

Installation instructions

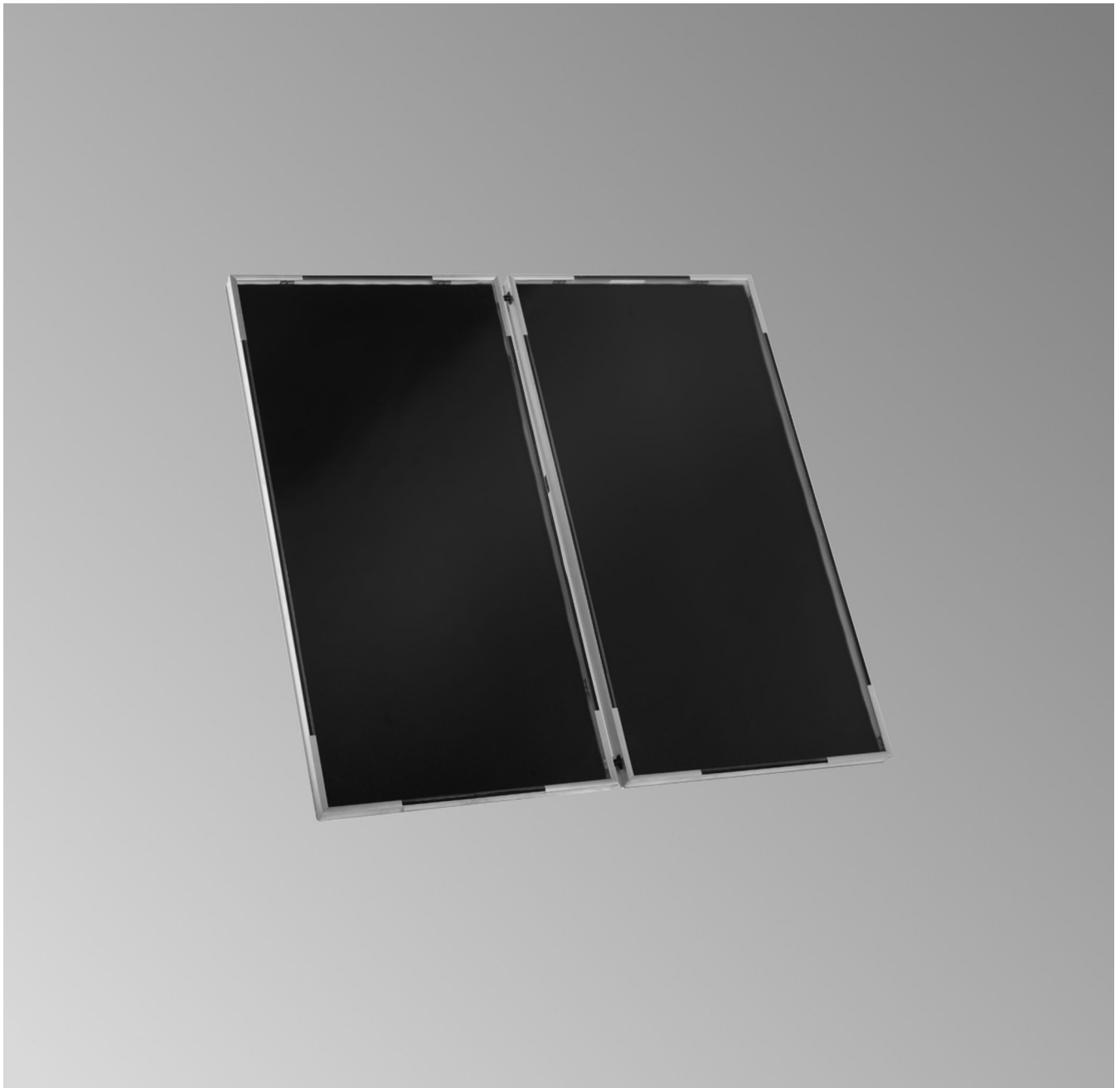
for contractors

VIESMANN

Vitosol-F/-FM
Type SVKA, SVKG
Flat-plate collector for pitched roofs, roof integration



VITOSOL-F/-FM



Safety instructions



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

Safety instructions explained



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.

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, 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.

Index

1. Information	Disposal of packaging	4
	Symbols	4
	Intended use	5
2. Installation sequence	Components	6
	Installation information	6
	Fitting the timbers	7
	Fitting the lower panels	8
	Installing the collectors	9
	■ Making the hydraulic connections	11
	Fitting the casing	13
3. Covering the collector array	19
4. Installation	20
5. Commissioning	22

Disposal of packaging

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.

Components

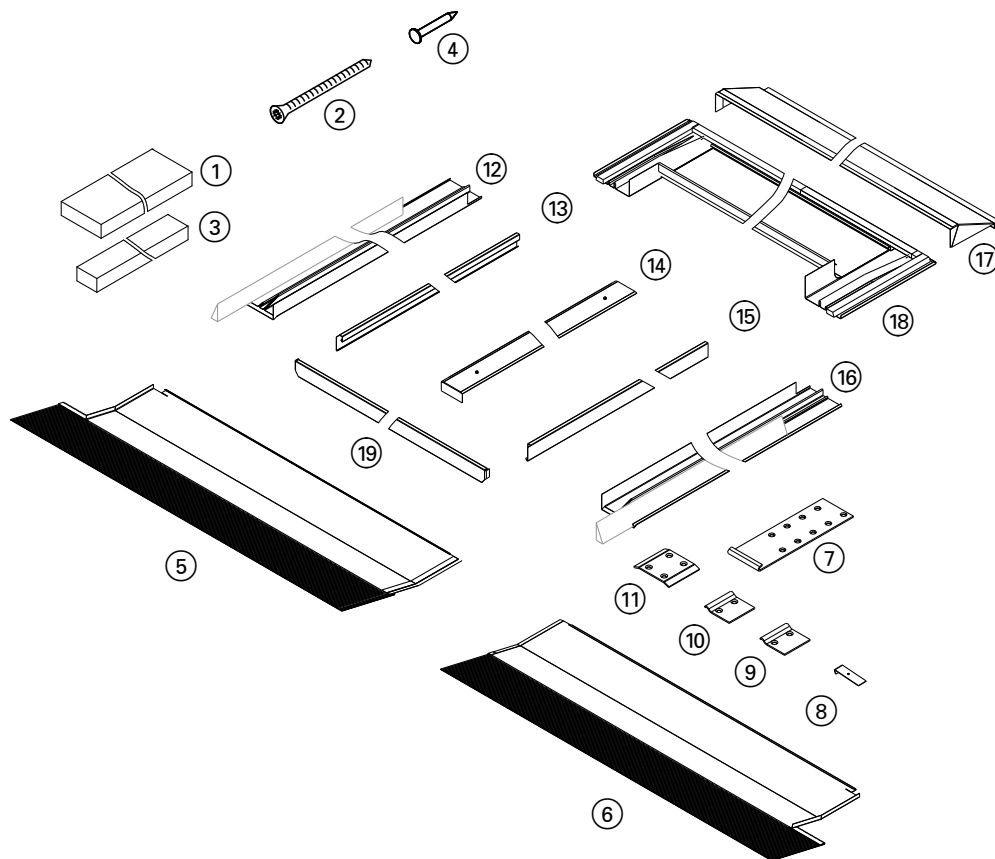


Fig. 1

- | | |
|---|--|
| ① Timber
120 x 30 x 2500 mm | ⑬ Left cover strip |
| ② Screws 8 x 120 mm | ⑭ Centre panel |
| ③ Timber
48 x 30 x 2500 mm | ⑮ Right cover strip |
| ④ Nails | ⑯ Right side panel
(for roof tiles and barrel roof tiles with sealing strips) |
| ⑤ Lower left panel with lead flashing | ⑰ Upper cover strip |
| ⑥ Lower right panel with lead flashing | ⑱ Top panel
(for roof tiles and barrel roof tiles with sealing strips) |
| ⑦ Mounting plate with butyl strip | ⑲ Lower cover strip |
| ⑧ Retaining bracket | |
| ⑨ Fixing clamp with butyl strip | |
| ⑩ Fixing clamp | |
| ⑪ Centre clamp | |
| ⑫ Left side panel
(for roof tiles and barrel roof tiles with sealing strips) | |

Installation information

Required roof area: 2700 x 2700 mm

- To prevent any damage to the ridge cover, allow sufficient clearance on the ridge side; at least 3 rows for **tiled roof cover**.

Note

With **tiled roof cover**, we recommend also maintaining a width of at least 3 tiles at the roof verges.

- If necessary, install a snow guard.

- Provide a roof hatch near the collectors for inspection and maintenance.
- Take additional measures on site to protect against water penetration as a result of snow and wind pressure, e.g. sarking membranes (accessories).

Fitting the timbers

Components

- ① Timber 120 x 30 x 2500 mm
- ② Screws 8 x 120 mm

- ③ Timber 48 x 30 x 2500 mm
- ④ Nails

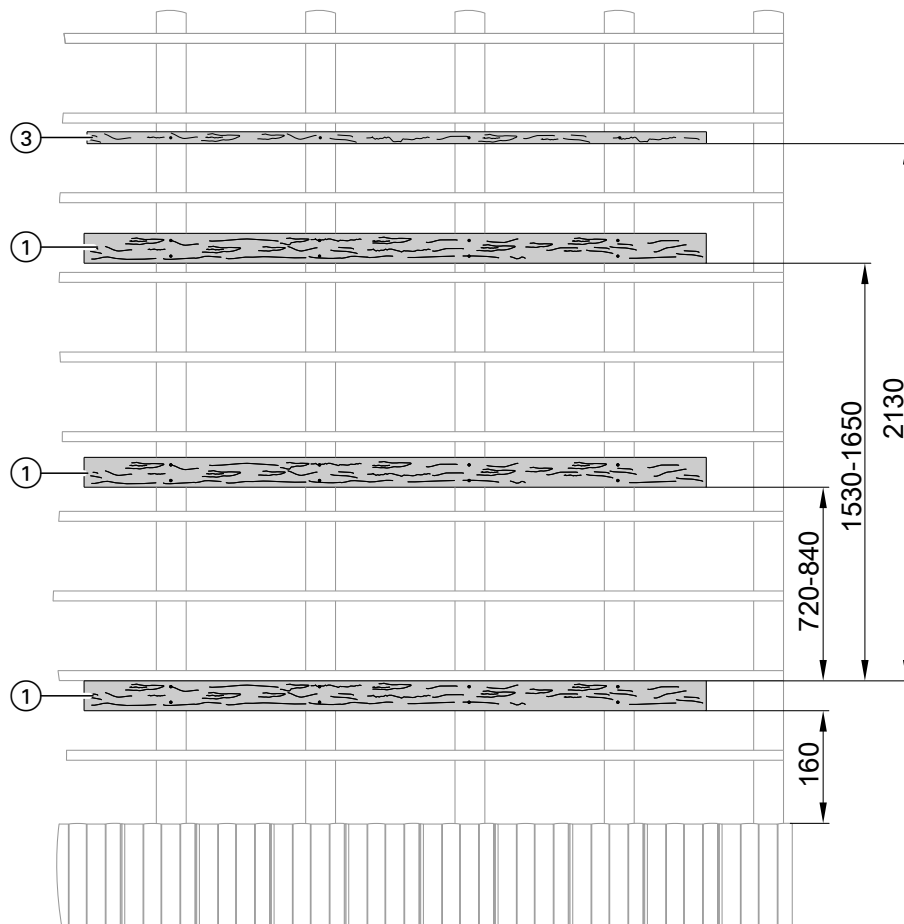


Fig. 2

- Provisionally position the lower timber parallel to the lower row of tiles (tie a line as a guide).
- It may be necessary for existing battens to be removed in the area taken up by the timbers. Support the joint between batten and timber.
- If cantilevers are created, reinforce them with an on-site batten.
- Secure timbers along their entire length with **2** screws for every rafter.

Fitting the timbers (cont.)

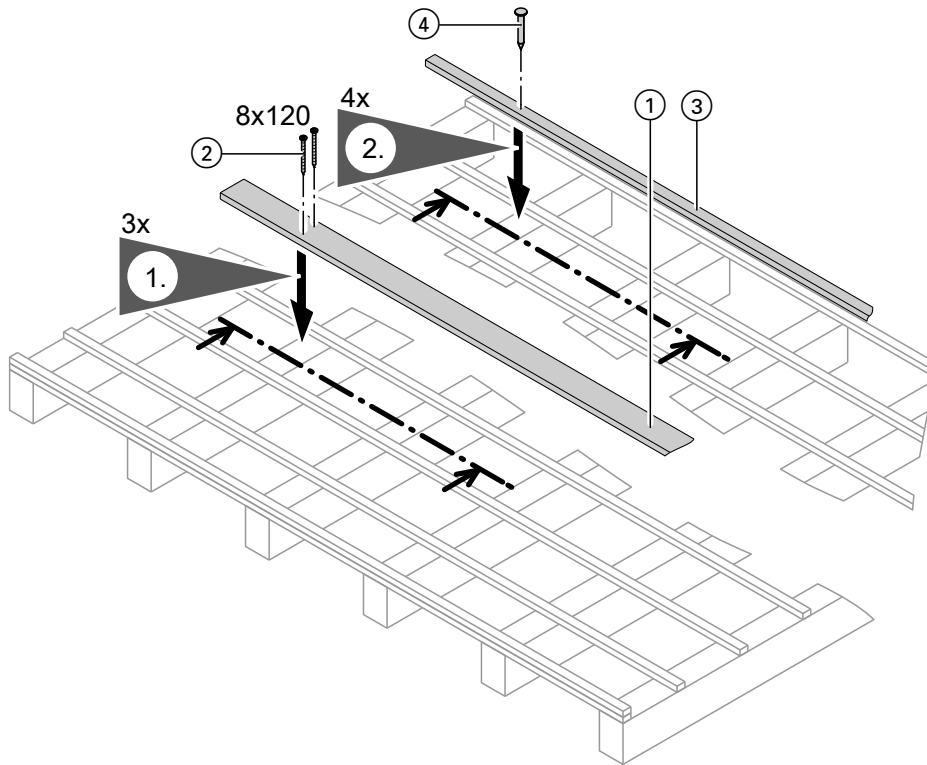


Fig. 3

Fitting the lower panels

Components

- ⑤ Lower left panel with lead flashing
- ⑥ Lower right panel with lead flashing
- ⑦ Mounting plate with butyl strip

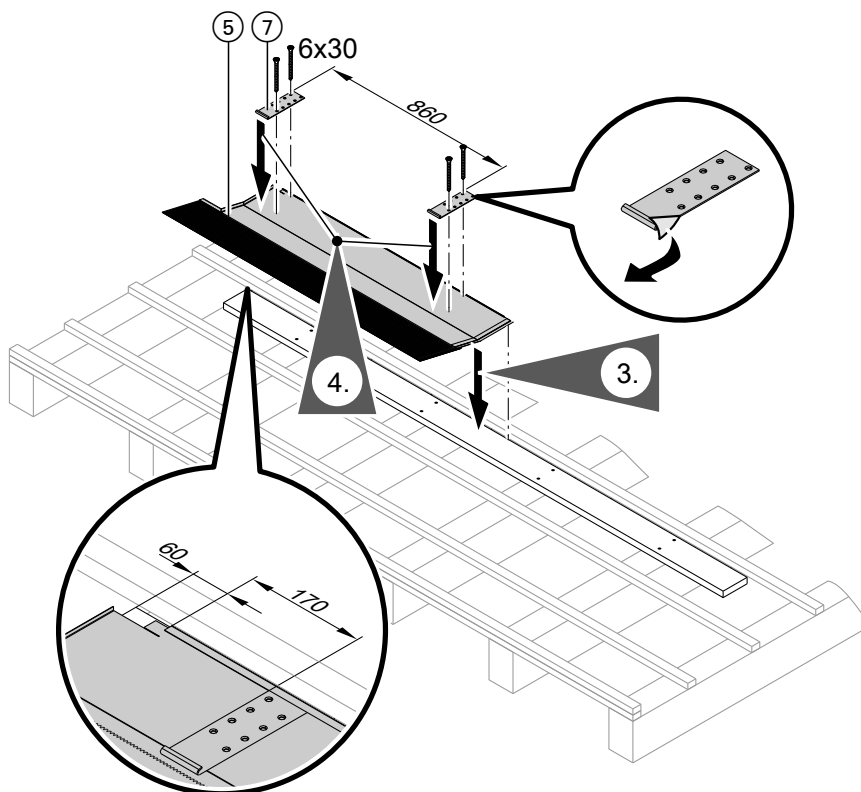


Fig. 4

Fitting the lower panels (cont.)

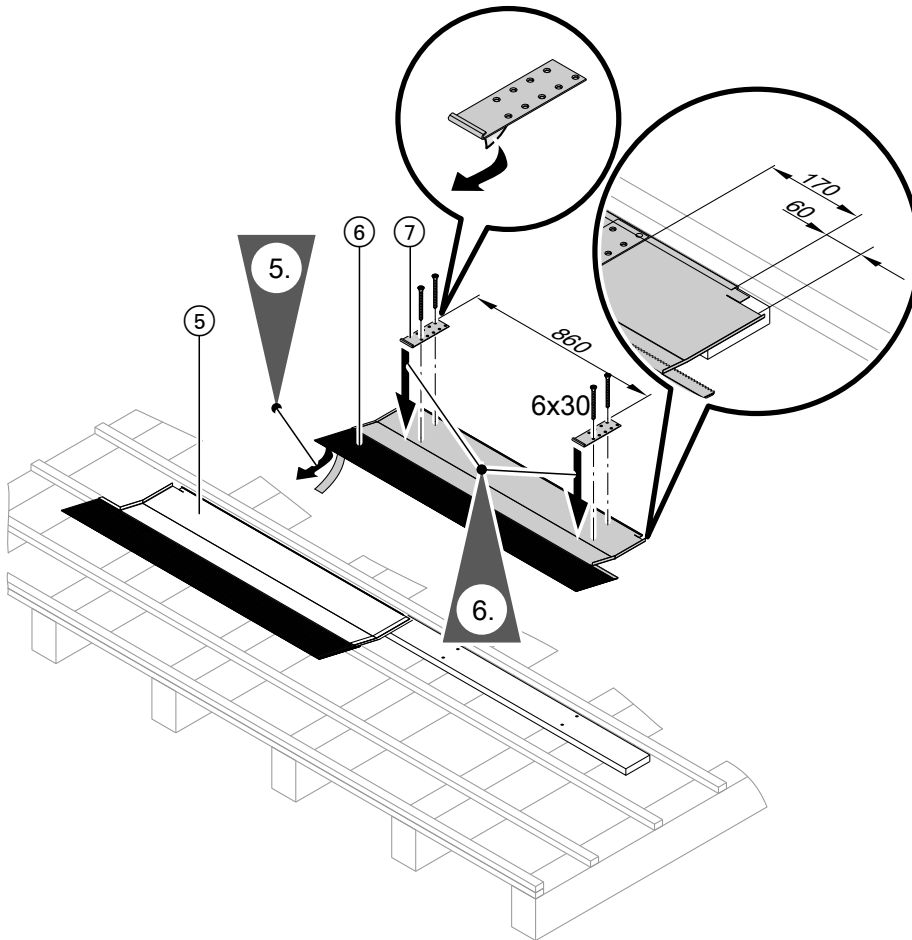


Fig. 5

Installing the collectors

Components

- ⑨ Fixing clamp with butyl strip
- ⑩ Fixing clamp
- ⑪ Centre clamp

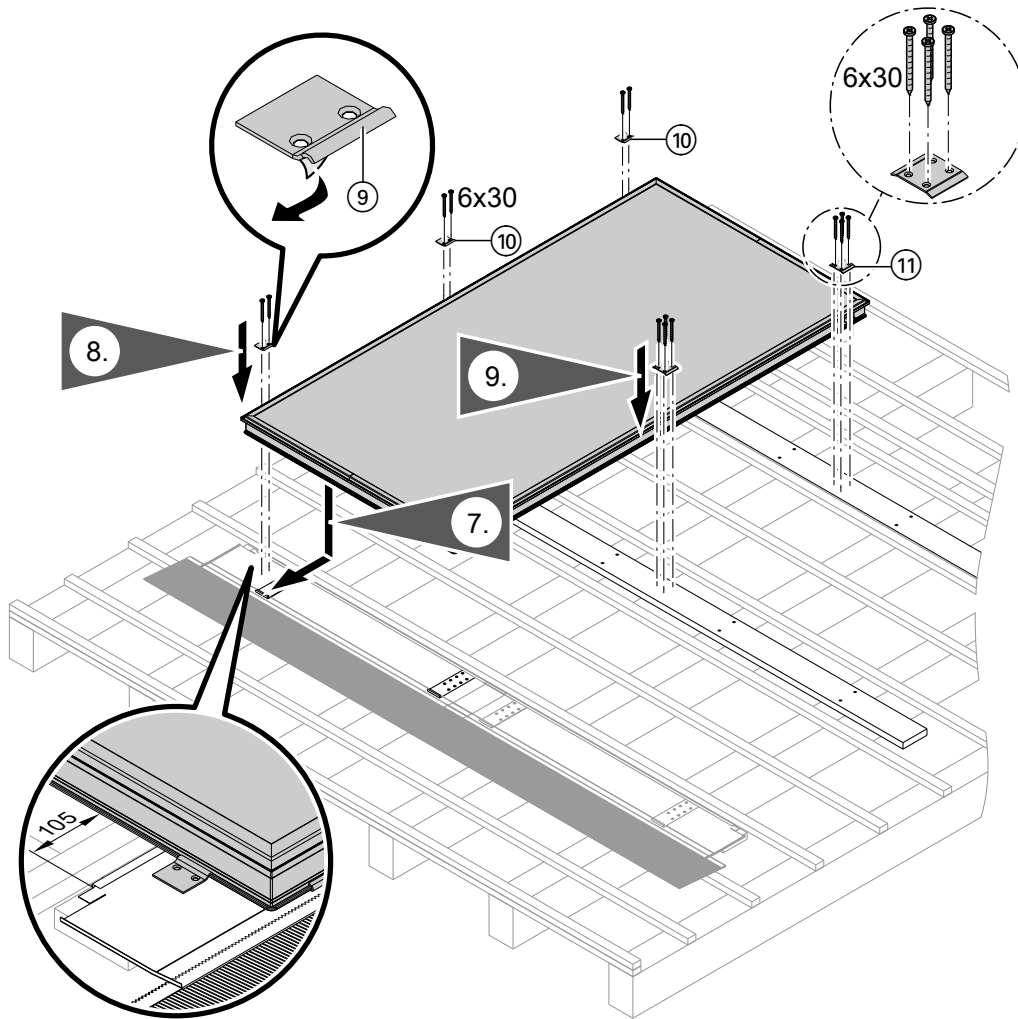


Fig. 6

Note on step 9:
Do not tighten the screws yet. The second collector must be pushed under the clamp.

! **Please note**
The connection pipes must not show any signs of damage.
Lubricate O-rings **only** with the special valve grease provided.

The collector temperature sensor is part of the standard delivery of the connection set.

Making the hydraulic connections

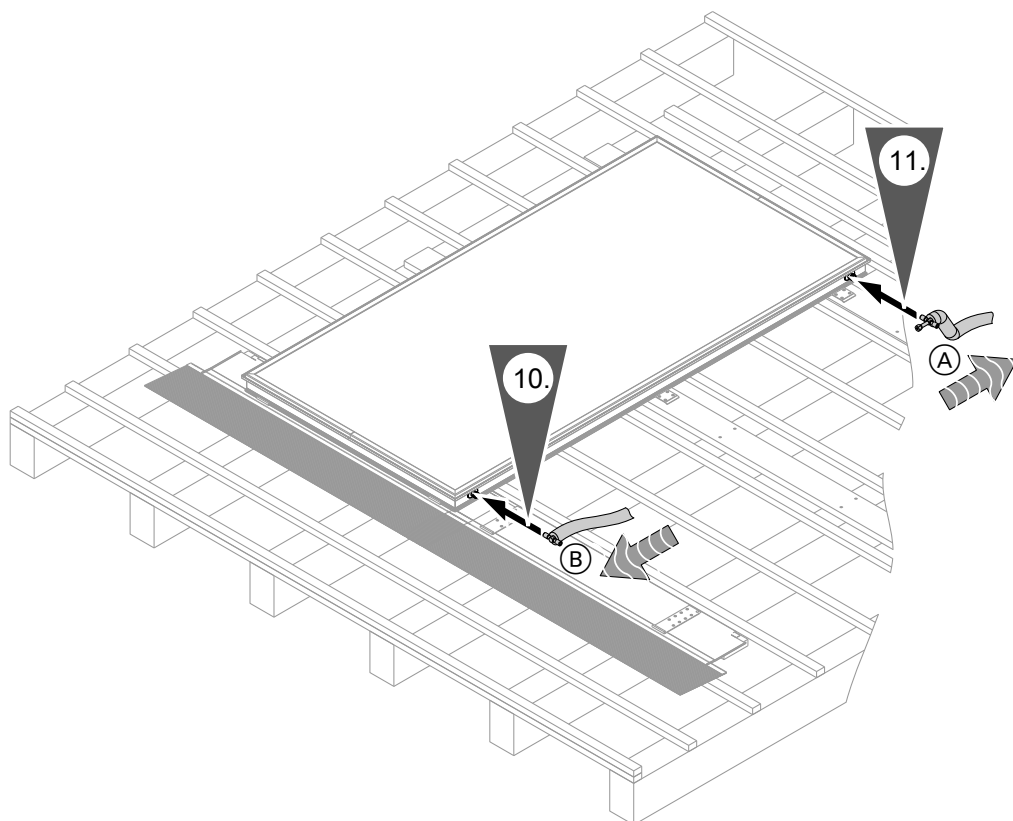


Fig. 7

- Ⓐ Connection, tee (S-shape) with sensor well for collector temperature sensor (flow)
- Ⓑ Connection, tee (return)

Fitting the collector temperature sensor

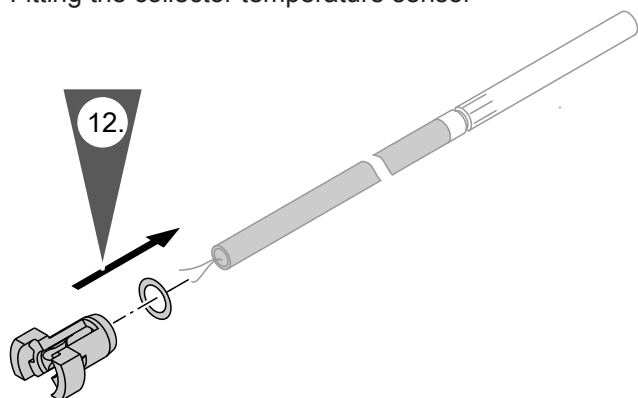


Fig. 8

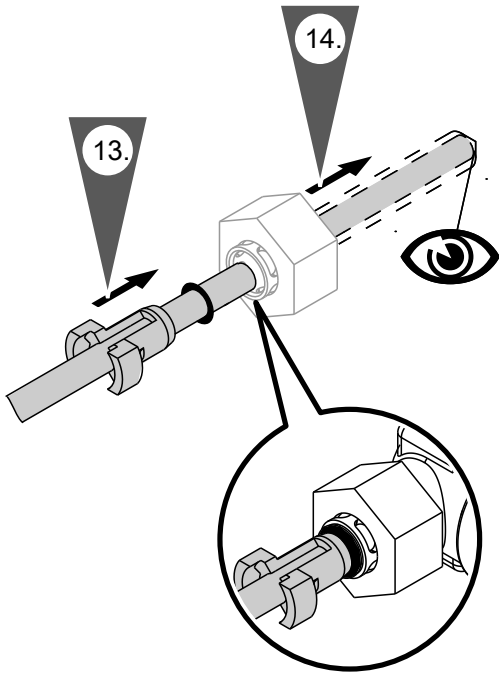


Fig. 9

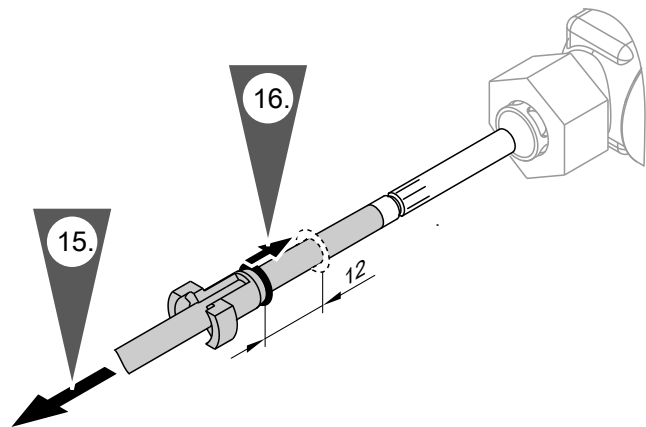


Fig. 10

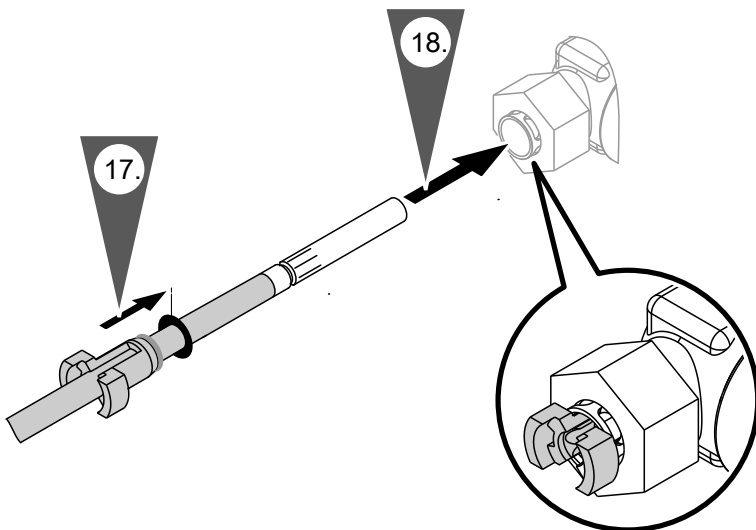


Fig. 11

Installing the collectors (cont.)

Installing the second collector

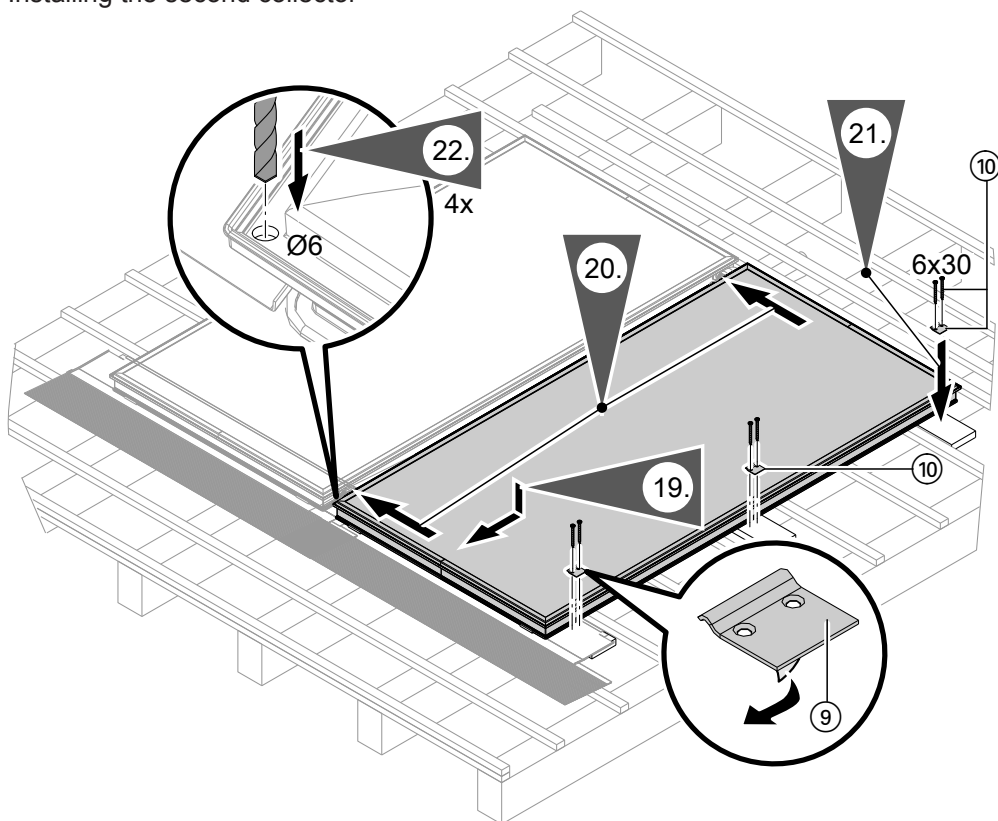


Fig. 12

Note on step 19:
Push the second collector under the centre clamps (see diagram on page 10). Tighten the screws.

Note on step 22:
Drill 2 holes in the **lower** edge of each collector (water drainage).

Fitting the casing

Components

- | | |
|---|--|
| ③ Timber
48 x 30 x 2500 mm | ⑮ Right cover strip |
| ⑧ Retaining bracket | ⑯ Right side panel
(for roof tiles and barrel roof tiles with sealing strips) |
| ⑫ Left side panel
(for roof tiles and barrel roof tiles with sealing strips) | ⑰ Upper cover strip |
| ⑬ Left cover strip | ⑱ Top panel
(for roof tiles and barrel roof tiles with sealing strips) |
| ⑭ Centre panel | ⑲ Lower cover strip |

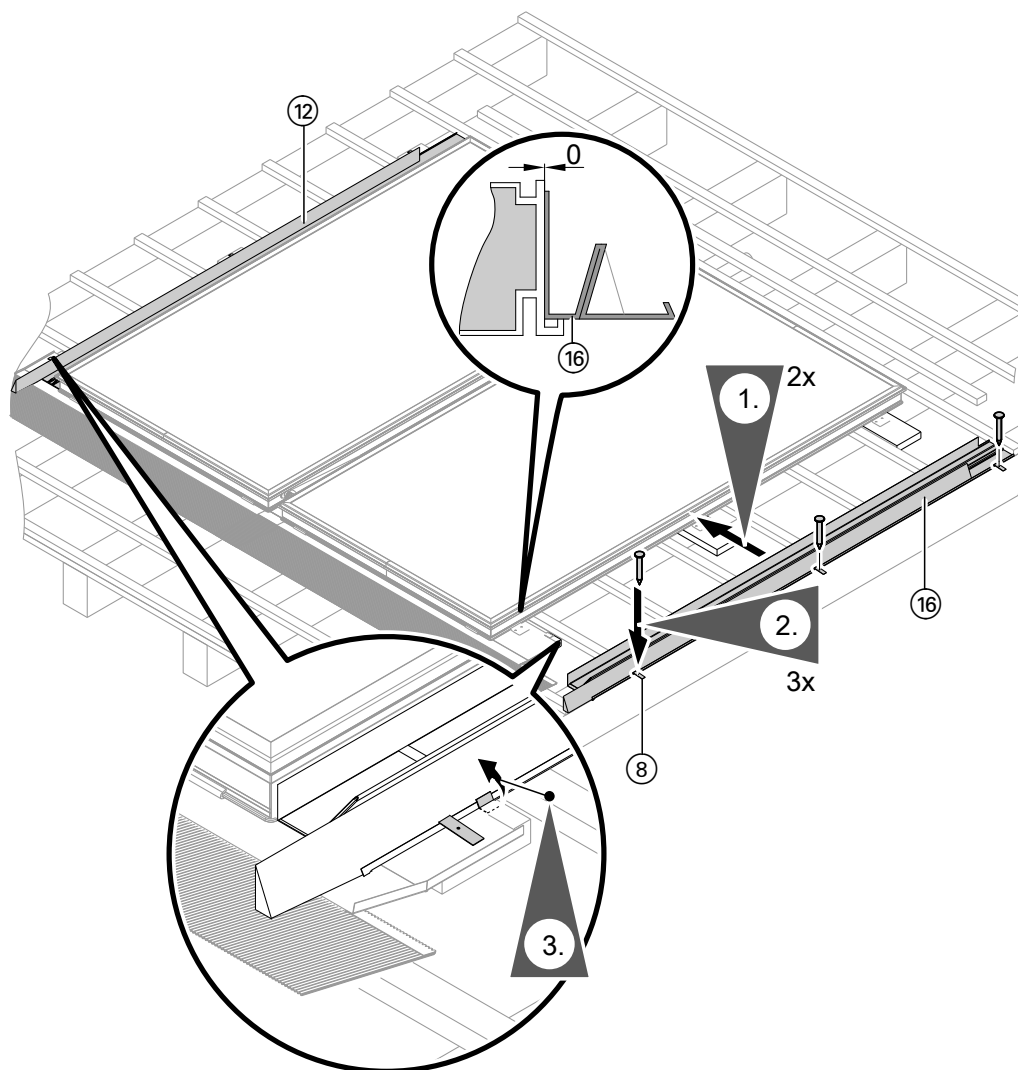


Fig. 13

Note on step 2:

Push the side panels up against the collector edge.

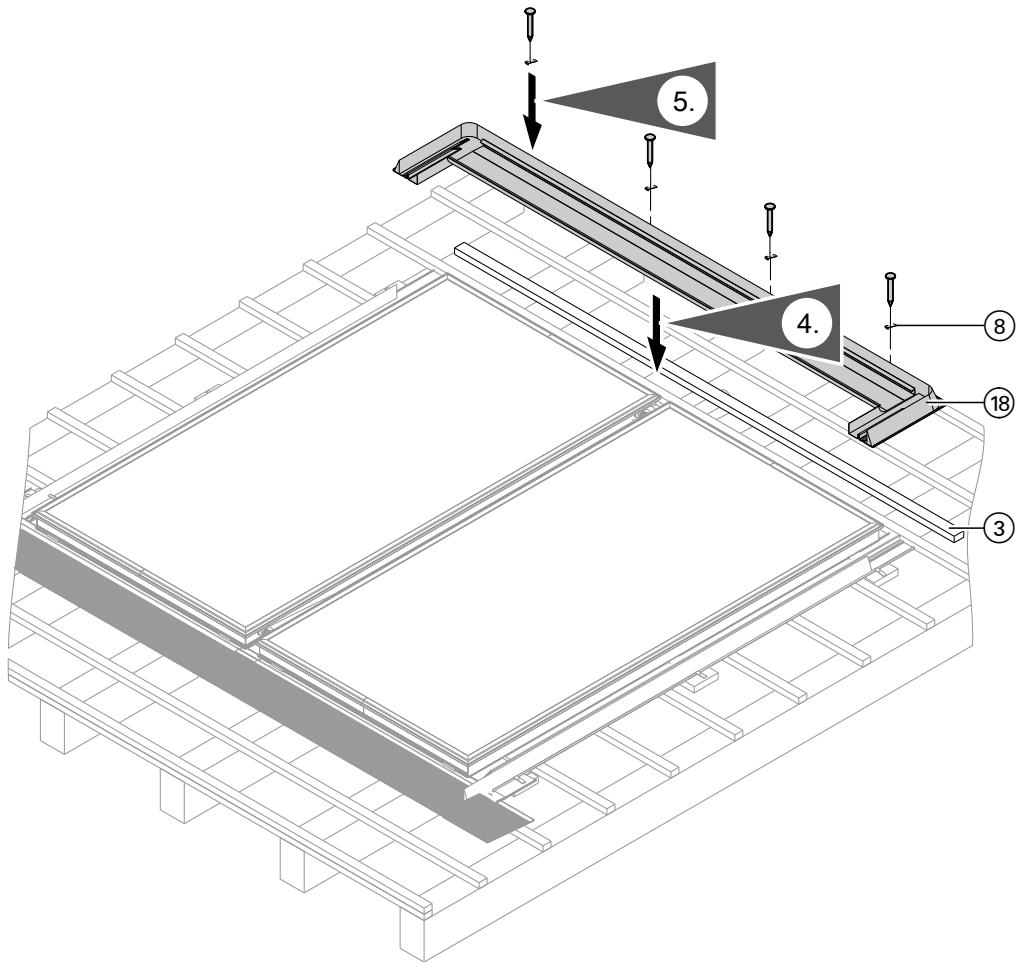


Fig. 14

Note on step 4:
Push the top section up against the collector edge.

Fitting the casing (cont.)

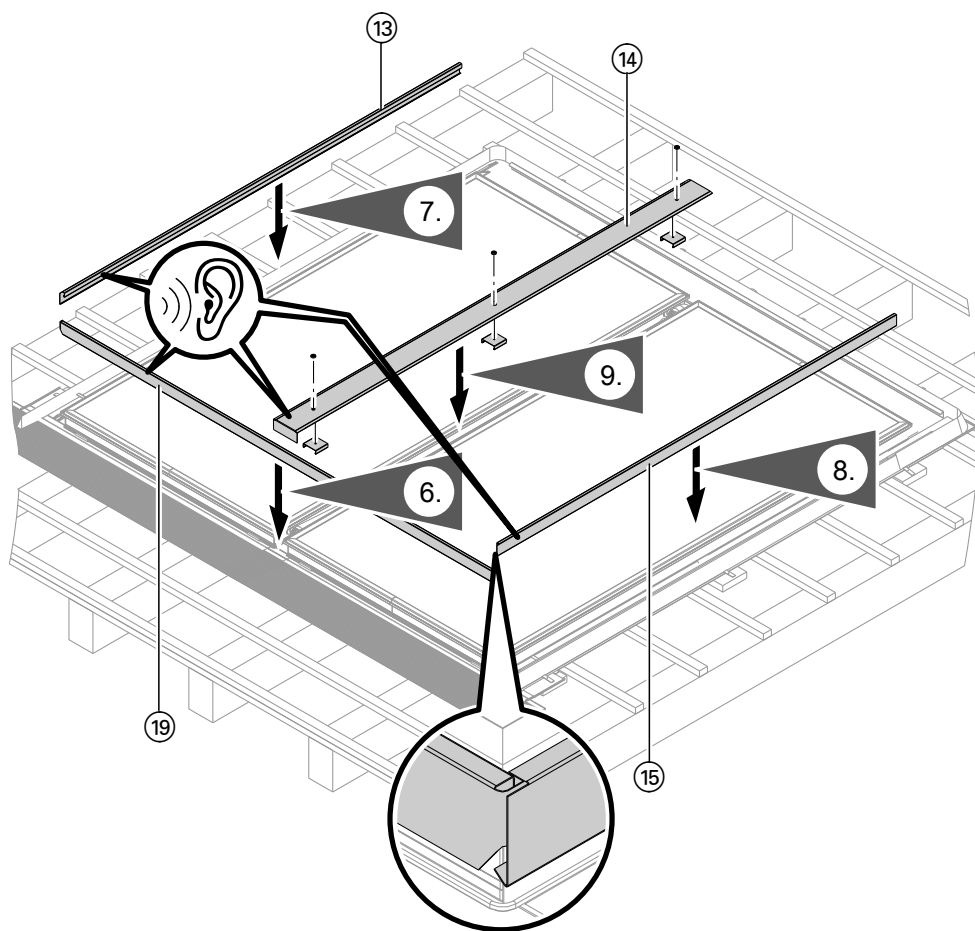


Fig. 15

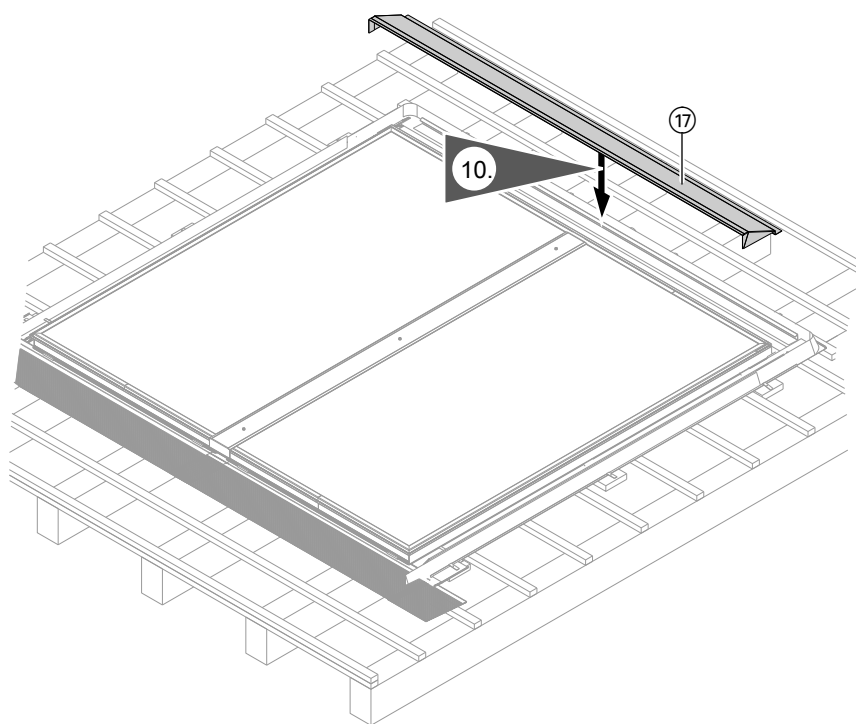


Fig. 16

Tiled roof cover

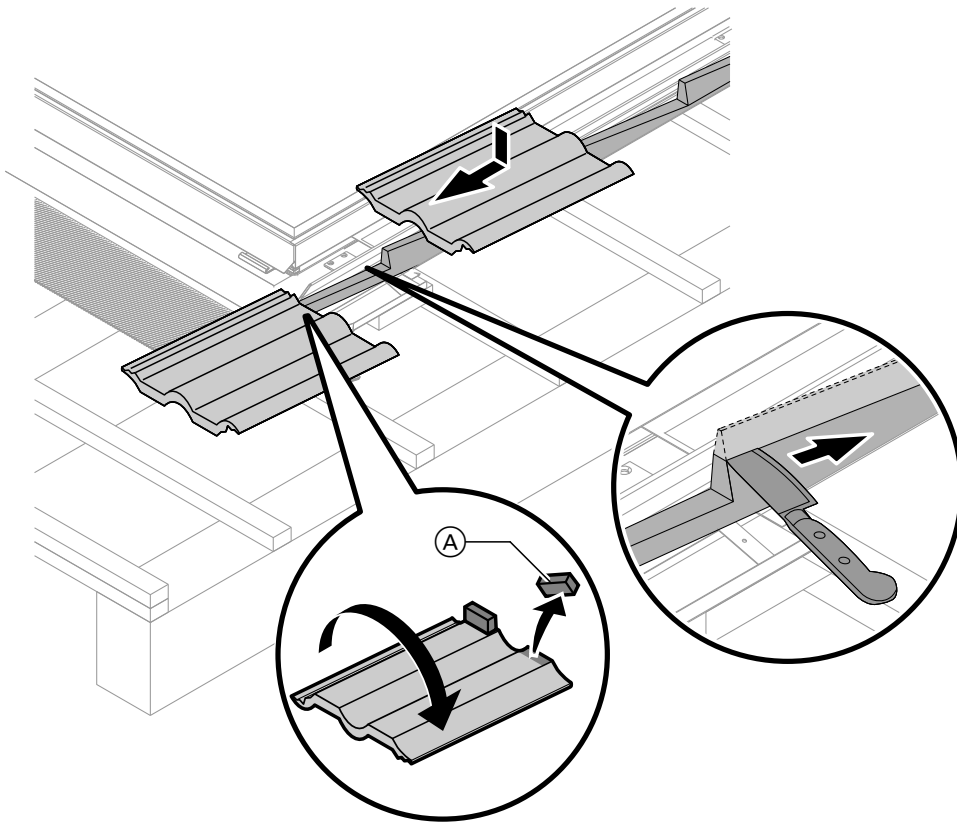


Fig. 17

Trim the tiles to size or use half-sized tiles.
Remove tile head (A) which rests on the side panel.

! **Please note**
The diagonal sealing strip must be completely hidden.
It may be necessary to trim the height of the diagonal sealing strip with a knife.

Barrel roof tile cover

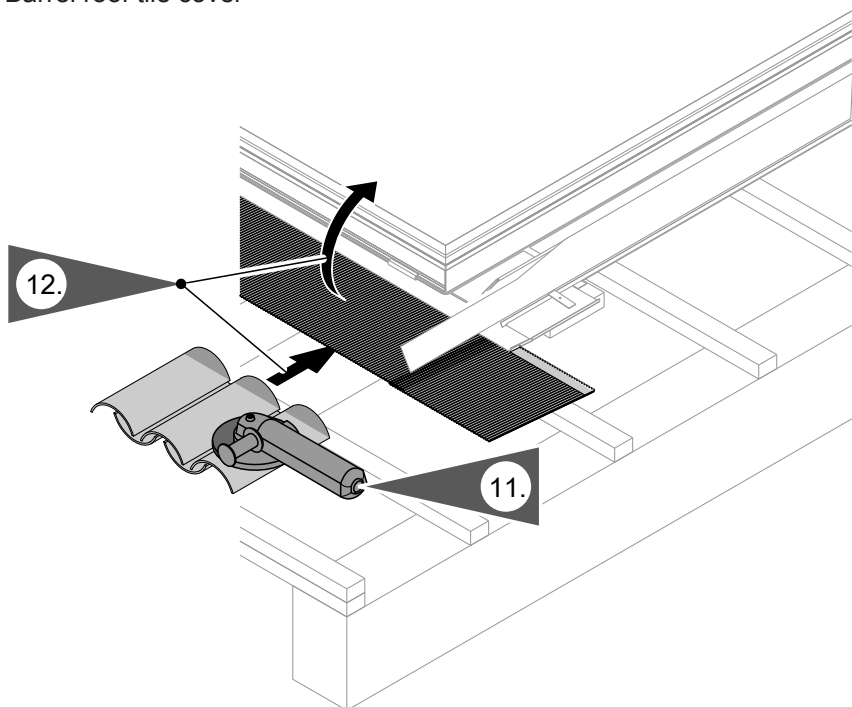


Fig. 18

Slate and plain tile cover

Position slates and plain tiles at the central edge of the side sections.


(cont.)

Commission the solar thermal system as quickly as possible once the collectors have been installed. To reliably prevent steam hammer, the collectors must be cold when filled. Cover the collector arrays. In the delivered condition, the collectors are covered with a protective film for this purpose. **Remove this protective film no later than 4 weeks following collector installation.**

Note

*If commissioning takes place at a later date, cover the collector arrays.
Do not use the protective foil provided to cover the collectors!*

Installation

- !** **Please note**
- Incorrect installation can lead to collector damage.
Use only gunmetal or brass fittings and copper pipes for the installation.
Never step on the collectors.
Never solder on or near the collectors.
 - Route pipes so that complete ventilation is ensured. Install an air separator in the solar flow upstream of the DHW cylinder.
Note
An air separator is integrated into the flow line of the Solar-Divicon (see diagram).
 - Braze or press fit the copper pipes in the solar circuit.
Soft solder could be weakened, particularly near the collectors, due to the high temperatures that occur there. Metal seal connections, locking ring fittings or Viessmann plug-in connections with double O-rings are the most suitable.
If other seals such as flat gaskets are used, adequate glycol, pressure and temperature stability must be guaranteed by the manufacturer.
 - Design all connections to be resistant to pressure and temperature (observe the maximum stagnation temperature of the collector).
Never use:
 - Teflon (inadequate glycol resistance)
 - Hemp connections (insufficiently gas-tight)
 - Equip the system to EN 12975 or EN ISO 9806 with an expansion vessel, safety valve and circulation pump.
 - The expansion vessel must be approved to DIN 4807.
The diaphragms and seals of the expansion vessel and safety valve must be suitable for the heat transfer medium.
 To calculate the pre-charge pressure, see the "Vitosol" service instructions.
 - For operation without a Solar-Divicon, use only safety valves that meet the following conditions:
 - Designed for 120 °C and up to 6 bar (0.6 MPa)
 - Letter ID "S" (solar) in the component identification

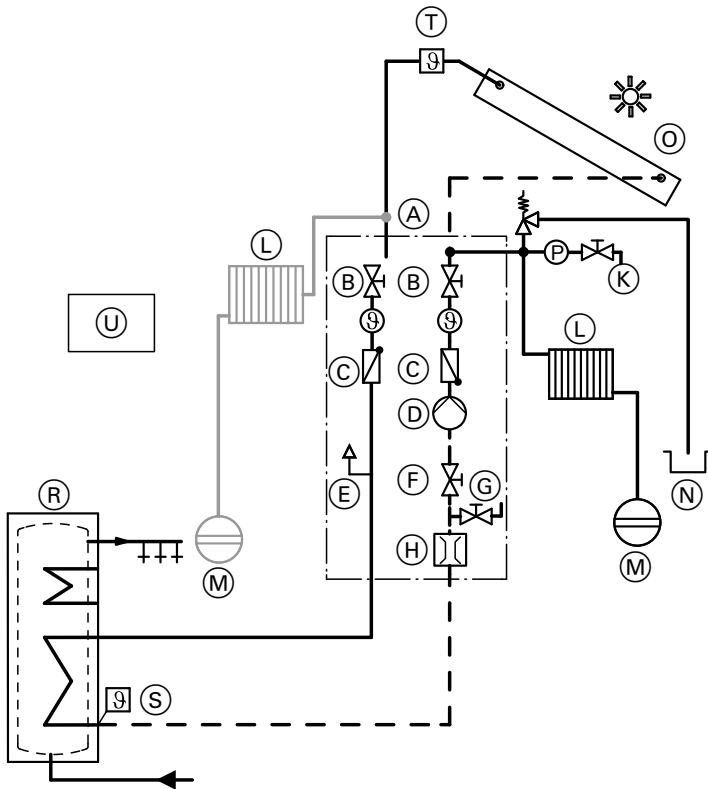


Fig. 19

- | | |
|---|----------------------------------|
| (A) Solar-Divicon | (K) Fill valve |
| (B) Shut-off valves | (L) Stagnation heat sink |
| (C) Non-return valves | (M) Expansion vessel |
| (D) Solar circuit pump | (N) Drip pan |
| (E) Air separator | (O) Collector |
| (F) Shut-off valve (adjusting screw above flow indicator (H)) | (R) DHW cylinder |
| (G) Drain valve | (S) Cylinder temperature sensor |
| (H) Flow indicator | (T) Collector temperature sensor |
| | (U) Solar control unit |

Commissioning



"Vitosol-F/-FM" service instructions.





Viessmann Werke GmbH & Co. KG
D-35107 Allendorf
Telephone: +49 6452 70-0
Fax: +49 6452 70-2780
www.viessmann.com

Viessmann Limited
Hortonwood 30, Telford
Shropshire, TF1 7YP, GB
Telephone: +44 1952 675000
Fax: +44 1952 675040
E-mail: info-uk@viessmann.com