

Installation instructions

for contractors

VIESMANN


Vitocell 300-V/W Type EVIA-A

DHW cylinder with internal indirect coil
160 to 500 l


VITOCCELL 300-V/W




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 qualified contractors.

- Work on electrical equipment may only be carried out by a qualified electrician.

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
- All relevant safety regulations as defined by DIN, EN, DVGW, VDE and locally applicable standards
 - Ⓐ ÖNORM, EN and ÖVE
 - Ⓒ SEV, SUVA, SVTI, SWKI and SVGW

Working on the system


- Isolate the system from the power supply (e.g. by removing the separate fuse or by means of a mains isolator) and check that it is no longer live.
- Safeguard the system against reconnection.
- Wear protective clothing.




Danger

Hot surfaces can cause burns.

- Before maintenance and service work, switch OFF the appliance and let it cool down.
- Never touch the hot surfaces of uninsulated pipes and fittings.

 **Please note**
Electronic assemblies can be damaged by electrostatic discharge.
Prior to commencing any work, touch earthed objects such as heating or water pipes to discharge static loads.

Repair work

 **Please note**
Repairing components that fulfil a safety function can compromise the safe operation of the system.
Replace faulty components only with genuine Viessmann spare parts.

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Disposal of packaging










Please dispose of packaging waste in line with statutory regulations.

DE: Use the disposal system organised by Viessmann.

AT: Use the ARA statutory disposal system (Altstoff Recycling Austria AG, licence number 5766).

CH: Packaging waste is disposed of by the HVAC contractor.

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 material losses and environmental pollution
	Live electrical area
	Pay particular attention.
	<ul style="list-style-type: none"> ▪ Component must audibly click into place. or ▪ Acoustic signal
	<ul style="list-style-type: none"> ▪ 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.

Intended use

The appliance is only intended to be installed and operated 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. Heating water buffer cylinders are only designed to hold fill water of potable water quality. Only operate solar collectors with the 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 for the individual case.

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

Incorrect usage also occurs 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

Stainless steel DHW cylinder with internal indirect coil for DHW heating in conjunction with floorstanding and wall mounted boilers.

- Capacity: 160, 200, 300 and 500 l
- 300 and 500 l: An immersion heater can be used.
- Suitable for systems conforming to DIN 1988, EN 12828 and DIN 4753

Connections

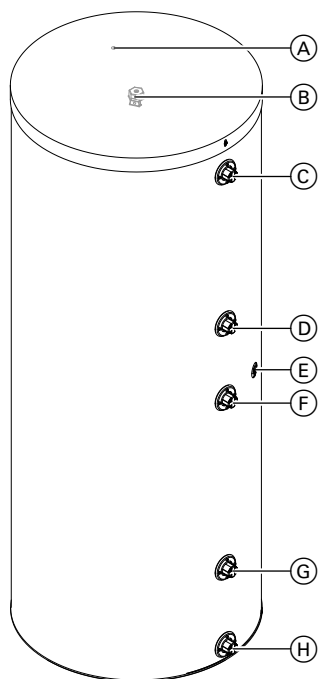


Fig. 1 160, 200, 300 litres

- Ⓐ Cylinder temperature sensor (160 and 200 l, below the thermal insulation)
- Ⓑ High limit safety cut-out (below the thermal insulation)
- Ⓒ DHW
- Ⓓ DHW circulation
- Ⓔ Cylinder temperature sensor or temperature controller (300 l)
- Ⓕ Heating water flow
- Ⓖ Heating water return
- Ⓗ Cold water

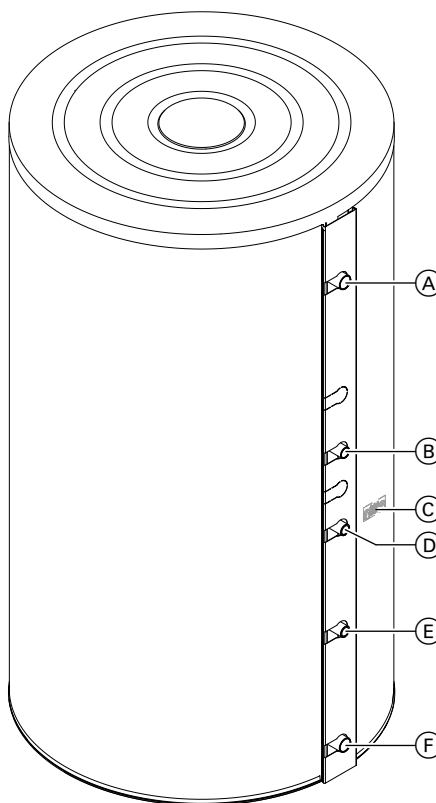


Fig. 2 500 litres

- Ⓐ DHW
- Ⓑ DHW circulation
- Ⓒ Clamp (behind the thermal insulation) for cylinder temperature sensor or temperature controller
- Ⓓ Heating water flow
- Ⓔ Heating water return
- Ⓕ Cold water

Information on transport and siting

Note

- Use a transport aid (accessories).
- Transport the appliance with a sufficient number of persons. Note the weight of the cylinder (see page 20).



Please note

To prevent material losses, install the DHW cylinder in a room free from draughts and risk of frost.

When not in use, the DHW cylinder must be drained if there is a risk of frost.



Please note

The thermal insulation must not come into contact with naked flames.

Exercise caution when welding and brazing.

- Minimum wall clearance: 500 mm.
- Provide adequate clearance from the wall to allow for operation of the temperature controller (if installed).
- Use the adjustable feet to level the DHW cylinder.

Note

Never extend the adjustable feet beyond a total length of 35 mm.

300 and 500 l capacity: Setting up the DHW cylinder with immersion heater

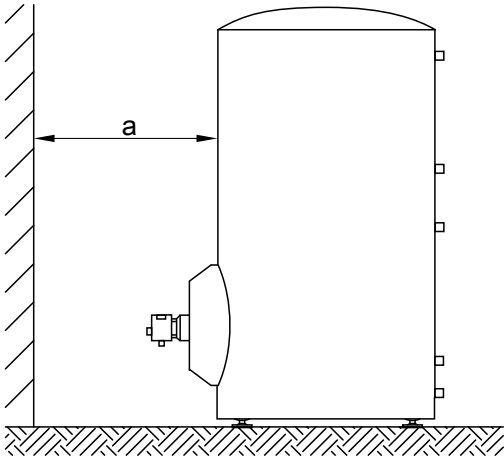


Fig. 3



Immersion heater installation instructions

Maintain the minimum clearance.

Cylinder capacity	Dim. a
300 l	730 mm
500 l	670 mm

Note

The unheated length of any threaded immersion heater installed on site must be at least 100 mm.

Installing the temperature controller sensor

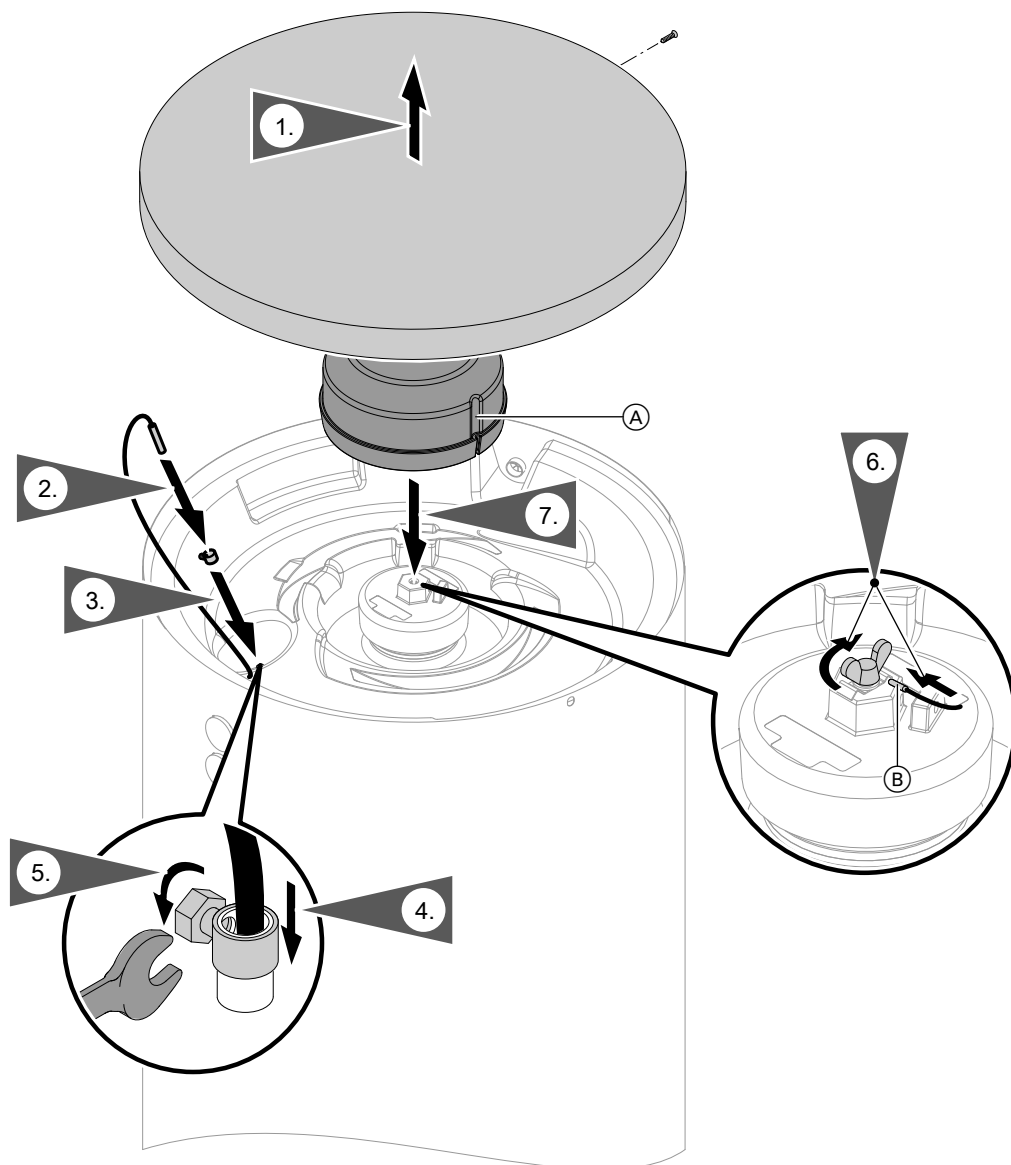


Fig. 4

Note for cylinders with 300 l capacity

Following step 1, remove the parts for flange cover installation.

Note on steps 2 to 5

For 160 and 200 l capacities only.

Note on step 6

If a high limit safety cut-out is installed:

- Cut out opening **A** on flange insulation.
- Push high limit safety cut-out sensor **B** into clamping bracket, and secure with wing screw.

Affixing the type plate

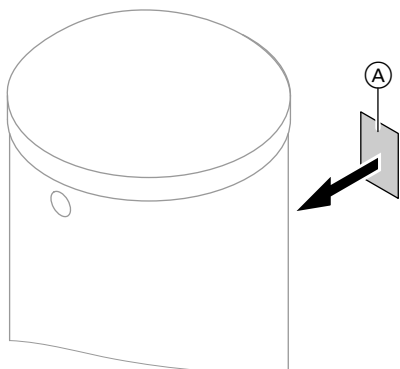


Fig. 5

Ⓐ Type plate

300 l capacity

Installing the sensor well and the cylinder temperature sensor

Note

The sensor retainer is in the sensor well.

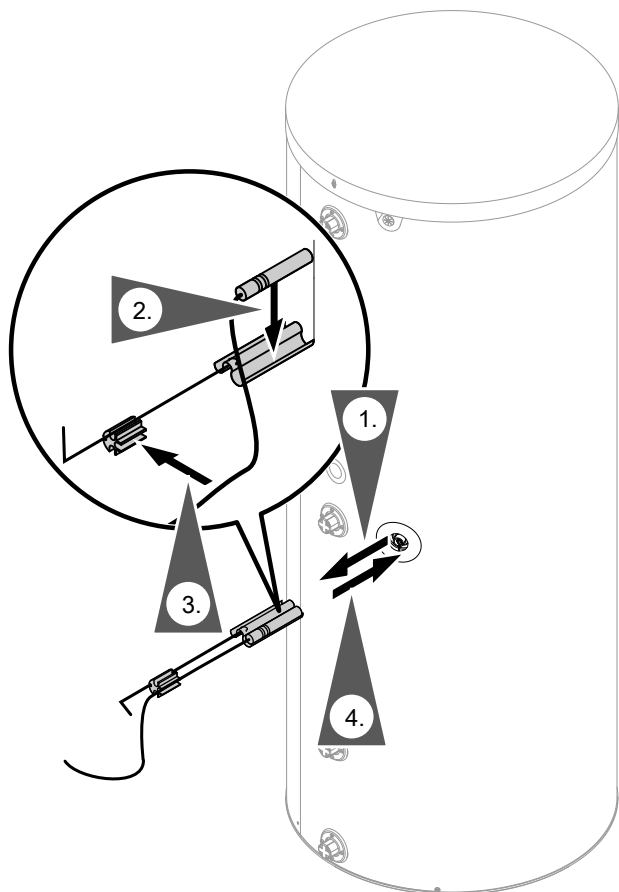


Fig. 6

1. Extract the sensor retainer.
2. Fit the sensor to the outside of the sensor retainer contact spring (not in the groove).

Note

- The sensor must sit flush with the front of the spring.
- **Never** wrap insulating tape around the sensor.

3. Insert the sensor retainer with sensor into the sensor well as far as it will go.

Fitting the flange cover

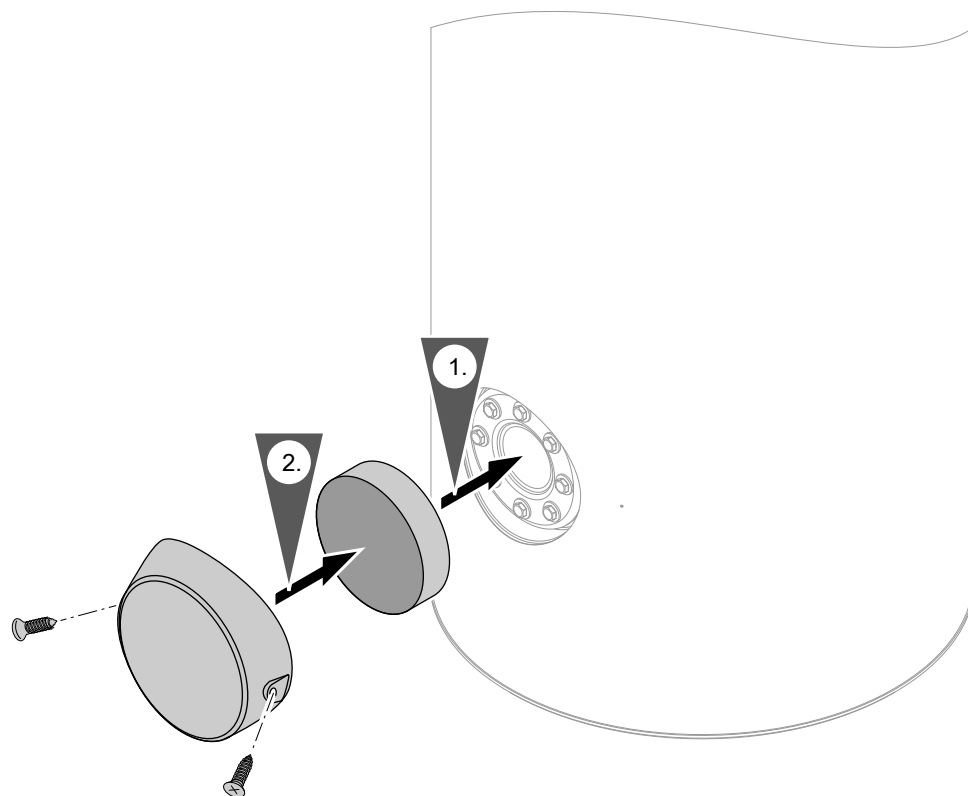


Fig. 7

Siting the DHW cylinder and fitting the thermal insulation mat at the bottom

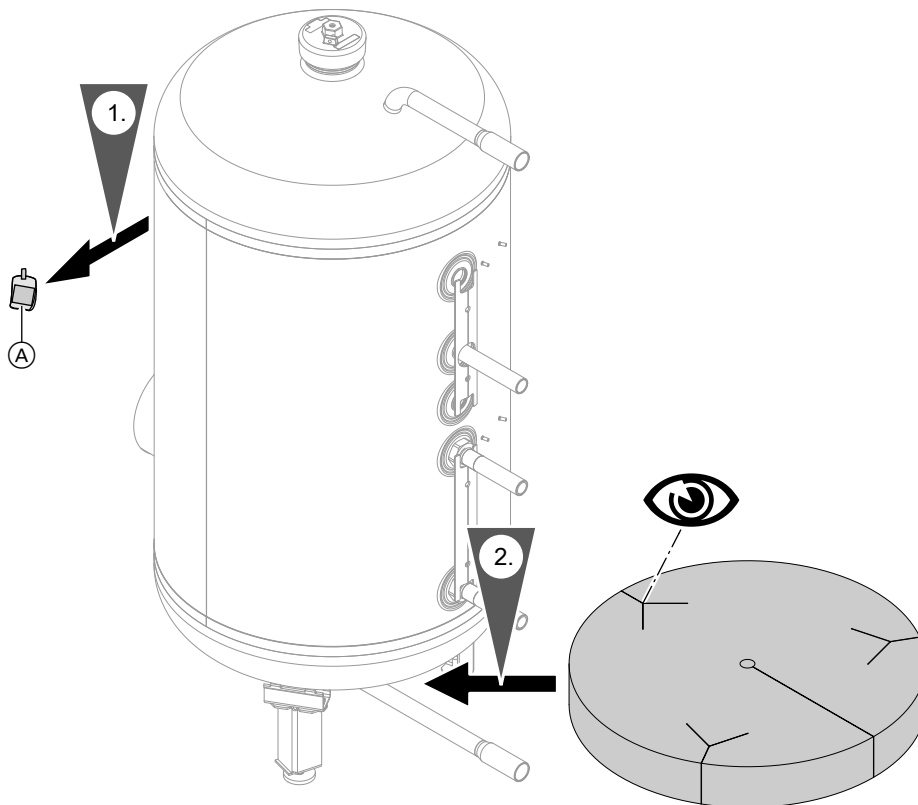


Fig. 8

Ⓐ Type plate

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

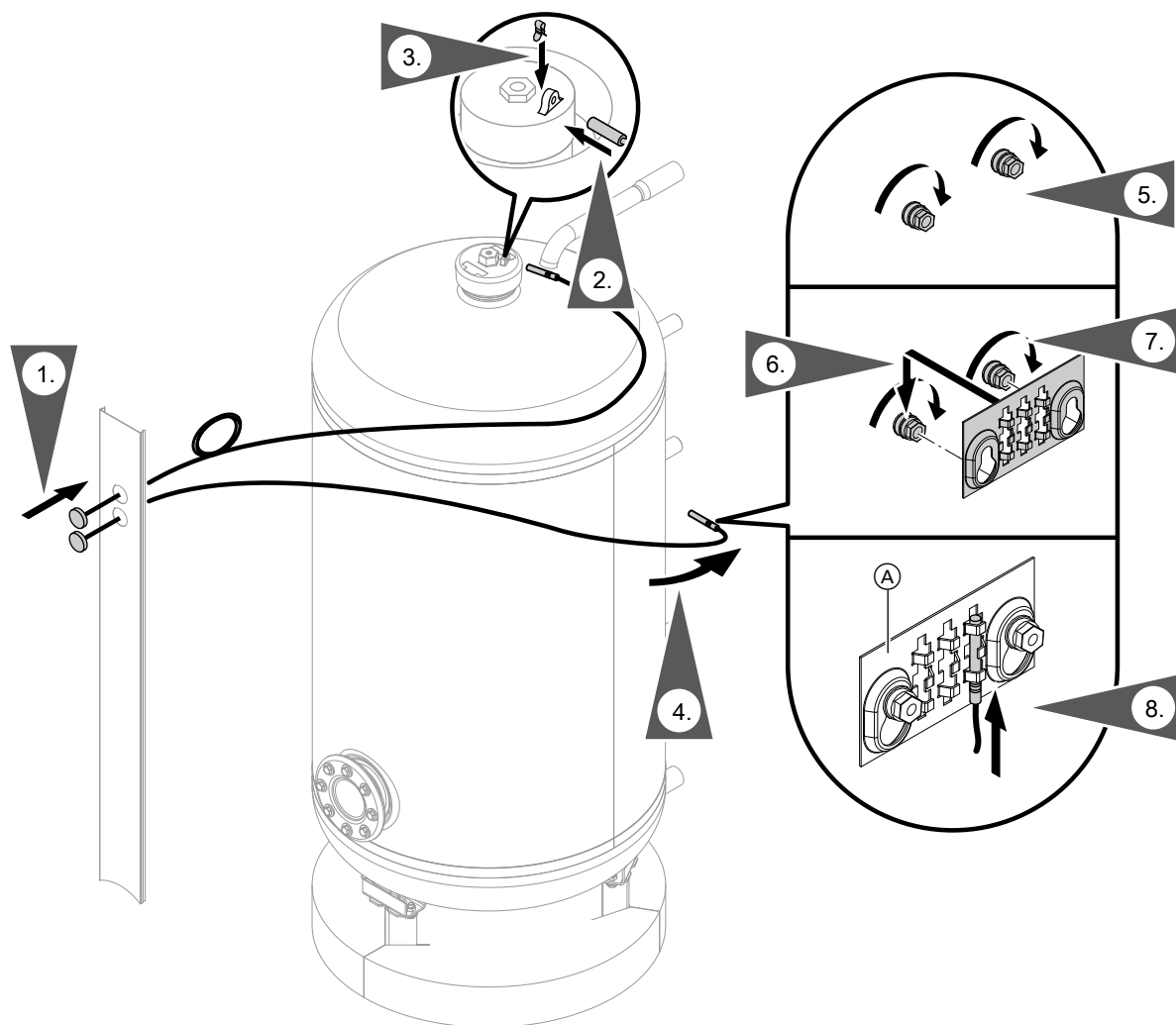


Fig. 9

1. Guide the thermometer sensor through the cover strip and insert the thermometer.

Note

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

2. Insert the upper thermometer sensor as far as it will go into the hole in the cylinder cap.
3. Use clips to secure the thermometer sensor against being pulled out.
4. Route the bottom thermometer sensor capillaries to the back of the cylinder body.
5. Screw the nuts onto the threaded studs. Do not tighten.

6. Slot the clamps onto the threaded studs and align.

7. Tighten the nuts.

8. Depending on where the sensor is being fitted: Insert the **thermometer sensors** and **cylinder temperature sensors** into clamp (A) as far as they will go.

Note

- **Never** wrap insulating tape around the sensors.
- When the thermal insulation is being fitted, the cylinder temperature sensor leads are routed outwards through the apertures (slots) in the rear cover strip.

Fitting the thermal insulation jacket

Note

- Ensure that no fleece remnants enter the DHW cylinder through the cylinder connections.
- 2 people are required for the following work.

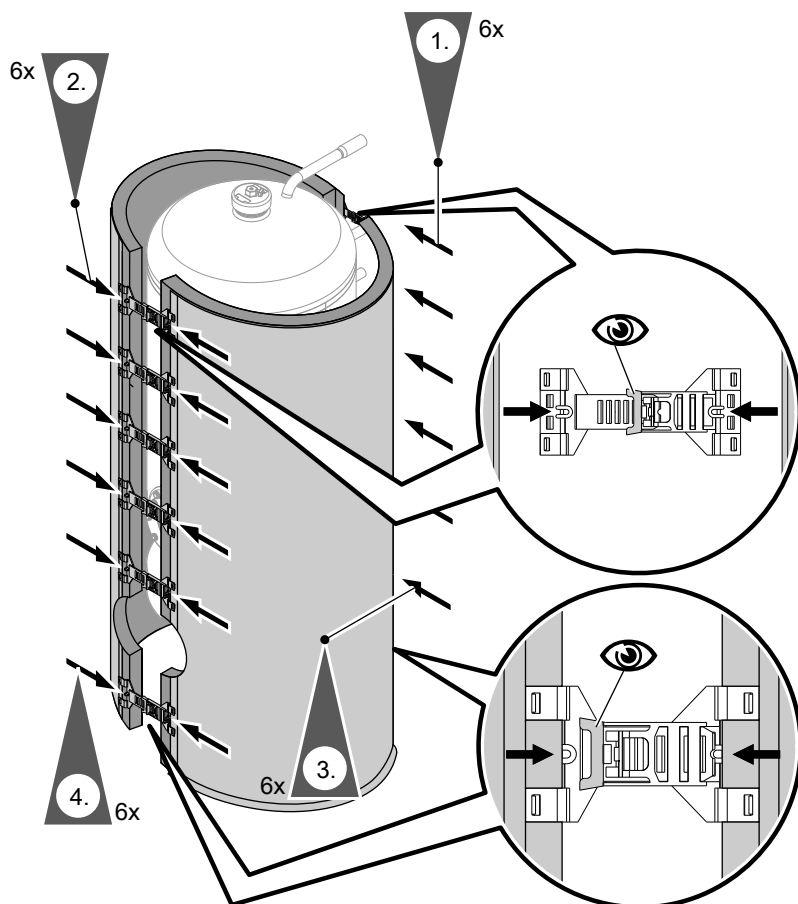


Fig. 10

1. At the back of the cylinder: Attach 6 clip fasteners to the edges of the right and left sections of the thermal insulation jacket. Place the thermal insulation jacket around the cylinder body.
3. Push the clip fasteners at the back of the cylinder as close together as possible.

Note

Leave the clip fasteners in the first notch.

2. At the front of the cylinder: Attach 6 clip fasteners to the edges of the right and left sections of the thermal insulation jacket.
4. Push the clip fasteners at the front of the cylinder as close together as possible.

Fitting the cover strips

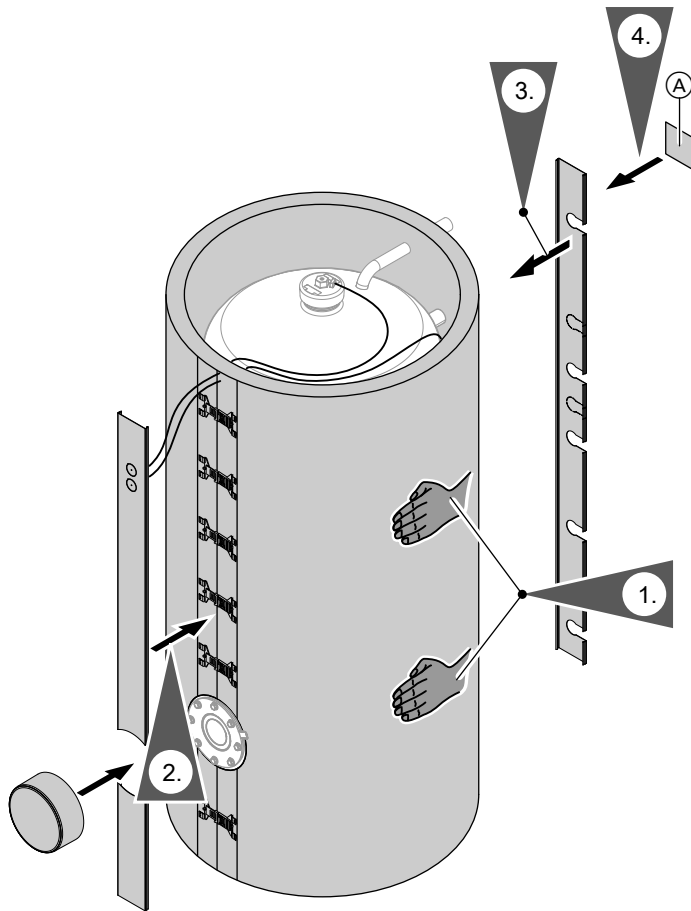


Fig. 11

Ⓐ DHW cylinder type plate

1. Fit the thermal insulation jacket evenly around the cylinder body by patting it.
2. Mount the front cover strip and flange cover.
3. Fit the rear cover strip.
4. Affix the type plate.

Fitting the cover

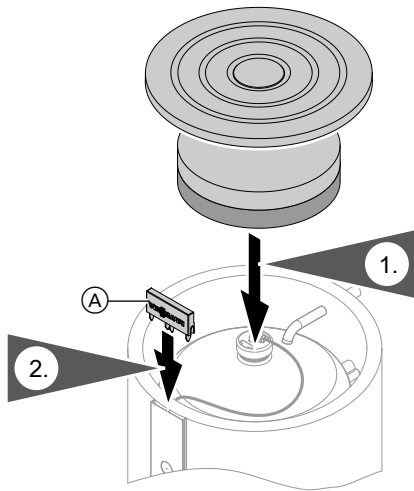


Fig. 12

Ⓐ Cap with Viessmann logo

Note

The soft side of the thermal insulation must rest against the cylinder body.

Connections on the heating water side

- 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.
- For 160, 200 and 300 l and heating water flow temperatures above 95 °C:
Remove the pipe collars from the pipe outlets on the heating water side (pipe collars have l.h. threads).

	Individual cylinder
Permissible temperature	160 °C
Permissible operating pressure	10 bar (1.0 MPa)
Test pressure	16 bar (1.6 MPa)

! 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 soldering and welding.
 - Realigning the connector will damage the gaskets.

Connections on the heating water side (cont.)

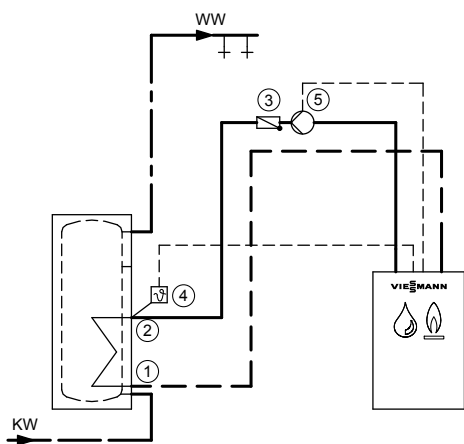


Fig. 13

- ① Heating water return
- ② Heating water flow
- ③ Spring-loaded check valve
- ④ Cylinder temperature sensor or temperature controller and high limit safety cut-out (if required)

- ⑤ Circulation pump
- KW Cold water
- WW DHW

1. Install the heat supply control unit.
2. Install the flow line with a rise and fit an air vent valve at the highest point.
3. Only for heating water flow temperatures in excess of 110 °C:
Install an additional type-tested high limit safety cut-out if the system does not already have one.
For this, use a TR/HLSC combination device (temperature limiter and high limit safety cut-out).

Note

For connections, see page 6.

Connections on the DHW side

- For connections on the DHW side, observe DIN 1988 and DIN 4753.
Ⓢ: SVGW regulations
- 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, check valve and time switch.

! 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 soldering and welding.
 - Realigning the connector will damage the gaskets.

Permissible temperature	95 °C
Permissible operating pressure	10 bar (1 MPa)
Test pressure	16 bar (1.6 MPa)

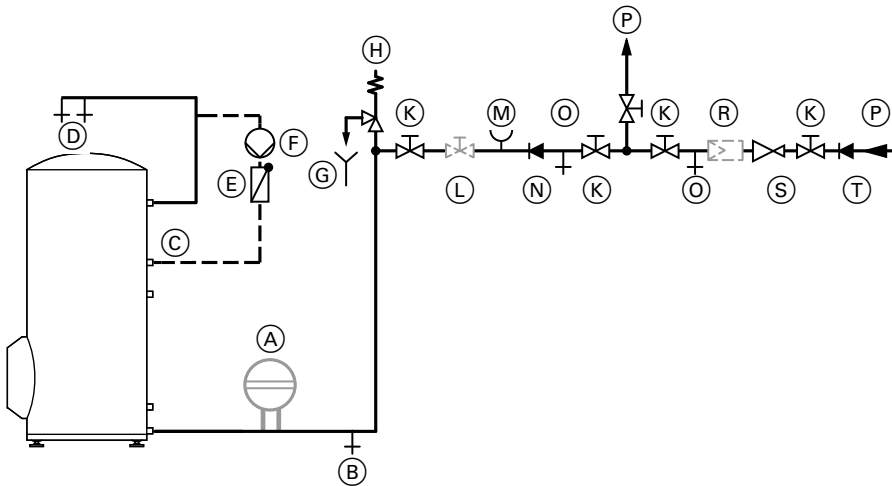


Fig. 14

- | | |
|---|-------------------------------------|
| (A) Expansion vessel | (L) Flow regulating valve |
| (B) Drain outlet | (M) Pressure gauge connection |
| (C) DHW circulation pipe | (N) Non-return valve |
| (D) DHW | (O) Drain outlet |
| (E) Spring-loaded check valve | (P) Cold water |
| (F) DHW circulation pump | (R) Drinking water filter |
| (G) Visible discharge pipe outlet point (tundish) | (S) Pressure reducer |
| (H) Safety valve | (T) Non-return valve/pipe separator |
| (K) Shut-off valve | |

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).

Diameter of safety valve connection:

- For 160 and 200 l cylinder capacity: R ½ (DN 15), max. heat input 75 kW
- For 300 l to 1000 l cylinder capacity: R ¾ (DN 20), max. heat input 150 kW
- For 1000 l to 5000 l cylinder capacity: R 1 (DN 25), max. heat input 250 kW

If the heat input of the DHW cylinder exceeds the maximum heat input associated with the respective capacity, select a sufficiently capable safety valve for the heat input (see DIN 4753-1, issue 3/88, section 6.3.1).

Install the safety valve in the cold water line. Ensure it cannot be shut off from the DHW cylinder. There must be no constrictions in the pipework between the safety valve and the DHW cylinder.

Never seal off the safety valve discharge pipe. Ensure that any expelled water is safely and visibly drained into a drainage system. Position a sign close to the safety valve discharge pipe, or ideally on the safety valve itself, with the following inscription: "For safety reasons, water may be discharged from the discharge pipe during heating. Never seal."

Install the safety valve above the top edge of the DHW cylinder.

Connecting the DHW circulation pipe for cylinder banks

Note

Always install cylinder banks with connected DHW circulation.

Connections on the DHW side (cont.)

Notes on the diagrams below

- Headers (D) for DHW must be approved for drinking water.
- Install the temperature controller in the final cylinder, as viewed from the heating water flow.
- The "DHW" connection can, contrary to the diagrams, also be connected on the same side as the heating water flow, and the "cold water" connection can be implemented on the same side as the heating water return. This ensures that every cylinder is heated and that water is drawn off from every cylinder equally.

In conjunction with boilers or district heating systems without heating water return temperature limiting facility and a DHW circulation pipe

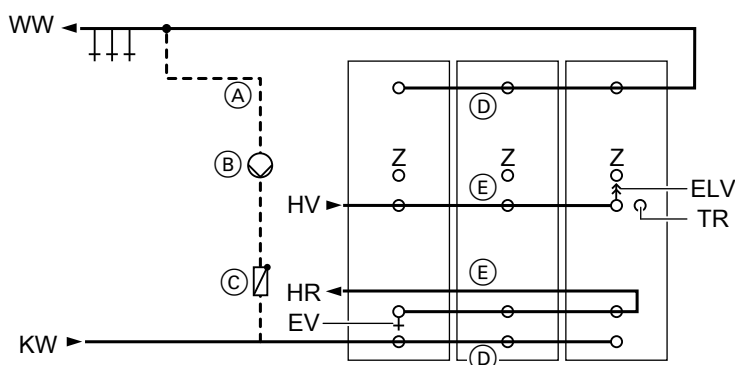


Fig. 15

- | | |
|--|---------------------------|
| (A) DHW circulation pipe | HR Heating water return |
| (B) DHW circulation pump | HV Heating water flow |
| (C) Spring-loaded check valve | KW Cold water |
| (D) Header on the DHW side (stainless steel) | WW DHW |
| (E) Header on the heating water side (steel) | TR Temperature controller |
| ELV Air vent valve | Z DHW circulation |
| EV Drain valve | |

In conjunction with district heating systems with a return temperature limiting facility on the heating water side and/or in conjunction with several DHW circulation pipes

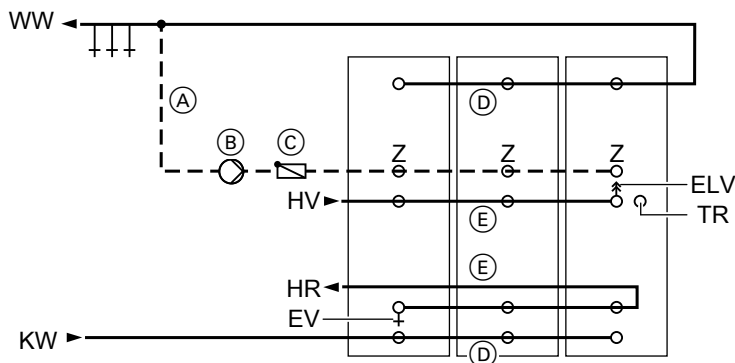


Fig. 16

- | | |
|--|-------------------------|
| (A) DHW circulation pipe | EV Drain valve |
| (B) DHW circulation pump | HR Heating water return |
| (C) Spring-loaded check valve | HV Heating water flow |
| (D) Header on the DHW side (stainless steel) | KW Cold water |
| (E) Header on the heating water side (steel) | WW DHW |
| ELV Air vent valve | |

Connections on the DHW side (cont.)

TR Temperature controller
Z DHW circulation

Connecting the equipotential bonding

Connect the equipotential bonding in accordance with the requirements stipulated by your local power supply utility and VDE [or local] regulations.

CH: Connect the equipotential bonding in accordance with the technical requirements stipulated by your local power supply utility and SEV regulations.

Commissioning



Service instructions

Specification

Cylinder capacity	I	160	200	300	500
DIN registration number		Applied for			
Standby heat loss	kWh/24 h	0.90	0.91	1.06	1.37
Dimensions					
Length (Ø) a					
▪ Incl. thermal insulation	mm	581	581	667	1022
▪ Excl. thermal insulation	mm	–	–	–	715
Width b					
▪ Incl. thermal insulation	mm	605	605	744	1084
▪ Excl. thermal insulation	mm	–	–	–	954
Height d					
▪ Incl. thermal insulation	mm	1189	1409	1734	1852
▪ Excl. thermal insulation	mm	–	–	–	1667
Height when tilted					
▪ Incl. thermal insulation	mm	1260	1460	1825	–
▪ Excl. thermal insulation	mm	–	–	–	1690
Weight incl. thermal insulation	kg	59.3	70.0	104.5	110.1
Connections (male thread)					
Heating water flow and return	G	¾	¾	1	1
Cold water, DHW	G	¾	¾	1	1¼
DHW circulation	G	¾	¾	1	1

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