

Installation instructions

for contractors

VIESMANN


Vitocell 100-L Type CVL, CVLA

Cylinder for DHW heating systems with cylinder loading system
500 to 950 l capacity


VITOCCELL 100-L



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 must 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
- Relevant country-specific safety regulations

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 suitable personal protective equipment when carrying out any work.



Danger

Hot surfaces and fluids can lead to burns or scalding.

- Before maintenance and service work, switch OFF the appliance and let it cool down.
- Never touch hot surfaces on the appliance, fittings or pipework.

- ! **Please note**
 - Electronic assemblies can be damaged by electrostatic discharge. Prior to commencing 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.

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.

Intended use (cont.)

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

Enamelled cylinder for DHW heating in combination with a Vitotrans 222 heat exchanger set (or other cylinder loading systems) **or** a heating lance for DHW heating in combination with a heat pump.

Additionally, the use of an immersion heater is possible.

Capacity: 500, 750 and 950 l

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

System examples

Available system examples: See www.viessmann-schemes.com.

Maintenance parts and spare parts

Maintenance parts and spare parts can be identified and ordered directly online.

Viessmann Partnership

Login:

<https://shop.viessmann.com/>



Viessmann spare part app

www.viessmann.com/etapp



Connections

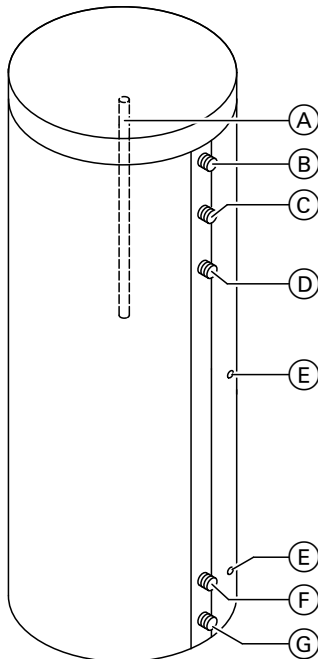


Fig. 1 500 l

- (A) Protective magnesium anode
- (B) DHW
- (C) Hot water inlet from the heat exchanger
- (D) DHW circulation
- (E) Sensor well for cylinder temperature sensor or temperature controller
- (F) Cold water
- (G) Drain

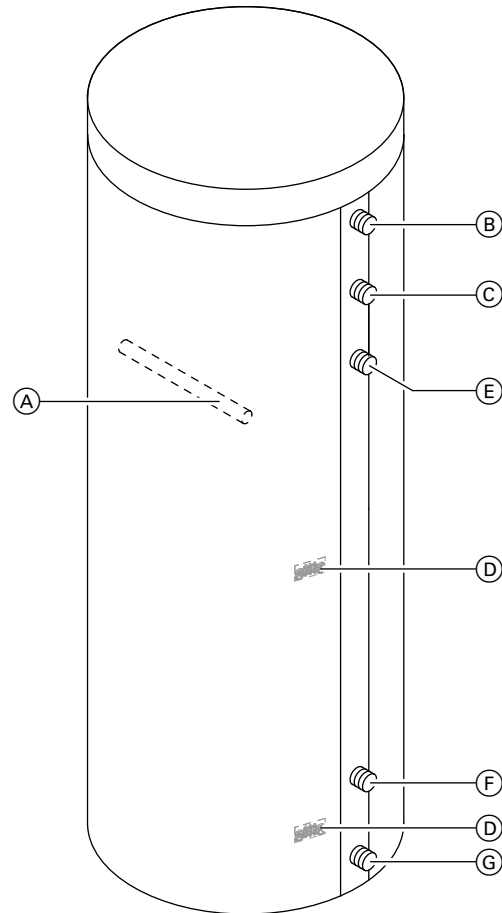


Fig. 2 750 and 950 l

- (A) Protective magnesium anode
- (B) DHW
- (C) Hot water inlet from the heat exchanger
- (D) Clamp for cylinder temperature sensor or temperature controller
- (E) DHW circulation
- (F) Cold water
- (G) Drain

Siting information

- ! **Please note**
The thermal insulation must not come into contact with naked flames.
Exercise caution when welding and brazing.
- ! **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 cylinder must be drained if there is a risk of frost.

- Provide adequate clearance from the wall to allow for operation of the temperature controller (if installed).
- 750 and 950 l capacity:
For **replacing the magnesium anode**, ensure a **clearance of at least 1000 mm** in front of the cylinder.
- Use the adjustable feet to level the cylinder.
Note
Never extend the adjustable feet beyond a total length of 35 mm.

Siting the cylinder with an immersion heater

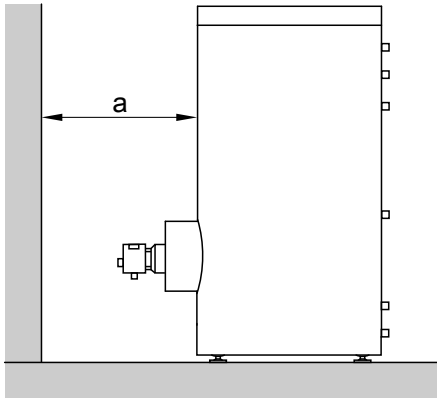


Fig. 3



Immersion heater installation instructions

Maintain the minimum clearance.

Cylinder capacity	Output of immersion heater	Dim. a
500 l	6 kW	650 mm
750 and 950 l	6 kW	1000 mm
750 and 950 l	12 kW	1000 mm

Note

The unheated length of any threaded immersion heater installed on site must be at least 100 mm. The threaded immersion heater must be suitable for installation in enamelled cylinders.



Heating lance installation instructions

Maintain the minimum clearance.

Siting the cylinder with a heating lance

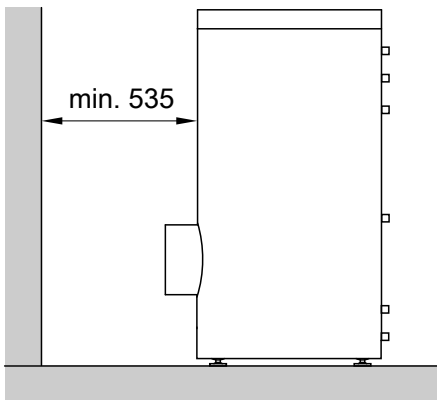


Fig. 4

Siting the cylinder

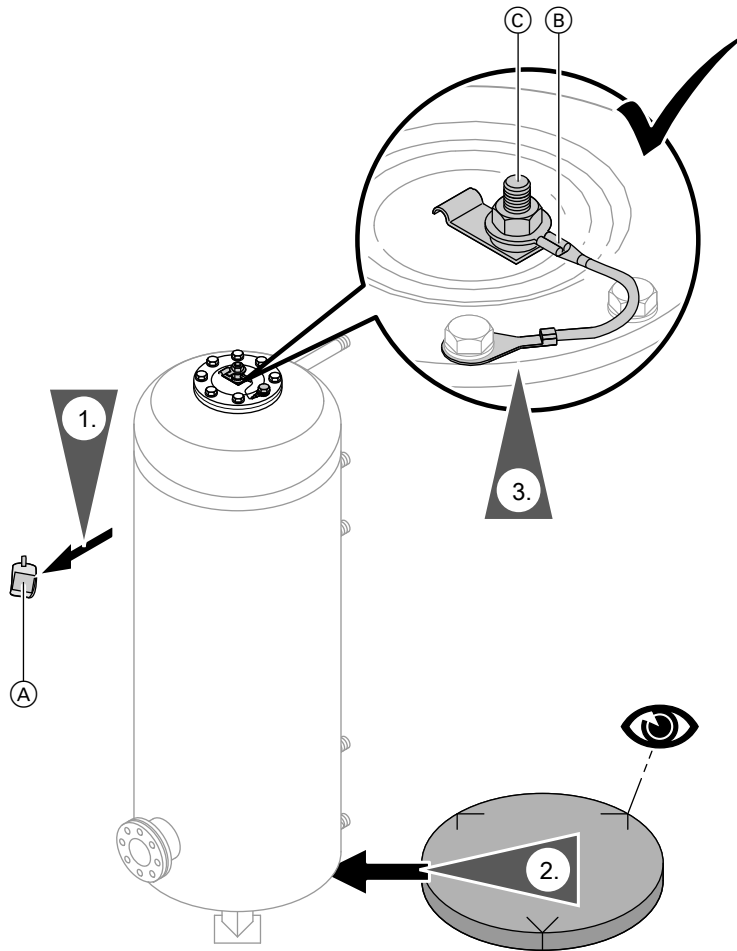


Fig. 5

- (A) Type plate
- (B) Earth cable
- (C) Protective magnesium anode

3. Test the anode connection.

Siting the cylinder

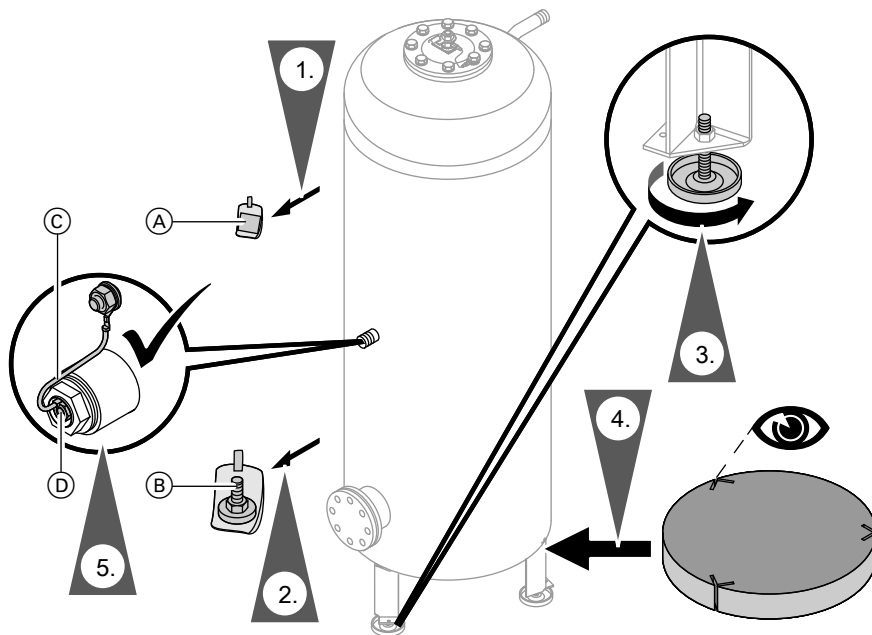


Fig. 6

- (A) Type plate
- (B) Adjustable feet as individual parts
- (C) Protective magnesium anode
- (D) Earth cable

3. Insert the adjustable feet into the legs as far as they will go. Use the adjustable feet to level the cylinder body.
5. Test the anode connection.

Note

Only use one or two of the adjustable feet to level the cylinder body. At least one of the adjustable feet must remain fully screwed in.

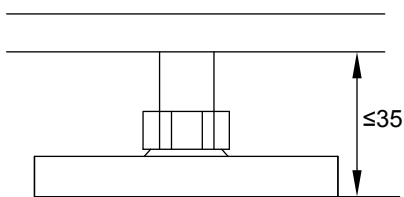


Fig. 7

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

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

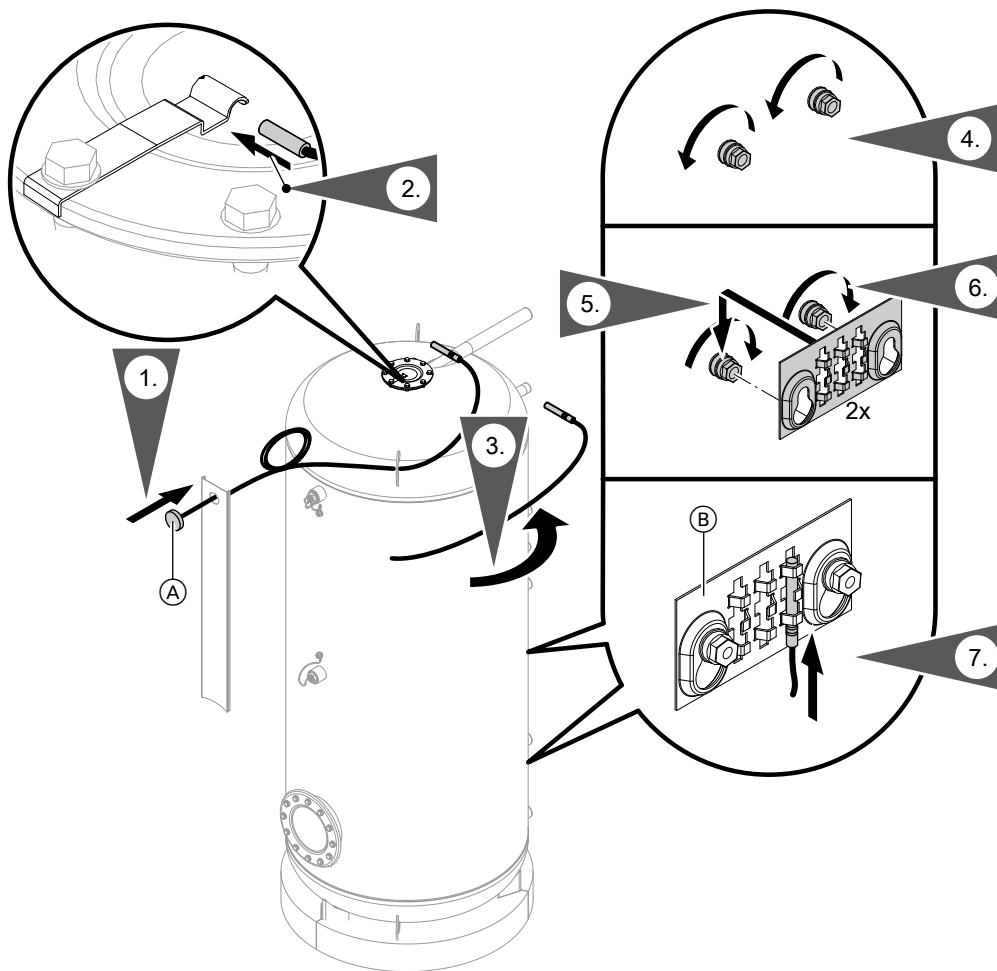


Fig. 8

- (A) Thermometer (part of standard delivery)
- (B) Clamping device for cylinder temperature sensors

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

Note

If no thermometer is being installed, seal the hole with a cover (pipe collar).

2. Guide the thermometer sensor through the lifting eye and insert it as far as it will go into the clamping bracket on the flange.

Note

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

3. Route the cylinder temperature sensors to the back of the DHW cylinder.

4. Release the nuts.

5. Slot the clamping devices onto the threaded studs and align.

6. Tighten the nuts.

7. Insert the cylinder temperature sensors as far as they will go into clamping devices (B).

Note

Never wrap insulating tape around the sensors.

Fitting the thermal insulation jacket

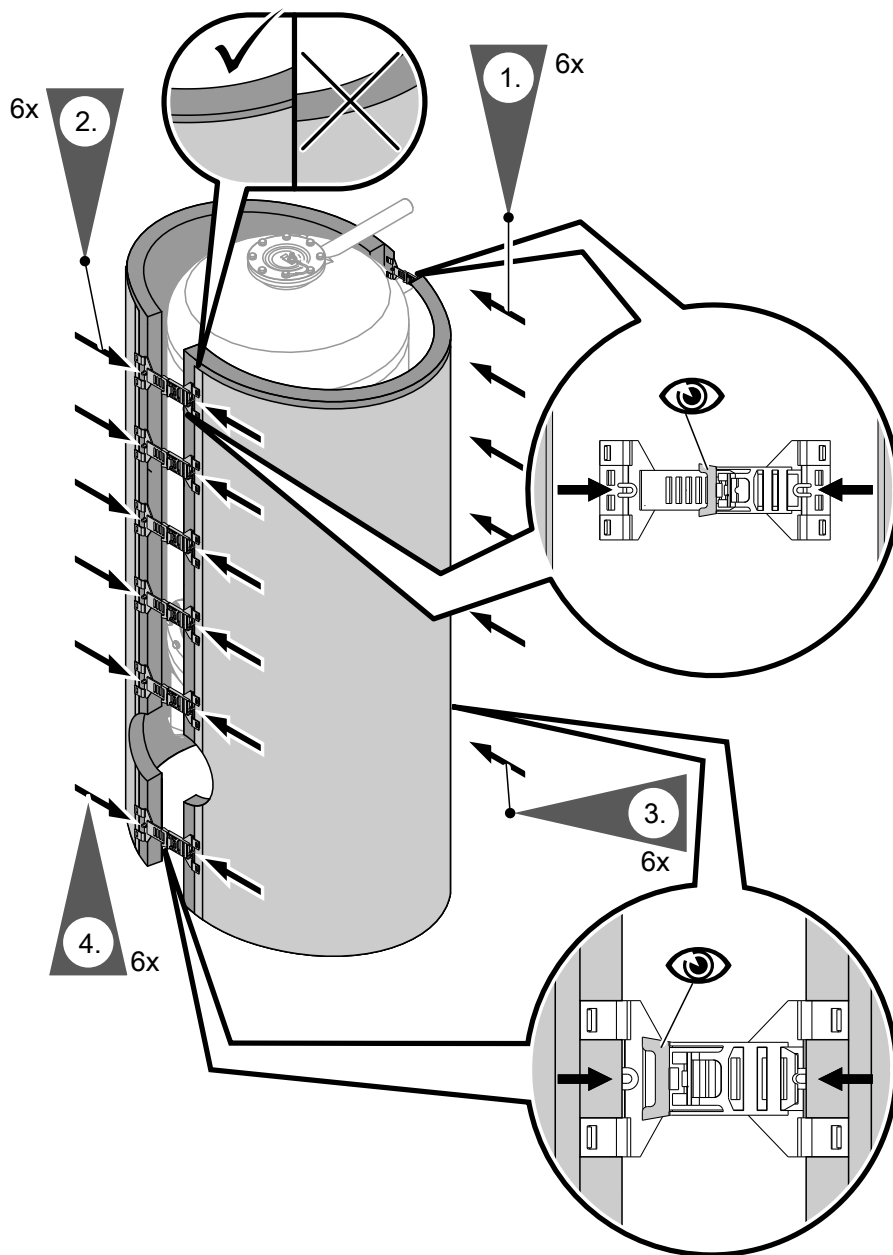


Fig. 9

Note

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

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.

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.

3. Push the clip fasteners at the back of the cylinder as close together as possible.

4. Push the clip fasteners at the front of the cylinder as close together as possible.

Note

Leave the clip fasteners in the first notch.

Fitting the thermometer and thermometer sensor (if supplied) and the cover strips

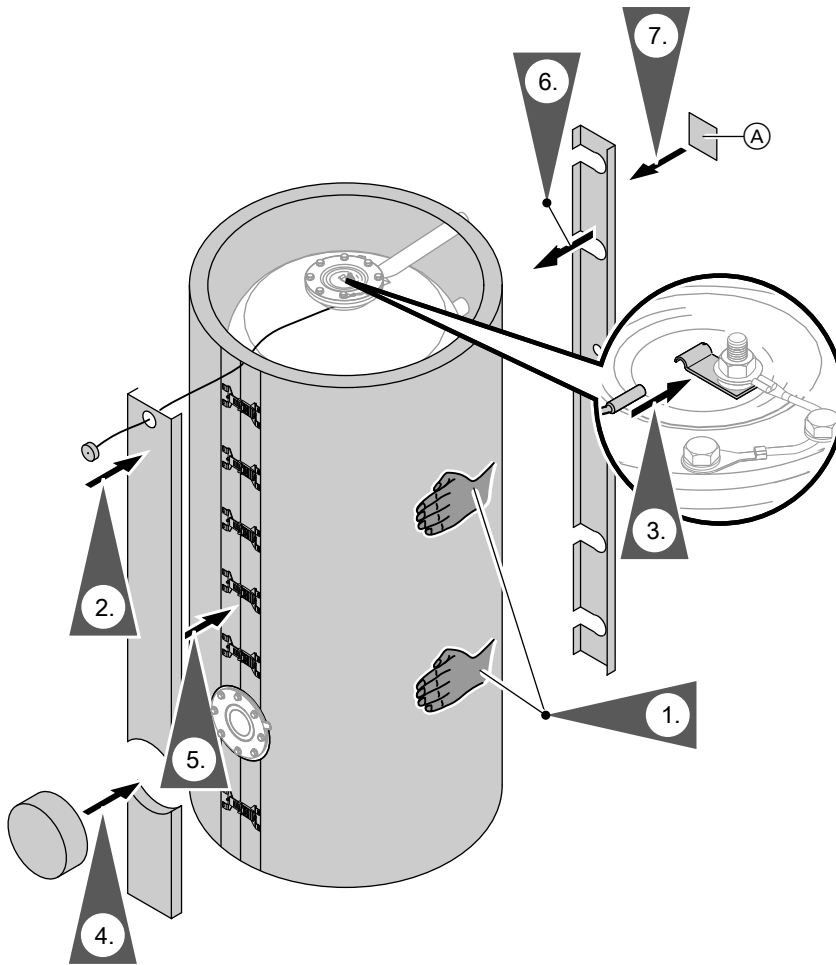


Fig. 10

Ⓐ Cylinder type plate

1. Fit the thermal insulation jacket evenly around the cylinder body by patting it.
2. For 500 l: Guide the thermometer lead through the front cover strip and thermal insulation jacket.
3. For 500 l: Insert the thermometer sensor as far as it will go into the clamping bracket.
4. Fit the flange cover.
5. Fit the front cover strip.
6. Fit the back cover strip.
7. Affix the type plate.

Note

If no thermometer is being installed, seal the hole with a cover (pipe collar).

Fitting the cover

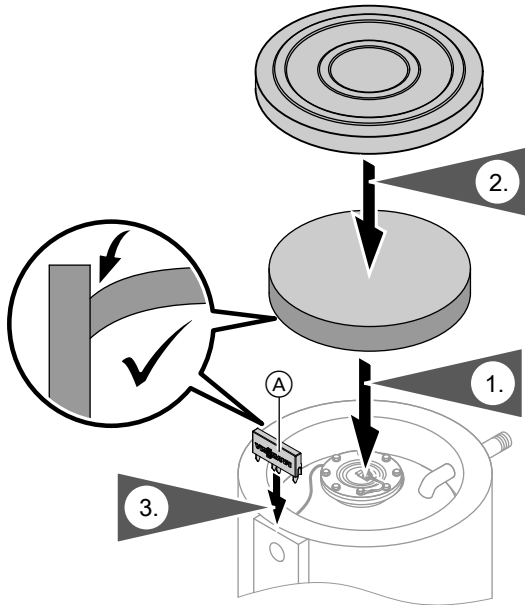


Fig. 11

Ⓐ Logo

500 l cylinders: inserting the cylinder temperature sensor

- The cylinder temperature sensor is supplied in the control unit pack.
- Insert sensor retainers into the sensor wells.
- Position the sensor on the outside of the sensor retainer contact spring (not in the groove) so that it is flush with the front of the spring.
- Do not wrap insulating tape around the sensor.
- Insert the sensor retainer with sensor into the sensor well as far as it will go.

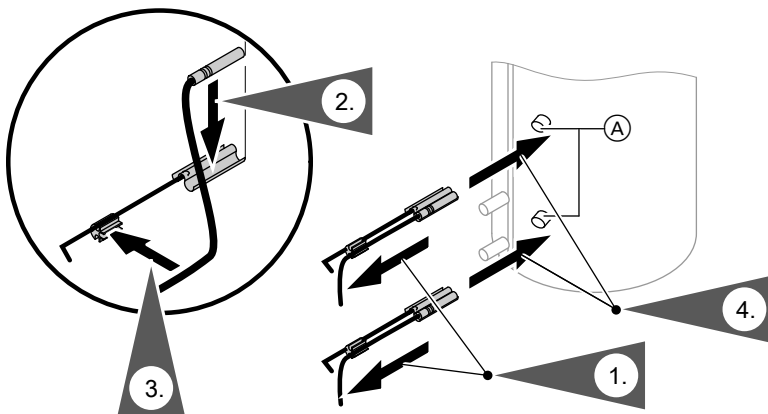


Fig. 12

Ⓐ Sensor wells for cylinder temperature sensor

Connecting a multi cylinder bank

500 l cylinder capacity

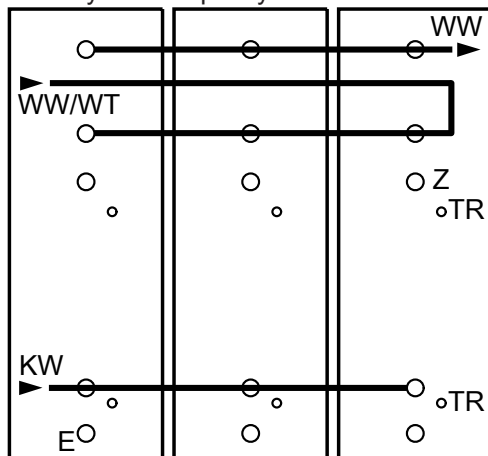


Fig. 13

- E Drain
- KW Cold water
- TR Temperature controller and/or cylinder temperature sensor
- WW DHW
- WW/WT Hot water inlet from the heat exchanger
- Z DHW circulation

- TR Temperature controller and/or cylinder temperature sensor
- WW DHW
- WW/WT Hot water inlet from the heat exchanger
- Z DHW circulation

- Install the temperature controller into the final cylinder, as viewed from the cold water flow (see diagram).
- The hot water inlet from the heat exchanger must always run in reverse to the cold water flow.

Note

DHW and cold water can also, contrary to the diagram, be connected to the other side.

750 and 950 l cylinder capacity

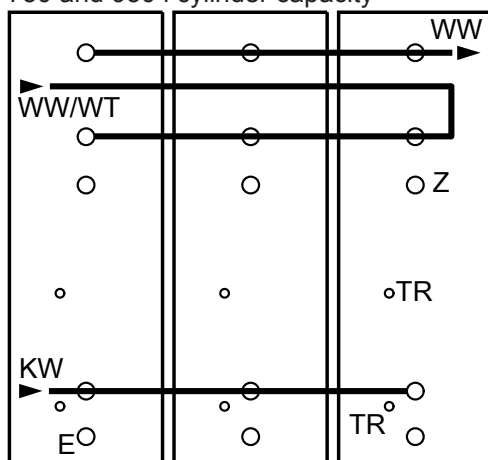


Fig. 14

- E Drain
- KW Cold water

Connections on the DHW side

- For connections on the DHW side, observe DIN 1988 and DIN 4753.
 (CH): SVGW regulations
- Connect all pipework with detachable fittings.
- Equip the DHW circulation pipe with a DHW circulation pump, check valve and time switch. Only limited gravity operation is possible.
- Always install cylinder banks with connected DHW circulation.

Permissible temperature	95 °C
Permissible operating pressure	10 bar (1 MPa)
Test pressure	13 bar (1.3 MPa)

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).

The safety valve must have the following connection diameter:

- At 500 to 1000 l cylinder capacity at least R ¾ (DN 20), max. heat input 150 kW.
- Above 1000 to 5000 l cylinder capacity at least 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 the safety valve cannot be shut off from the cylinder. There must be no restrictions in the pipework between the safety valve and the 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 cylinder.

Connecting the equipotential bonding

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

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

Commissioning



Service instructions

Specification

Type			CVL	CVLA	CVLA
Cylinder capacity	I		500	750	950
DIN registration number			9W256-13	Applied for	
Standby heat loss q_{ST} at 45 K temperature differential	kWh/24 h		1.95	2.28	2.48
Dimensions					
Length a (∅)	Excl. thermal insulation	mm	650	790	790
	Incl. thermal insulation	mm	859	1062	1062
Width b	Excl. thermal insulation	mm	837	1005	1005
	Incl. thermal insulation	mm	923	1110	1110
Height c	Excl. thermal insulation	mm	1844	1817	2123
	Incl. thermal insulation	mm	1948	1897	2197
Height when tilted	Excl. thermal insulation	mm	1860	1980	2286
Weight					
Cylinder	Excl. thermal insulation	kg	136	235	284
	Incl. thermal insulation	kg	156	260	314
Connections (male thread)					
DHW inlet from heat exchanger		R	2	2	2
Cold water, DHW		R	2	2	2
DHW circulation, drain outlet		R	1¼	1¼	1¼

Final decommissioning and disposal

Viessmann products can be recycled. Components and substances from the system are not part of ordinary domestic waste.

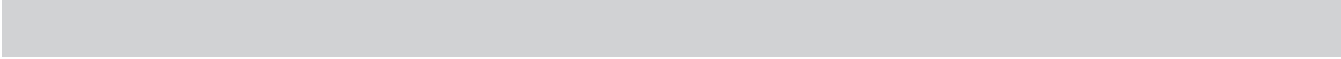
For decommissioning, isolate the system from the power supply and allow components to cool down where appropriate.
All components must be disposed of correctly.

Declaration of Conformity

We, Viessmann Climate Solutions SE, D-35108 Allendorf, 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.

Using the serial number, the Declaration of Conformity can be found on the following website:

www.viessmann.co.uk/eu-conformity









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5607106 Subject to technical modifications.