

# Installation and service instructions for contractors

**VIESMANN**

**Vitocell 100-E/100-W**  
**Type SVW 200 I, SVPA 400 I**  
Heating water buffer cylinder

*For applicability, see the last page*

## **VITOCELL 100-E/100-W**



## Safety instructions

### 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.

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

#### Note

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

#### Target group

These instructions are exclusively intended for authorised contractors.

- Work on electrical equipment must only be carried out by a qualified electrician.
- 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 the protection of the environment
- 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 and SWKI

#### Safety instructions for working on the system

##### 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.

 **Danger**  
Hot surfaces can cause burns.

- Before maintenance and service work, switch OFF the appliance and let it cool down.
- Never touch hot surfaces on the boiler, burner, flue system 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.

#### Auxiliary components, spare and wearing parts

 **Please note**  
Spare 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 replacements, use only original spare parts supplied or approved by Viessmann.

#### Safety instructions for operating the system

##### If you smell flue gas

 **Danger**  
Flue gas can lead to life threatening poisoning.

- Shut down the heating system.
- Ventilate the installation site.
- Close doors to living spaces to prevent flue gases from spreading.

##### Ensuring the removal of flue gas and supply of combustion air

Ensure that flue systems are clear and cannot be sealed, for instance due to accumulation of condensate or other causes. Ensure an adequate supply of combustion air.

Instruct system users that subsequent modifications to the building characteristics are not permissible (e.g. cable/pipework routing, cladding or partitions).

 **Danger**  
Leaking or blocked flue systems, or an inadequate supply of combustion air can cause life threatening poisoning from carbon monoxide in the flue gas.  
Ensure the flue system is in good working order. Apertures for supplying combustion air must be non-closable.

**Safety instructions** (cont.)**Extractors**

Operating appliances that extract air to the outside (cooker hoods, extractors, air conditioning units, etc.) can create negative pressure. If the boiler is operated at the same time, this can lead to reverse flow of the flue gas.

**Danger**

The simultaneous operation of the boiler and appliances that extract air to the outside can result in life threatening poisoning due to reverse flow of the flue gas.

Fit an interlock circuit or take suitable steps to ensure an adequate supply of combustion air.

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## Symbols

Symbol	Meaning
	Reference to other document containing further information
	Additional information, not safety relevant
	Step in a diagram: The numbering corresponds to the sequence of work.

## 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

### Vitocell 100-E/100-W, type SVW (200 l capacity)

Steel heating water buffer cylinder for storing heating water in combination with heat pumps and solid fuel boilers, with optional electric heater (immersion heater).

Suitable for systems to EN 12828 and DIN 4753.  
Vitocell 100-E: Colour: Vitosilver  
Vitocell 100-W: White

### Vitocell 100-E, type SVPA (400 l capacity)

Steel heating water buffer cylinder for storing heating water in combination with heat pumps, solar thermal systems, solid fuel boilers and heat recovery.  
Suitable for installation of Vitotrans 353, type PZS.  
Suitable for systems to EN 12828 and DIN 4753.

**Connections**

**Type SVW (200 l)**

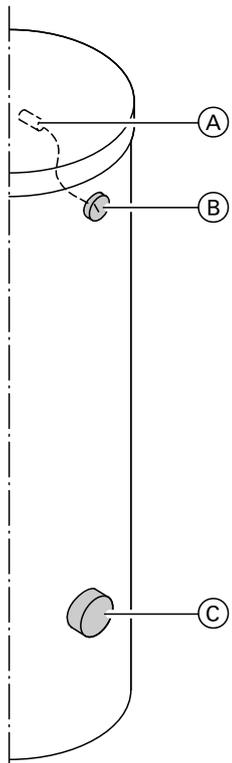


Fig. 1 Front

- (A) Thermometer sensor retainer
- (B) Thermometer (TH)
- (C) Female connection for immersion heater (EHE)

Installation

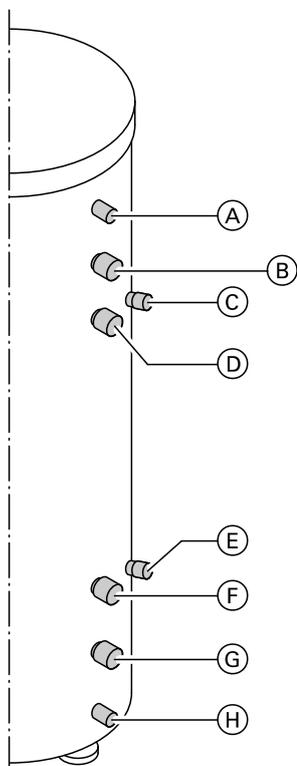
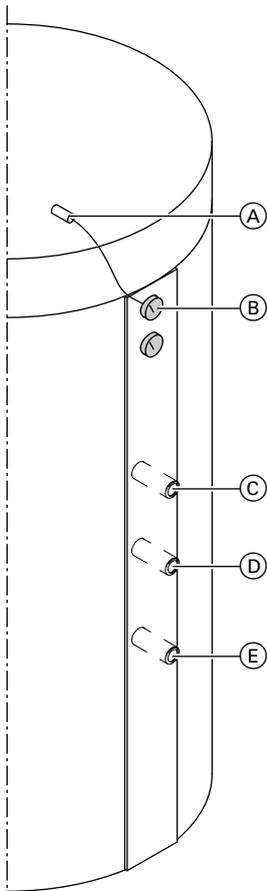


Fig. 2 Back

- (A) Air vent valve (EL)
- (B) Heating water flow 1 (HV1) to the heating circuits
- (C) Sensor well 1 (SPR1) for cylinder temperature sensor
- (D) Heating water flow 2 (HV2) from the heat generator
- (E) Sensor well 2 (SPR2) for cylinder temperature sensor
- (F) Heating water return 2 (HR2) from the heating circuits
- (G) Heating water return 1 (HR1) to the heat generator
- (H) Drain outlet (E)

**Connections** (cont.)

**Type SVPA (400 I)**



- Ⓐ Thermometer sensor retainer
- Ⓑ Thermometer (TH, max. 2)
- Ⓒ Heating water flow G 1
- Ⓓ Return stratification G 1
- Ⓔ Heating water return G 1

Fig. 3 Front

**Connections** (cont.)

Installation

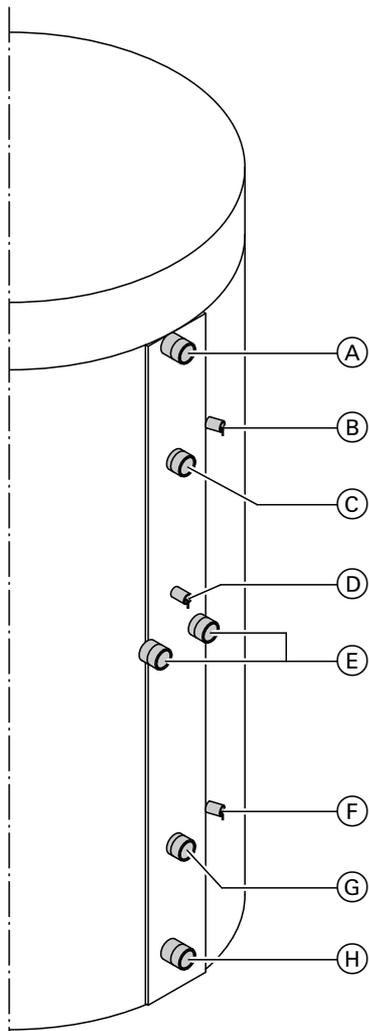


Fig. 4 Back

- Ⓐ Heating water flow 1 (HV1) to the heating circuits / air vent valve (EL)
- Ⓑ Sensor well 1 (SPR1) for cylinder temperature sensor
- Ⓒ Heating water flow 2 (HV2) from the heat generator
- Ⓓ Sensor well 2 (SPR2) for cylinder temperature sensor
- Ⓔ Heating water flow 3 (HV3) / heating water return 1 (HR1)
- Ⓕ Sensor well (SPR3) for cylinder temperature sensor
- Ⓖ Heating water return 2 (HR2) from the heating circuits
- Ⓗ Heating water return 3 (HR3) to the heat generator / drain outlet (E)

## Siting the Vitocell

- ! Please note**  
 To prevent material damage, site the buffer cylinder in a draught-free room free from the risk of frost.  
 When not in use, the buffer 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).
  - Placing the heating water buffer cylinder on a plinth will make the room easier to clean.
  - Use the adjustable feet to level the buffer cylinder.

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

### Vitocell with immersion heater, type SVW

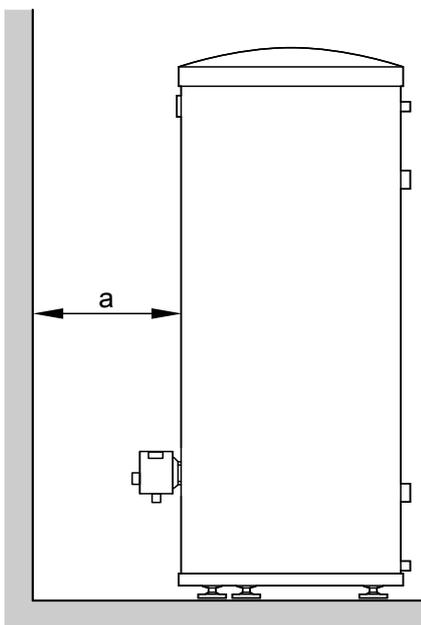


Fig.5

 Immersion heater installation instructions

Maintain the minimum clearance.

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

Vitocell	Contents	Dim. a	Output of immersion heater
Type SVW	200 l	min. 650 mm	6 kW

### Vitocell 100-E/100-W, type SVW

- ! Please note**  
 The thermal insulation must not come into contact with naked flames.  
 Exercise caution when welding and brazing.
1. Install the cylinder temperature sensors; see page 21.
  2. At heating water flow temperatures above 95 °C, remove the pipe collars from the pipe outlets (collars have l.h. threads).

3. If no electric immersion heater is installed, seal in the front female connection with the plug supplied. Fit the cover.
4. Affix the type plate supplied to the back of the heating water buffer cylinder.

## Installation sequence

### 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.

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

### Thermal insulation on the Vitocell without Vitotrans

#### Fitting the lower thermal insulation mat

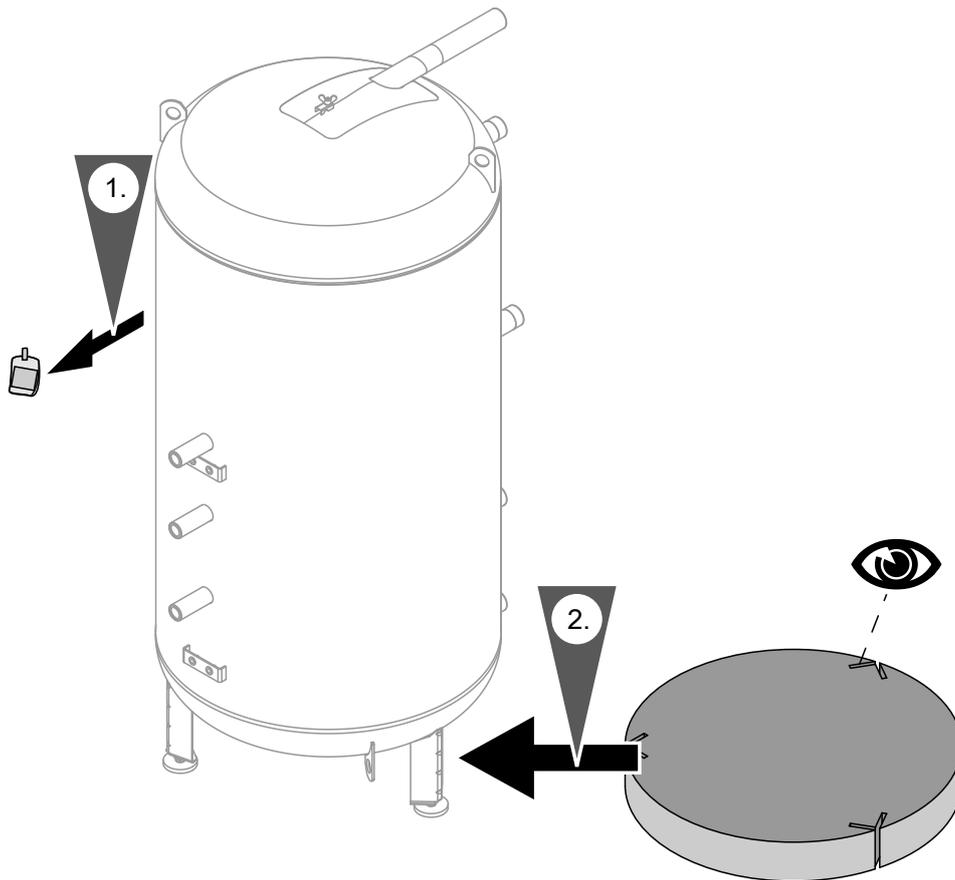


Fig.6

Position and level the cylinder.

**!** **Please note**  
The thermal insulation must not come into contact with naked flames.  
Exercise caution when welding and brazing.

## Thermal insulation on the Vitocell without... (cont.)

### Fitting the thermal insulation jacket

#### Note

Ensure that no fleece remnants enter the heating water buffer cylinder through the cylinder connections.

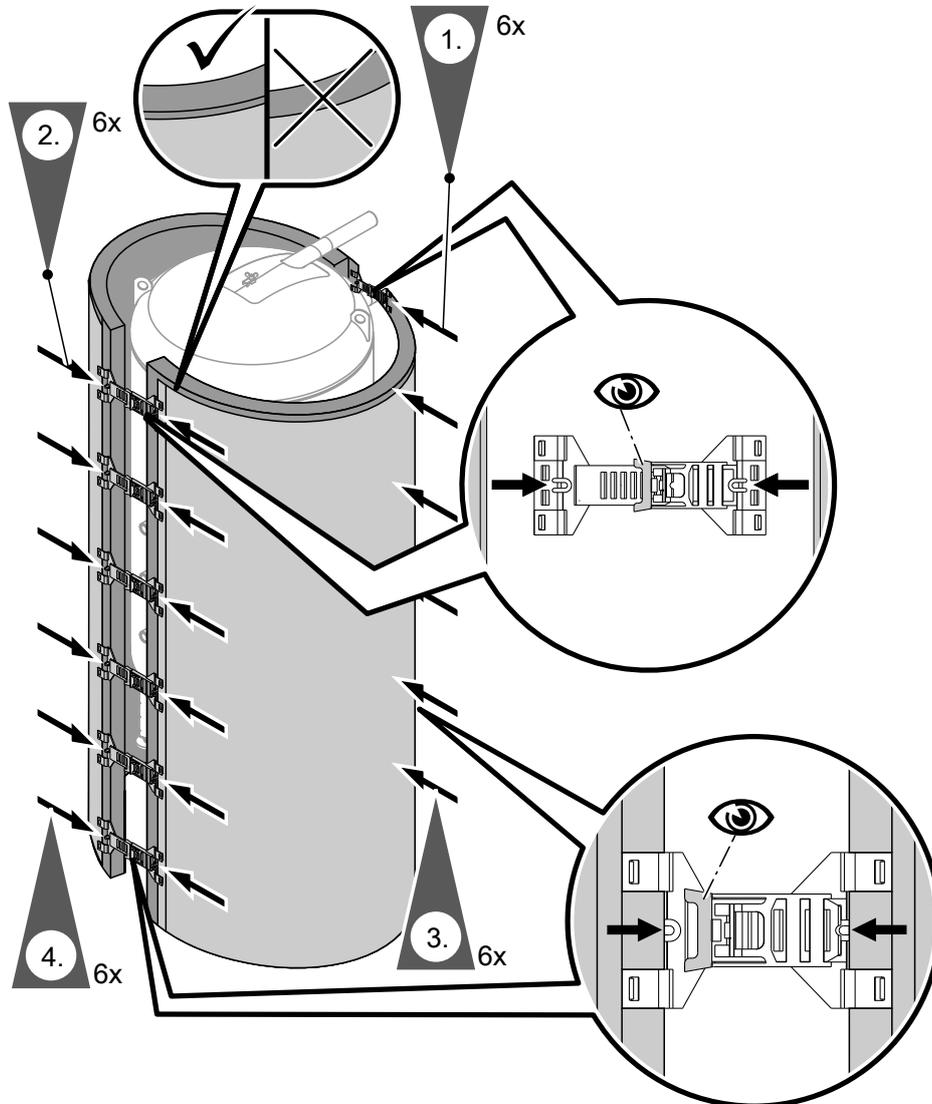


Fig. 7

#### Note

2 people are required for the following work.

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.

#### 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.
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.

Fitting the thermometer, thermometer sensor and cover strips

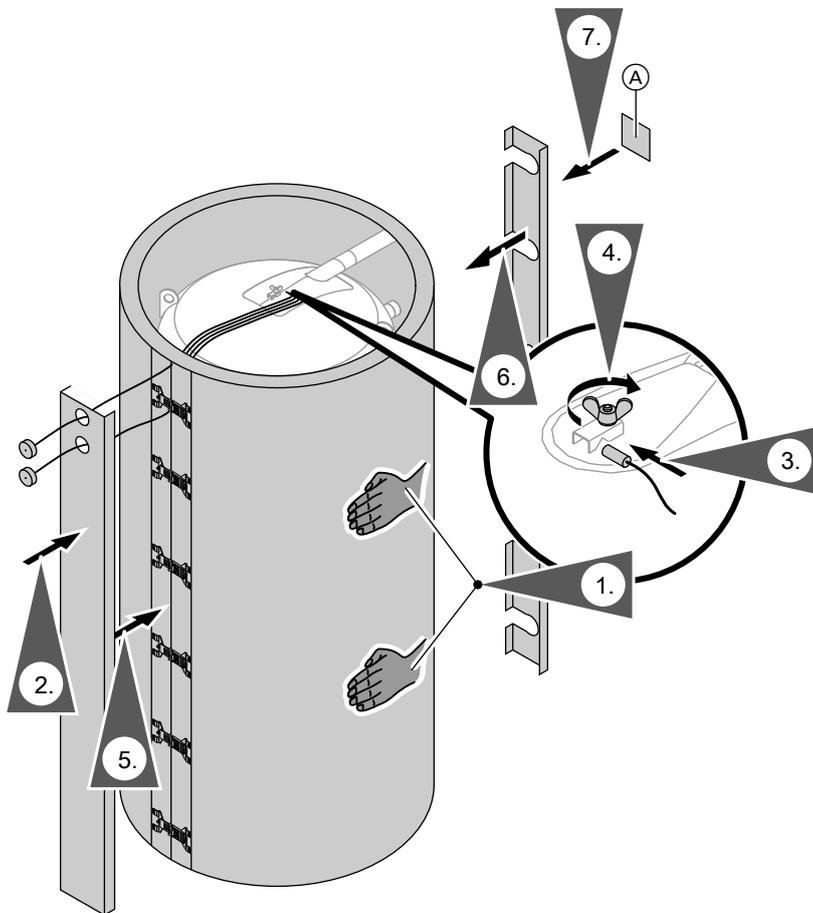


Fig. 8

(A) Type plate (self-adhesive)

Fit the thermal insulation jacket evenly around the cylinder body by patting it.

**Note**

Slide the thermometer sensor into the clamping bracket at the upper base as far as it will go and tighten the wing nut.

Thermal insulation on the Vitocell without... (cont.)

Fitting the cover

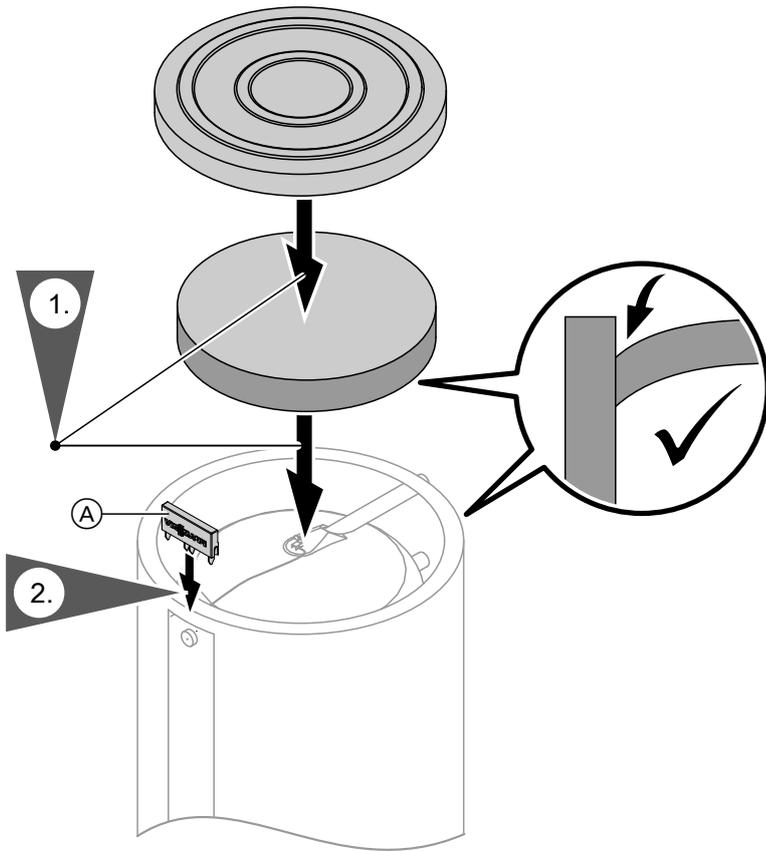


Fig.9

Fitting the lower thermal insulation mat

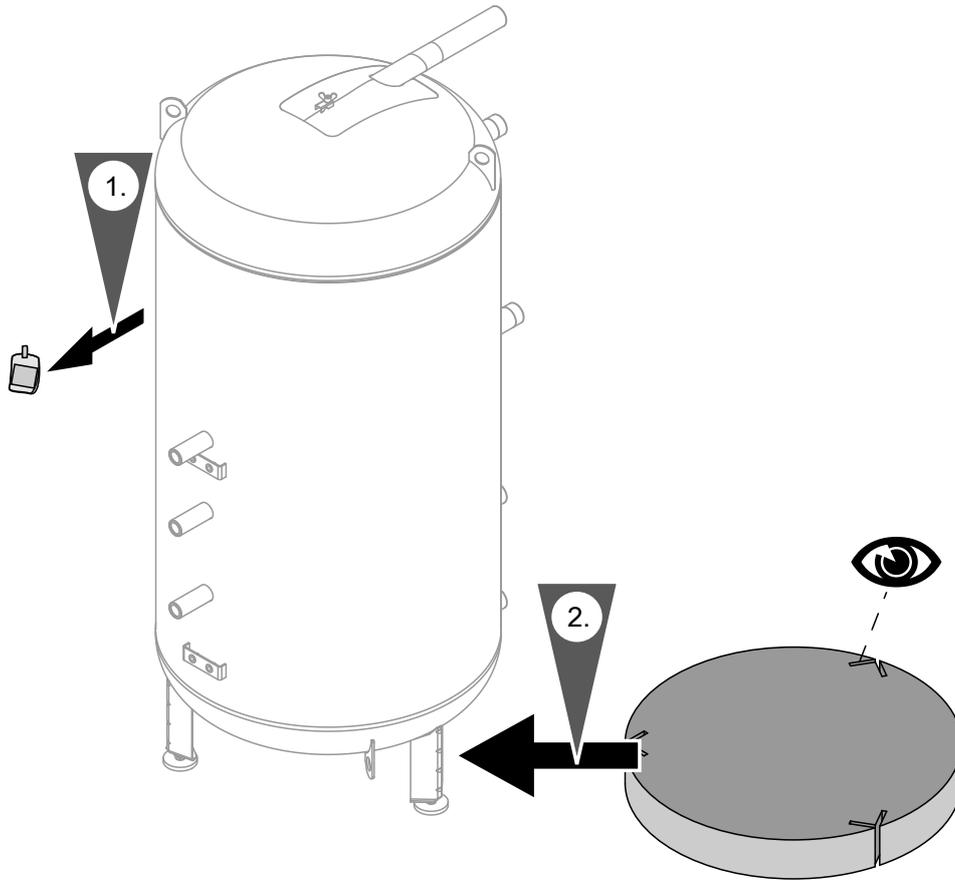


Fig.10

Position and level the cylinder.

**!** **Please note**  
The thermal insulation must not come into contact with naked flames.  
Exercise caution when welding and brazing.

Vitocell type SVPA with Vitotrans (cont.)

Fitting the Vitotrans

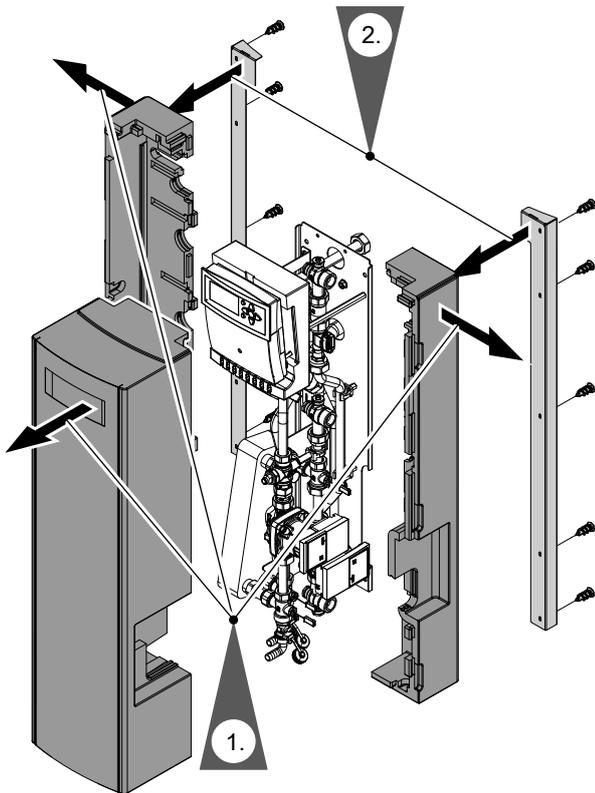


Fig.11

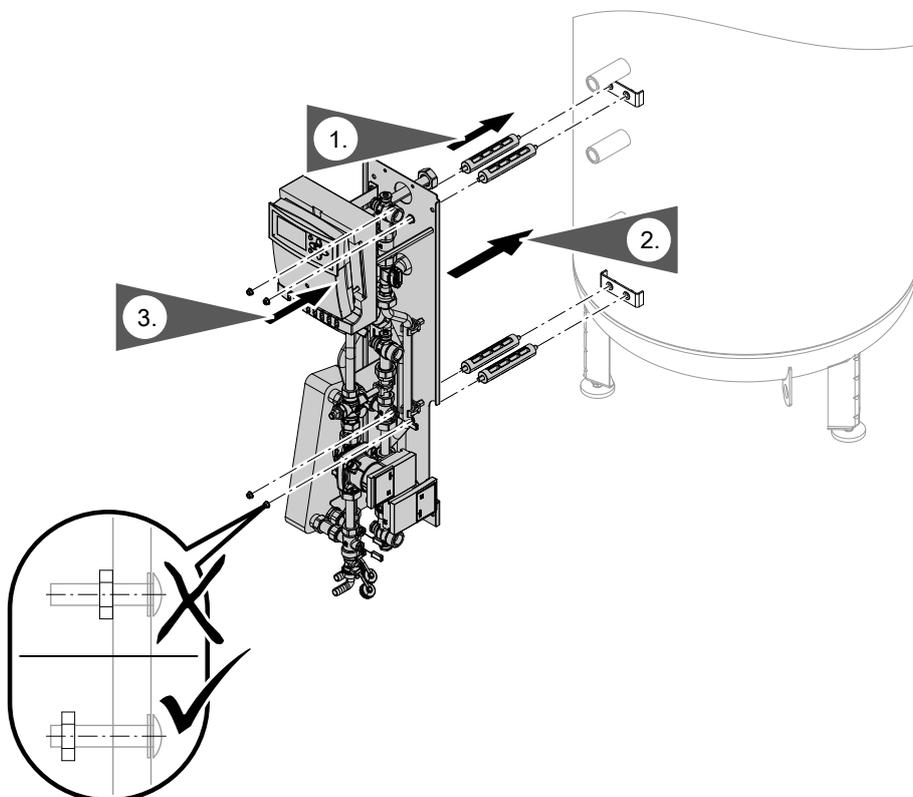


Fig.12

1. Fit the bolts.
2. Fit the module.
3. Screw the nuts onto the bolts until hand-tight.

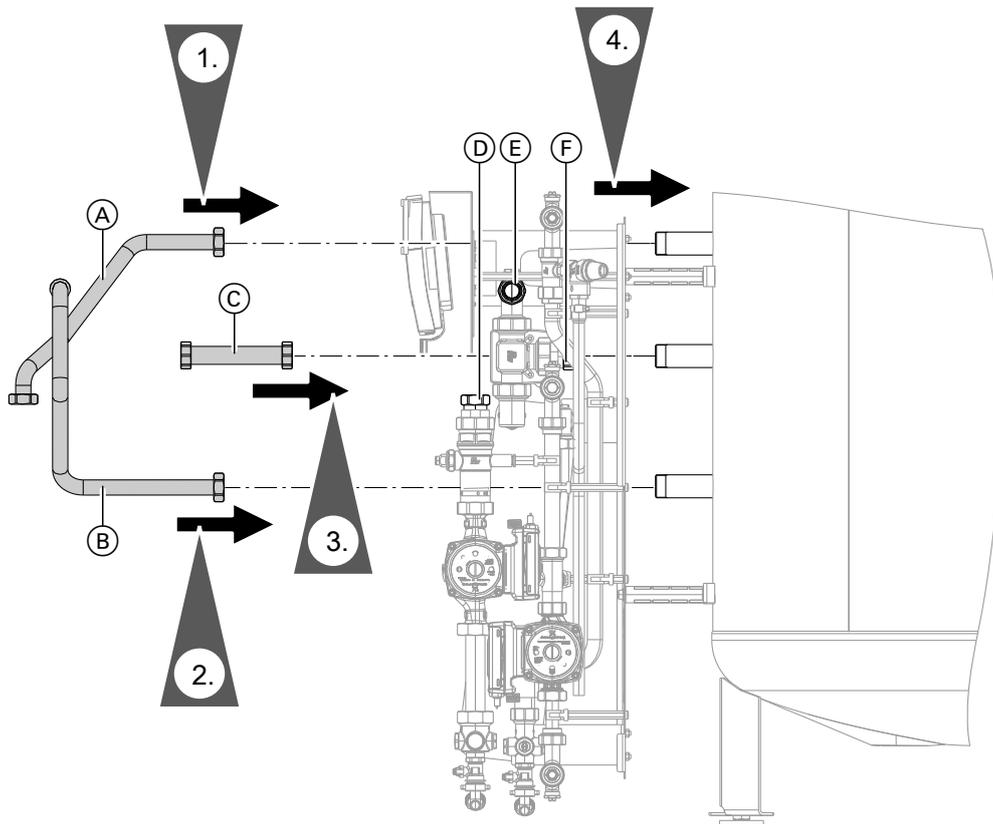


Fig. 13

1. Connect heating water flow connection pipe (A) to connection (D) on the Vitotrans.
2. Connect heating water return connection pipe (B) to connection (E) on the Vitotrans.
3. Connect return stratification connection pipe (C) to connection (F) on the Vitotrans.
4. Connect the pipes to the cylinder connections.

Thermal insulation on the Vitocell with Vitotrans

Fitting the thermal insulation jacket

**Note**

Ensure that no fleece remnants enter the heating water buffer cylinder through the cylinder connections.

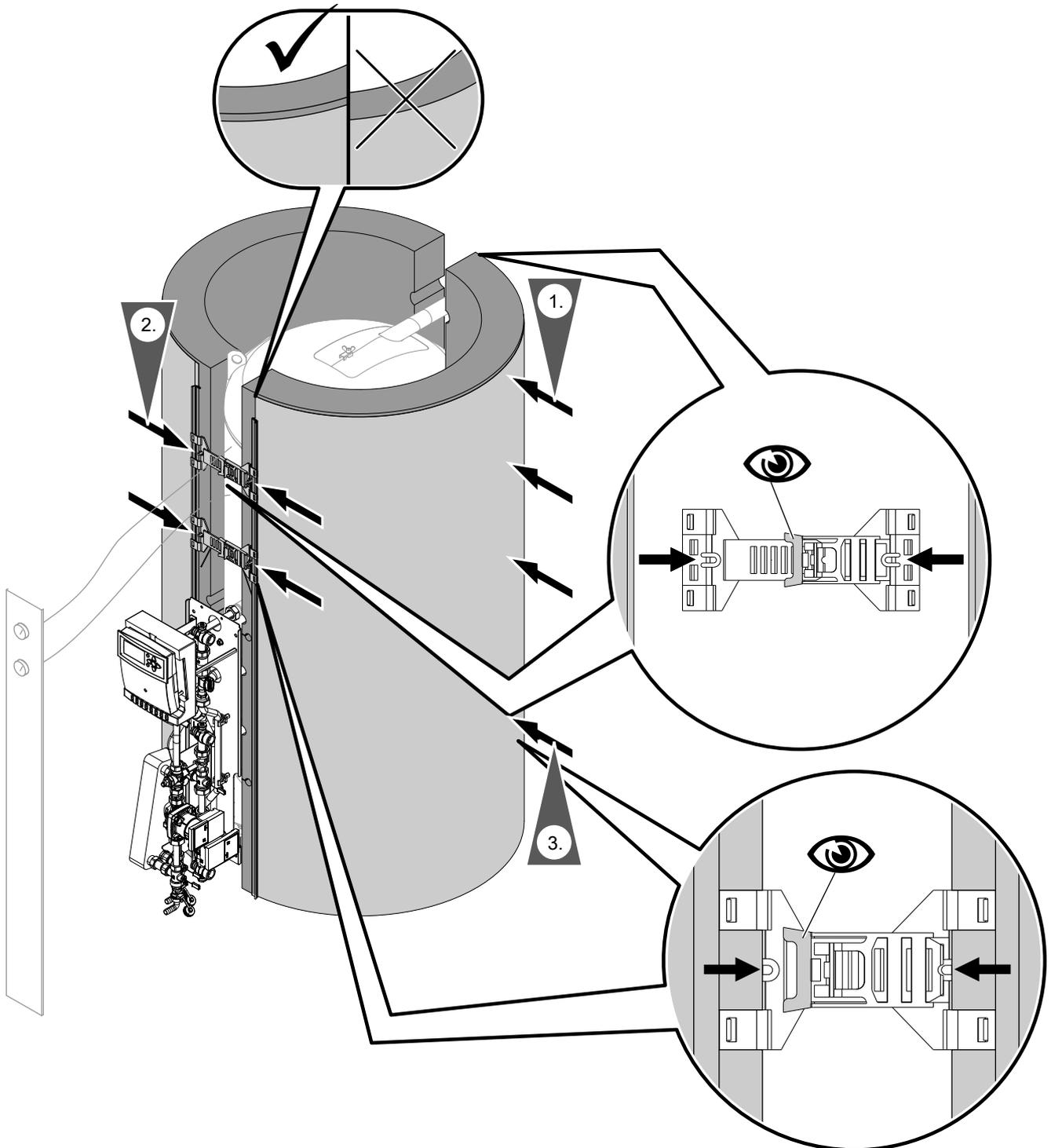


Fig.14

## Installation sequence

### Thermal insulation on the Vitocell with... (cont.)

#### Note

2 people are required for the following work.

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.

#### Note

Leave the clip fasteners in the first notch.

2. Fit 4 clip fasteners above and 2 clip fasteners behind the Vitotrans so that they are evenly spaced.

3. Push the clip fasteners as close together as possible.

### Closing the thermal insulation and fitting the cover strips

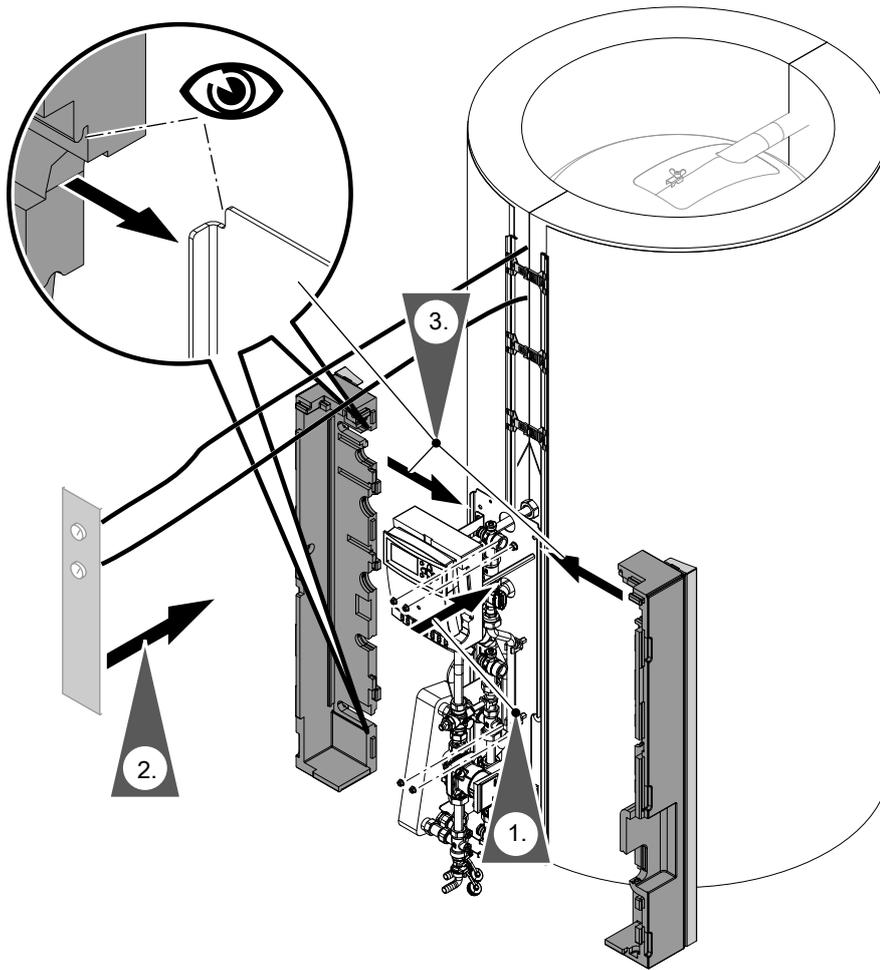


Fig.15

1. Tighten the nuts on the bolts.
2. Trim and fit the cover strip.

3. Insert the rear sections of the Vitotrans thermal insulation. Observe the groove in the thermal insulation.

## Thermal insulation on the Vitocell with... (cont.)

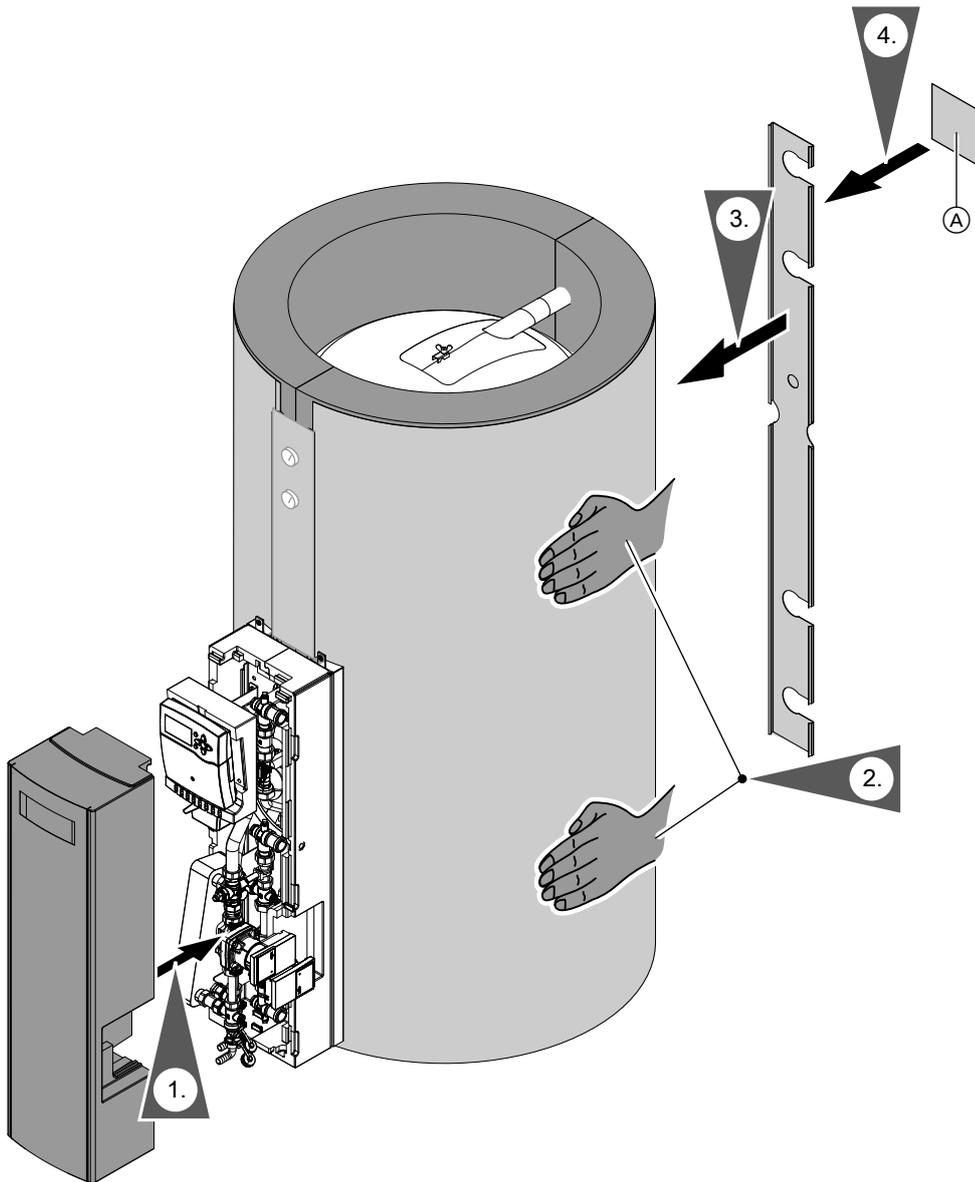


Fig.16

(A) Type plate (self-adhesive)

1. Fit the front section of the Vitotrans thermal insulation.
2. Push the cylinder thermal insulation towards the front by patting it. This reduces the gap between the Vitotrans and the cylinder.
3. Fit the rear strip to the thermal insulation.
4. Affix the type plate.

Fitting the cover

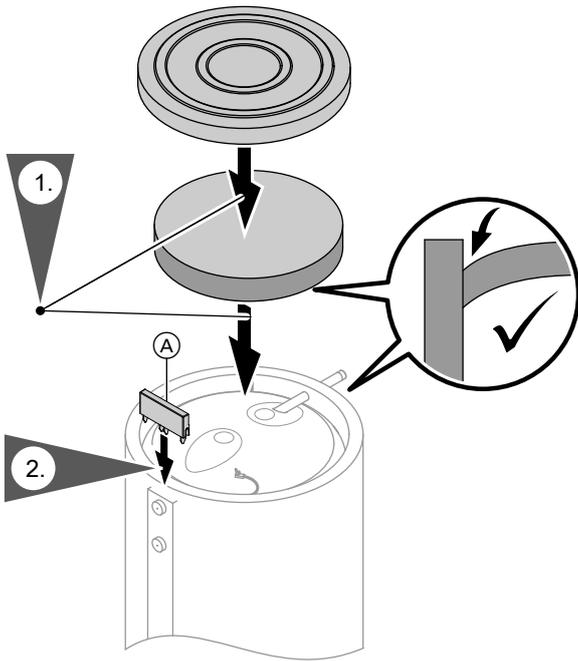


Fig.17

Ⓐ Viessmann logo

## Fitting the cylinder temperature sensor

**Note**

The cylinder temperature sensor is supplied in the control unit pack.

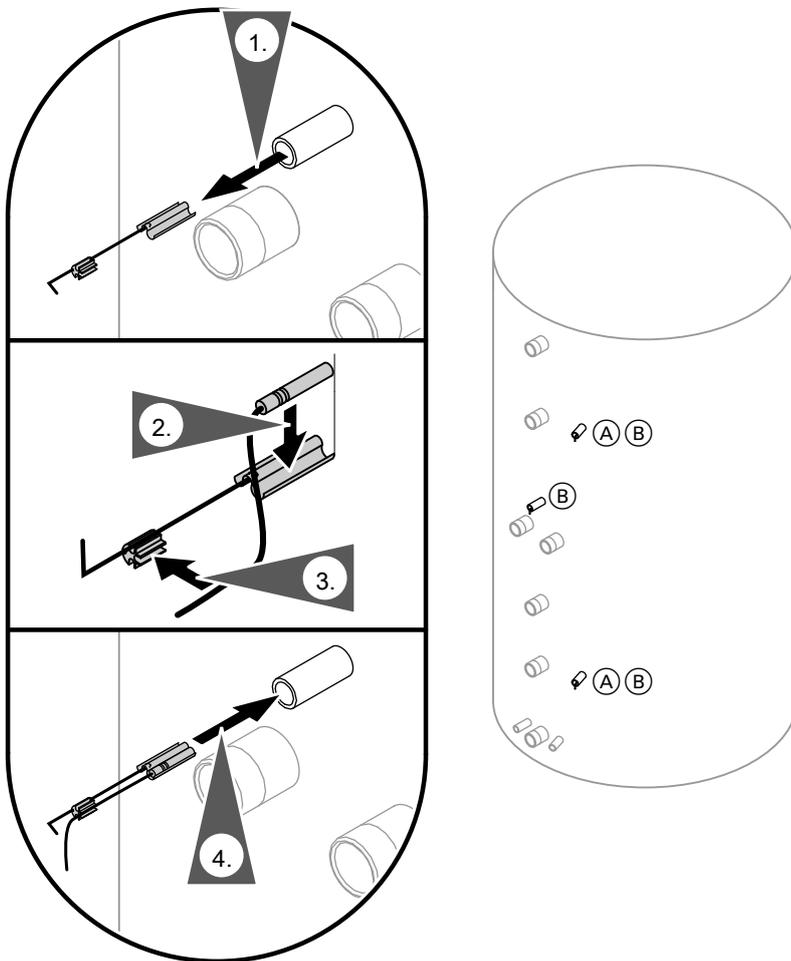


Fig.18

- (A) Sensor wells for 200 l capacity
- (B) Sensor wells for 400 l capacity

**Note**

- **Never** wrap insulating tape around the sensor.
- 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.
- Insert the sensor retainer with sensor into the sensor well as far as it will go.

## Connecting the heating water side

Any number of heating water buffer cylinders, type SVPA, can be connected in series or in parallel. The connection pipes and air vent valves must be provided on site.

- ! **Please note**  
The thermal insulation must not come into contact with naked flames.  
Exercise caution when welding and brazing.

Permissible temperature	110 °C
Heating water flow	110 °C
Permissible operating pressure	3 bar (0.3 MPa)
Test pressure	4.8 bar (0.48 MPa)

- Note**  
For connection locations, see from page 6.

## Installation sequence

### Connecting the heating water side (cont.)

1. Connect all pipework with detachable fittings.
2. Install the flow line with a rise and fit an air vent valve at the highest point.
3. Check all connections for leaks after filling the cylinder.

Cylinder bank connected in series (type SVPA 400 I)

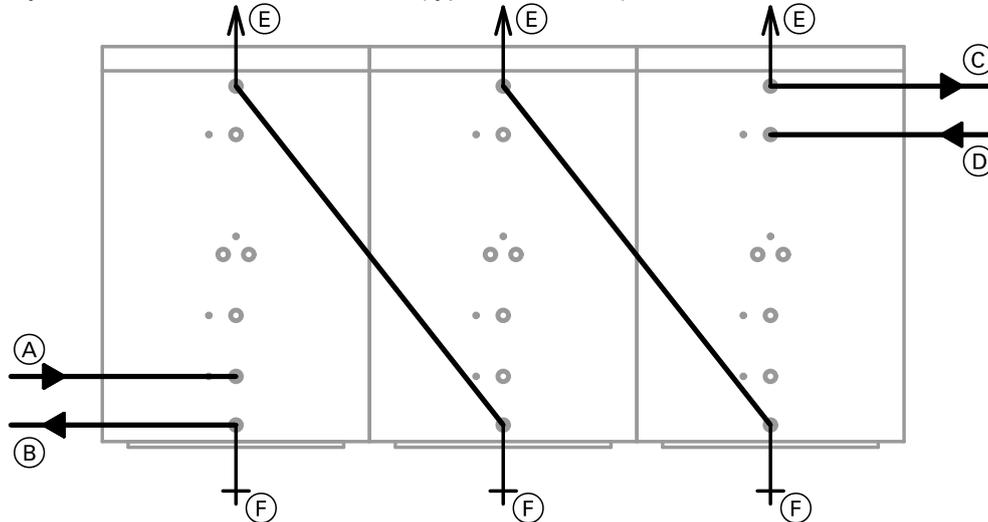


Fig.19

- (A) Heating water return 3 (HR3) from the heating circuits
- (B) Heating water return 4 (HR4) to the heat source
- (C) Heating water flow 1 (HV1) to the heating circuits
- (D) Heating water flow 2 (HV2) from the heat source
- (E) Air vent valve (EL)
- (F) Drain outlet (E)

Cylinder bank connected in parallel (type SVPA 400 I)

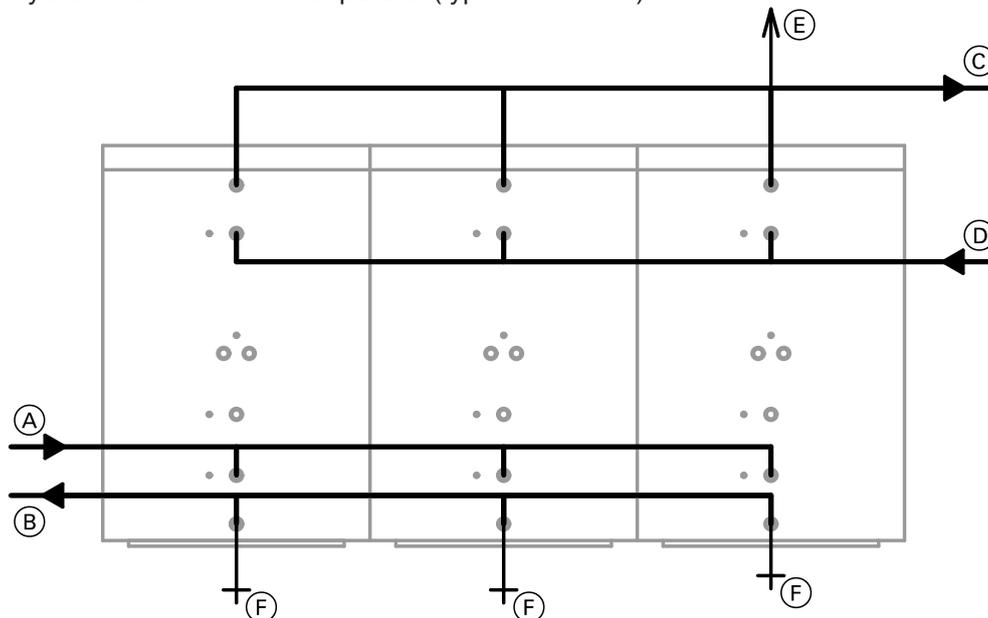


Fig.20

- (A) Heating water return 3 (HR3) from the heating circuits
- (B) Heating water return 4 (HR4) to the heat source
- (C) Heating water flow 1 (HV1) to the heating circuits
- (D) Heating water flow 2 (HV2) from the heat source
- (E) Air vent valve (EL)
- (F) Drain outlet (E)

## Ordering parts

**The following information is required:**

- Serial no. (see type plate (A))
- Position number of the part (from this parts list)

**Parts not shown**

020	Installation and service instructions
024	Spray paint
025	Touch-up paint stick, Vitosilver
026	Vitocell 100 logo
027	VISSMANN logo



Parts list

Parts list, type SVW (200 l)

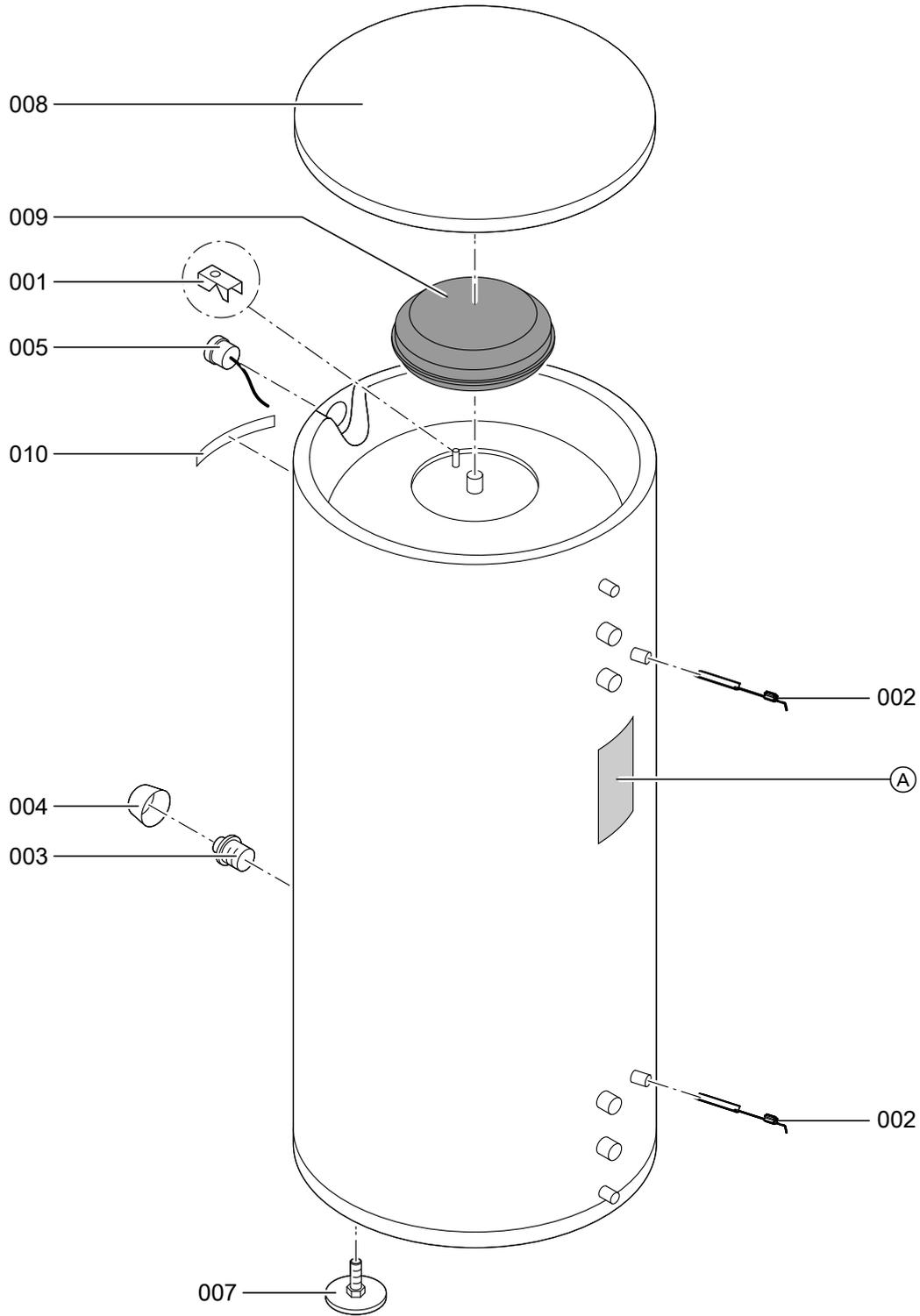


Fig.21

Components

**Parts list, type SVW (200 I)** (cont.)

<b>Pos.</b>	<b>Part</b>
001	Clamping bracket
002	Sensor retainer
003	Plug
004	Cover
005	Thermometer 30 to 120 °C
007	Adjustable foot
008	Top panel
009	Flange insulation
010	VISSMANN logo (curved)



Parts list

Parts list, type SVPA (400 I)

Cylinder assembly, type SVPA 400 I

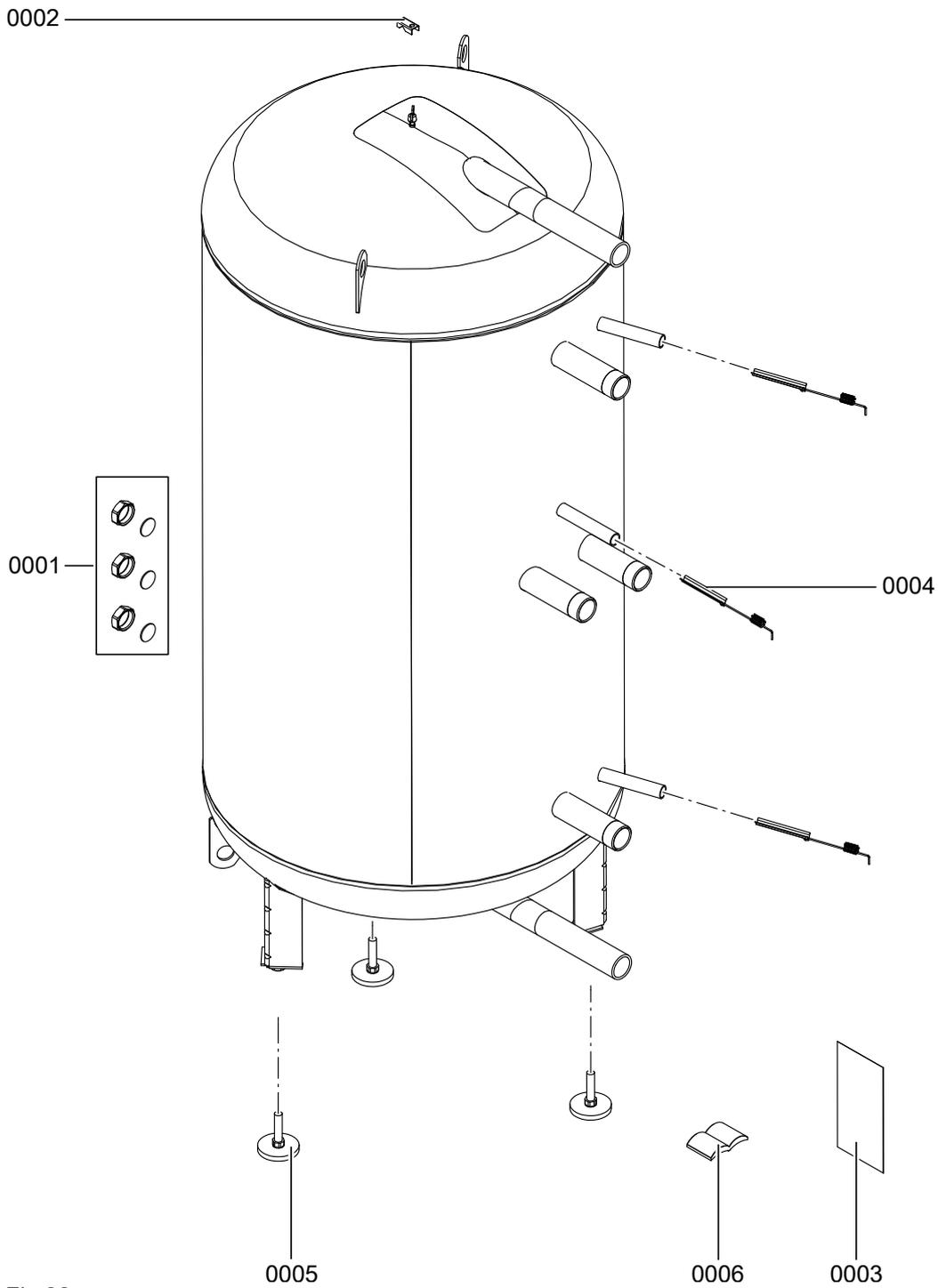


Fig.22

**Parts list, type SVPA (400 I)** (cont.)

<b>Pos.</b>	<b>Part</b>
0001	Plug
0002	Clamping bracket
0003	Type plate, Vitocell 100-E SVPA 400 I
0004	Sensor retainer
0005	Adjustable foot
0006	Vitocell 100-E installation and service instructions



Thermal insulation assembly type SVPA 400 I

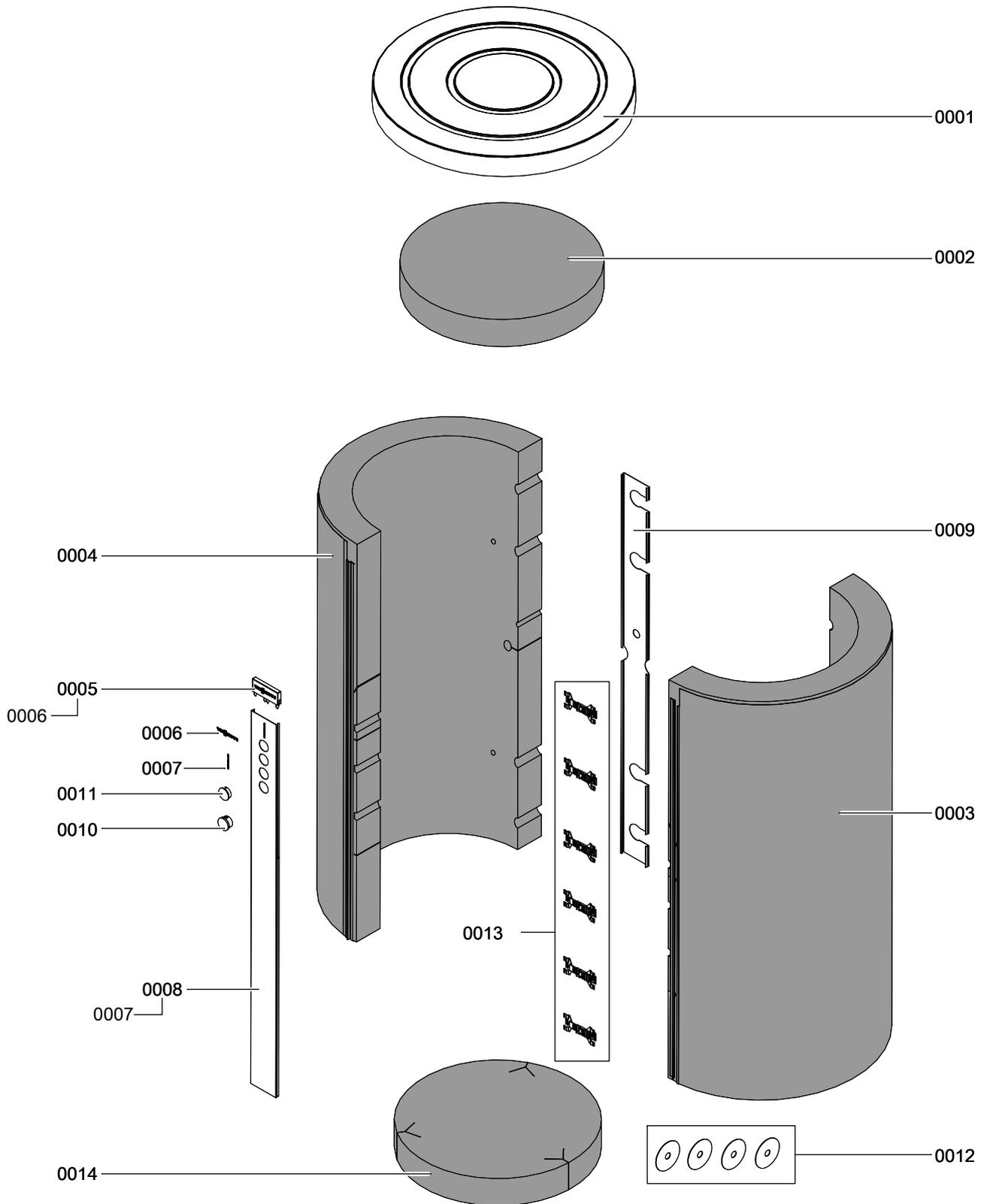


Fig.23

**Parts list, type SVPA (400 I) (cont.)**

<b>Pos.</b>	<b>Part</b>
0001	Lid
0002	Thermal insulation mat, upper
0003	Thermal insulation jacket, right section
0004	Thermal insulation jacket, left section
0005	End cap with logo
0006	VISSMANN logo
0007	Vitocell 100 logo
0008	Cover strip
0009	Cover strip
0010	Thermometer 30 to 120 °C
0011	Thermometer cover (grey)
0012	Sensor well bezel
0013	Clip fastener (6 pce)
0014	Thermal insulation mat, lower

Commissioning/service reports

**Commissioning/service reports**

	<b>Commissioning</b>	<b>Service</b>	<b>Service</b>
date:			
by:			

	<b>Service</b>	<b>Service</b>	<b>Service</b>
date:			
by:			

	<b>Service</b>	<b>Service</b>	<b>Service</b>
date:			
by:			

	<b>Service</b>	<b>Service</b>	<b>Service</b>
date:			
by:			

	<b>Service</b>	<b>Service</b>	<b>Service</b>
date:			
by:			

## Specification

<b>Cylinder</b>	<b>Type</b>	<b>SVW</b>	<b>SVPA</b>
Contents	l	200	400
<b>Dimensions</b>	mm	1409	1524
Height			
Width	mm	640	885
Length	∅ mm	581	859
Transport dimension	∅ mm		650
Weight	kg	80	122
<b>Standby heat loss</b> To DIN EN 12897:2006	kWh/24 h	1.46	1.8

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## Applicability

### Serial No.:

7248307

7501369

7552963

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