

# Installation and service instructions for contractors

**VIESMANN**


**Vitocell 140-E**  
**Type Typ SEIC**  
**Vitocell 160-E**  
**Type Typ SESB**

Heating water buffer cylinder in conjunction with solar thermal systems, heat pumps and solid fuel boilers


## **VITOCCELL 140-E** **VITOCCELL 160-E**




### 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 qualified contractors.


- Work on electrical equipment may 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 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.

-  **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.

-  **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.

**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.

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**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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**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-authorized components and making non-approved modifications or conversions can compromise safety and may invalidate our warranty.











For installation and replacements, use only Viessmann original parts or parts approved by Viessmann.

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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.
	<ul style="list-style-type: none"> <li>▪ Component must audibly click into place.</li> <li>or</li> <li>▪ Acoustic signal</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Fit new component.</li> <li>or</li> <li>▪ In conjunction with a tool: Clean the surface.</li> </ul>
	Dispose of component correctly.
	Dispose of component at a suitable collection point. Do <b>not</b> dispose of component in domestic waste.

The steps in connection with commissioning, inspection and maintenance are found in the "Commissioning, inspection and maintenance" section and 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 in solar thermal systems that comply with EN 12977, with due attention paid to the associated installation, service and operating instructions. Heating water 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 use for purposes other than room heating 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 results in an exclusion of liability.

Incorrect usage also occurs if the components in the system are modified from their intended function.

## Product information

Vitocell 140-E, type SEIC and Vitocell 160-E, type SESB are steel heating water buffer cylinders for heating water storage in conjunction with solar thermal systems in systems that comply with EN 12828 and DIN 4753.

The heating water buffer cylinders can be connected to the following heat sources:

- Heat pumps
- Solar systems
- Solid fuel boiler
- Heat recovery

If a solar system is connected via the installed indirect coil, the Solar-Divicon can be fitted directly to the heating water buffer cylinder as a pumping station for the collector circuit.

The **Vitocell 160-E, type SESB** is fitted with a **stratification system** for solar heating.

For DHW heating, the Vitotrans 353 freshwater module can be fitted directly to the heating water buffer cylinder. DHW is heated according to the instantaneous water heating principle.

## System examples

Available system examples: See [www.viessmann-schemes.com](http://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/>



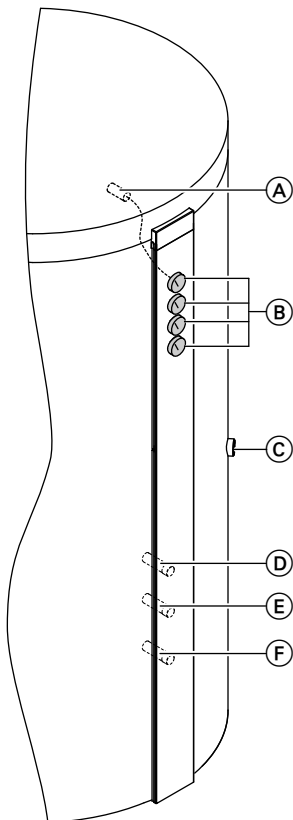
### Viessmann spare part app

[www.viessmann.com/etapp](http://www.viessmann.com/etapp)

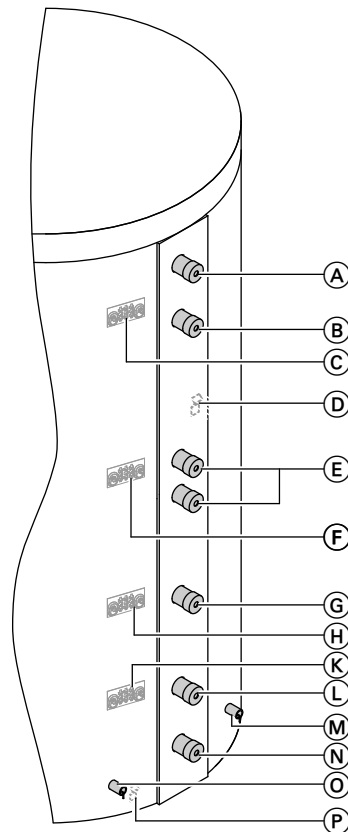


Connections

Front



Back



View without Solar-Divicon (accessories)

- (A) Thermometer sensor fixing (below the thermal insulation)
- (B) Thermometer (accessories): up to 4 pce
- (C) Immersion heater EHE, connection 1½
- (D) Heating water flow G 1
- (E) Return stratification G 1
- (F) Heating water return G 1
- (A) Heating water flow 1 to the heating circuits/air vent valve
- (B) Heating water flow 2 from the heat generator
- (C) Clamping device for buffer temperature sensor 1 (behind the thermal insulation)
- (D) Thermometer sensor fixing (behind the thermal insulation)
- (E) Heating water flow 3/heating water return
- (F) Clamping device for buffer temperature sensor 2 and thermometer sensor (behind the thermal insulation)
- (G) Heating water return 2 from the heating circuits
- (H) Clamping device for buffer temperature sensor 3 and thermometer sensor (behind the thermal insulation)
- (K) Clamping device for buffer temperature sensor 4 (behind the thermal insulation)
- (L) Heating water return 3
- (M) Solar heating water flow/air vent valve (if Solar-Divicon accessory is fitted: At the front of the heating water buffer cylinder)
- (N) Heating water return 4 to the heat generator/ drain
- (O) Solar heating water return (if Solar-Divicon accessory is fitted: At the front of the heating water buffer cylinder)
- (P) Thermometer sensor fixing (behind the thermal insulation)

## Installing the heating water buffer cylinder

### Installation information



#### 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.



#### Please note

To prevent material losses, install the heating water buffer cylinder in a room free from the risk of frost and draughts. When not in use, the heating water 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 heating water buffer cylinder.

## Installing the heating water buffer cylinder with immersion heater EHE

### Minimum clearances

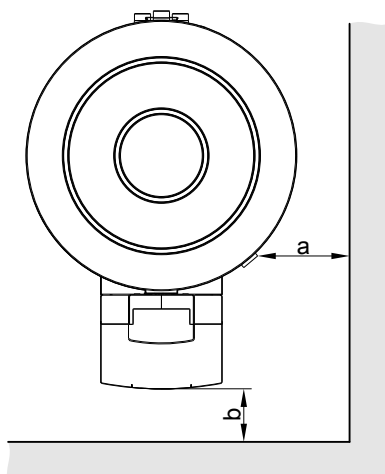


Fig. 1



Immersion heater EHE installation instructions

Maintain minimum clearances.

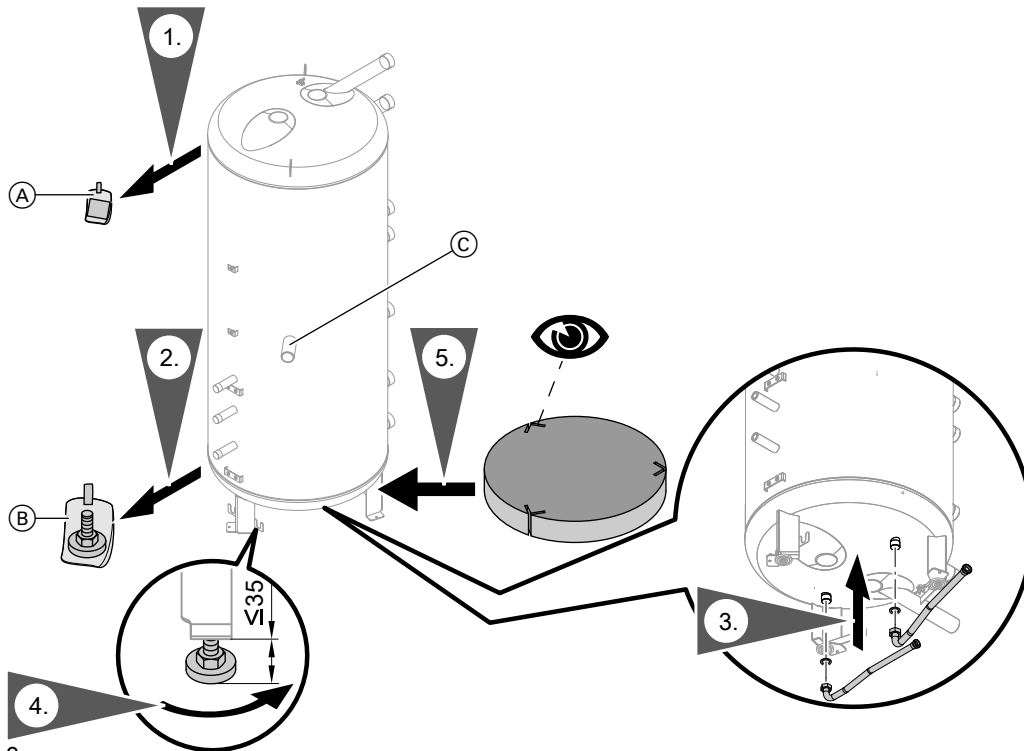
#### Note

*The unheated length of an immersion heater EHE installed on site must be at least 100 mm.*

Max. output	Dimension a	Dimension b
6 kW	≥ 550 mm	≥ 650 mm
12 kW	≥ 750 mm	≥ 650 mm



**Fitting the lower thermal insulation mat and aligning the buffer cylinder**



3x  
Fig. 2

- (A) Bag with type plate
- (B) Bag of 3 adjustable feet

**Note**  
Adjust only 1 or 2 of the adjustable feet to level the cylinder body. At least one of the adjustable feet must remain fully screwed in.  
**Never** extend the adjustable feet beyond a total length of 35 mm.

- 6. If **no** immersion heater EHE is installed, tightly seal the front female connection (C) with the R 1½ plug supplied.

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

Installation

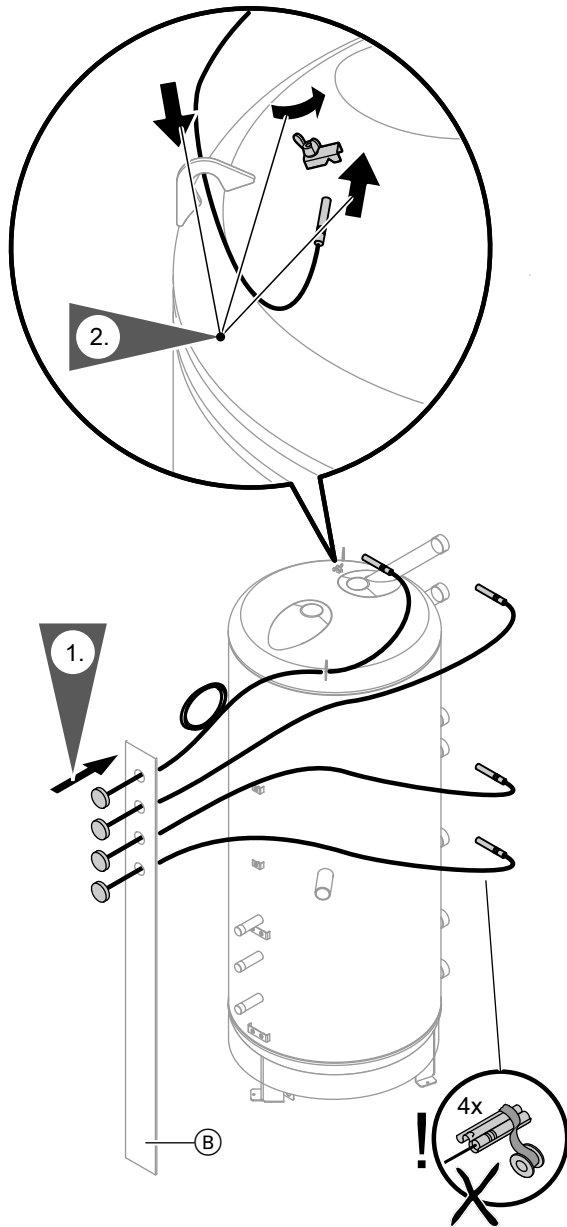


Fig. 3

Fitting the thermometer sensor (if supplied) ... (cont.)

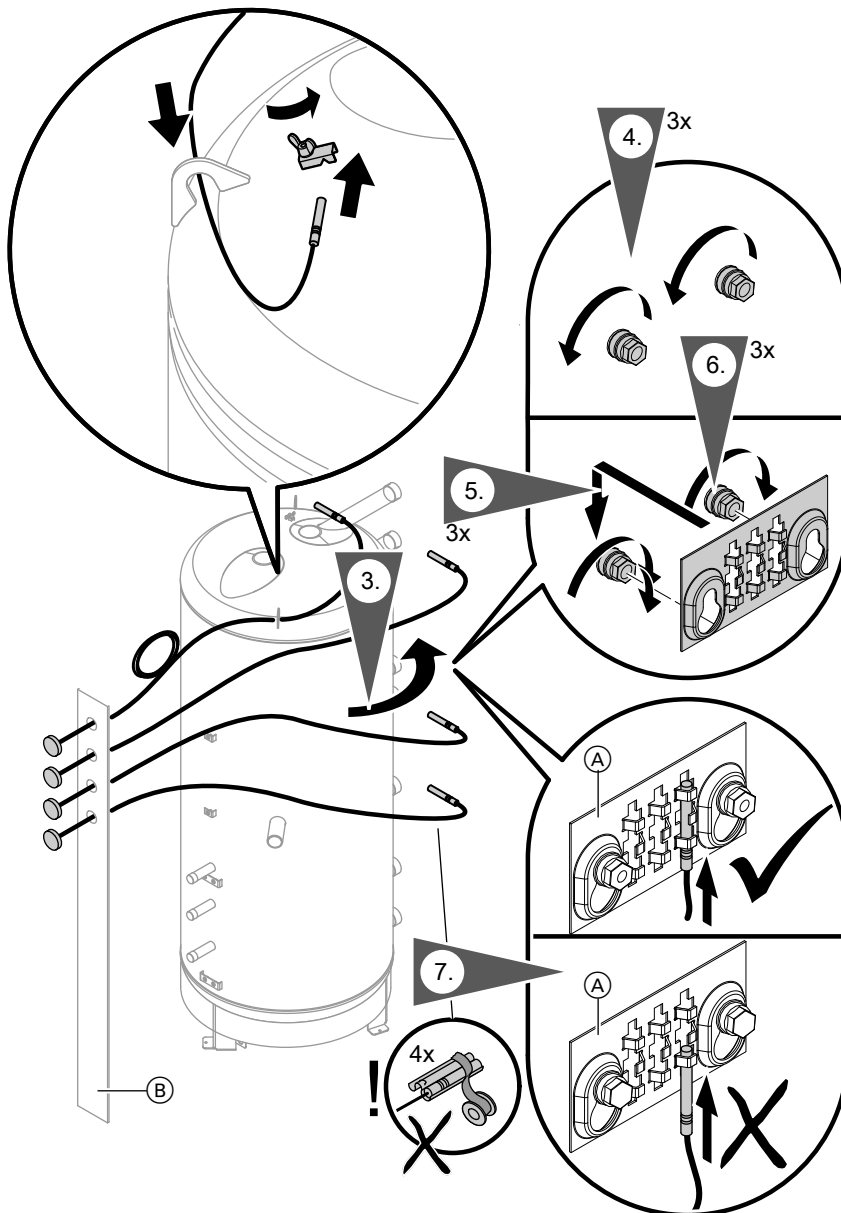


Fig. 4

- (A) Clamping device
- (B) Cover strip

**Note**

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

**Note**

When the thermal insulation is being fitted, the buffer temperature sensor leads are routed outwards through the apertures (slots) in the rear cover strip: See page 13.

## Fitting the thermal insulation



### 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

If fleece remnants from the thermal insulation get into the heating water buffer cylinder, they will 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.

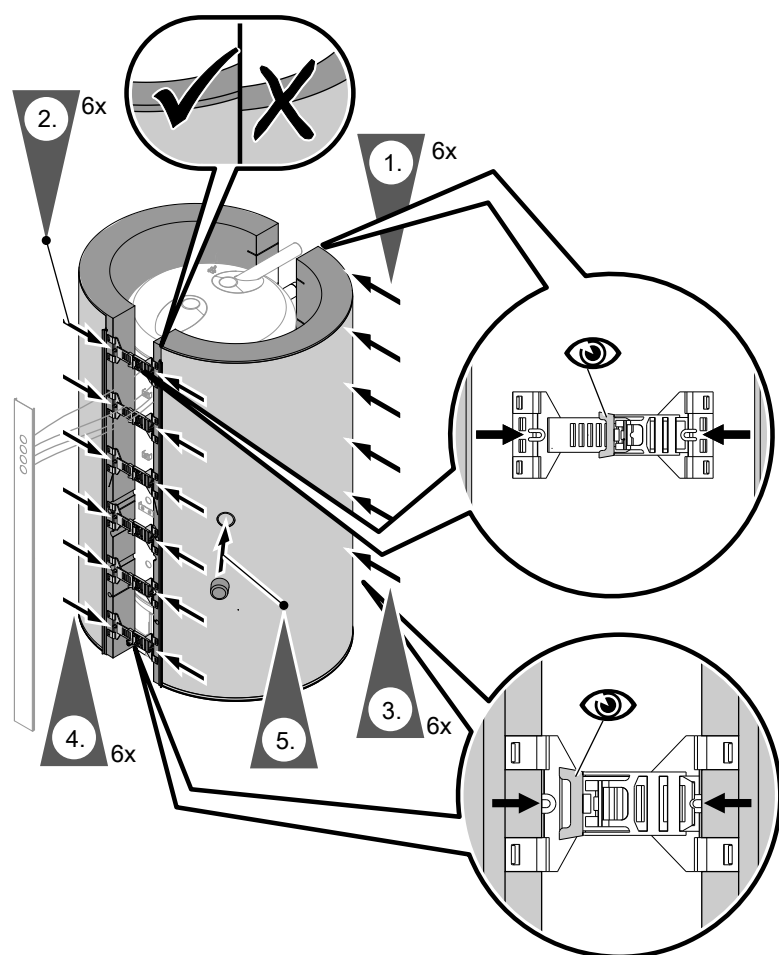


Fig. 5

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 at the back of the cylinder as close together as possible.

### Fitting the thermal insulation (cont.)

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

### Fitting the cover strips

1. Pat the thermal insulation to ensure it fits evenly around the cylinder body.
4. Affix type plate (A).

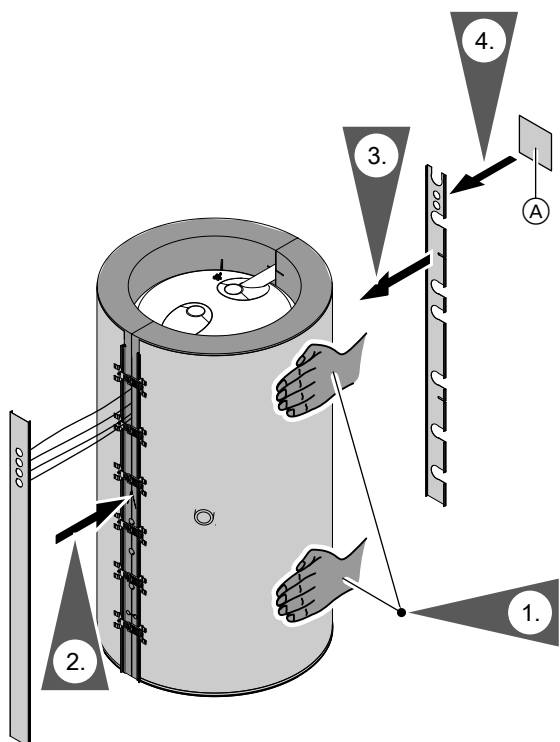


Fig. 6

(A) Type plate

Fitting the cover

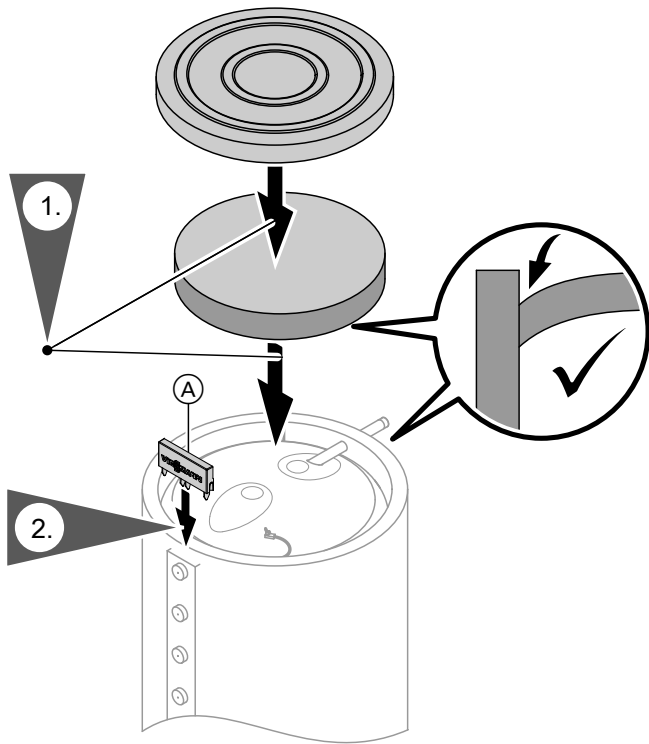
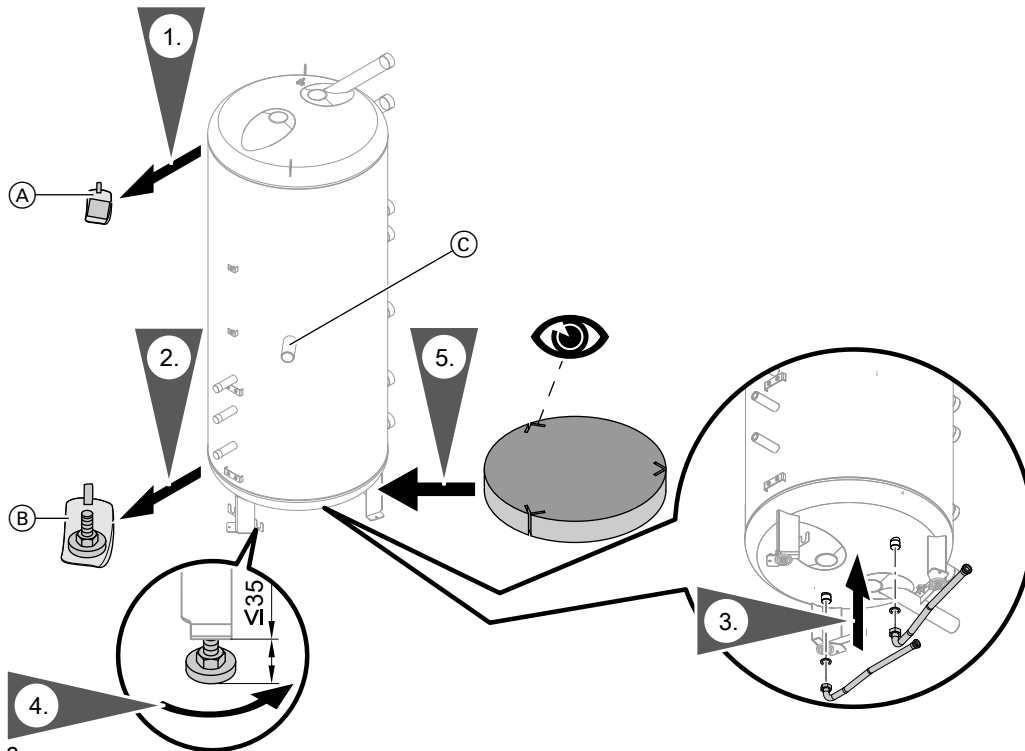


Fig. 7

Ⓐ Viessmann logo

**Fitting the lower thermal insulation mat and aligning the buffer cylinder**



3x  
Fig. 8

- (A) Bag with type plate
- (B) Bag of 3 adjustable feet

**Note**  
Adjust only 1 or 2 of the adjustable feet to level the cylinder body. At least one of the adjustable feet must remain fully screwed in.  
**Never** extend the adjustable feet beyond a total length of 35 mm.

- 6. If **no** immersion heater EHE is installed, tightly seal the front female connection (C) with the R 1½ plug supplied.

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

Installation

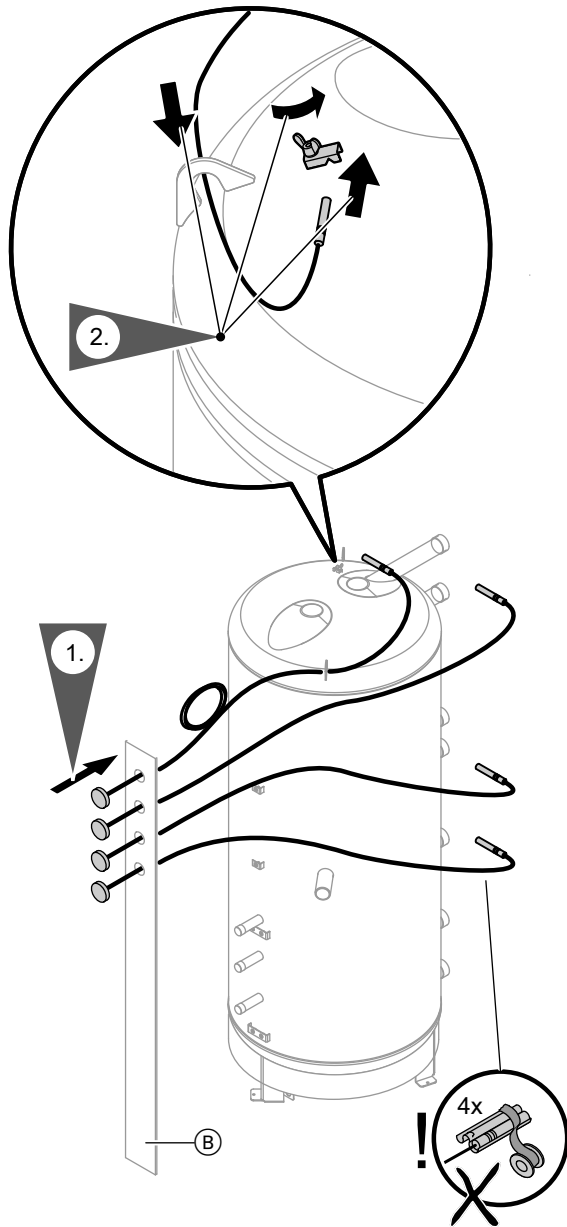


Fig. 9



Fitting the thermometer sensor (if supplied) ... (cont.)

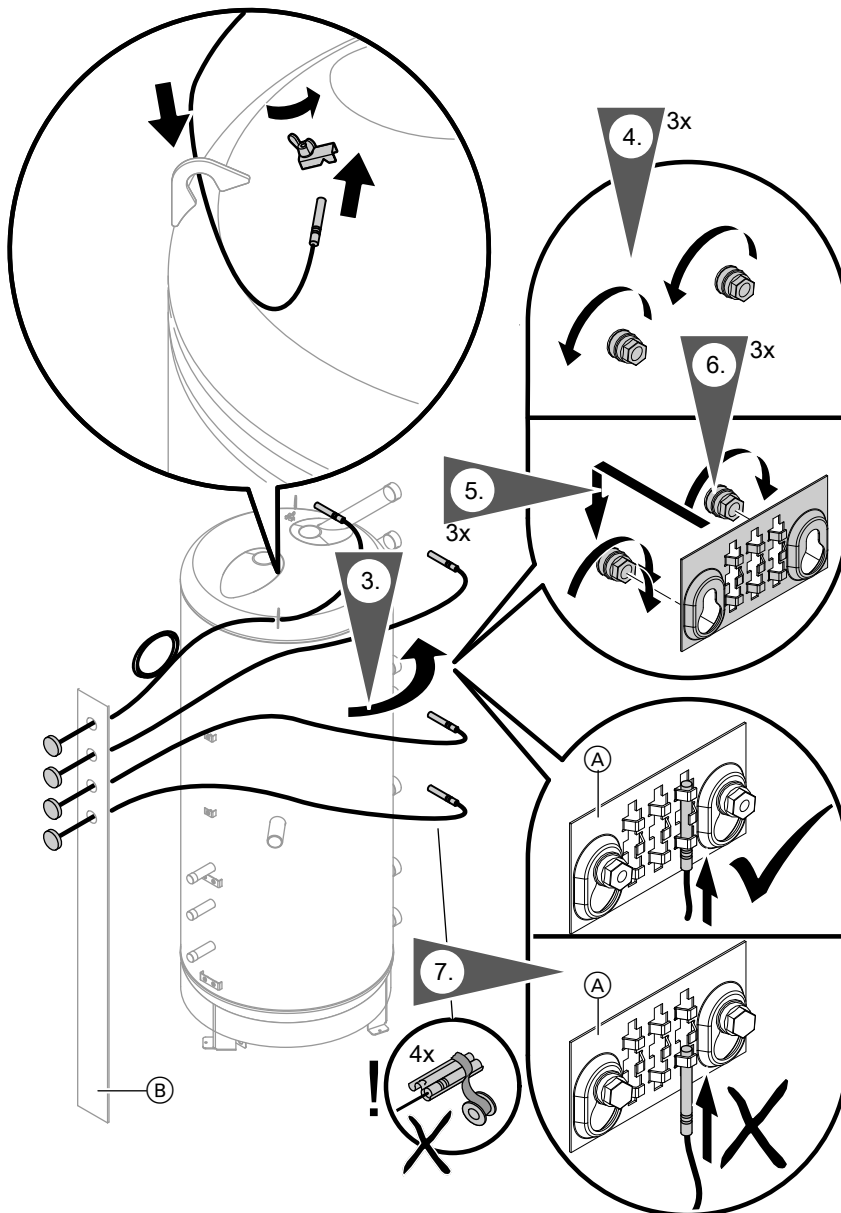


Fig. 10

- (A) Clamping device
- (A) Cover strip

**Note**

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

**Note**

When the thermal insulation is being fitted, the buffer temperature sensor leads are routed outwards through the apertures (slots) in the rear cover strip: See page 22.

Fitting the Vitotrans 353

Installation

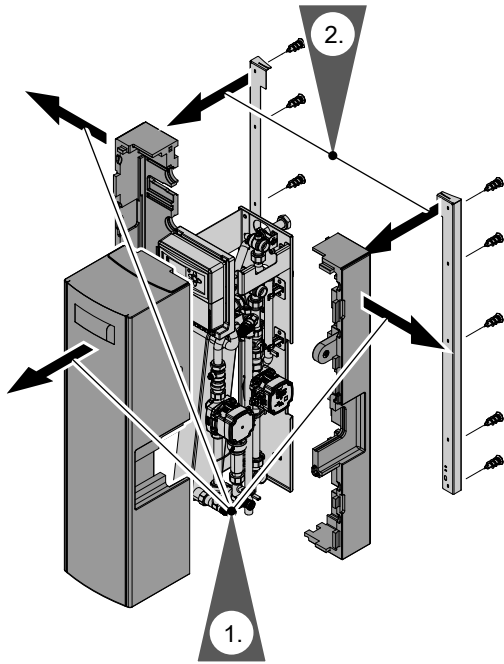


Fig. 11

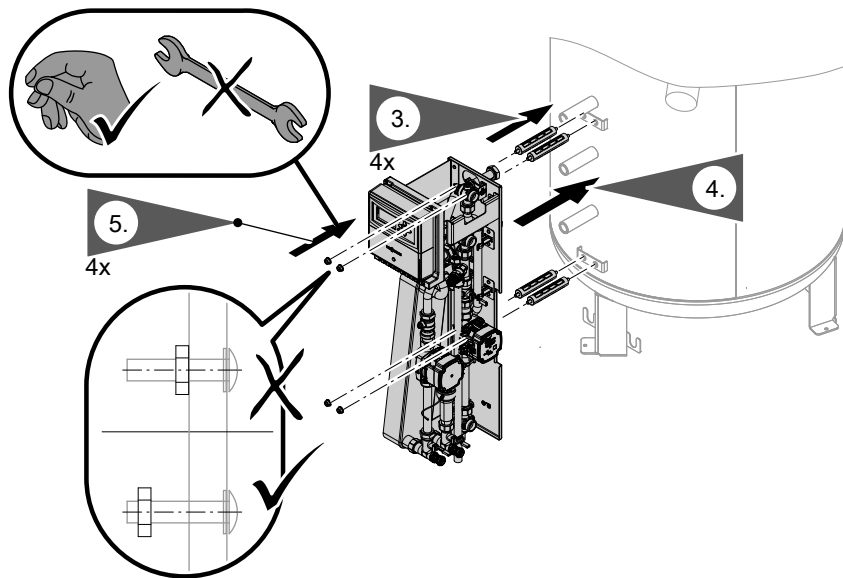


Fig. 12

**Fitting the Vitotrans 353 (cont.)**

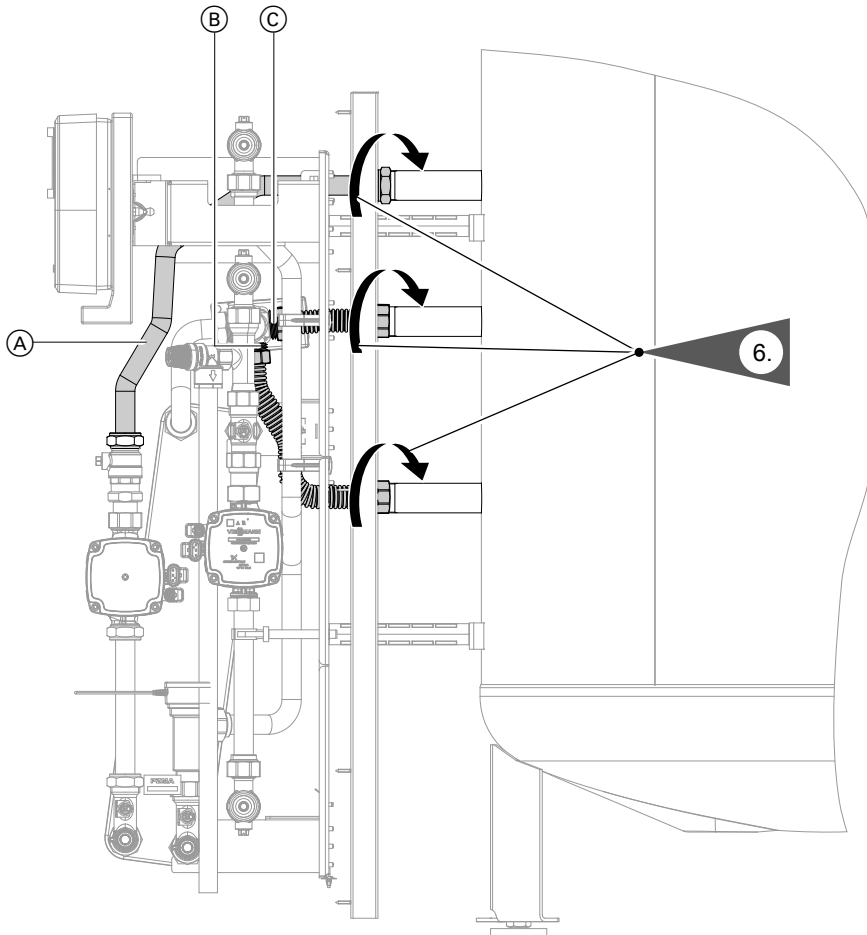


Fig. 13

- (A) Heating water flow
- (B) Heating water return
- (C) Return stratification

**Fitting the thermal insulation**

**! 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.

**! Please note**  
 If fleece remnants from the thermal insulation get into the heating water buffer cylinder, they will 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.

**Fitting the thermal insulation (cont.)**

Installation

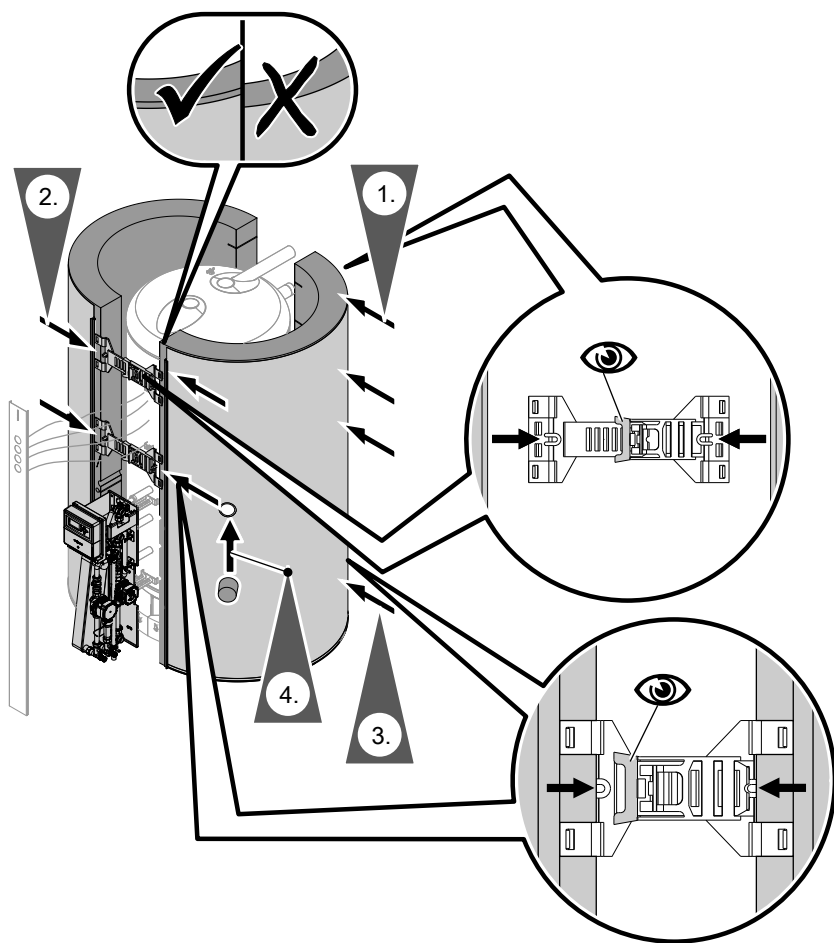


Fig. 14

1. Attach 6 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. Place the thermal insulation jacket around the cylinder body.
2. Fit 4 clip fasteners above and 2 clip fasteners behind the Vitotrans so that they are evenly spaced. Leave the clip fasteners in the first notch.
3. Push the clip fasteners as close together as possible.
4. Install the immersion heater EHE or seal the hole with a cover.

Fitting the cover strips

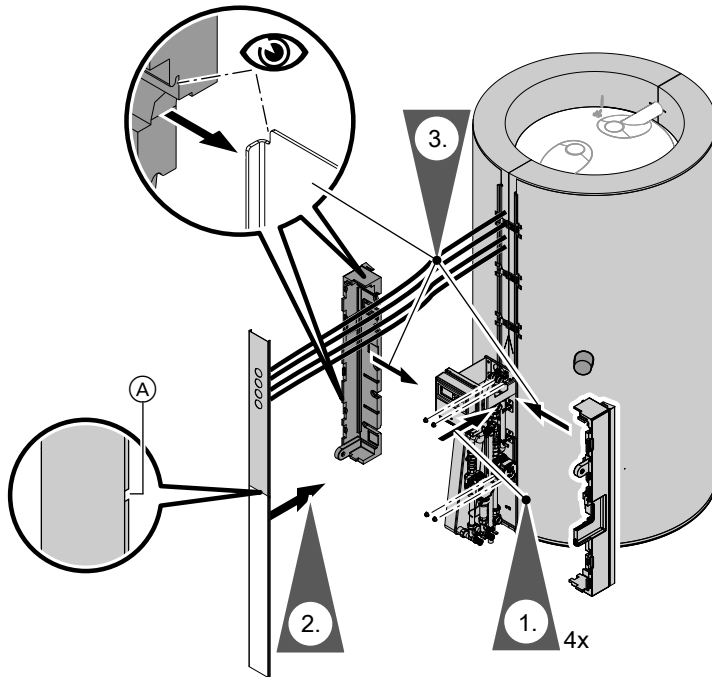


Fig. 15

1. Tighten the nuts on the bolts.
2. Separate the cover strip at slot (A) and fit the upper section.
3. Insert the side sections of the Vitotrans thermal insulation. Observe the groove in the thermal insulation.

**Fitting the cover strips (cont.)**

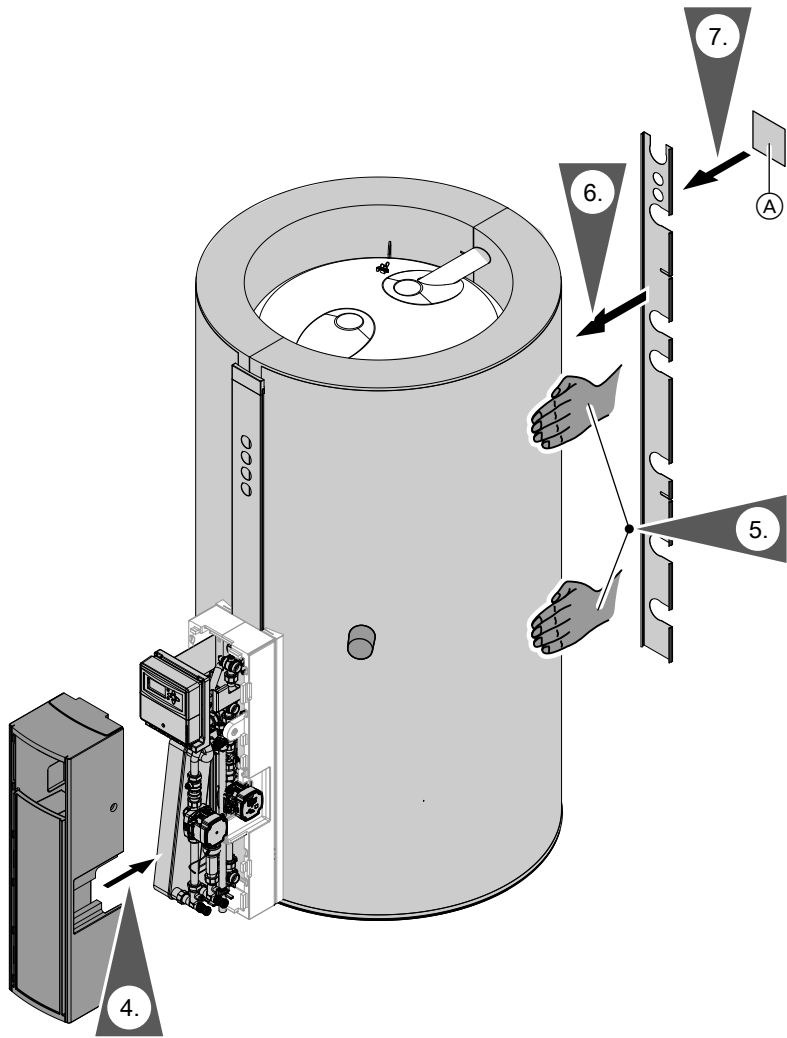


Fig. 16 Vitocell 140-E, type SEIC, 750 l

Ⓐ Type plate

- 4. Fit the front section of the Vitotrans thermal insulation.
- 5. Fit the thermal insulation jacket evenly around the cylinder body by patting it. Start at the back and progress to the front. This reduces the gap between the Vitotrans and the cylinder.
- 6. Fit the rear cover strip to the thermal insulation.
- 7. Affix type plate Ⓐ.

**Fitting the cover**

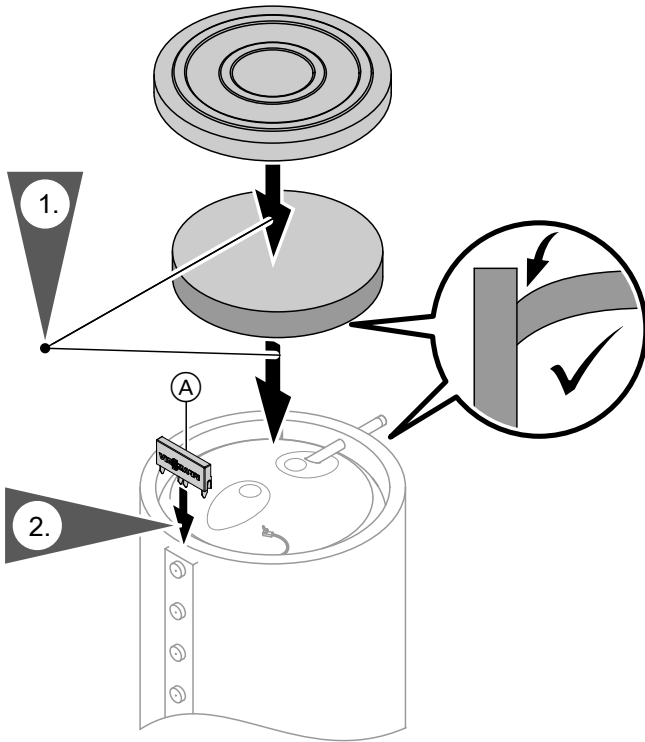


Fig. 17

(A) Viessmann logo

**Installing the air vent valve on the solar side**

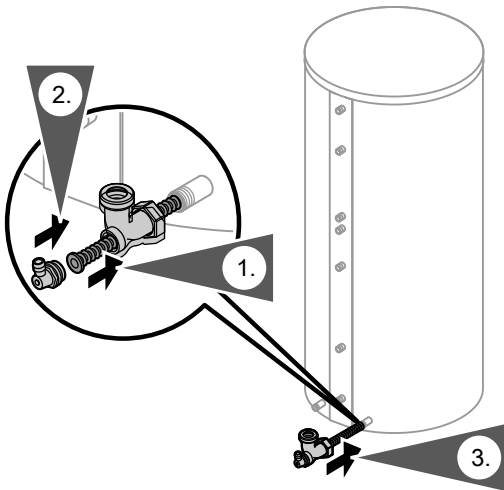
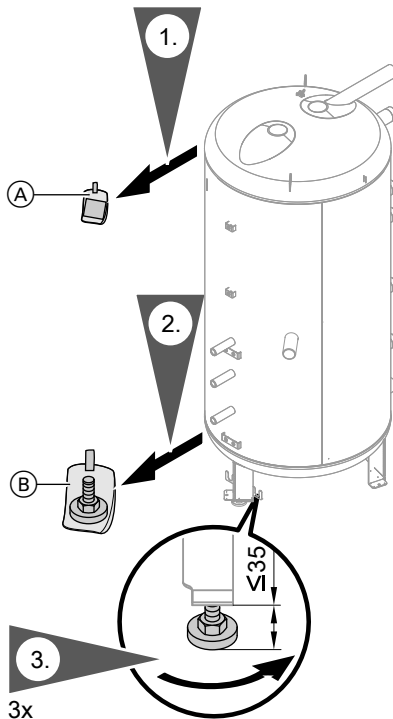


Fig. 18

3. Push the corrugated hose into the solar flow and secure the elbow with flat gasket to the cylinder. Route the drip hose of the air vent valve into a vessel.

Continue on page 36.

## Siting and levelling



3x  
Fig. 19

- (A) Bag with type plate
- (B) Bag of 3 adjustable feet

### Note

Adjust only 1 or 2 of the adjustable feet to level the cylinder body. At least one of the adjustable feet must remain fully screwed in.

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

- 4. If **no** immersion heater is installed, tightly seal the front female connection with the R 1½ plug supplied.



Fitting the support panel

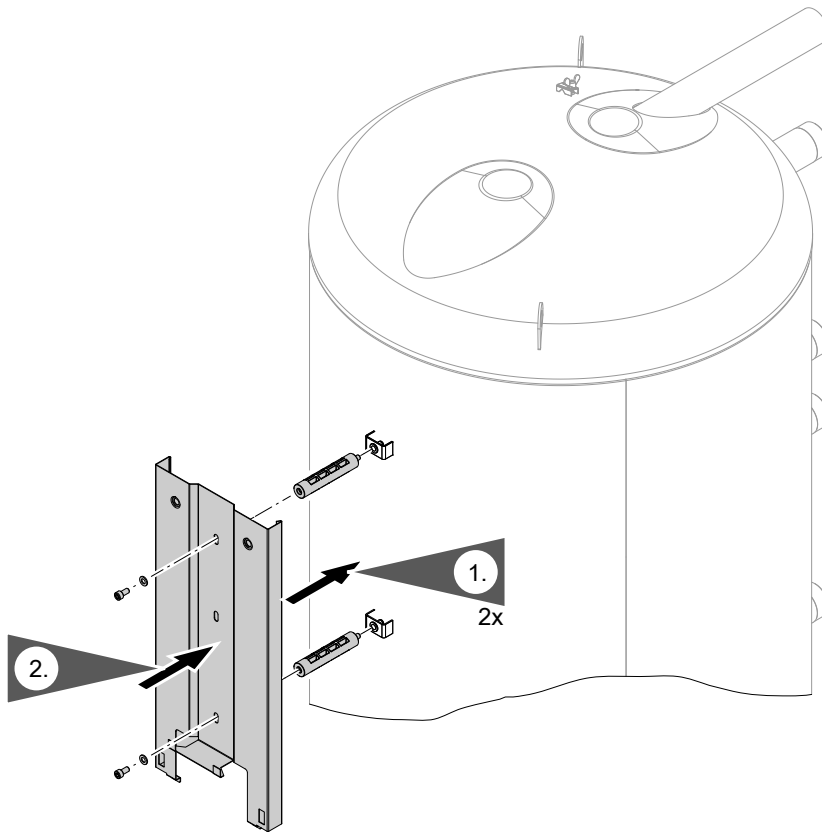


Fig. 20

**Note**

Use the two lower holes if fitting to heating water buffer cylinder with 600 l capacity.

Installing connections on the solar side

Installation

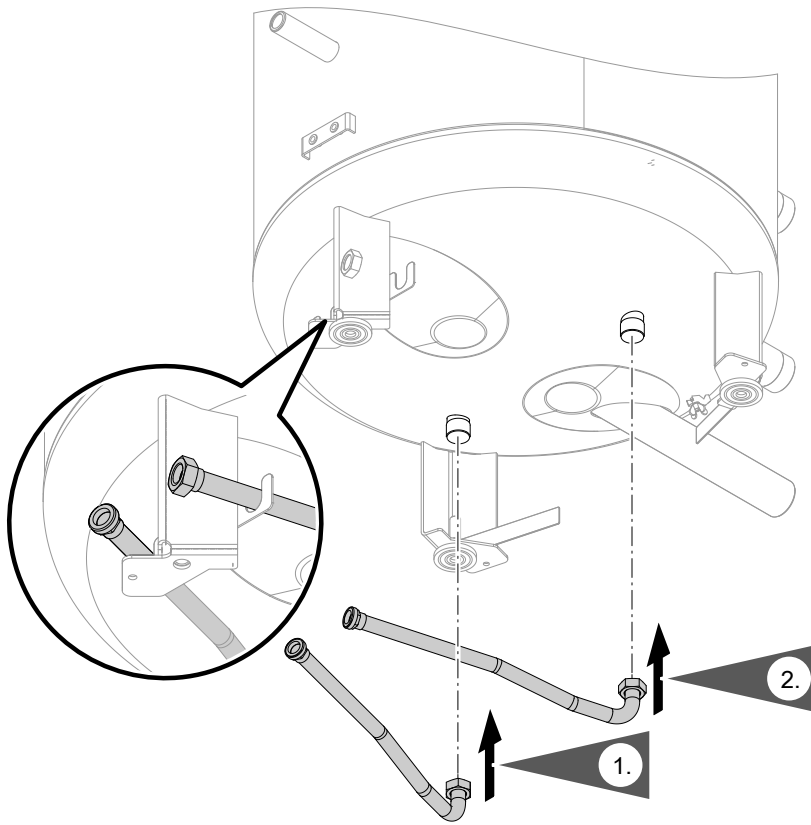


Fig. 21

**Installing connections on the solar side** (cont.)

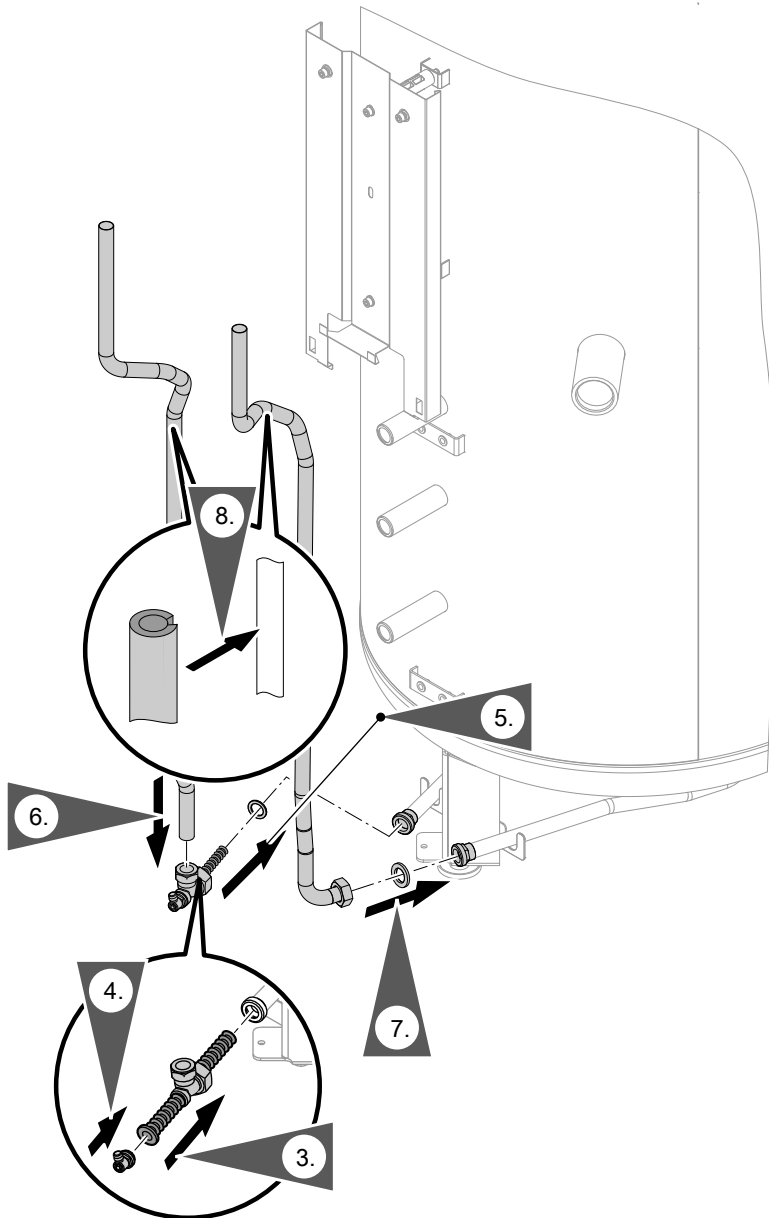



Fig. 22

3. Push the corrugated hose into the elbow.
4. Screw the air vent plug into the elbow.
5. Push the corrugated hose into the solar flow and secure the elbow with flat gasket to the cylinder.
6. Fit the solar flow pipe.
7. Fit the solar return pipe.
8. Before the Divicon is fitted: Attach thermal insulation to the pipes – the long section to the left-hand pipe, the short section to the right-hand one.

## Installing the Solar-Divicon

 Solar-Divicon installation instructions

- ! Please note**  
 Cables can be damaged if exposed to hot components.  
 Ensure adequate thermal insulation between cables and hot pipework.

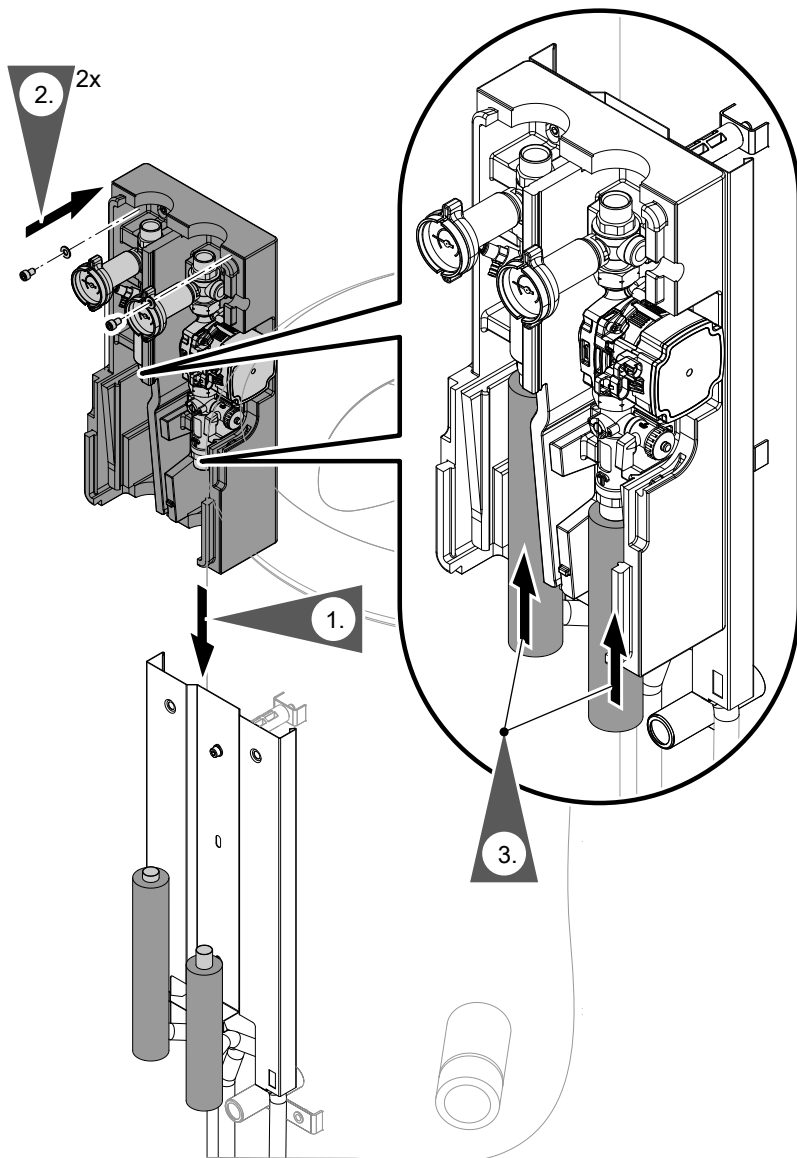


Fig. 23

## Connecting the Solar-Divicon on the solar side and checking for leaks

- ! Please note**  
 Once the thermal insulation and thermal insulation cover are in place, the fittings are covered. The following steps must therefore be carried out before fitting the thermal insulation.

### Connections on the solar side

Permissible temperature	140 °C
Permissible operating pressure	10 bar (1 MPa)
Test pressure	16 bar (1.6 MPa)

**Note**  
 For connection locations see page 7.

## Connecting the Solar-Divicon on the solar side... (cont.)

1. Connect all pipework with detachable fittings.
2. Fill the system on the solar side.
3. Check all fittings on the solar side for leaks, including the connections underneath the cylinder.



Solar collector service instructions

## Fitting the Solar-Divicon thermal insulation

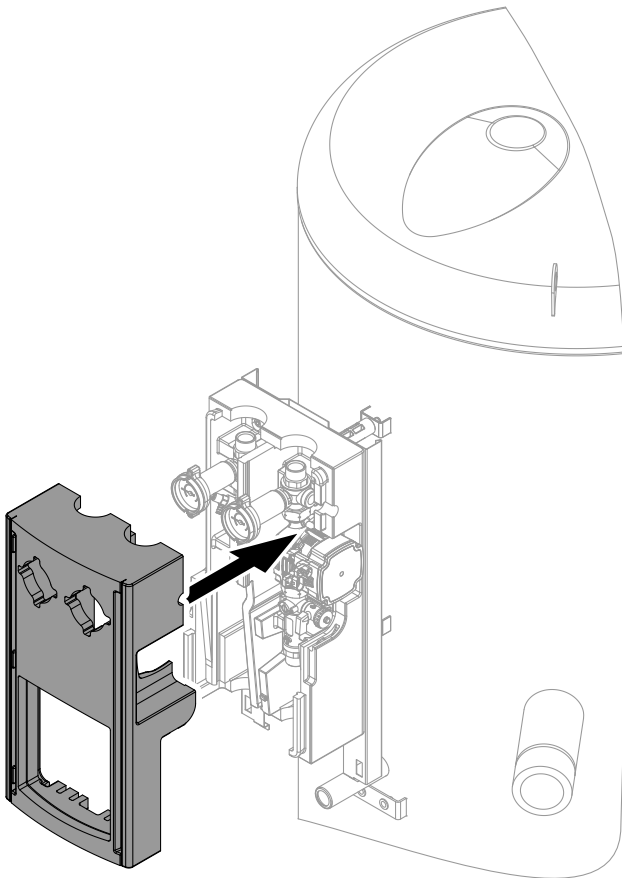


Fig. 24

## Fitting the lower thermal insulation mat

**Note**

*Do not carry out the following steps until the leak test has been carried out: See page 28.*

**Fitting the lower thermal insulation mat (cont.)**

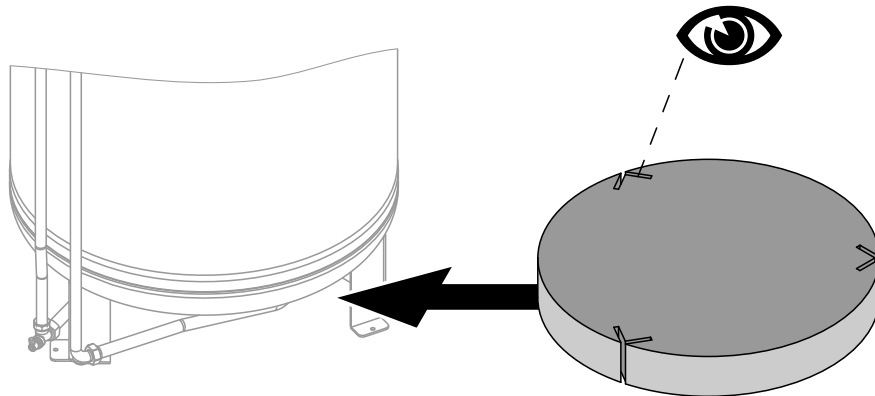


Fig. 25

**Fitting the thermometer sensor (if supplied) and buffer temperature sensors**

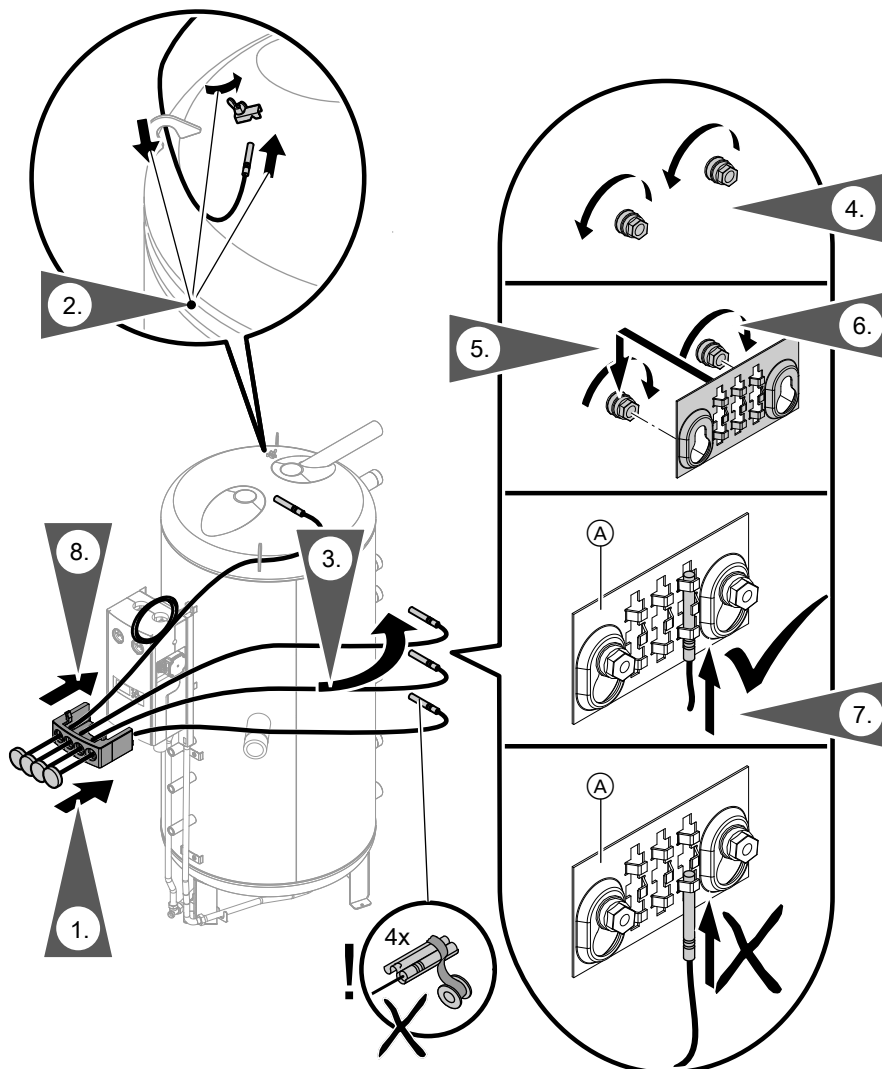


Fig. 26

(A) Clamping device

**Note**

The cover hangs on the heating water buffer cylinder and is held in position by the straight capillaries. This is necessary for the rest of the installation.

**Note**

When the thermal insulation is being fitted, the buffer temperature sensor leads are routed outwards through the apertures (slots) in the rear cover strip.

Fitting the Vitotrans 353

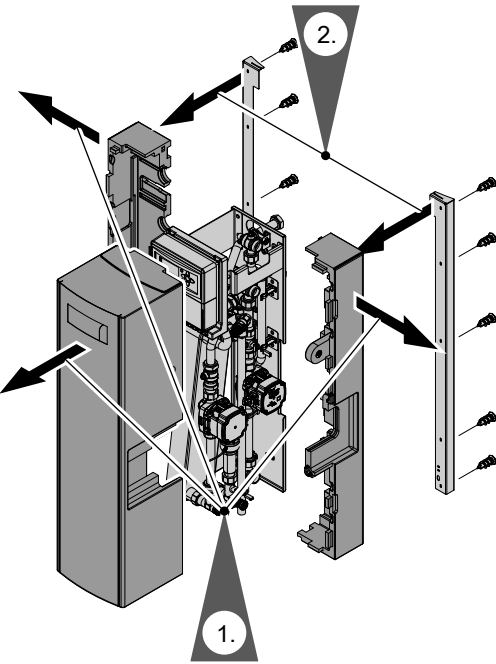


Fig. 27

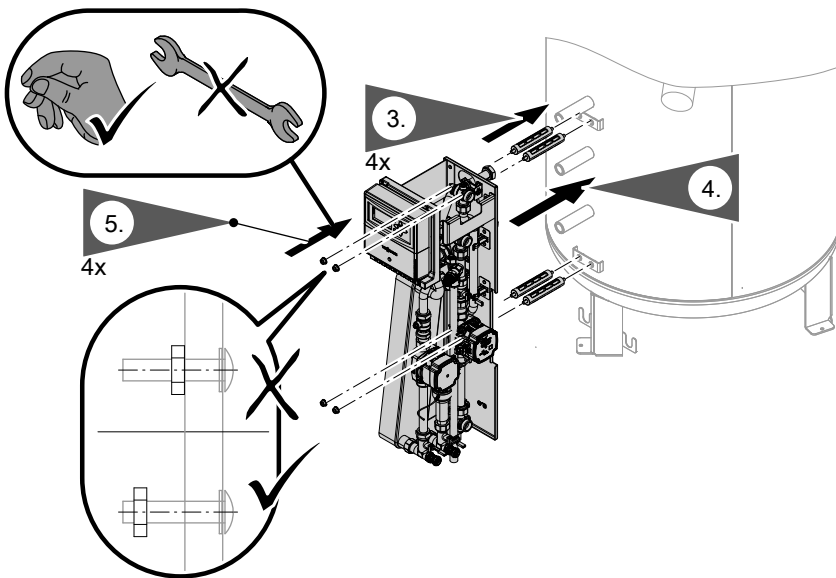


Fig. 28

**Fitting the Vitotrans 353 (cont.)**

Installation

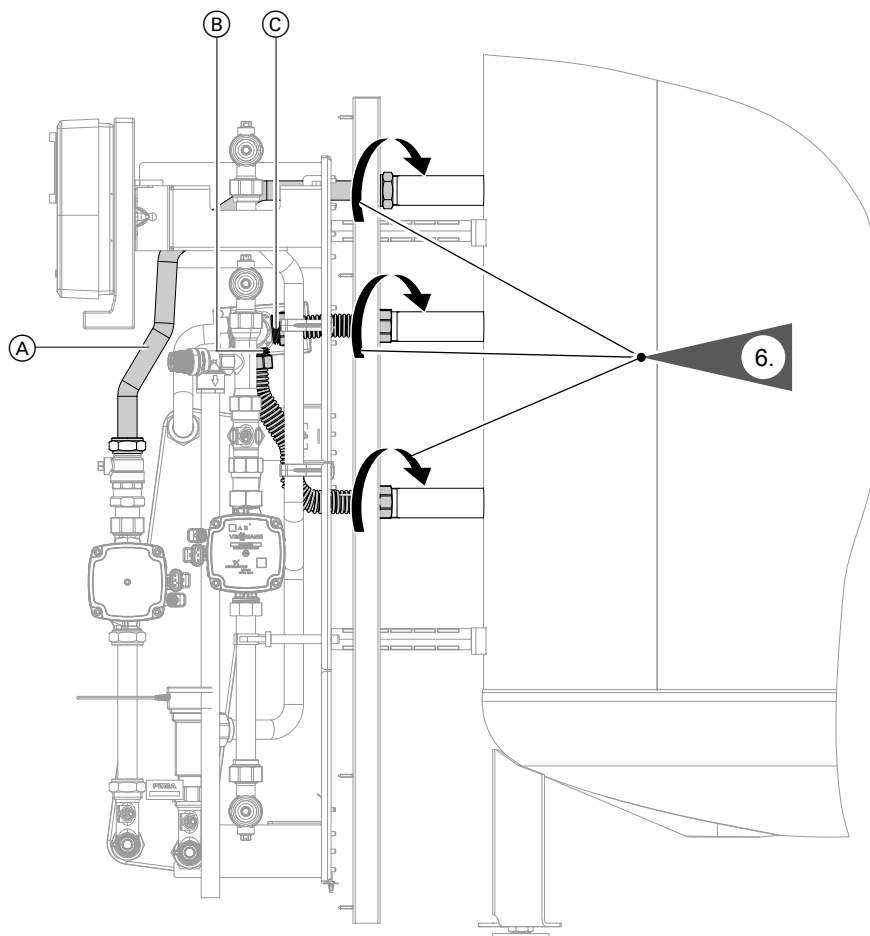


Fig. 29

- (A) Heating water flow
- (B) Heating water return
- (C) Return stratification

**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.



**Please note**

If fleece remnants from the thermal insulation get into the heating water buffer cylinder, they will 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.



**Fitting the thermal insulation jacket (cont.)**

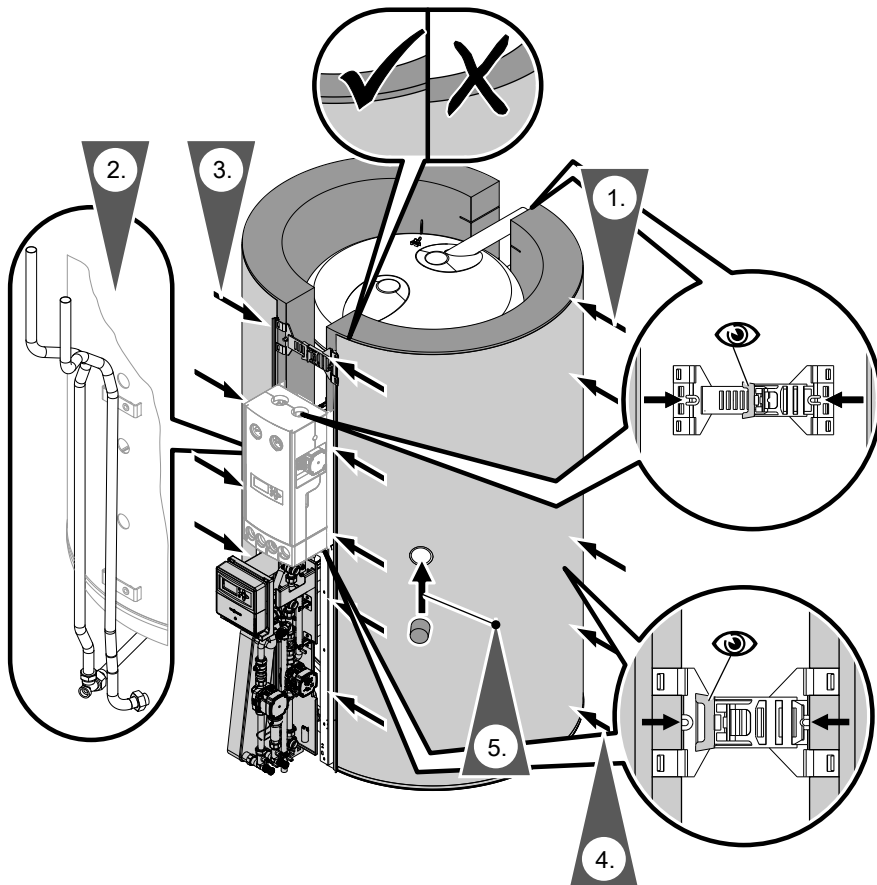


Fig. 30

1. Attach 6 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 the thermal insulation in front of the pipes.
3. Fit the clip fasteners evenly spaced behind the Solar-Divicon and between Solar-Divicon and Vitotrans.
4. Push the clip fasteners as close together as possible.
5. Install the immersion heater EHE or seal the hole with a closure.

**Fitting the cover strips**

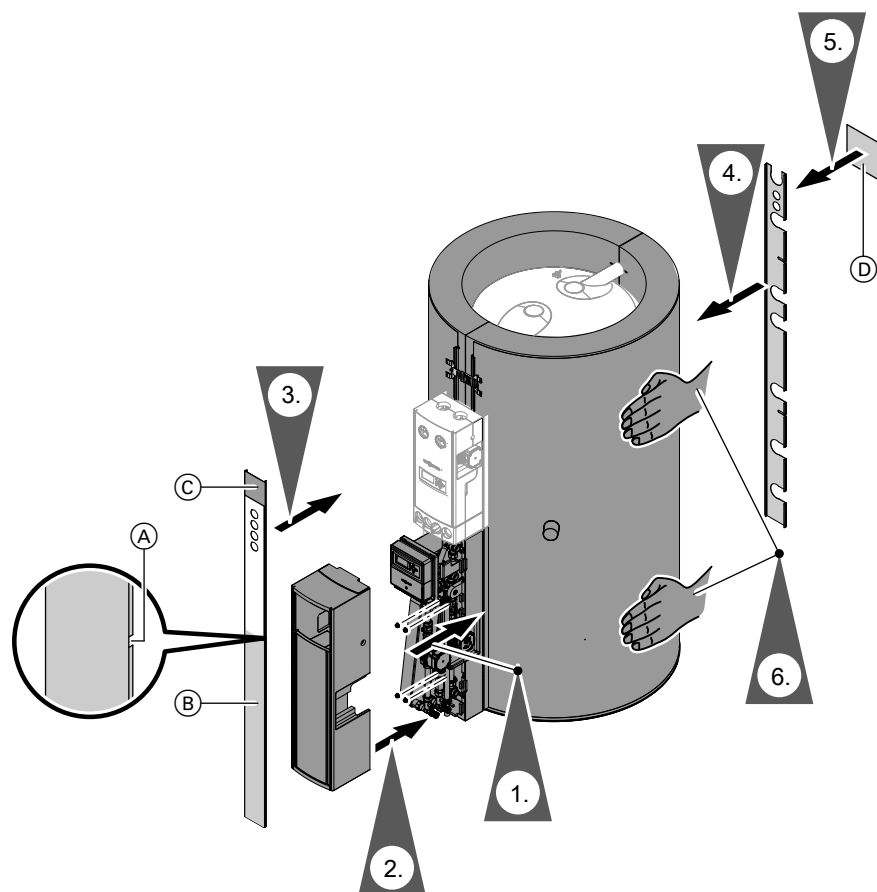


Fig. 31 Example: Vitocell 140-E, type SEIC, 750 l

- Ⓐ Groove for separating the cover strip
- Ⓑ Cover strip, lower part

- Ⓒ Cover strip, upper part
- Ⓓ Type plate

1. Screw the nuts onto the bolts.
2. Fit the front section of the Vitotrans thermal insulation.
3. Prepare and fit the front cover strip in accordance with the following table.
4. Fit the rear cover strip to the thermal insulation.
5. Affix type plate Ⓓ.
6. Tap the thermal insulation towards the front. This reduces the gap to the fitted modules.

**Fitting the cover strip**

Cylinder capacity	With Vitotrans and Solar-Divicon
600 l	Do not fit a cover strip.
750 l	Shorten part Ⓒ to 300 mm and fit.
950 l	Fit without shortening part Ⓒ.

Fitting the cover

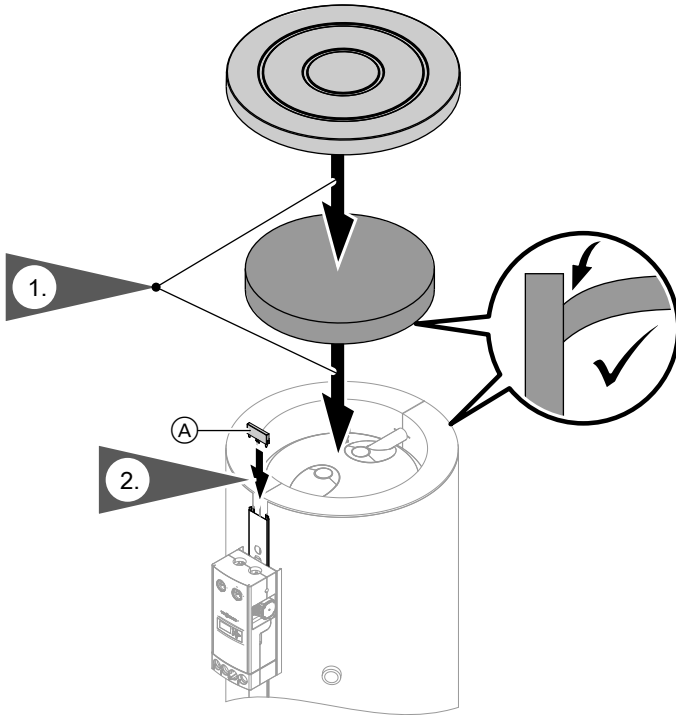


Fig. 32

Ⓐ Cap

## Connections on the heating water side

### Connections on the heating water side

- Adjust the temperature controller and the high limit safety cut-out so that the heating water temperature in the heating water buffer cylinder does **not** exceed 110 °C.
- Connect all pipework with detachable fittings.

#### Permissible temperatures

Solar side	140 °C
Heating water side	110 °C

#### Permissible operating pressure

Solar side	10 bar (1.0 MPa)
Heating water side	3 bar (0.3 MPa)

#### Test pressure

Solar side	16 bar (1.6 MPa)
Heating water side	4.8 bar (0.48 MPa)

#### Note

For the position of the connections, see page 7.

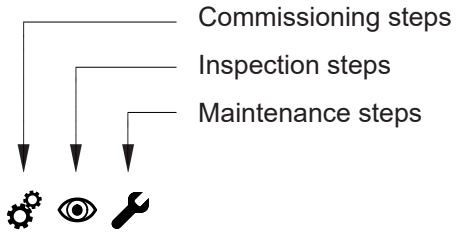
1. Install the flow lines with a rise. Fit an air vent valve at the highest point.
2. Install the heat supply control unit.
3. If not present, install a type-tested high limit safety cut-out in the system. For this, use a TR/STB combination device (temperature limiter and high limit safety cut-out).
4. Tightly seal any connections that are not required.

### 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.



**Steps - commissioning, inspection and maintenance**



Page

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### Filling the heating water buffer cylinder

1. Only fill the heating water buffer cylinder with fill water of potable quality: See chapter "Fill and top-up water".
2. Check all connections for leaks. Test pressure: 9.6 bar (0.96 MPa).  
If necessary re-seal the connections.
3. Check the function of the shut-off and safety equipment according to the relevant manufacturer's instructions.



#### Please note

Excessively high operating temperatures can cause damage to the system. Adjust the temperature controller and the high limit safety cut-out so that the heating water temperature in the heating water buffer cylinder does not exceed 110 °C.

### Fill and top-up water

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 normally 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): See the table below.
- 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).
- If no aluminium or aluminium alloy components are installed, the heating water in systems with Viessmann heat generators does not need to be fully 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. Viessmann accepts no liability for damage or operational failure 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.



## Filling the heating water buffer cylinder (cont.)

### Total permissible hardness of the fill and top-up water according to VDI 2035

Total heating output of heat generator	Specific water capacity of heat generator <sup>1</sup>	Specific system volume <sup>2</sup>		
		≤ 20 l/kW	> 20 to ≤ 40 l/kW	> 40 l/kW
≤ 50 kW	≥ 0.3 l/kW	None	≤ 3.0 mol/m <sup>3</sup> (16.8 °dH)	≤ 0.05 mol/m <sup>3</sup> (0.3 °dH)
	< 0.3 l/kW	≤ 3.0 mol/m <sup>3</sup> (16.8 °dH)	≤ 1.5 mol/m <sup>3</sup> (8.4 °dH)	≤ 0.05 mol/m <sup>3</sup> (0.3 °dH)
> 50 to ≤ 200 kW	—	≤ 2.0 mol/m <sup>3</sup> (11.2 °dH)	≤ 1.0 mol/m <sup>3</sup> (5.6 °dH)	≤ 0.05 mol/m <sup>3</sup> (0.3 °dH)
> 200 to ≤ 600 kW	—	≤ 1.5 mol/m <sup>3</sup> (8.4 °dH)	≤ 0.05 mol/m <sup>3</sup> (0.3 °dH)	≤ 0.05 mol/m <sup>3</sup> (0.3 °dH)
> 600 kW	—	≤ 0.05 mol/m <sup>3</sup> (0.3 °dH)	≤ 0.05 mol/m <sup>3</sup> (0.3 °dH)	≤ 0.05 mol/m <sup>3</sup> (0.3 °dH)

### Further requirements for the fill and top-up water independent of the heating output according to VDI 2035

#### Appearance

Clear, free of sedimented substances

#### Electrical conductivity

If the conductivity of the heating water is above **1500 µS/cm** due to a high salt content (e.g. in supply areas near the coast), desalination is necessary.

#### pH value

Materials in the system	pH value
Without aluminium alloys	8.2 to 10.0
With aluminium alloys	8.2 to 9.0

#### Information about system design

- For softening the heating water, use softening systems with water flow meters: See Vitaset pricelist.
- During installation, ensure that individual pipework sections can be drained separately. This avoids the need to drain all the heating water in the case of maintenance and repair work.
- As the formation of sludge and magnetite in the heating water cannot generally be completely prevented during operation, we recommend the installation of suitable magnetic dirt separators: See Vitaset pricelist.

### Notes on commissioning and operating the system

- In order to prevent corrosion by remaining flushing water, fill the system completely immediately after flushing.
- Even treated fill water contains oxygen and small amounts of foreign matter. In order to prevent local concentrations of corrosion products and other deposits on the heating surfaces of the heat generator, commission the system in stages with a high heating water flow rate. Start with the heat generator at its lowest output. For the same reason, in the case of multi boiler systems and cascades, commission all heat generators at the same time.
- If extending the system or conducting maintenance or repair work, only drain the pipework sections where absolutely necessary.
- Check and clean filters, dirt traps and other blow-down or separating facilities in the heating water circuit after filling and commissioning.
- Special regional regulations regarding fill and top-up water must be observed. When disposing of heating water containing additives, check whether additional treatment may be required before it is discharged into the public waste water system.

<sup>1</sup> In the case of systems with several heat generators that have several different specific water capacities, the smallest specific water capacity is definitive.

<sup>2</sup> To calculate the specific system volume, the smallest individual heating output should be used for systems with several heat generators.

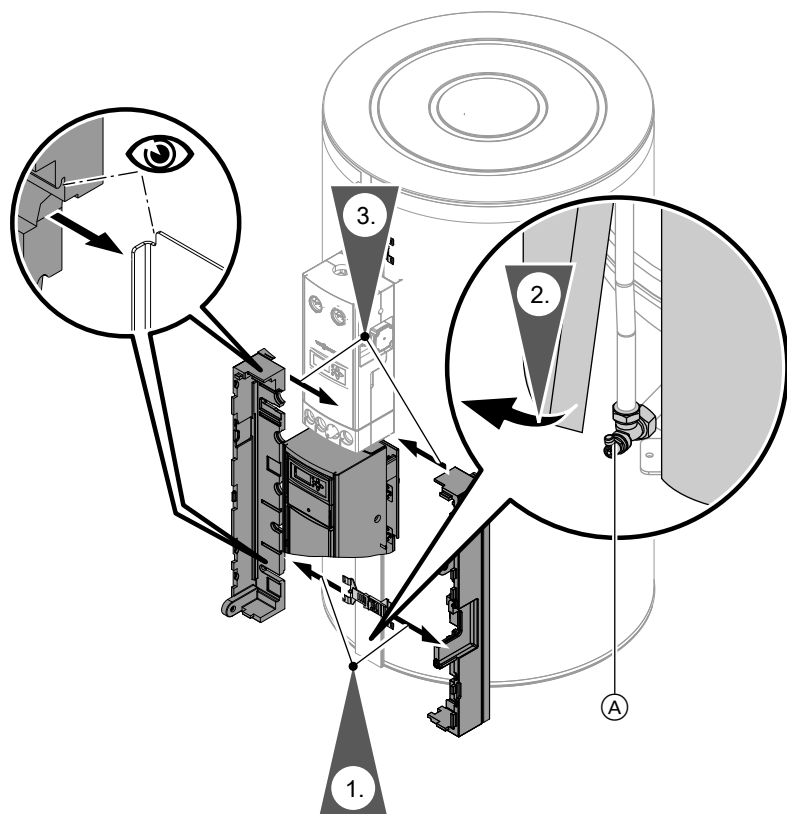


Fig. 33

1. Open and pull apart the clip fasteners.
2. Slightly pull the thermal insulation to the side. Bleed solar circuit air vent valve (A).
3. Close the thermal insulation back up again. Insert the rear sections of the Vitotrans thermal insulation. Observe the groove in the thermal insulation.

**Note**

*If white creases appear on the surface of the thermal insulation, these can be removed with hot air (e.g. from a hair dryer).*

**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.

As part of maintenance and inspection work on the overall system, we recommend carrying out the following checks on the heating water buffer cylinder. Rectify any defects found.

**Visual check of the thermal insulation**

- Check thermal insulation jacket for damage and moisture.
- Check thermal insulation caps for damage and moisture.

**Visual check of the positioning**

- Check that the heating water buffer cylinder is horizontally level.
- Check electrical cables for damage, e.g. sensor leads.

**Shut-off valves**

- Operate the shut-off valves on the flow and return connections.
- Operate the shut-off valves on the ventilation and drain connections.
- Check all shut-off valves for leaks and correct operation.





### Draining the heating water buffer cylinder

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



### Instructing the system user

The installer should instruct the user in the operation of the system.

The system installer should also provide information on the required maintenance.



Commissioning/service reports

**Commissioning/service reports**

	<b>Commissioning</b>	<b>Maintenance/service</b>	<b>Maintenance/service</b>
Date:			
By:			

	<b>Maintenance/service</b>	<b>Maintenance/service</b>	<b>Maintenance/service</b>
Date:			
By:			

	<b>Maintenance/service</b>	<b>Maintenance/service</b>	<b>Maintenance/service</b>
Date:			
By:			

	<b>Maintenance/service</b>	<b>Maintenance/service</b>	<b>Maintenance/service</b>
Date:			
By:			

	<b>Maintenance/service</b>	<b>Maintenance/service</b>	<b>Maintenance/service</b>
Date:			
By:			

## Specification

		Vitocell 140-E, type SEIC			Vitocell 160-E, type SESB	
Cylinder capacity	l	600	750	950	750	950
DIN registration no.		9W264E			9W265E	
Standby heat loss $Q_{ST}$ with 45 K temperature differential	kWh/24 h	2.10	2.25	2.45	2.25	2.45
<b>Dimensions</b>						
Length ( $\varnothing$ )						
▪ Incl. thermal insulation	mm	1064	1064	1064	1064	1064
▪ Excl. thermal insulation	mm	790	790	790	790	790
Width	mm	1119	1119	1119	1119	1119
Height						
▪ Incl. thermal insulation	mm	1645	1900	2200	1900	2200
▪ Excl. thermal insulation	mm	1520	1814	2120	1814	2120
Height when tilted						
▪ Excl. thermal insulation and adjustable feet	mm	1630	1890	2195	1890	2195
<b>Weight</b>						
▪ Incl. thermal insulation	kg	135	159	182	168	193
▪ Excl. thermal insulation	kg	112	131	150	140	161
<b>Connections (male thread)</b>						
Heating water flow and return		R 2	2	2	2	2
Heating water flow and return (solar)		R 1	1	1	1	1
Standby capacity $V_{aux}$	l	230	380	453	380	453
Solar capacity $V_{sol}$	l	370	370	497	370	497

## Specification for immersion heater EHE in conjunction with Vitocell 140-E/160-E

Type	Power supply		SEIC			SESB	
			600	750	950	750	950
Cylinder capacity		l	600	750	950	750	950
Content that can be heated by the immersion heater		l	295	375	431	375	431
<b>Immersion heater EHE with max. output range of 6 kW</b>							
<b>Heat-up time from 10 to 60 °C</b>							
2 kW	1/N/PE	h	8.5	10.9	12.5	10.9	12.5
4 kW	230 V/50 Hz	h	4.2	5.4	6.3	5.4	6.3
6 kW	3/PE	h	2.8	3.6	4.2	3.6	4.2
	400 V/50 Hz						
<b>Immersion heater EHE with max. output range of 12 kW</b>							
<b>Heat-up time from 10 to 60 °C</b>							
4 kW	2/PE	h	4.2	5.4	6.3	5.4	6.3
8 kW	400 V/50 Hz	h	2.1	2.7	3.1	2.7	3.1
12 kW	3/PE	h	1.4	1.8	2.1	1.8	2.1
	400 V/50 Hz						

## Disposal

### 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 Limited, Hortenwood 30, Telford TF1 7YP, United Kingdom, declare as authorised representative of the manufacturer and in sole responsibility for the manufacturer, that the named product complies with the applicable UK regulations in terms of its design and operational characteristics.

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

**[www.viessmann.co.uk/conformity](http://www.viessmann.co.uk/conformity)**

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