

Vitocell 100-B
Type CVB-400-S1
Type CVB-400-S2
Type CVB-500-S1
Type CVB-500-S2
Type CVBB-750-S1
Type CVBB-910-S1

Dual mode DHW cylinder with internal indirect coil

VITOCELL 100-B



Safety instructions



Please follow these safety instructions closely to prevent accidents and material losses.

Safety instructions explained



Danger

This symbol warns against the risk of injury.

Note

Details identified by the word "Note" contain additional information.



Please note

This symbol warns against the risk of material losses and environmental pollution.

Target group

These instructions are exclusively intended for authorised contractors.

- Work on electrical equipment may only be carried out by qualified electricians.
- The system must be commissioned by the system installer or a qualified person authorised by the installer.

Regulations to be observed

- National installation regulations
- Statutory regulations for the prevention of accidents
- Statutory regulations for environmental protection
- Codes of practice of the relevant trade associations
- Relevant country-specific safety regulations

Working on the system

- Isolate the system from the power supply (e.g. at a separate fuse or main switch) and check that it is no longer live.
- Safeguard the system against reconnection.



Danger

Hot surfaces can cause burns.

- Before maintenance and service work, switch off the appliance and let it cool down.
- Do not touch the hot surfaces of uninsulated pipes and fittings.



Please note

Electronic assemblies can be damaged by electrostatic discharge. Before beginning work, touch earthed objects, such as heating or water pipes, to discharge any static.

Safety instructions (cont.)**Danger**

Floors that are wet or damp with water or glycol based liquids can cause injury due to slipping and falling.

- Keep the floor clean and dry during installation and maintenance work.
- Wear non-slip shoes.

**Danger**

Broken-off fragments of insulation material can cause death by suffocation if inhaled or swallowed.

- Do not let children play in the installation room.
- Keep the installation room clean after installation and maintenance work.

Operation of the system**Please note**

Unsuitable fill and top-up water increases the level of deposits and corrosion. This can reduce the output or cause damage to the system.

- Flush the heating system thoroughly before filling.
- Only fill with water of potable quality.
- Use only softened fill and top-up water complying with VDI 2035.

Repair work**Please note**

Repairing components that fulfil a safety function can compromise the safe operation of the system.

Faulty components must be replaced with original spare parts from the manufacturer.

Auxiliary components, spare and wearing parts

! Please note

- Auxiliary components, spare parts and wearing parts that have not been tested together with the system can compromise its function. Installing non-authorised components and making non-approved modifications or conversions can compromise safety and may invalidate our warranty.
For installation and replacement, use only original parts from the manufacturer or spare parts approved by the manufacturer.

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Disposal of packaging

Please dispose of packaging waste in line with statutory regulations.

Symbols

Symbol	Meaning
	Reference to other document containing further information
	Step in a diagram: The numbers correspond to the order in which the steps are carried out.
	Warning of personal injury
	Warning of material losses and environmental pollution
	Live electrical area
	Pay particular attention.
	- Component must audibly click into place. - or - Acoustic signal
	- Fit new component. - or - In conjunction with a tool: Clean the surface.
	Dispose of component correctly.
	Dispose of component at a suitable collection point. Do not dispose of component in domestic waste.

The sequences of steps for commissioning, inspection and maintenance are summarised in the section "Commissioning, inspection and maintenance" and are identified as follows:

Symbol	Meaning
	Steps required during commissioning
	Not required during commissioning
	Steps required during inspection
	Not required during inspection
	Steps required during maintenance
	Not required during maintenance

Intended use

The appliance is intended to be installed and operated only in sealed unvented systems that comply with EN 12828/DIN 1988, or solar thermal systems that comply with EN 12977, with due attention paid to the associated installation, service and operating instructions. DHW cylinders are only designed to store and heat water of potable water quality. Buffer cylinders are exclusively designed to hold fill water of potable quality. Operate solar collectors only with heat transfer medium approved by the manufacturer.

Intended use presupposes that a fixed installation in conjunction with permissible, system-specific components has been carried out.

Commercial or industrial usage for a purpose other than heating the building or DHW shall be deemed inappropriate.

Any usage beyond this must be approved by the manufacturer in each individual case.

Incorrect usage or operation of the appliance (e.g. the appliance being opened by the system user) is prohibited and will result in an exclusion of liability.

Incorrect usage also applies if the components in the system are modified from their intended use (e.g. through direct DHW heating in the collector).

Adhere to statutory regulations, especially concerning the hygiene of potable water.

Product information

Vitocell 100-B is a vertical, dual mode DHW cylinder with internal indirect coil. The cylinder and indirect coil are made from steel and are protected against corrosion through Ceraprotect enamel coating and a protective magnesium anode.

Used in conjunction with the following heat generators:

- Solar systems
- Oil/gas boilers

- Wall mounted gas boilers
- Heat pumps

Additionally, the use of an immersion heater EHE is possible.

Suitable for systems conforming to DIN 1988, EN 12828 and DIN 4753.

System examples

Available system examples:

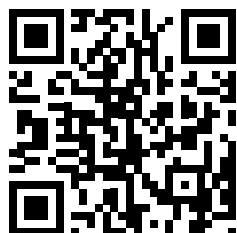
schematics.viessmann-climatesolutions.com

Maintenance parts and spare parts

You can identify and order maintenance parts and spare parts directly online.

PartnerShop

Login:
shop.viessmann-climatesolutions.com



Spare part app

Web application

viparts.viessmann-climatesolutions.com

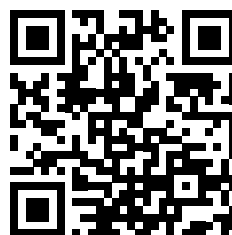


Fig. 1

Product information (cont.)**ViParts app****Inspection and maintenance**

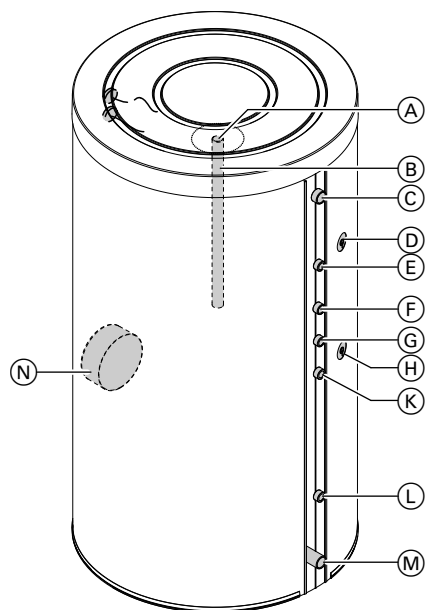
DIN 1988 requires a visual inspection and (if necessary) cleaning no later than 2 years after the cylinder has been commissioned, and thereafter according to requirements.

Note

Recommendation: In addition, perform an annual function check of the protective magnesium anode. This function check can be made without interrupting operation by measuring the earth current with an anode tester: See page 34.

Overview of connections

Type CVB-400-S1, type CVB-400-S2, type CVB-500-S1, type CVB-500-S2



- Ⓒ DHW
- Ⓓ Sensor well for cylinder temperature sensor
- Ⓔ Heating water flow from heat generator (upper internal indirect coil)
- Ⓕ DHW circulation
- Ⓖ Heating water return to the heat generator (upper indirect coil)
- Ⓗ Sensor well for cylinder temperature sensor
- Ⓚ Heating water flow from the solar collectors (lower internal indirect coil)
- Ⓛ Heating water return to the solar collectors (lower indirect coil) and cylinder temperature sensor for solar operation (with threaded elbow)
- Ⓜ Cold water/drain
- Ⓝ Flange for electric immersion heater EHE

Fig. 2

- Ⓐ Connection for thermometer sensor
- Ⓑ Protective magnesium anode with earth cable

Overview of connections (cont.)

Type CVBB-750-S1, type CVBB-910-S1

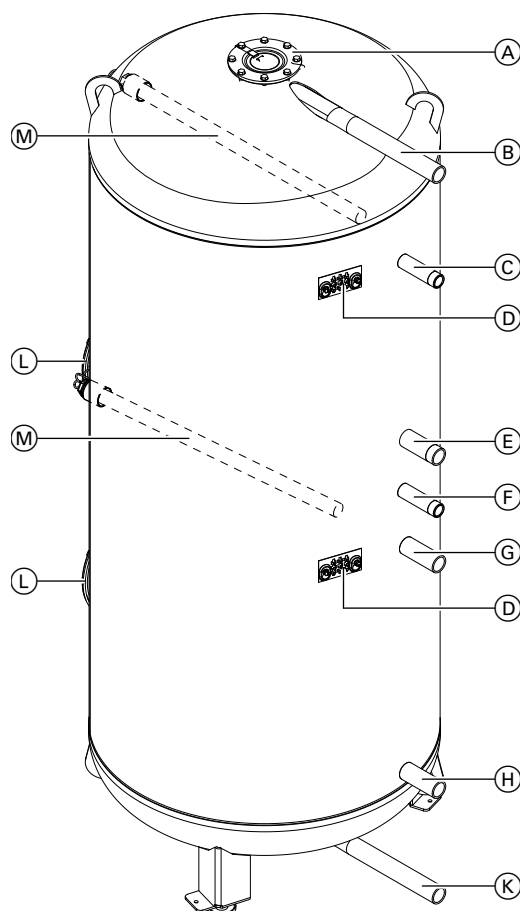


Fig. 3

- Ⓐ Connection for thermometer sensor
 Ⓑ DHW

- Ⓒ Heating water flow (upper indirect coil)
 Ⓓ Clamping device for cylinder temperature sensors
 Ⓔ DHW circulation
 Ⓕ Heating water return (upper indirect coil)
 Ⓖ Heating water flow (lower indirect coil)
 Ⓗ Heating water return (lower indirect coil) and cylinder temperature sensor for solar operation (with threaded elbow)
 Ⓚ Cold water/drain
 Ⓛ Flange for electric immersion heater EHE and/or heating lance
 Ⓜ Protective magnesium anode with earth cable

- The upper indirect coil is designed for connection to a boiler.
- The lower indirect coil is designed for connection to solar collectors.

Information on siting

**Danger**

Intense heat from a naked flame will melt the thermal insulation. The resulting vapours may be harmful to health. Prevent the thermal insulation from coming into contact with naked flames, e.g. from brazing and welding.

**Please note**

Frost and draughts can cause material damage to the DHW cylinder.

- Only site the DHW cylinder in frost-protected and draught-free rooms.
- When not in use, the DHW cylinder must be drained if there is a risk of frost.

Placing the DHW cylinder on a plinth will make the room easier to clean.

Adjustable feet

Note

Level the DHW cylinder using only one or two of the adjustable feet. At least one of the adjustable feet must remain fully screwed in.

Do **not** extend the adjustable feet beyond a total length of 35 mm.

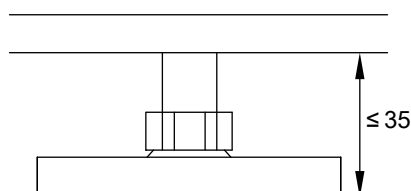


Fig. 4

Minimum clearances

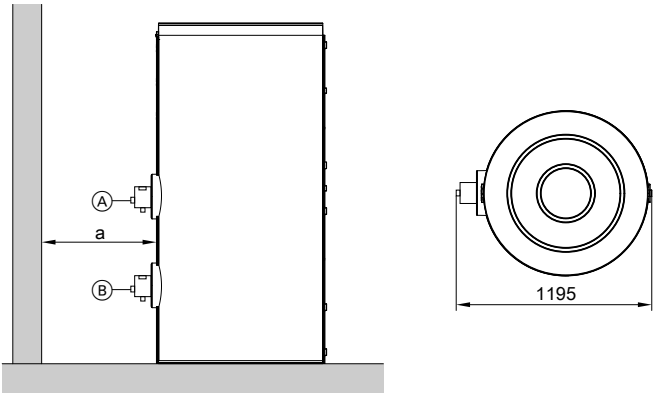


Fig. 5

Installation of the electric immersion heater EHE either in position (A) or (B).
Maintain the following minimum clearances:

Minimum clearance for installation of an electric immersion heater EHE

Installation location	Dimension a
(A)	≥ 700 mm
(B)	≥ 1000 mm

Electric immersion heater EHE

 Installation instructions for the electric immersion heater EHE

- Maintain the minimum clearances to the wall for maintenance work.
- Allow an adequate distance from the wall to enable the temperature controller (if installed) to be operated.
- The unheated length of the electric immersion heater must be at least 100 mm.
- The electric immersion heater EHE must be suitable for enamelled DHW cylinders.

Fitting the lower thermal insulation mat and levelling the DHW cylinder

Type CVB-400-S1, type CVB-400-S2, type CVB-500-S1, type CVB-500-S2



Danger

Intense heat from a naked flame will melt the thermal insulation. The resulting vapours may be harmful to health.

Prevent the thermal insulation from coming into contact with naked flames, e.g. from brazing and welding.

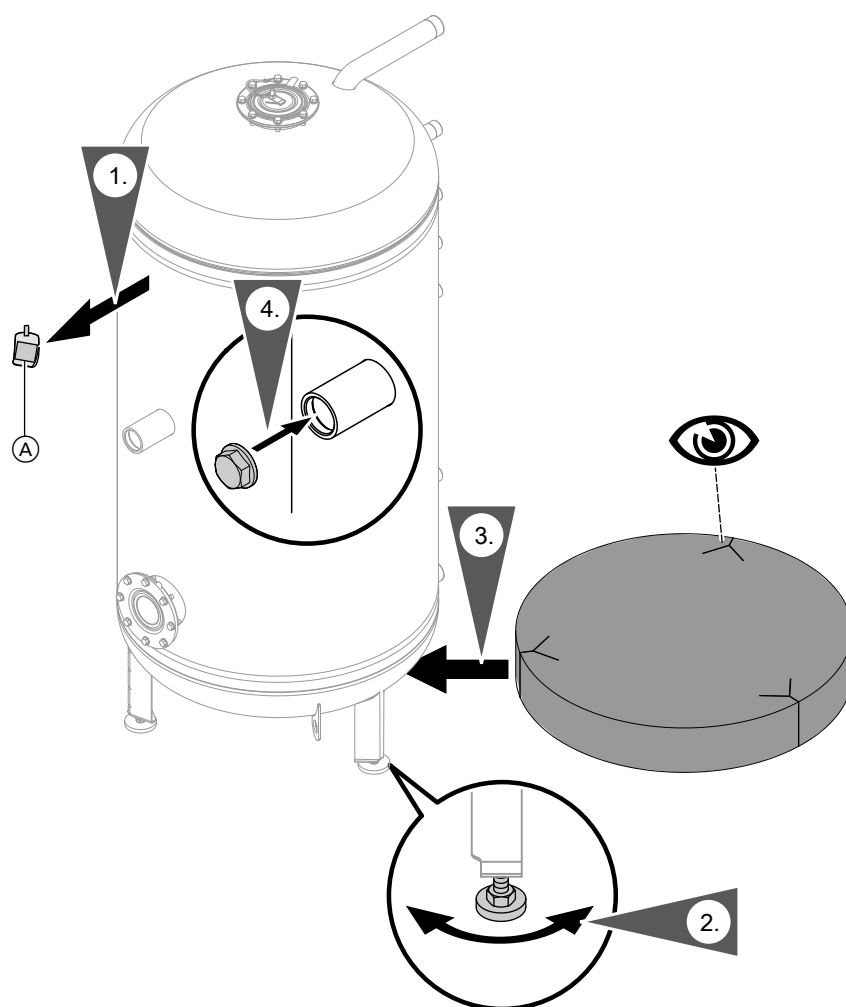


Fig. 6

(A) Bag with type plate

2. Use the adjustable feet to level the cylinder body:
See page 11.
4. If no electric immersion heater EHE is being installed, seal the front sleeve with the plug supplied and fit the cover.

Type CVBB-750-S1, type CVBB-910-S1



Danger

Intense heat from a naked flame will melt the thermal insulation. The resulting vapours may be harmful to health.

Prevent the thermal insulation from coming into contact with naked flames, e.g. from brazing and welding.

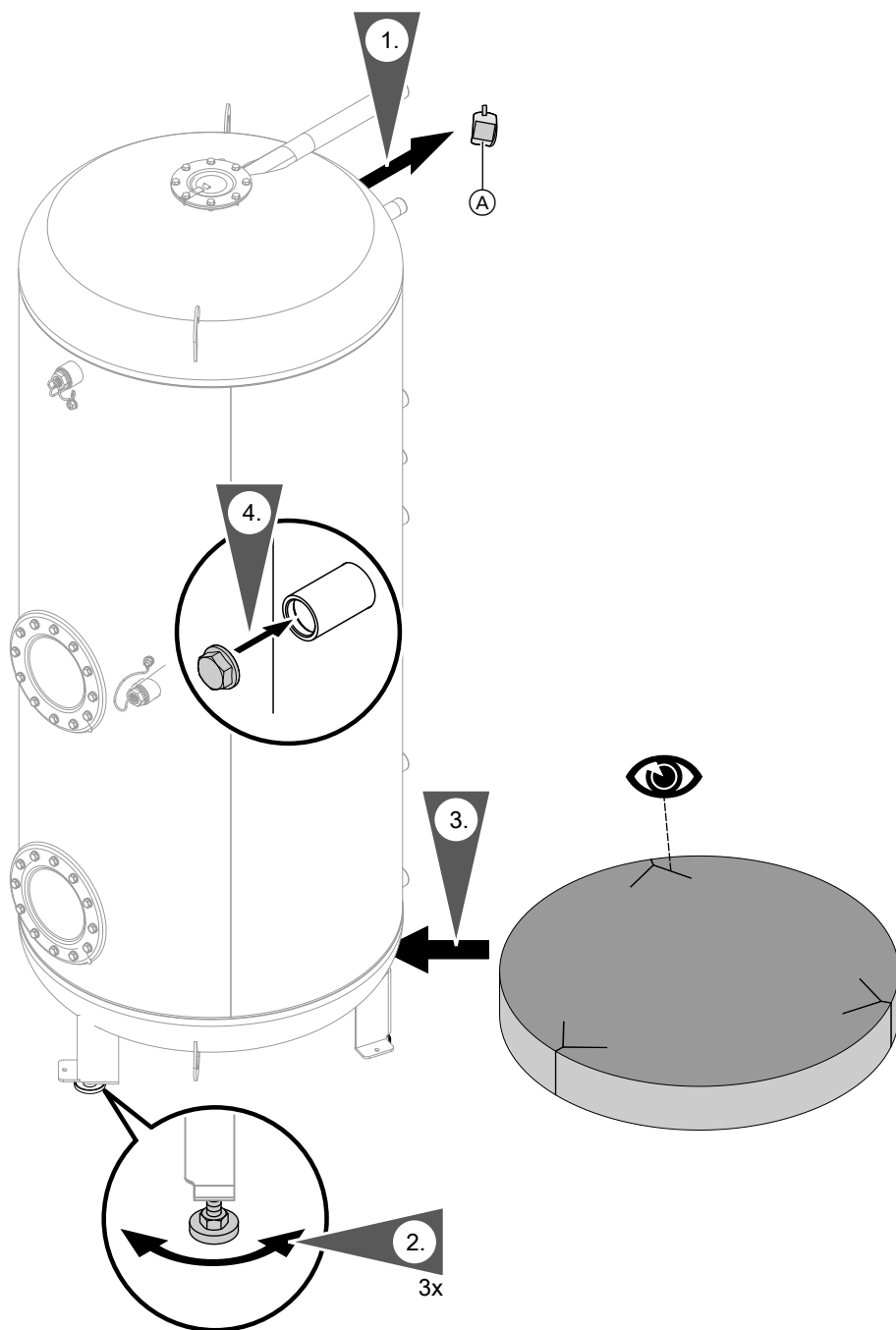


Fig. 7

(A) Bag with type plate

2. Insert the adjustable feet into the legs as far as they will go. Use the adjustable feet to level the cylinder body: See page 11.

4. If no electric immersion heater EHE is being installed, seal the front sleeve with the plug supplied and fit the cover.

Installing the thermometer sensor (if supplied) and cylinder temperature sensor

Type CVBB-750-S1, type CVBB-910-S1

Note

Do not interchange the top thermometer (in standard delivery) and bottom thermometer (accessories). The cable lengths are different.

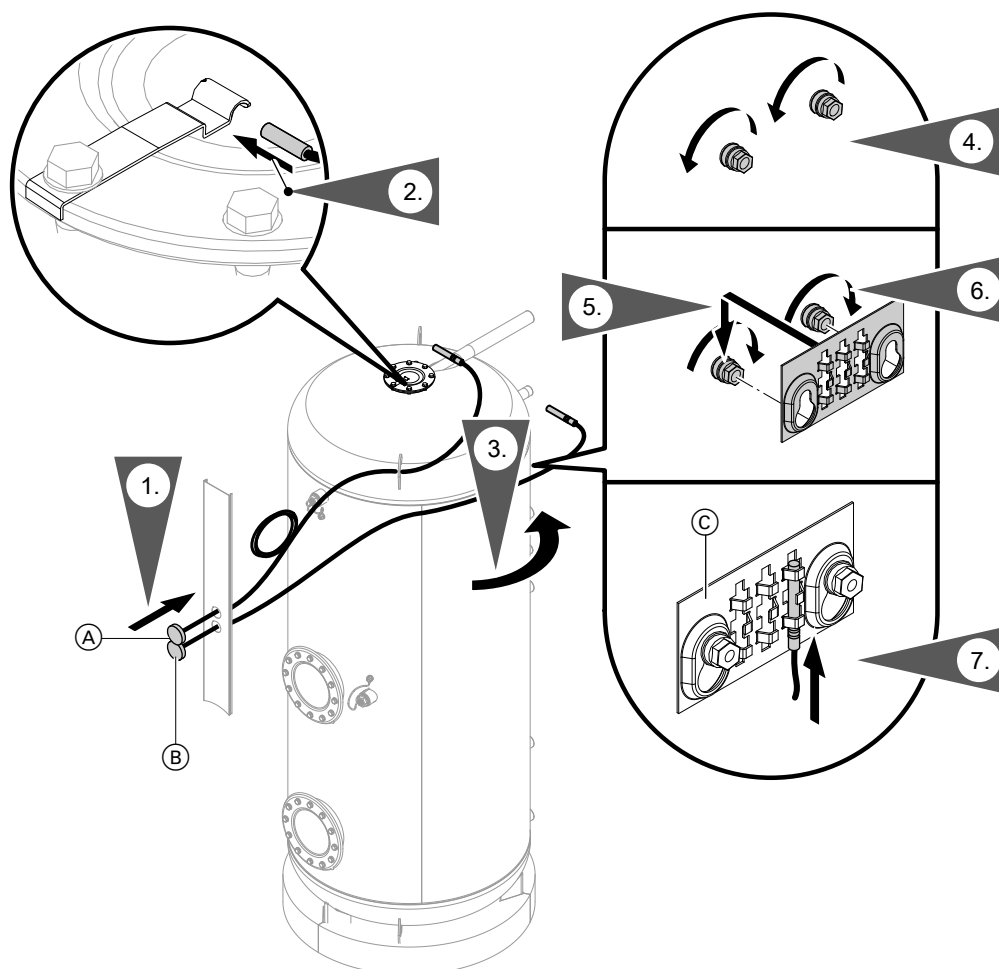


Fig. 8

- (A) Top thermometer (in standard delivery)
- (B) Bottom thermometer (accessories)
- (C) Clamping device

1. Guide the thermometer sensor through the cover strip. Insert the thermometer.
2. Guide the upper thermometer sensor through the lifting eye and as far as it will go into the clamping bracket, and tighten the wing nut.

Note

The cover strip is held in its vertical position by the unwound capillaries. This is necessary for the rest of the installation.

3. Route the thermometer sensor capillaries to the back.
4. Push the clamping device onto the threaded studs and align.

7. Depending on installation position: secure the thermometer sensor in the clamping bracket or push it into the clamping device as far as it will go. Push the cylinder temperature sensor as far as it will go into the clamping device.

Note

- Do **not** wrap insulating tape around the thermometer and sensors.
- When the thermal insulation is being fitted, the sensor leads of the temperature sensors are routed outwards through the apertures (slots) in the rear cover strip.

Fitting the thermal insulation jacket



Danger

Intense heat from a naked flame will melt the thermal insulation. The resulting vapours may be harmful to health. Prevent the thermal insulation from coming into contact with naked flames, e.g. when welding and brazing.

Note

2 people are required for the following work.



Please note

Fleece remnants in the heating water buffer cylinder contaminate the heating water and may result in operating faults.

- During installation, ensure that no fleece remnants enter the heating water buffer cylinder through the cylinder connections.
- Seal connections that are not required with caps.

Type CVB-400-S1, type CVB-400-S2, type CVB-500-S1, type CVB-500-S2

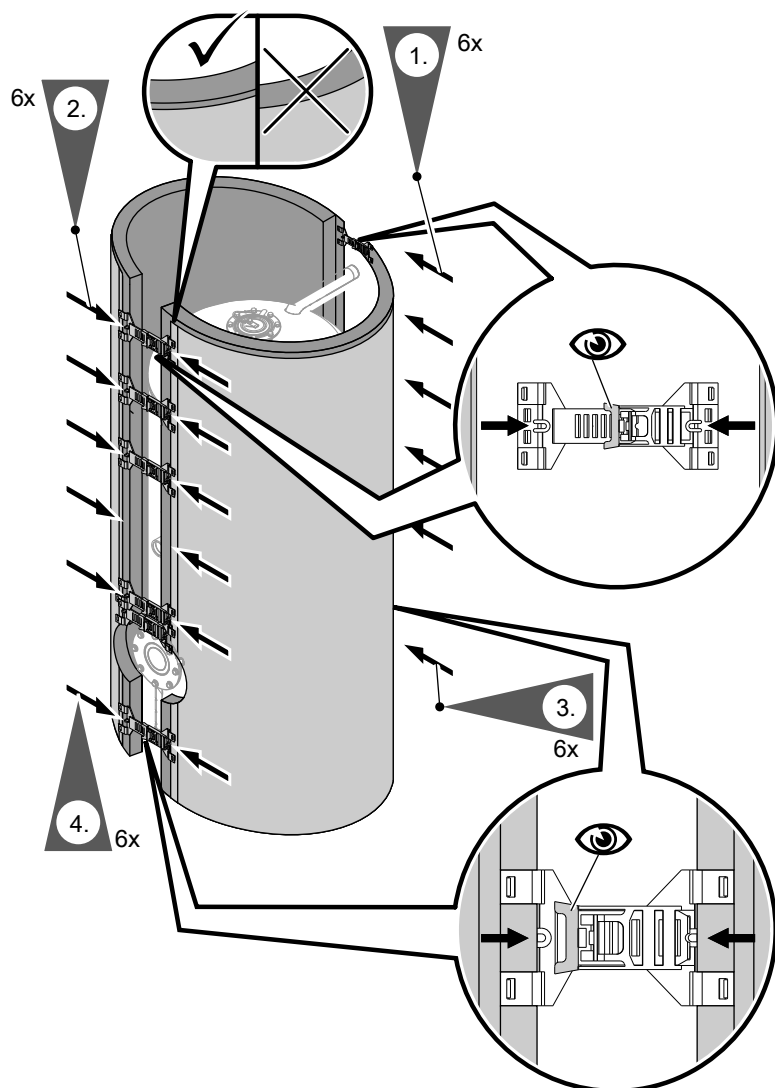


Fig. 9

Fitting the thermal insulation jacket (cont.)

Type CVBB-750-S1, type CVBB-910-S1

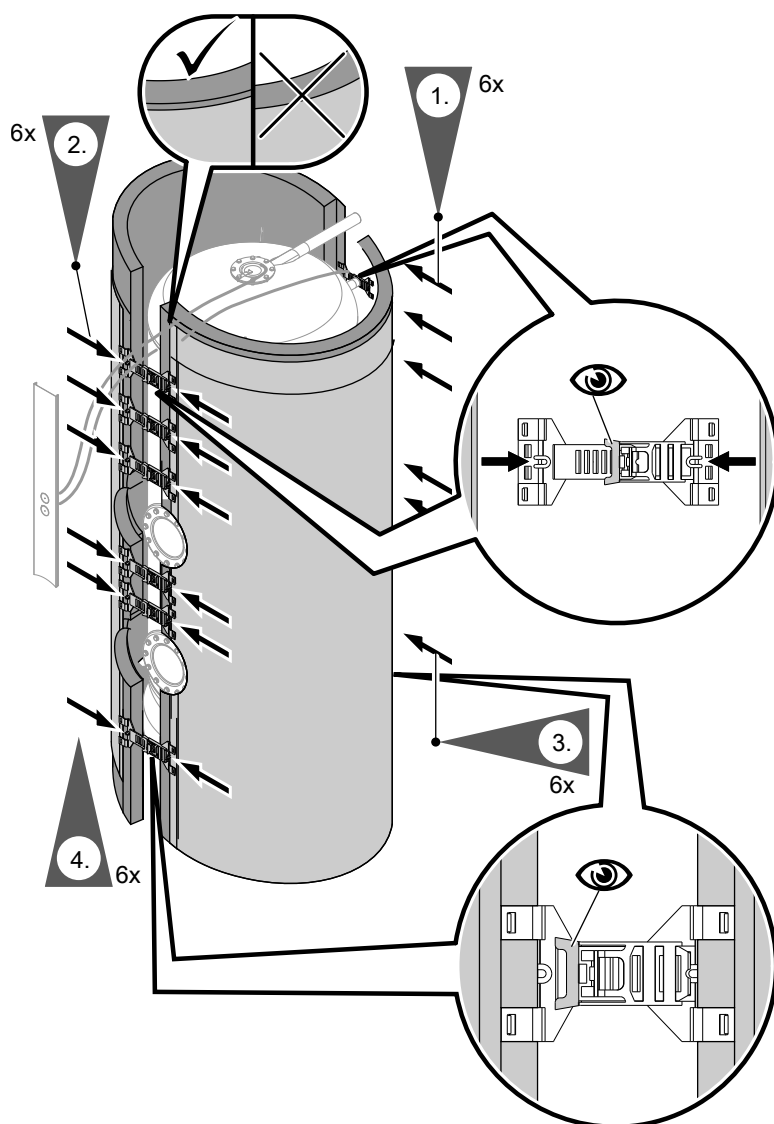


Fig. 10

1. Attach clip fasteners at the back of the cylinder to the edges of the right and left sections of the thermal insulation jacket. Leave the clip fasteners in the first notch. Place the thermal insulation jacket around the cylinder body.
2. Attach clip fasteners at the front of the cylinder to the edges of the right and left sections of the thermal insulation jacket. Leave the clip fasteners in the first notch.
3. Push the clip fasteners on the back of the cylinder as close together as possible.
4. Push the clip fasteners on the front of the cylinder as close together as possible.

Installing the thermometer sensor (if supplied) and cylinder temperature sensor

Type CVB-400-S1, type CVB-400-S2, type CVB-500-S1, type CVB-500-S2

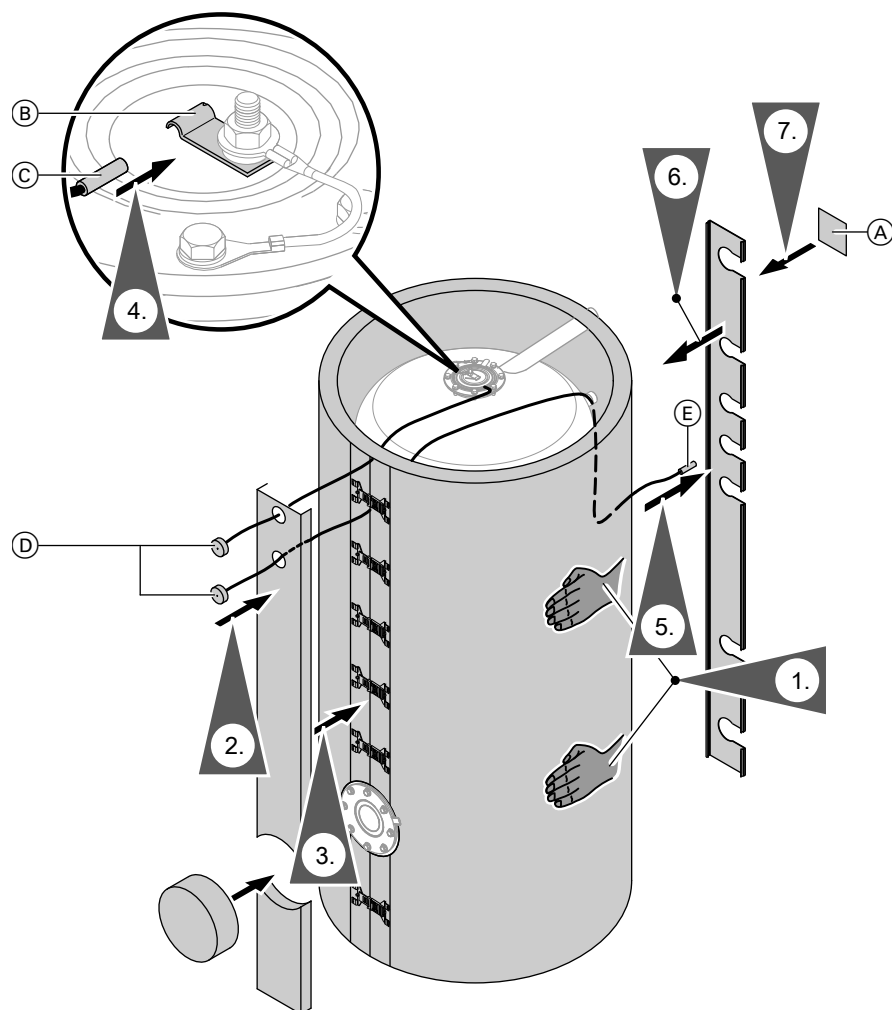
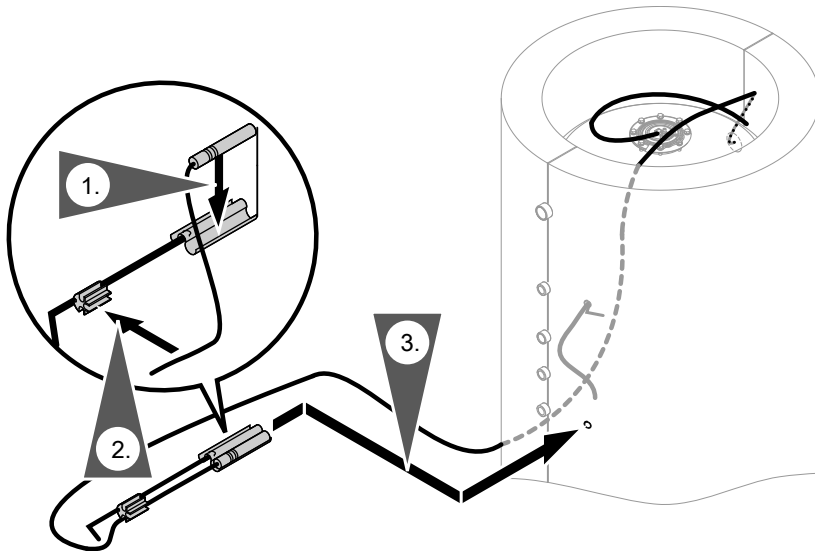


Fig. 11

- Ⓐ DHW cylinder type plate
- Ⓑ Clamping bracket
- Ⓒ Upper thermometer sensor

- Ⓓ Thermometer leads
- Ⓔ Lower thermometer sensor

1. Pat the thermal insulation jacket to fit it evenly around the cylinder body.
2. Guide the thermometer cables through the cover strip and thermal insulation jacket.
3. Fit the front cover strip.
4. Push the upper thermometer sensor into the clamping bracket as far as it will go.
5. Route the lower thermometer sensor at the back through the thermal insulation jacket to the outside.
6. Fit the back cover strip.
7. Affix the type plate.
8. Seal the opening next to the cover strip below the lower thermometer sensor with a cover (pipe collar).

Installing the thermometer sensor (if supplied)... (cont.)**Type CVB-400-S1, type CVB-400-S2, type CVB-500-S1, type CVB-500-S2***Fig. 12*

1. Place the thermometer sensor in the sensor retainer spring, flush with the front.
3. Slide the sensor retainer, together with the thermometer sensor, into the sensor well as far as it will go.

Note

Do **not** wrap insulating tape around the thermometer sensor.

Fitting flange covers and cover strips

Type CVBB-750-S1, type CVBB-910-S1

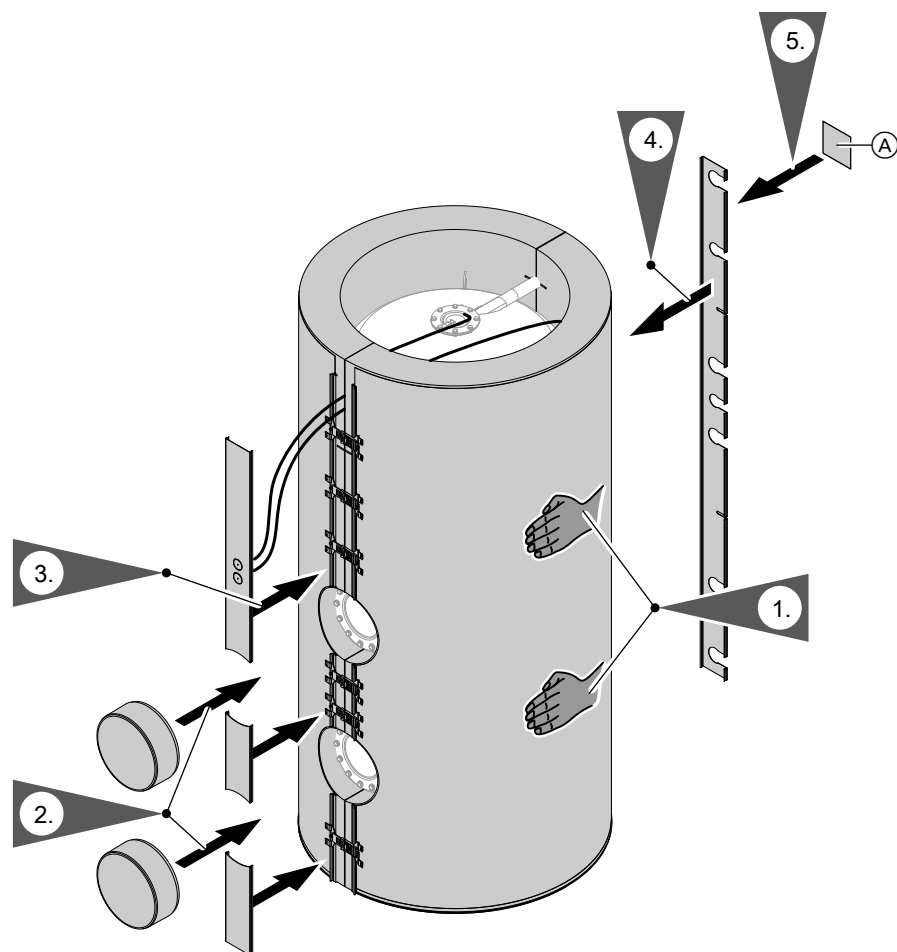


Fig. 13

Ⓐ Type plate

Pat the thermal insulation jacket to fit it evenly around the cylinder body.

Check the anode connection. Fitting the top cover

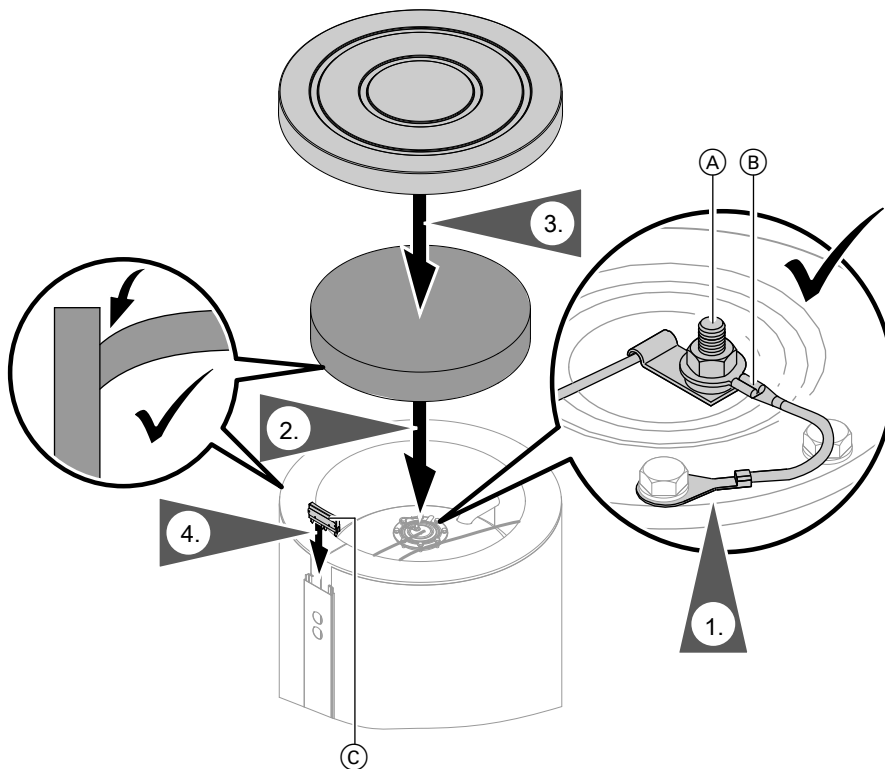


Fig. 14

- (A) Protective magnesium anode
- (B) Earth cable
- (C) Cap

Installing the cylinder temperature sensor

Type CVB-400-S1, type CVB-400-S2, type CVB-500-S1, type CVB-500-S2

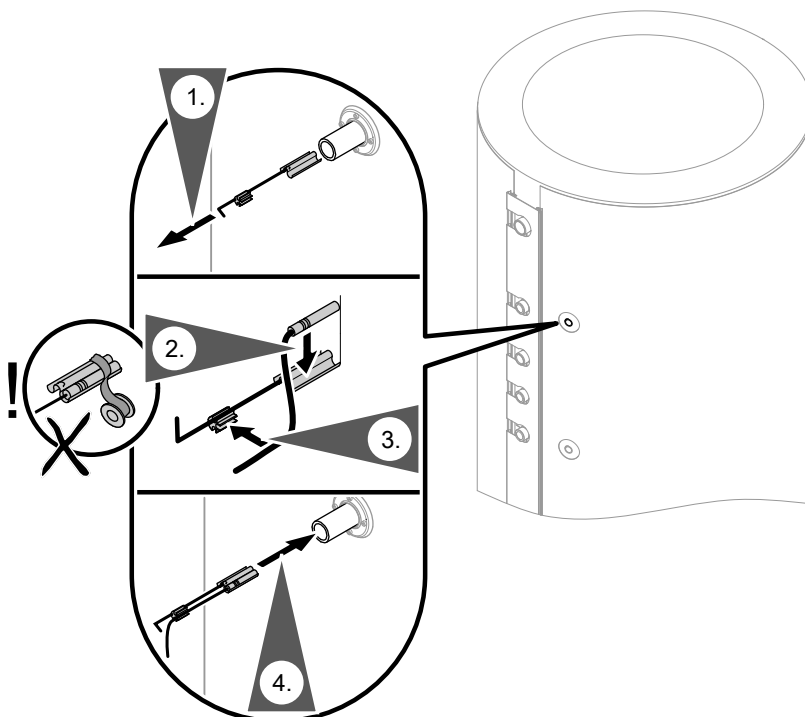


Fig. 15

Installing the cylinder temperature sensor (cont.)

Note

- Cylinder temperature sensor included in standard delivery of control unit
- Insert sensor retainers into the sensor wells.

2. Insert the cylinder temperature sensor into the sensor retainer spring so that it is flush with the front.

4. Slide the sensor retainer, together with the cylinder temperature sensor, into the sensor well as far as it will go.

Installing the cylinder temperature sensor for solar operation

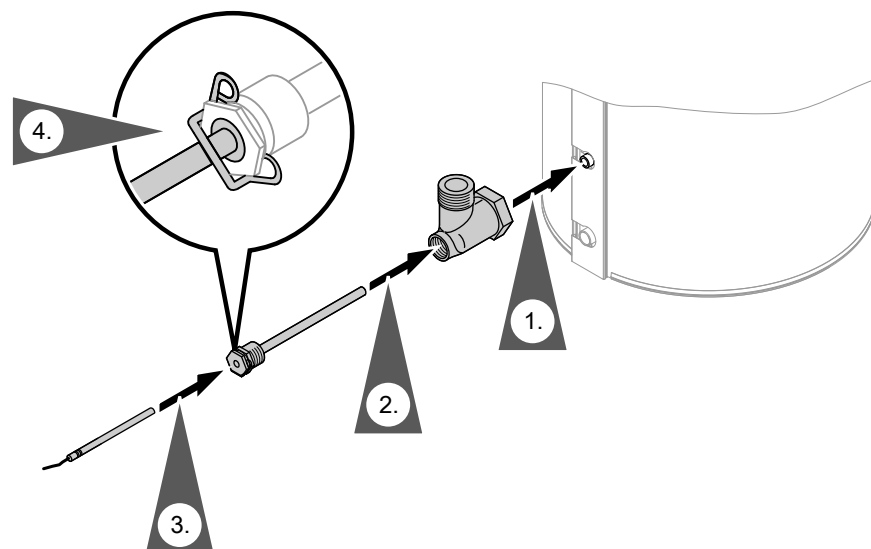


Fig. 16

1. Seal the threaded elbow and sensor well (standard delivery for the DHW cylinder) into the heating water return connection (solar return).

3. Insert the cylinder temperature sensor (standard delivery of the solar control unit) into the sensor well as far as it will go.

4. Secure it with a clamp.

Making the connections on the heating water side

- ! Please note**
- Unsuitable fill and top-up water increases the level of deposits and corrosion. This can reduce the output or cause damage to the DHW cylinder.
 - To prevent residues from entering the heating system, flush the indirect coil thoroughly before filling.
 - Only fill with water of potable quality.
 - Use only softened fill and top-up water complying with VDI 2035.
 - Connect all pipework with detachable fittings.
 - Seal any connections that are not required with red brass caps.
 - Adjust the temperature controller and high limit safety cut-out so that the DHW temperature in the DHW cylinder does not exceed 95 °C.

Permissible heating water flow temperature	
▪ Solar side	160 °C
▪ Heating water side	160 °C
Permissible operating pressure	
▪ Solar side	10 bar 1 MPa
▪ Heating water side	10 bar 1 MPa
▪ DHW side	10 bar 1 MPa
Test pressure	
▪ Solar side	16 bar 1.6 MPa
▪ Heating water side	16 bar 1.6 MPa
▪ DHW side	16 bar 1.6 MPa
Permissible DHW temperature	95 °C

DHW heating by solar collectors

For DHW reheating, the solar collectors are connected to the lower internal indirect coil. In parallel mode, a heat generator is connected to the upper internal indirect coil.

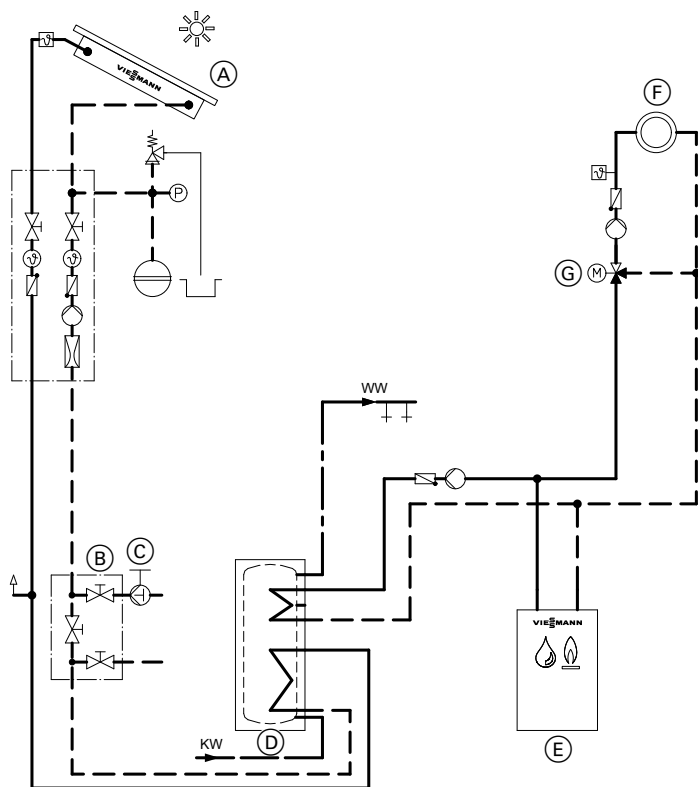


Fig. 17

- | | | | |
|---|------------------------|----|-----------------|
| Ⓐ | Solar collector | Ⓕ | Heating circuit |
| Ⓑ | Fill valve | Ⓖ | Heating mixer |
| Ⓒ | Solar manual fill pump | KW | Cold water |
| Ⓓ | DHW cylinder | WW | DHW |
| Ⓔ | Heat generator | | |

Making the connections on the heating water side (cont.)

DHW heating by heat pump

By means of the upper and lower internal indirect coils (indirect coils connected in series)

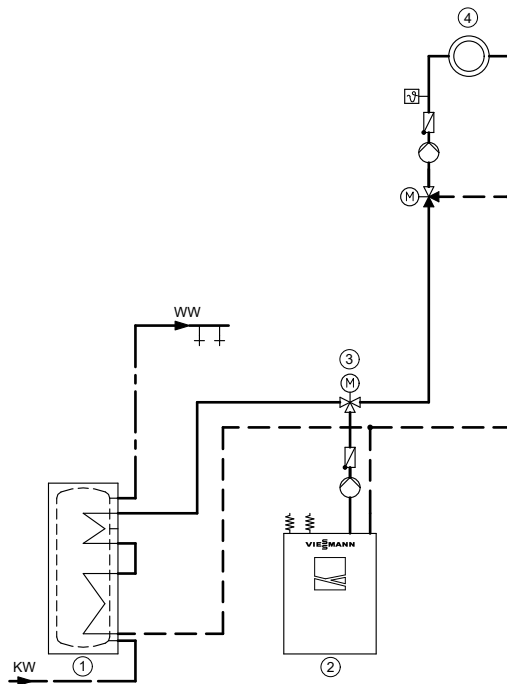


Fig. 18

- | | |
|----------------|-------------------|
| ① DHW cylinder | ④ Heating circuit |
| ② Heat pump | KW Cold water |
| ③ 3-way valve | WW DHW |

1. In the case of heating water flow temperatures above 95 °C, remove the pipe collars from the pipe outlets on the heating water side.

Note

Pipe collars have l.h. threads.

2. Install the heat supply control unit.

3. Install the flow line with a rise and fit an air vent valve at the highest point.
4. Only for heating water flow temperatures above 110 °C: If the system does not already have one, also install a type-tested high limit safety cut-out. For this, use a temperature limiter and high limit safety cut-out (TR/STB).

Making the connections on the DHW side

- For connections on the DHW side, observe DIN 1988 and DIN 4753.
- Connect all pipework with detachable fittings.
- Seal any connections that are not required with red brass caps.
- Equip the DHW circulation pipe with a DHW circulation pump and a check valve.
- Connection of the DHW circulation pump:
 - Connection to the heat generator control unit
 - Connection to a time switch if a DHW circulation pump cannot be connected to the control unit of the heat generator.
- Always install cylinder banks with connected DHW circulation.



Please note

The internal indirect coil is installed with gaskets.

- Temperatures > 150 °C at the connections will damage the gaskets. Maintain a safe distance when brazing and welding.
- Realigning the nipple will damage the gaskets.

Making the connections on the DHW side (cont.)

Type CVB-400-S1, type CVB-400-S2, type CVB-500-S1, type CVB-500-S2

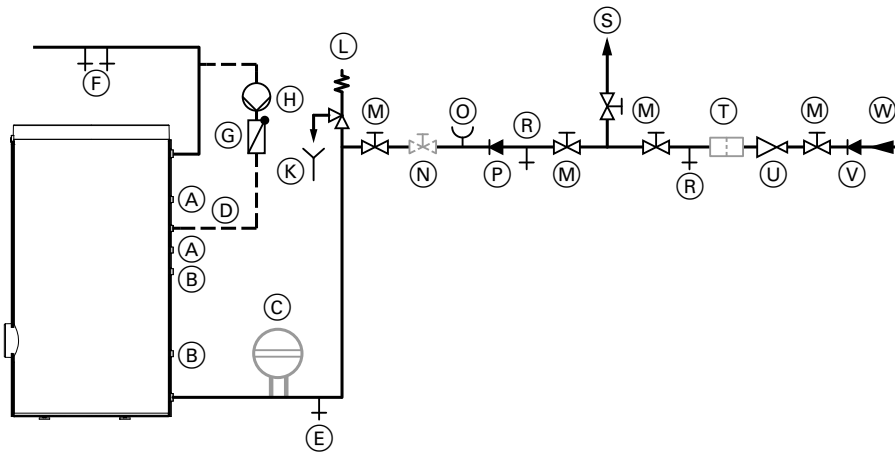


Fig. 19

- | | |
|--|-------------------------------------|
| (A) Upper indirect coil for connection to heat generator | (M) Shut-off valve |
| (B) Lower indirect coil for connection to solar collectors | (N) Flow regulating valve |
| (C) Diaphragm expansion vessel | (O) Pressure gauge connector |
| (D) DHW circulation pipe | (P) Non-return valve |
| (E) Drain | (R) Drain |
| (F) DHW | (S) Cold water |
| (G) Spring-loaded check valve | (T) Drinking water filter |
| (H) DHW circulation pump | (U) Pressure reducer |
| (K) Visible discharge pipe outlet point | (V) Non-return valve/pipe separator |
| (L) Safety valve | (W) Cold water |

Type CVBB-750-S1, type CVBB-910-S1

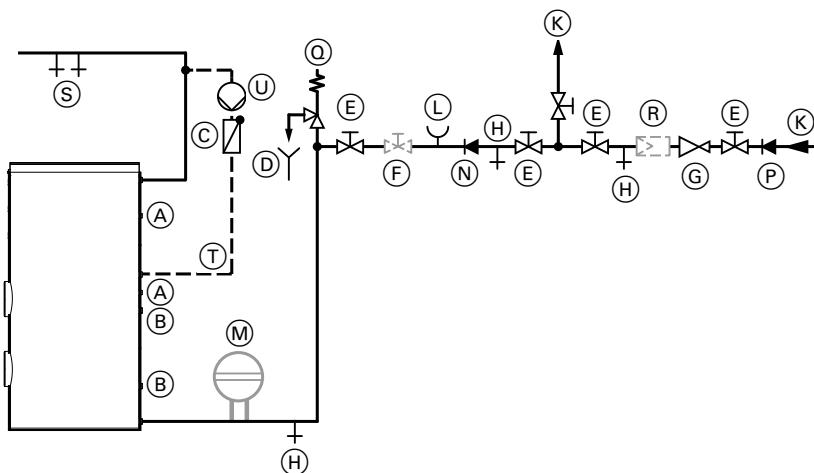


Fig. 20

- | | |
|--|---|
| (A) Upper indirect coil for connection to the boiler | (L) Pressure gauge connector |
| (B) Lower indirect coil for connection to solar collectors | (M) Expansion vessel, suitable for drinking water |
| (C) Spring-loaded check valve | (N) Non-return valve |
| (D) Visible discharge pipe outlet point | (P) Non-return valve/pipe separator |
| (E) Shut-off valve | (Q) Safety valve |
| (F) Flow regulating valve | (R) Drinking water filter |
| (G) Pressure reducer | (S) DHW |
| (H) Drain | (T) DHW circulation pipe |
| (K) Cold water | (U) DHW circulation pump |

Making the connections on the DHW side (cont.)

Safety valve

The system must be equipped with a type-tested diaphragm safety valve as protection against overpressure.

Permissible operating pressure: 10 bar (1 MPa).

Required connection diameter of safety valve:

Cylinder capacity	≤ 200 l	200 to 1000 l	1000 to 5000 l
Min. connection	R ½	R ¾	R 1
	DN 15	DN 20	DN 25
Max. heat input	75 kW	150 kW	250 kW

If the heat input of the DHW cylinder is higher than the max. heat input associated with the capacity, select a larger safety valve: See DIN 4753-1, issue 3/88, section 6.3.1.

Install the safety valve in the cold water line. It must not be possible to isolate this safety valve from the DHW cylinder or the cylinder bank. There must be no constrictions in the pipework between the safety valve and the DHW cylinder.

Never seal off the safety valve discharge pipe. The overpressure can damage the system. Ensure that any expelled water is safely and visibly drained into a drainage system. Affix a sign close to the discharge pipe of the safety valve, preferably on the safety valve itself, that reads as follows:

"For safety reasons, water may be discharged from the discharge pipe during heating! Never seal off the discharge pipe!"

Recommendation: Install the safety valve above the top edge of the DHW cylinder. Then the DHW cylinder will not need to be drained when working on the safety valve.

Connecting the equipotential bonding

Connect the equipotential bonding in accordance with TAR low voltage (VDE-AR-N-4100) of the local power supply utility and VDE regulations.

Steps - commissioning, inspection and maintenance

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			Inspection steps	
			Maintenance steps	Page
			  	
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	•	•	4. Checking the anode earth current with an anode tester.....	30
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Filling the DHW cylinder

1. Fill the DHW cylinder on the DHW side.

Note

If the DHW cylinder is pressurised, tighten the flange cover with a torque of 25 Nm.

2. Check the fittings for leaks on the heating water and DHW sides, and at the electric immersion heater EHE. If required, tighten the fittings.

3. Check the function of the safety valves according to the manufacturer's instructions.

Fill and top-up water



Please note

Unsuitable fill and top-up water increases the level of deposits and corrosion. This can reduce the output or cause damage to the DHW cylinder.

- Flush the heating system thoroughly before filling.
- Only fill with water of potable quality.
- Use only softened fill and top-up water complying with VDI 2035.

The quality of the fill and top-up water is one of the key factors for preventing damage caused by deposits or corrosion in the heating system.

In order to prevent system damage, the European standards and national guidelines for fill and top-up water must be observed right from the design stage, e.g. VDI 2035.

- Regular checks of the appearance, water hardness, conductivity and pH value of the heating water during operation lead to higher operational reliability and system efficiency. These properties must also be observed for the top-up water. According to VDI 2035, the quantity and properties of the top-up water must always be documented in the system log or maintenance reports.
- The basis for filling the heating system is tap water of potable water quality in line with Directive 98/83/EC and/or (EU) 2020/2184. For use as heating water, it is sufficient to soften the tap water. VDI 2035 specifies the maximum recommended concentrations of alkaline earths (hardeners), depending on the heating output and the specific system volume (ratio of the heating output of the heat generators to the heating water volume of the system).

- We recommend always softening the fill and top-up water, as the water hardness can vary due to the mixture of different sources of supply, and the information provided by water supply utilities only gives average values. The information provided by water supply utilities is not sufficient for designing the system. In addition, it must be taken into account that the quantity of top-up water that will be added to the system during its service life cannot be predicted precisely at the design stage (especially in the case of existing heating circuits).
- In systems with components containing aluminium, the heating water must be completely desalinated.
- The use of glycol as antifreeze without adequate inhibition and buffering is not permitted. The suitability of an antifreeze or other chemical additive should be certified by the manufacturer. Chemical additives in the heating water require more extensive monitoring and maintenance. Observe the manufacturer's instructions. No liability is accepted for damage or operating faults arising due to the use of unsuitable additives, incorrect dosing or poor maintenance.
- Chemical water treatments may only be planned and carried out by appropriately qualified specialist companies.



Shutting down the system

1. Disconnect any electrical accessories (e.g. electric immersion heater EHE, impressed current anode) from the power supply. Safeguard against unauthorised reconnection.
2. Close the cold water inlet and heating circuits.
3. If not present, attach drain hose to the drain valve and route to a suitable drain.
4. Open taps or air vent valve.
5. Open drain valve.



Type CVB-400-S1, type CVB-400-S2, type CVB-500-S1, type CVB-500-S2

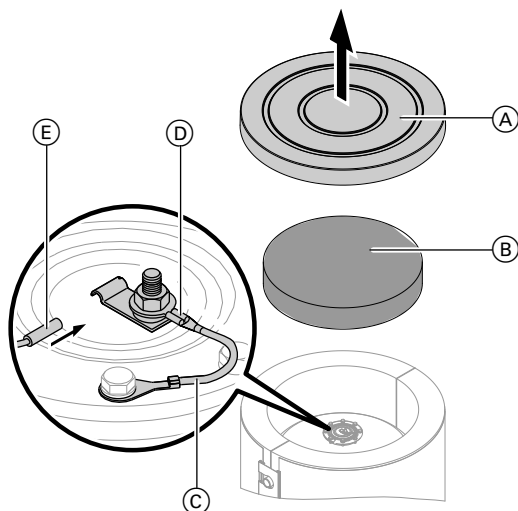


Fig. 21

- Ⓐ Top cover
- Ⓑ Thermal insulation
- Ⓒ Earth cable

- Ⓓ Push-on tab
- Ⓔ Thermometer sensor

1. Remove the top cover and thermal insulation. Remove the thermometer sensor (if installed).
2. Pull the earth cable off the push-on tab.
3. Connect the tester in series between push-on tab and earth cable:
 - Current > 0.3 mA:
Protective magnesium anode is in working order.
 - Current < 0.3 mA:
For the visual inspection of the protective magnesium anode: See page 34



Type CVBB-750-S1, type CVBB-910-S1

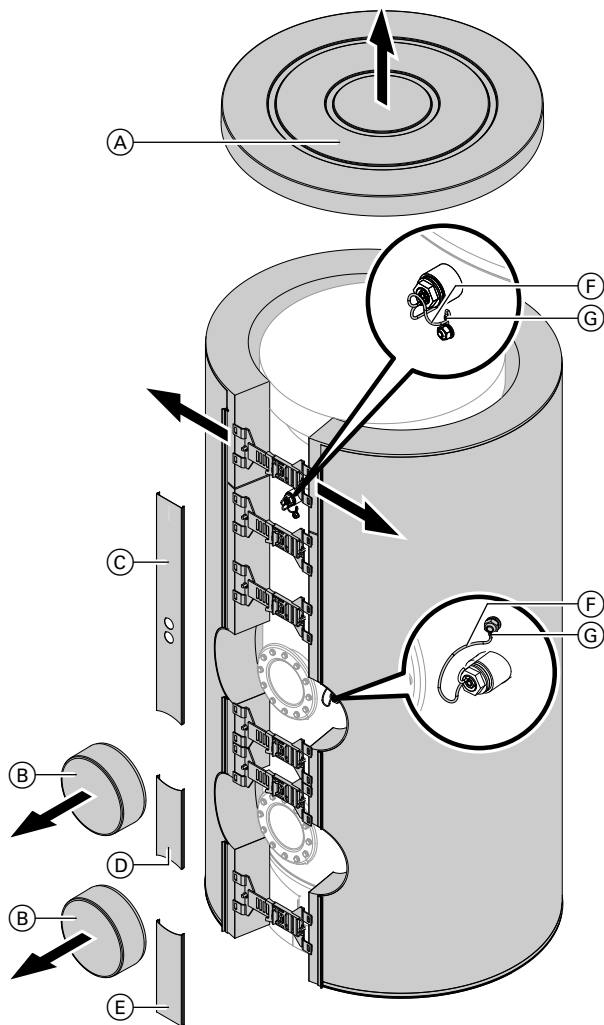


Fig. 22

- Ⓐ Top cover
- Ⓑ Flange cover with thermal insulation
- Ⓒ Cover strips
- Ⓓ Cover strips

- Ⓔ Cover strips
- Ⓕ Earth cables
- Ⓖ Push-on tabs

1. Remove top cover and flange cover with thermal insulation.
2. Remove cover strips. Open and pull apart the clip fasteners.
3. Pull earth cables off the push-on tabs.
4. Connect the tester in series between push-on tab and earth cable:
 - Earth current > 0.3 mA:
Protective magnesium anode is in working order.
 - Earth current < 0.3 mA:
For the visual inspection of the protective magnesium anode: See page 34



Cleaning the inside of the DHW cylinder

Type CVB-400-S1, type CVB-400-S2, type CVB-500-S1, type CVB-500-S2

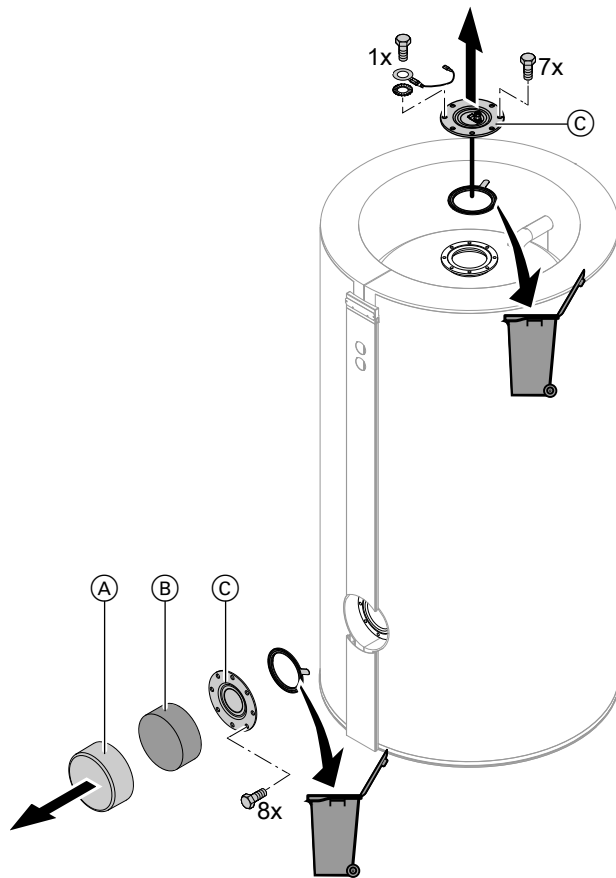


Fig. 23

- (A) Cap
- (B) Thermal insulation
- (C) Flange cover

1. Drain the DHW cylinder on the DHW side.
2. Remove cap, thermal insulation and flange cover.
3. Disconnect the DHW cylinder from the pipework to prevent cleaning agents and contaminants from entering the pipework.
4. **!** **Please note**
Pointed, sharp and hard objects can damage the interior surfaces.
Only use plastic tools to clean the interior.

Remove loose deposits with a high pressure cleaner or manually.

5. **!** **Danger**
Cleaning agent residues can lead to **poisoning**.
Observe the cleaning agent manufacturer's instructions.

- !** **Please note**
Cleaning agents containing hydrochloric acid can damage the interior.
Do not use cleaning agents containing hydrochloric acid.

Use a chemical cleaning agent to remove hard deposits that cannot be removed with a high pressure cleaner.

6. **Fully** drain all cleaning agent.
7. Flush the DHW cylinder **thoroughly** after cleaning.



Cleaning the inside of the DHW cylinder (cont.)

Type CVBB-750-S1, type CVBB-910-S1

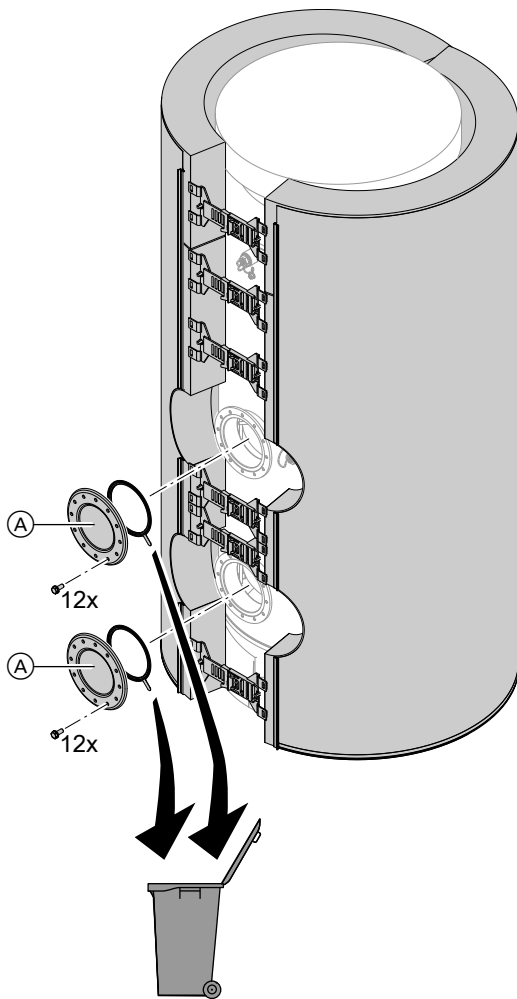


Fig. 24

(A) Flange cover

1. Drain the DHW cylinder on the DHW side.
2. Remove the flange cover.
3. Disconnect the DHW cylinder from the pipework to prevent cleaning agents and contaminants from entering the pipework.
4. **!** **Please note**
Pointed, sharp and hard objects can damage the interior surfaces.
Only use plastic tools to clean the interior.

Remove loose deposits with a high pressure cleaner or manually.

5. **!** **Danger**
Cleaning agent residues can lead to **poisoning**.
Observe the cleaning agent manufacturer's instructions.

! **Please note**
Cleaning agents containing hydrochloric acid can damage the interior.
Do not use cleaning agents containing hydrochloric acid.

Use a chemical cleaning agent to remove hard deposits that cannot be removed with a high pressure cleaner.

6. **Fully** drain all cleaning agent.
7. Flush the DHW cylinder **thoroughly** after cleaning.



Checking and replacing the protective magnesium anode

Check the protective magnesium anode:
Replace the protective magnesium anode if it has eroded to a diameter of ≤ 10 to 15 mm.

Note

A chain anode (accessories) can be installed where space is tight.



Returning the DHW cylinder to use

Type CVB-400-S1, type CVB-400-S2, type CVB-500-S1, type CVB-500-S2

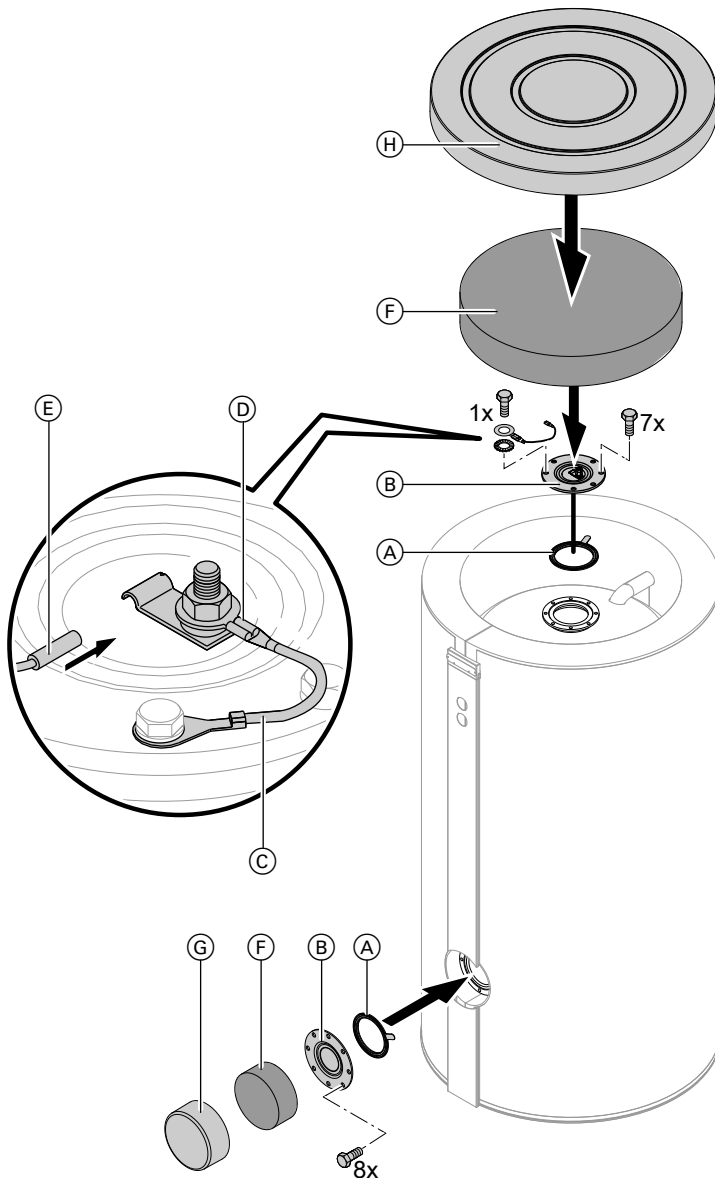


Fig. 25

- | | |
|------------------|------------------------|
| (A) Gaskets | (E) Thermometer sensor |
| (B) Flange cover | (F) Thermal insulation |
| (C) Earth cable | (G) Cap |
| (D) Push-on tab | (H) Top cover |

1. Reconnect the DHW cylinder to the pipework.
2. Insert **new** gaskets with the flange covers.
3. Fit all flange covers and the earth cable.
Max. torque: 25 Nm
4. Push the earth cable onto the push-on tab.
5. Fill the DHW cylinder on the DHW side.
6. Tighten all flange covers.
Max. torque: 25 Nm



Returning the DHW cylinder to use (cont.)

7. Install the thermometer sensor (if supplied).

8. Fit thermal insulation. Fit cap and top cover.

Type CVBB-750-S1, type CVBB-910-S1

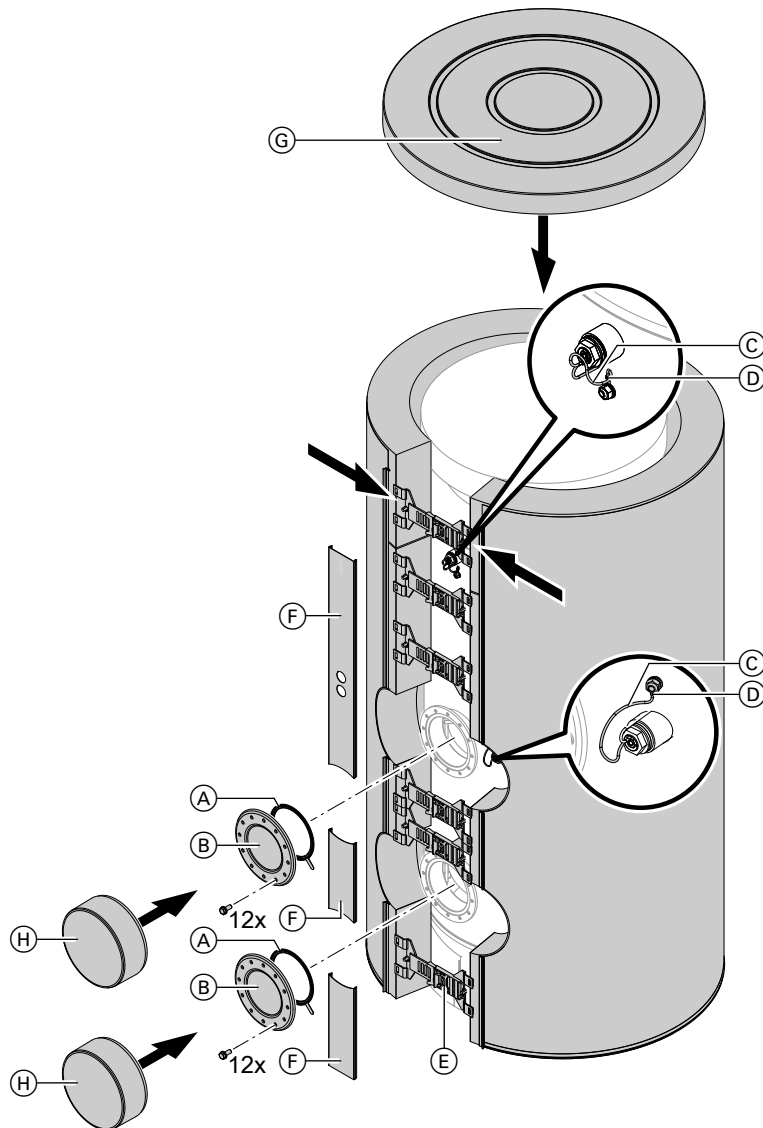


Fig. 26

- | | |
|------------------|---|
| (A) Gaskets | (E) Clip fasteners |
| (B) Flange cover | (F) Cover strips |
| (C) Earth cables | (G) Top cover |
| (D) Push-on tabs | (H) Flange covers with thermal insulation |

1. Reconnect the DHW cylinder to the pipework.
2. Insert **new** gaskets with the flange covers.
3. Fit flange covers. Tighten the screws with a torque of 25 Nm.
4. Connect earth cables to push-on tabs.
5. Fill the DHW cylinder on the DHW side. Then tighten the flange cover with a torque of 25 Nm.
6. Push clip fasteners as close together as possible. Fit cover strips.
7. Fit top cover and flange cover with thermal insulation.



Checking the connections on the water side for tightness



Commissioning/service reports

	Commissioning	Maintenance/service	Maintenance/service
Date:			
By:			

	Maintenance/service	Maintenance/service	Maintenance/service
Date:			
By:			

	Maintenance/service	Maintenance/service	Maintenance/service
Date:			
By:			

	Maintenance/service	Maintenance/service	Maintenance/service
Date:			
By:			

	Maintenance/service	Maintenance/service	Maintenance/service
Date:			
By:			

Specification

Cylinder type		CVB-400-S1	CVB-400-S2	CVB-500-S1	CVB-500-S2	CVBB-750-S1	CVBB 910-S1
Dimensions							
Length							
▪ Incl. thermal insulation	mm	859	859	859	859	1062	1062
▪ Excl. thermal insulation	mm	650	650	650	650	790	790
Total width							
▪ Incl. thermal insulation	mm	923	923	923	923	1110	1110
▪ Excl. thermal insulation	mm	881	881	881	881	1005	1005
Height							
▪ Incl. thermal insulation	mm	1624	1624	1948	1948	1897	2197
▪ Excl. thermal insulation	mm	1518	1518	1844	1844	1797	2103
Height when tilted							
▪ Excl. thermal insulation	mm	1550	1550	1860	1860	1980	2266
Weight							
▪ Incl. thermal insulation	kg	150	162.5	186	194.5	273	315
▪ Excl. thermal insulation	kg	130	130	160	160	240	278
Connections							
Upper indirect coil (male thread)		G 1	G 1	G 1	G 1	G 1	G 1
Lower indirect coil (male thread)		R 1	R 1	R 1	R 1	R 1¼	R 1¼
Cold water, DHW (male thread)		R 1¼	R 1¼	R 1¼	R 1¼	R 1¼	R 1¼
DHW circulation (male thread)		R 1	R 1	R 1	R 1	R 1¼	R 1¼
Electric immersion heater EHE (female thread)		R 1½	R 1½	R 1½	R 1½	R 1½	R 1½

Specification – electric immersion heater EHE

Electric immersion heater EHE, 6 kW

Rated output, standard mode	kW	2	4	6
Rated voltage		1/N/PE 230 V~/50 Hz	1/N/PE 230 V~/50 Hz	3/PE 400 V~/50 Hz
Rated current	A	8.7	17.4	8.7

Electric immersion heater EHE, 12 kW

Rated output, standard mode	kW	6	8	12
Rated voltage		2/PE 400 V~/50 Hz	2/PE 400 V~/50 Hz	3/PE 400 V~/50 Hz
Rated current	A	10	20	17.3

Final decommissioning and disposal

This product can be recycled. Components and fluids from the system do not belong in ordinary domestic waste.

For decommissioning, isolate the system from the power supply, secure against reconnection and allow components to cool down where appropriate. All components must be disposed of correctly.

Declaration of conformity

We, Viessmann Climate Solutions GmbH & Co. KG,
Viessmannstrasse 1, 35108 Allendorf (Eder),
Germany, as legal successor of
Viessmann Climate Solutions SE,
Viessmannstrasse 1, 35108 Allendorf (Eder), Ger-
many, declare as sole responsible body that the
named product complies with the European directives
and supplementary national requirements in terms of
its design and operational characteristics.

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