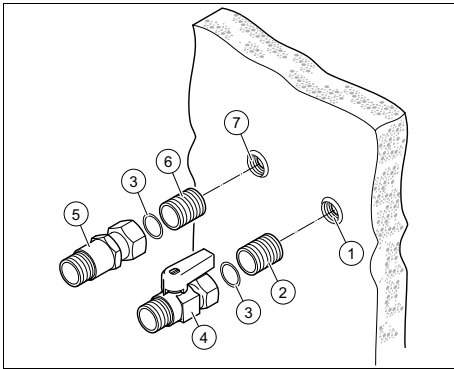
1. 裝設水源接頭時請注意：
 - 冷水管路中的保險閥並非必要。
 - 所有冷熱水管均可由鋼、銅、或塑膠造成。
 - 本產品必須與固定安裝的水管維持連接狀態。不得臨時連接軟管。
 - 本產品的冷水接頭不可與其他加熱系統的入水管線連接。

5 安裝

- 本產品的熱水接頭不可與水龍頭或類似物品連接。



2. 為了簡化水源接頭的安裝，可將產品框架的下部往上翻折（1）。
 - 不可移除翻折框架。



小心！
洩漏可能導致產品損壞的風險！

連接管上的機械壓力可能會造成連接管洩漏以及損壞產品。

- ▶ 請避免在連接管上施以機械壓力！

3. 將兩個雙螺紋接套（2）和（6）裝入，並將雙螺紋接套扭緊於牆上的接頭（1）和（7）。
4. 將密封件（3）置入冷水（4）和熱水接頭（5）的蓋形螺絲帽內。
5. 扭緊冷水接頭連接件（4）和牆上冷水接頭（1）的雙螺紋接套（2）。
6. 扭緊熱水接頭連接件（5）和牆上熱水接頭（7）的雙螺紋接套（6）。

7. 將一個密封件置入裝置側的熱水接頭蓋形螺絲帽內。



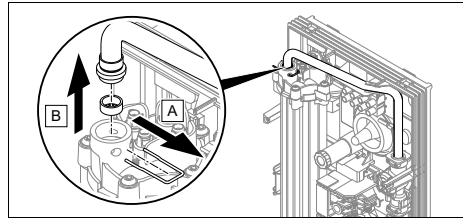
小心！
水中的異物可能導致管路阻塞而造成產品損壞。

本產品不可在無冷水入口濾網的情況下使用。

- ▶ 安裝冷水接頭時，請將隨附的過濾網安裝在產品的冷水入口。

8. 鎖緊裝置接頭與冷水和熱水接頭。
9. 將產品框架的下部回摺直至卡住。

5.2 安裝限流器 12l/min（可自由選購）

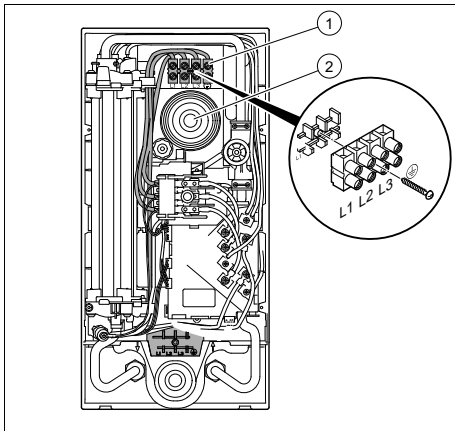


- ▶ 如圖所示安裝限流器。

5.3 將產品接上電力

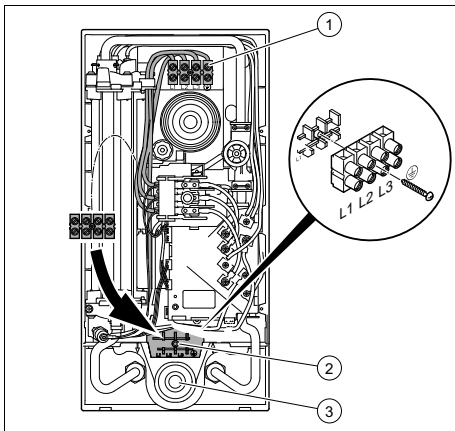
1. 在進行電力安裝時，請注意銘牌上的資料。
2. 請符合以下要求：
 - 本產品必須安裝於固定的電源接頭上。
 - 此固定電源接頭的所有針腳必須配有至少3mm觸點間距的分離裝置（例如在斷路器）
 - 本產品必須連接至接地線。
 - 使用下方電線套管時，可將出廠時安裝在上方的電氣接頭電路接線端子鋪設在下方部分。

5.3.1 在機身上方進行電力連接



1. 將連接電纜穿過上方電線套管 (2)
2. 將每條導線連接到電路接線端子 (1) 的 L1、L2、L3。
3. 將接地線 PE 連接在 \oplus 上。

5.3.2 穿過下部電子接頭



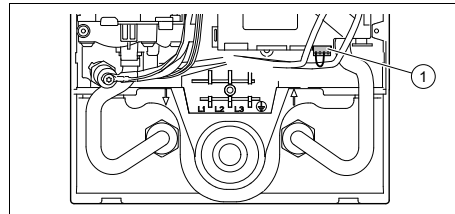
1. 將連接電纜穿過下方電線套管 (3)
2. 鬆開電路接線端 (1)。
3. 將電路接線端子連同內部電線移至產品內的下方位置 (2)。
4. 於下方位置旋緊電路接線端子。
5. 檢查電路接線端的電線鋪設是否正確。
6. 將每條導線連接到電路接線端子的 L1、L2、L3。

7. 將接地線 PE 連接在 \oplus 上。

5.3.3 安裝防燙傷保護

1. 請向操作人員說明，是否要將其出口溫度限制在 40 °C。

條件: 出口溫度應限制在 40 °C。



- ▶ 將夾子 X9 上的插頭 (1) 更換為隨機附上的插頭 (溫度限制器)。

5.3.4 安裝可選購的減載繼電器

如有必要，可在本產品前安裝一個市面上售賣的減載繼電器。此繼電器的功能為，當使用本產品生產熱水時，繼電器將關閉其他耗電裝置，以避免家中裝置負載過度。減載繼電器必須符合以下條件：

- 起動電流 < 15 A
- 持續電流 > 50 A
- ▶ 將減載繼電器安裝於外部導體 L2。
- ▶ 如此產品用於替換舊機，必須同時更換減載繼電器。

6 啟動產品

6.1 排清產品內的空氣泡



小心！
發熱線乾燒可能導致產品損壞危險

煙道內的氣墊在調試時可能導致發熱線乾燒。

- ▶ 調試前請使用本產品無泡沫取水。

1. 切斷產品電源。
2. 請打開冷水管內的冷水截止閥。
3. 請打開熱水截止閥至少一分鐘。

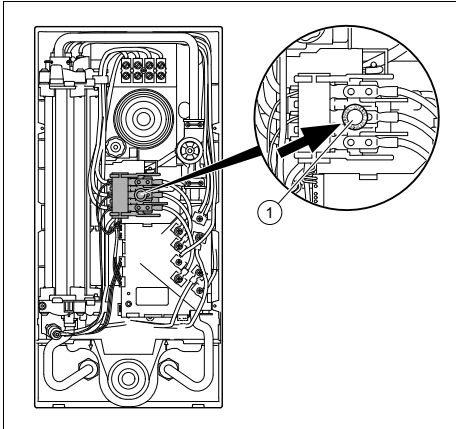
6 啟動產品

4. 關閉及打開熱水龍頭數次。



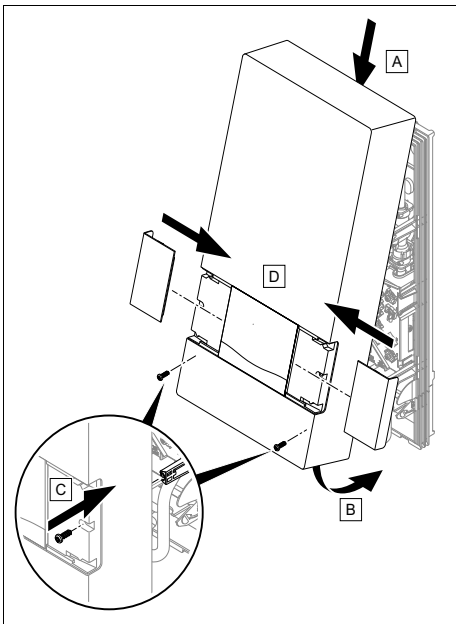
注意事項

在一般模式下，產品不需進行額外排氣。



5. 按下安全開關 (1)。

6.2 安裝產品外殼



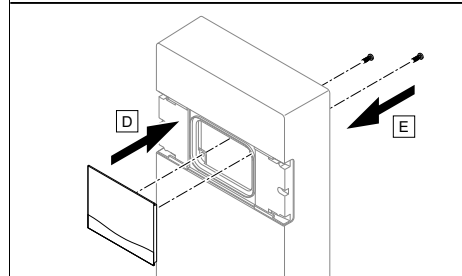
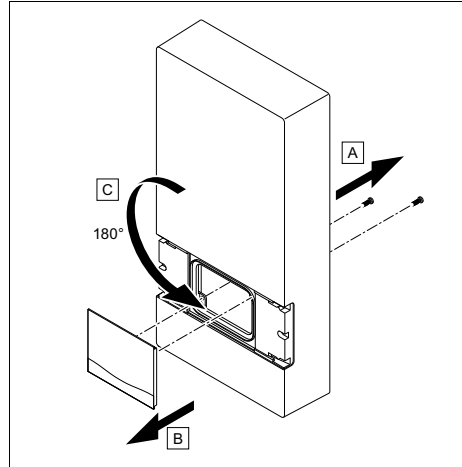
▶ 請如圖所示裝上產品外殼。



注意事項

請檢查產品外殼是否安裝正確。

6.3 將產品外殼轉至 180° 後安裝



- ▶ 從產品外殼拆除控制面板。
- ▶ 將產品外殼旋轉 180°。
- ▶ 在產品外殼上安裝控制面板。
- ▶ 請裝上產品外殼。(→ 頁 34)

6.4 檢查功能

1. 請將本產品連接到供電系統 (開啟斷路器)。
2. 打開其中一個水龍頭時，檢查產品的功率。

7 將產品移交至使用者

1. 將所有專屬的說明書和產品相關文件交予使用者保管。
2. 請向使用者解釋使用說明，必要時回答他的問題。
3. 特別提醒使用者有關必須注意的安全提示。
4. 請告知使用者，熱水溫度超過 43 °C 時會有燙傷危險。
5. 請提醒使用者，切勿自行移除產品外殼，也不得自行維修本產品。
6. 請告知使用者定期由合資格人員（檢查 / 保養合約）檢查 / 保養設備的重要。

8 回收及廢棄處理

處理廢棄包裝

- ▶ 請依規定棄置產品包裝材料。
- ▶ 請遵守所有相關規定。

9 排解方法

排解方法表請參閱附件。

排解方法 (→ 頁 36)

9.1 採購備件

產品的原裝零件已由製造商認證為符合標準聲明中的一部分。如在保養或維修時使用其他未經認證或未獲核可的部件，則會導致該產品的符合標準聲明失效，且產品亦可能因而不符適用規定。

我們建議您盡速使用製造商的原裝備件，以確保產品可正常且安全無虞地運作。如要獲得有關可用的原裝備件資訊，請連絡本說明書背面的聯絡地址。

- ▶ 當您在保養或維修須用到備件時，請只使用適用於產品獲得許可的備件。

10 檢查與保養

- ▶ 每三年為產品進行一次功能及目測檢查。
- ▶ 若是水質過硬，則須較頻繁地進行去水垢處理。

若水質充滿大量漂浮物質，則須較經常更換冷水管中的濾水網。濾水網同時也提供密封件的功能。

- ▶ 更換冷水道中的濾水網。請注意必須正確安裝在煙道中，才能確保密封功能。
- ▶ 檢查加熱塊和熱水接頭之間的熱水管是否有沉積物。
- ▶ 在重新組裝時，請在熱水接頭上裝入一個新的密封扁片。
- ▶ 檢查是否須要為產品進行去水垢處理。必要時為產品進行去水垢處理。
- ▶ 若產品需要完成全面的去水垢處理，於冷水和熱水接頭之間接上去水垢泵。
- ▶ 完成去水垢處理後，用水徹底沖洗產品。
- ▶ 去水垢處理後，排清產品中所有氣泡。
(→ 頁 33)

11 停止運行

11.1 將產品暫時停止運行

1. 切斷產品電源。
2. 關閉冷水截止閥。

11.2 將產品永久終止操作

1. 切斷產品電源。
2. 關閉冷水截止閥。
3. 鬆開冷水和熱水接頭。
4. 使用適當的容器盛載產品內殘餘的水 (至 0.4 升)。
5. 拆除產品。

附件

附件

A 排解方法

故障	可能原因	措施
產品無通電	住處保險絲跳線	▶ 更換電力裝置。
	產品內的安全開關被啟動	▶ 更換電力裝置。
無熱水，水保持低溫	產品無通電	▶ 檢查 L1、L2、L3 至 PE (230 V)，以及 L1、L2、L3 互相之間 (400 V)。 1. 若無法測量電壓，則請按照故障「產品無通電」中所述之方式處理。
	加熱塊上測量 (接頭1與接頭4相差) 的電阻值大於200Ω	▶ 更換加熱元件。
	開始取水時，電子裝置上的繼電器無咋啦聲	▶ 更換葉輪。
	其他原因	▶ 更換電力裝置。
水溫不夠熱	設定溫度或流量設定不正確	▶ 將標準溫度調至約 40 °C，並將流量設定約 5 l/min。
	加熱塊上測量 (接頭1與接頭4相差) 的電阻值大於200Ω	▶ 更換加熱元件。
	直到 4 l/min 以上才會聽到電力裝置繼電器的咋啦聲	▶ 更換葉輪。
	其他原因	▶ 更換電力裝置。

B 技術資料

技術資料 - 一般資訊

型號	VED E 18/8 BB INT	VED E 21/8 BB INT	VED E 24/8 BB INT	VED E 27/8 BB INT
溫度設定	固定設定溫度，55 °C 或 40 °C	固定設定溫度，55 °C 或 40 °C	固定設定溫度，55 °C 或 40 °C	固定設定溫度，55 °C 或 40 °C
熱水器加熱系統	螺旋型裸加熱管	螺旋型裸加熱管	螺旋型裸加熱管	螺旋型裸加熱管
額定容積	0.4 l	0.4 l	0.4 l	0.4 l
設備側的冷水和熱水接頭	G 1/2"	G 1/2"	G 1/2"	G 1/2"
設備尺寸，寬度	240 mm	240 mm	240 mm	240 mm
設備尺寸，高度	481 mm	481 mm	481 mm	481 mm
設備尺寸，深度	100 mm	100 mm	100 mm	100 mm
重量已填滿約	4.4 kg	4.4 kg	4.4 kg	4.4 kg
防水保護等級	IP 25	IP 25	IP 25	IP 25

技術資料 - 熱水運行模式

型號	VED E 18/8 BB INT	VED E 21/8 BB INT	VED E 24/8 BB INT	VED E 27/8 BB INT
最大允許的進水溫度	55 °C	55 °C	55 °C	25 °C
最小水流啟動壓力	0.015 MPa	0.015 MPa	0.015 MPa	0.015 MPa
啟動流量	3 l/min	3 l/min	3 l/min	3 l/min
停止流量	2.5 l/min	2.5 l/min	2.5 l/min	2.5 l/min
最大流量	8 l/min	8 l/min	8 l/min	10 l/min
限制器 12l 的最大流量	12 l/min	12 l/min	12 l/min	12 l/min
許可的超壓	1.0 MPa	1.0 MPa	1.0 MPa	1.0 MPa

技術資料 - 電子裝置

型號	VED E 18/8 BB INT	VED E 21/8 BB INT	VED E 24/8 BB INT	VED E 27/8 BB INT
額定電壓	400 V	400 V	400 V	400 V
額定功率	18 kW	21 kW	24 kW	27 kW
額定電流	26 A	31 A	35 A	39 A
安全措施	32 A	32 A	40 A	40 A
特定電阻 $\rho_{15} \geq (\vartheta \leq 35^\circ\text{C})$	$\geq 900 \Omega \cdot \text{cm}$	$\geq 900 \Omega \cdot \text{cm}$	$\geq 900 \Omega \cdot \text{cm}$	$\geq 900 \Omega \cdot \text{cm}$
特定導電率 $\sigma_{15} \leq (\vartheta \leq 35^\circ\text{C})$	$\leq 1,111.0 \mu\text{S/cm}$	$\leq 1,111.0 \mu\text{S/cm}$	$\leq 1,111.0 \mu\text{S/cm}$	$\leq 1,111.0 \mu\text{S/cm}$
電子接頭	3~PE, 400 V / 50 Hz	3~PE, 400 V / 50 Hz	3~PE, 400 V / 50 Hz	3~PE, 400 V / 50 Hz

1 HK, 香港

Country specifics

1 HK, 香港

– Hong Kong –

zht

保修相關資訊，請參閱背面下方的聯絡地址。

本公司的客戶服務聯絡資訊，請參閱背面下方的地址或 www.vaillant.com。

en

For information on the manufacturer's guarantee, you can write to the contact address that is provided on the back page.

For contact details for our authorised customer service department, you can write to the address that is provided on the back page, or you can visit www.vaillant.com.

2 IN, India

– India –

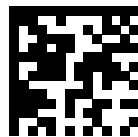
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2.1 Guarantee

For information on the manufacturer's guarantee, you can write to the contact address that is provided on the back page.

2.2 Customer service

For contact details for our customer service department, you can write to the address that is provided on the back page, or you can visit www.vaillant.com.



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