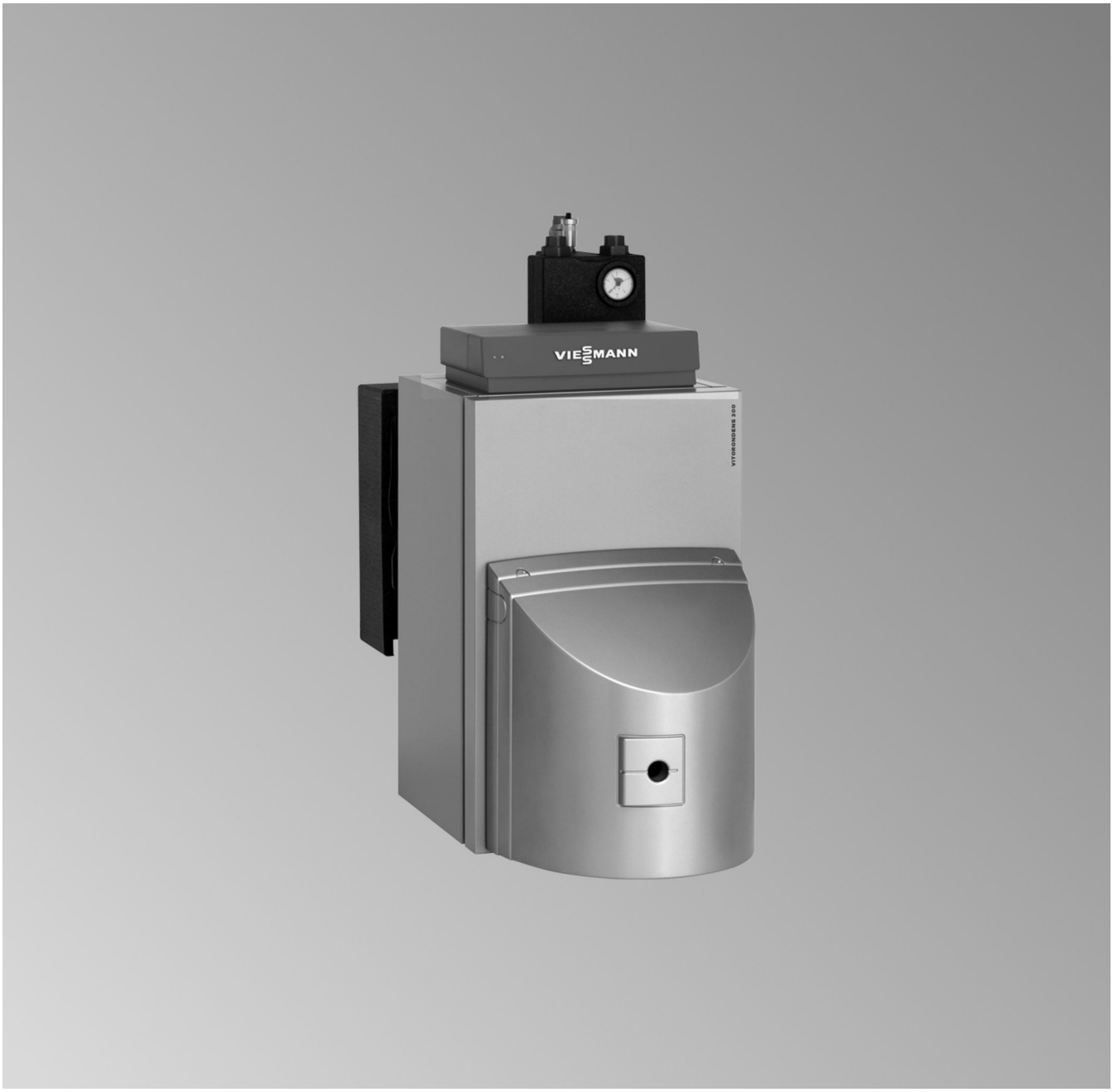
Installation instructions

for contractors

Vitorondens 200-T
Type BR2A, 20.2 to 53.7 kW
Oil Unit condensing boiler

VITORONDENS 200-T



5624305 GB/en 11/2017

Dispose after installation.

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 qualified contractors.
- Work on gas installations may only be carried out by a registered gas fitter.
- Work on electrical equipment may only be carried out by a qualified electrician.

Regulations to be observed

- National installation regulations
- Statutory regulations for the prevention of accidents
- Statutory regulations for environmental protection
- Codes of practice of the relevant trade associations
- All current safety regulations as defined by DIN, EN, DVGW, TRGI, TRF, VDE and all locally applicable standards
  - (A) ÖNORM, EN, ÖVGW G K directives, ÖVGW-TRF and ÖVE
  - (CH) SEV, SUVA, SVGW, SVTI, SWKI, VKF and EKAS guideline 1942: LPG, part 2

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.
- Where gas is used as the fuel, close the main gas shut-off valve and safeguard it against unintentional reopening.

Index

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.
	▪ Component must audibly click into place. or ▪ Acoustic signal
	▪ 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 intended solely for installation and operation in sealed unvented heating systems that comply with EN 12828, with due attention paid to the associated installation, service and operating instructions. It is only designed for heating up heating water that is of potable water quality.

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 in each individual case.

Incorrect usage or operation of the appliance (e.g. the appliance being opened by the system user) is prohibited and will result in an exclusion of liability. Incorrect usage also occurs if the components in the heating system are modified from their intended use (e.g. if the flue gas and ventilation air paths are sealed).

Siting

Clearance dimensions

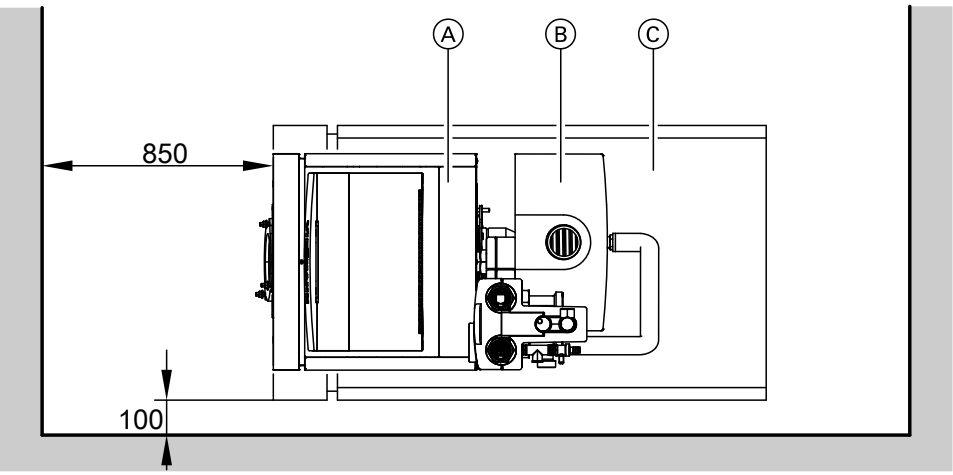


Fig. 1

Ⓐ Boiler
Ⓑ Heat exchanger
Ⓒ DHW cylinder

5624305

Siting (cont.)

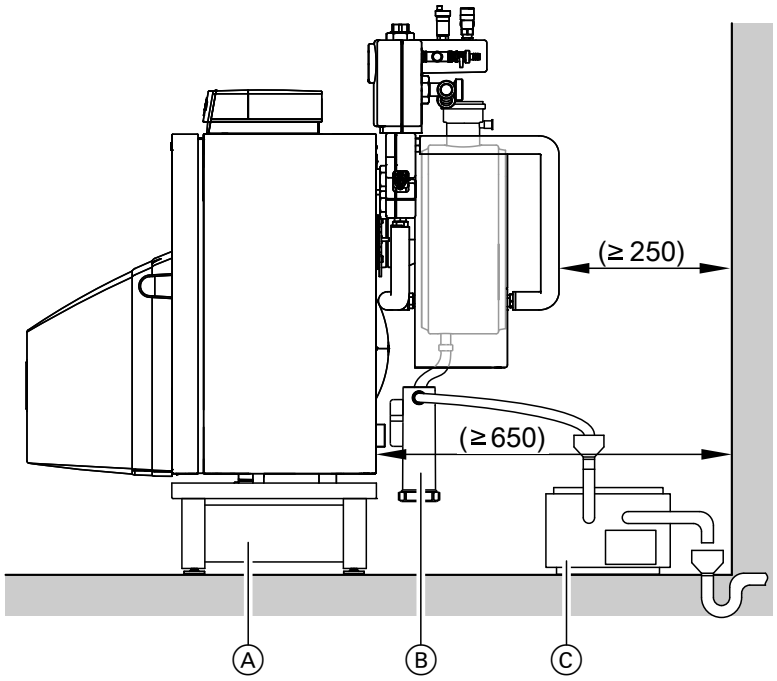


Fig. 2

Ⓐ Plinth (accessories)
Ⓑ Trap
Ⓒ Neutralising system (accessories)

Overview of connections

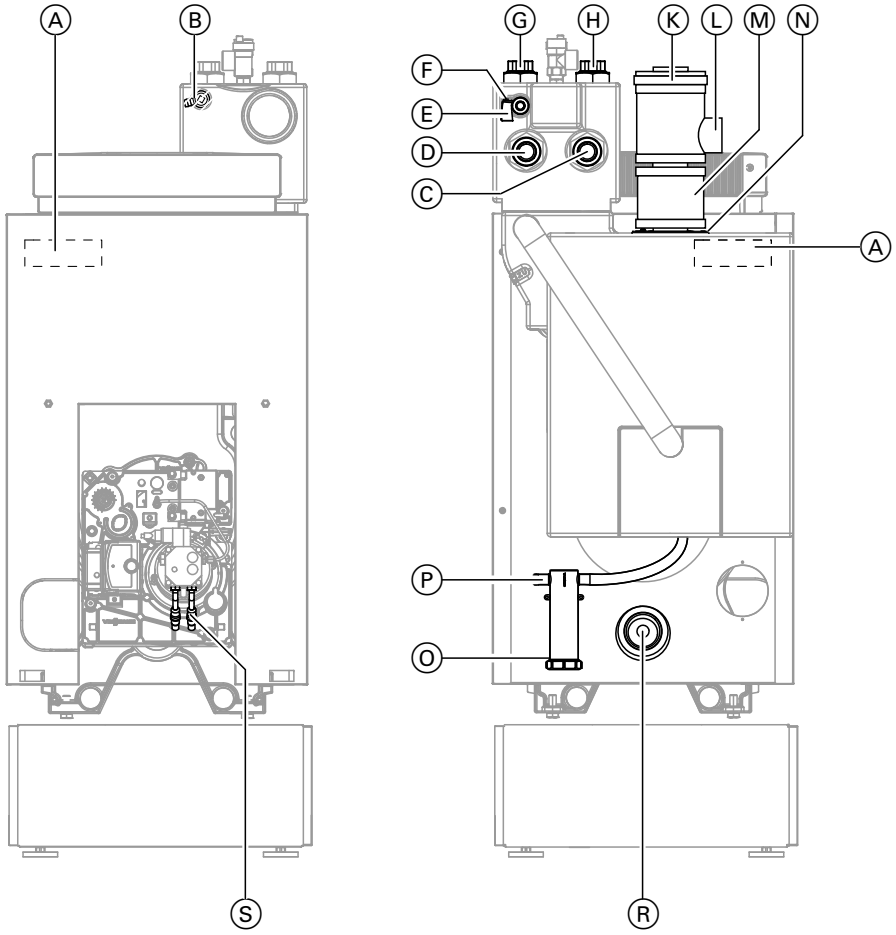


Fig. 3

Ⓐ Wiring area
Ⓑ Air vent valve
Ⓒ Cylinder flow and heating flow G 1½
Ⓓ Cylinder return and heating return G 1½
Ⓔ Boiler fill valve
Ⓕ Connection for diaphragm expansion vessel (tee Rp ½)
Ⓖ Heating return
- Flat gasket connection: G 1½
- Connection with the threaded inserts supplied: Rp 1

Ⓗ Heating flow
- Flat gasket connection: G 1½
- Connection with the threaded inserts supplied: Rp 1

Ⓚ Boiler flue connection (accessories)
Ⓛ Ventilation air connector
For room sealed operation
Ⓜ Silencer (accessories)
Ⓝ Flue gas connection
Ⓞ Trap
Ⓟ Condensate drain
Ⓡ Drain
Ⓢ Oil line connection

Siting and levelling the boiler

Siting without DHW cylinder

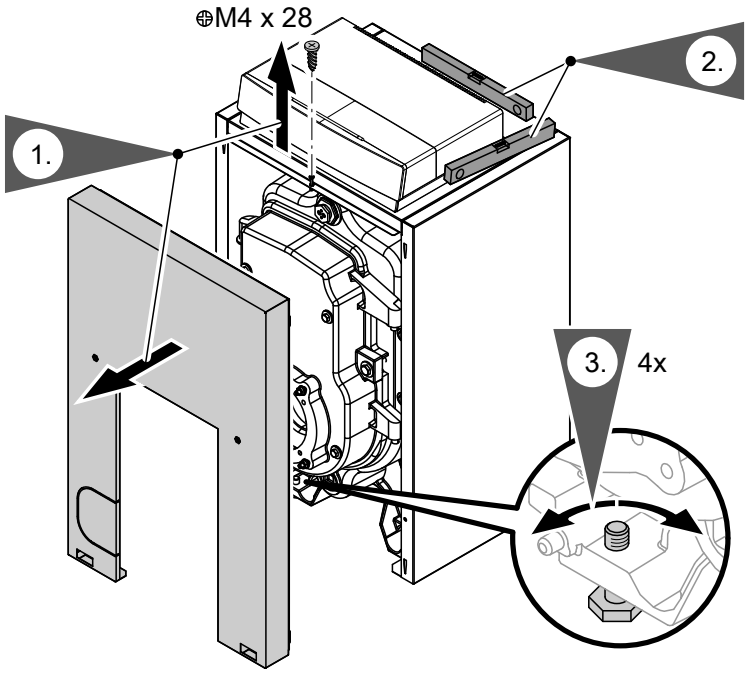


Fig. 4

Align the boiler with a slight incline towards the back.

Siting on a plinth

Installation instructions on the plinth packaging

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Siting and levelling the boiler (cont.)

Siting on a DHW cylinder

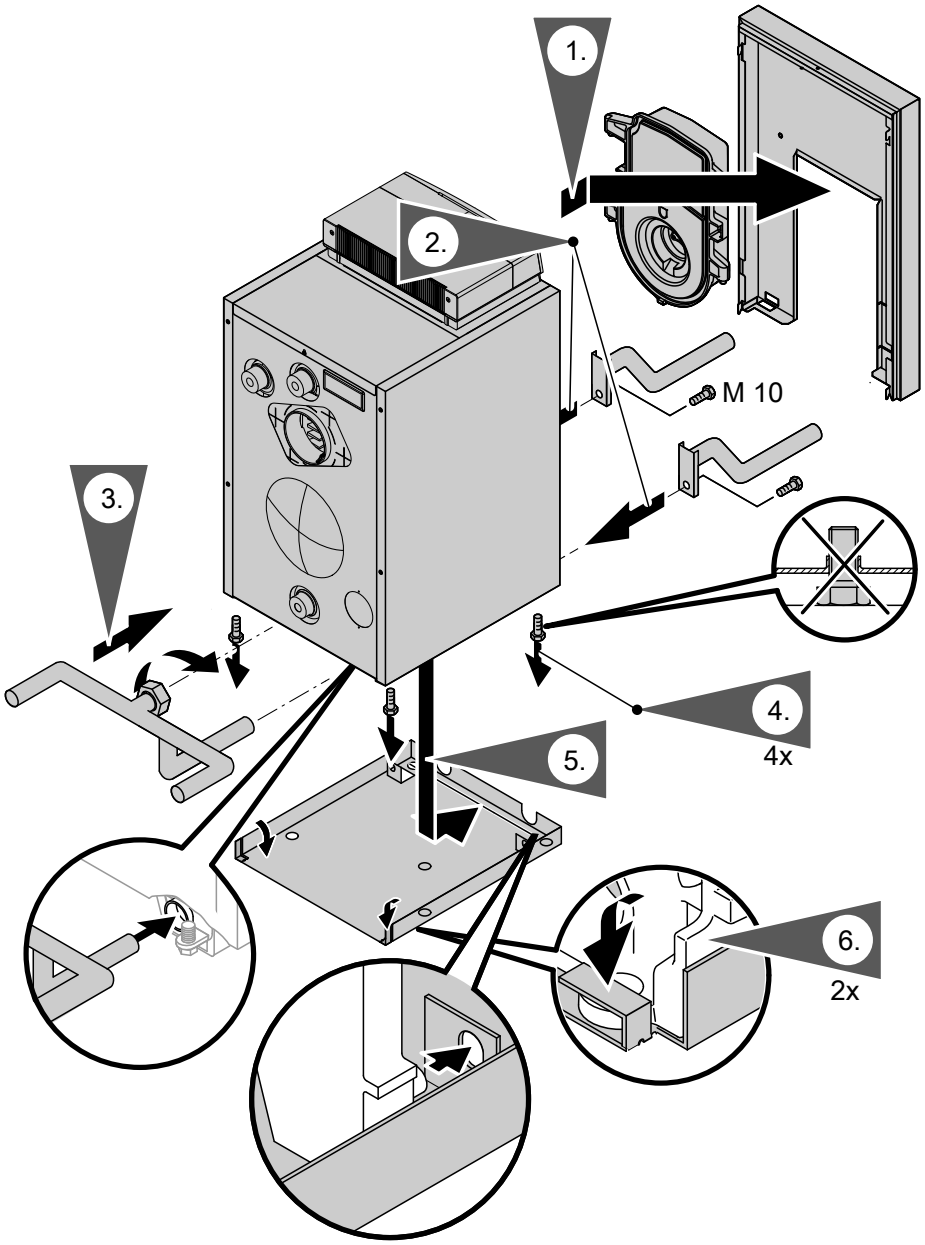

Fig. 5

Siting and levelling the boiler (cont.)

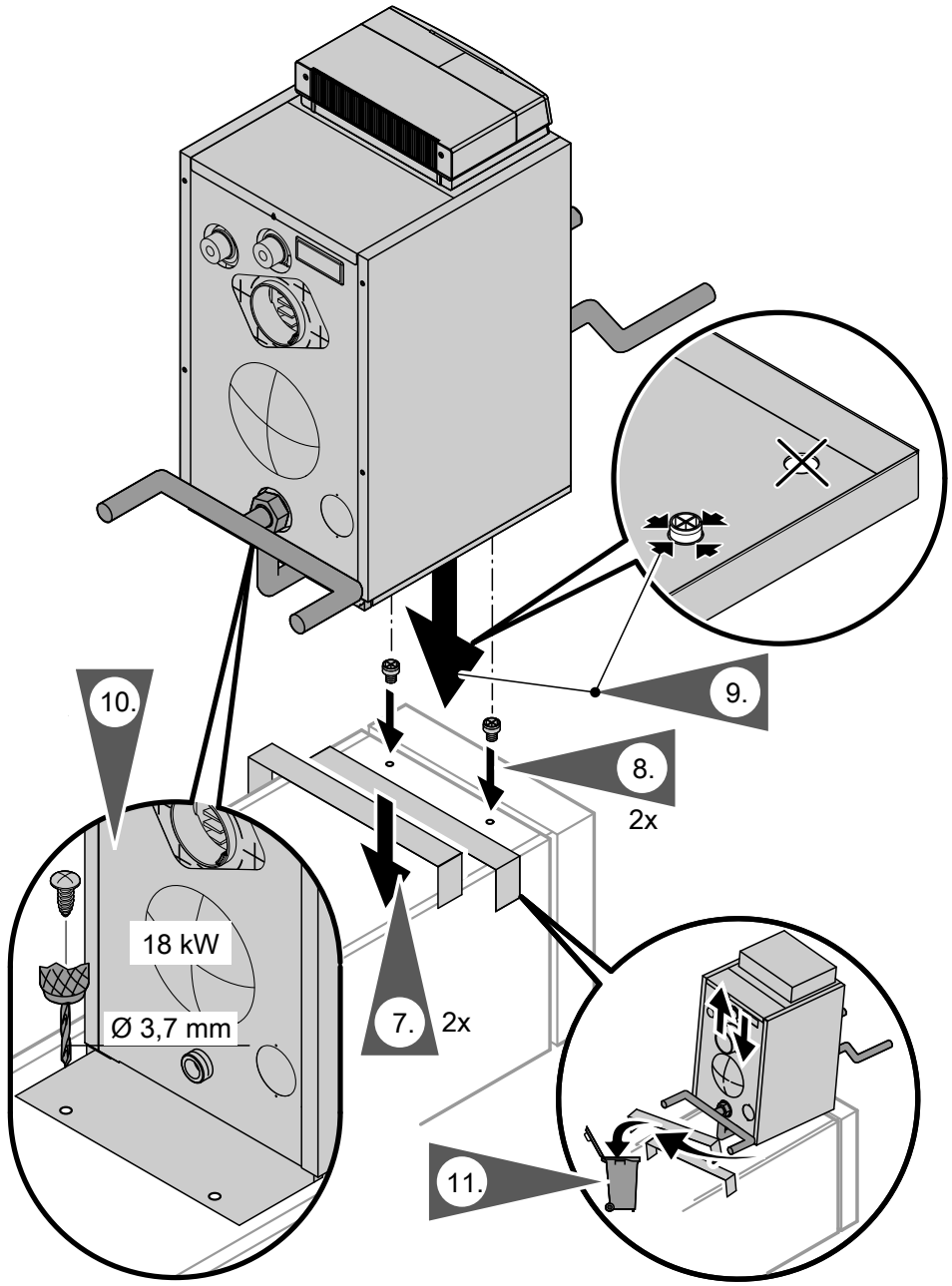

Fig. 6

Repositioning the boiler door hinges

In the delivered condition, the boiler door is fitted so it opens to the left. Reposition the hinges if required.

5624305

Repositioning the boiler door hinges (cont.)

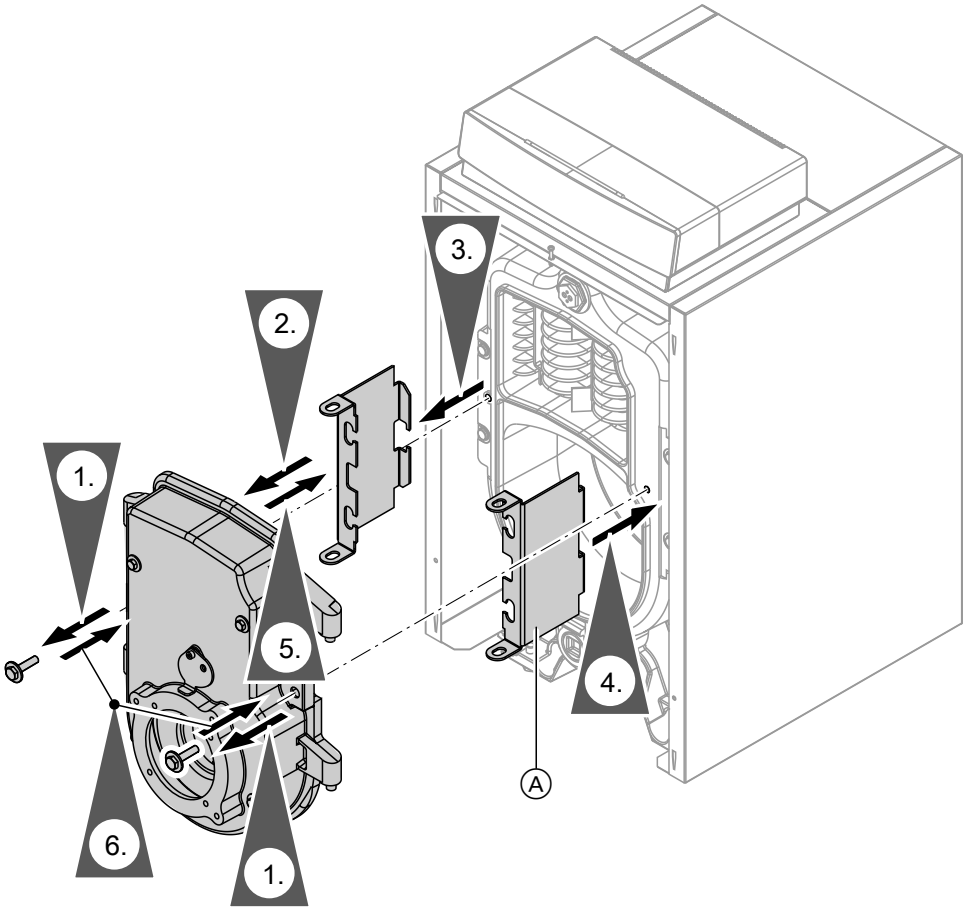

Fig. 7

Ⓐ Hinge bracket

Fitting the heat exchanger to the boiler

Preparations for installation

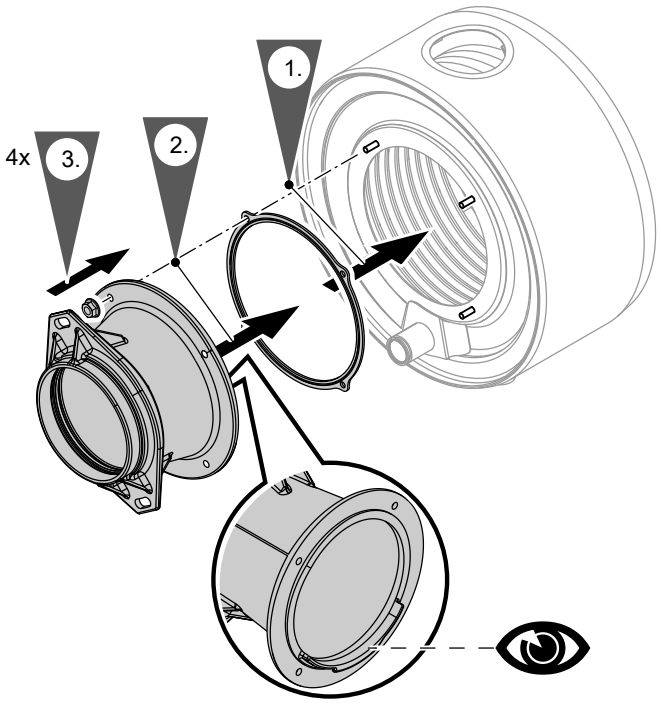

Fig. 8

Boiler flow/return distributor

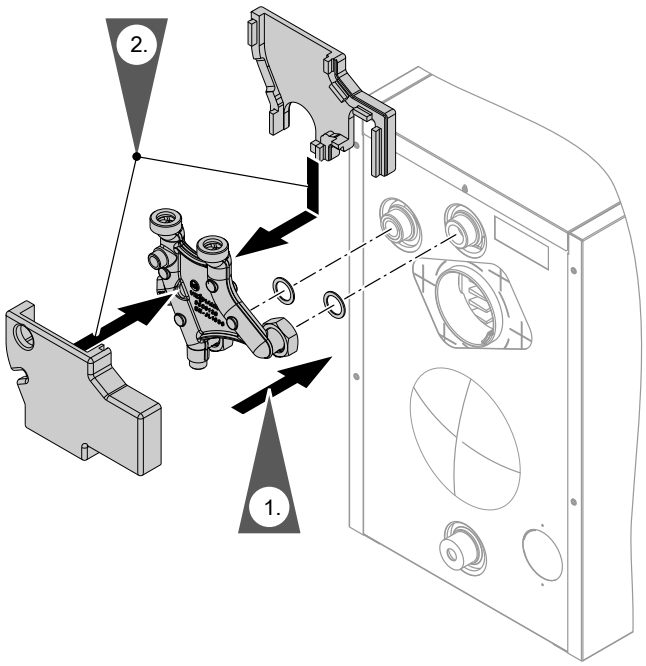

Fig. 9

Fitting the heat exchanger to the boiler (cont.)

Note
The return injector nozzle must be fitted in the boiler return.

Heat exchanger with flue gas connection

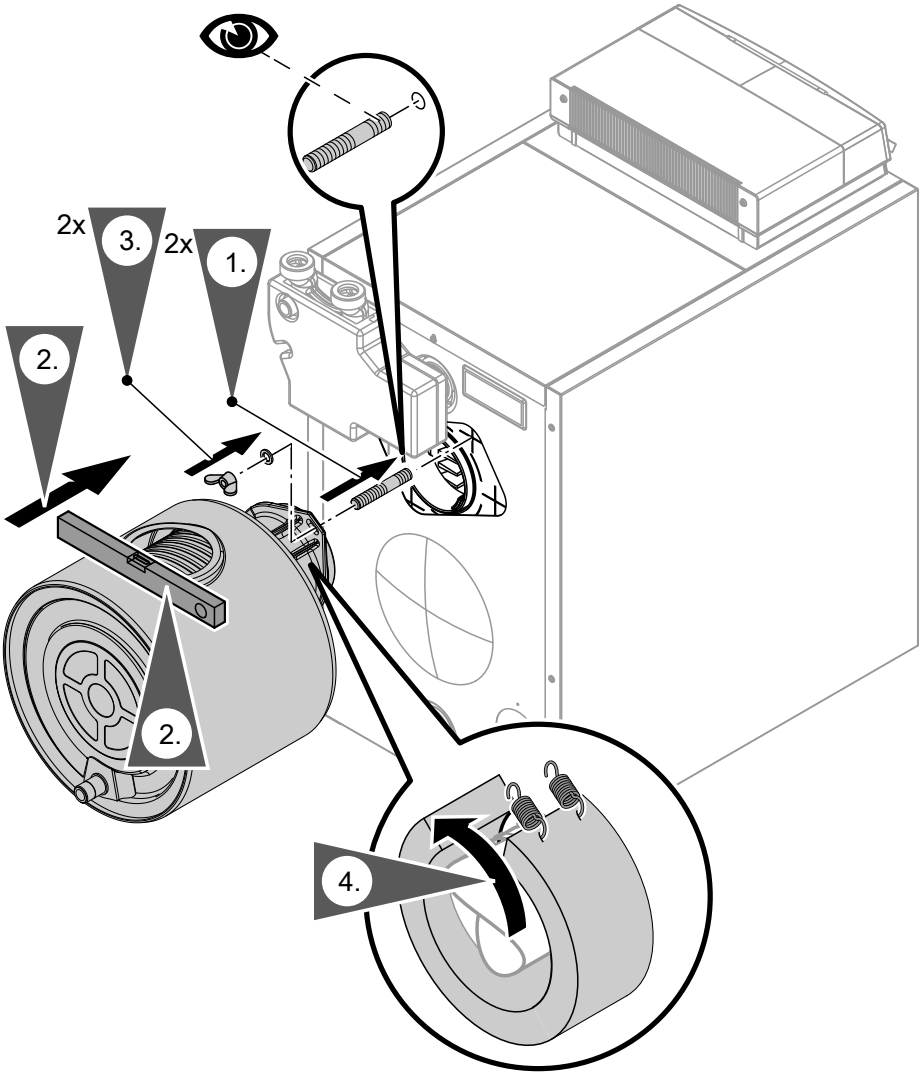

Fig. 10

Fitting the heat exchanger to the boiler (cont.)

Thermal insulation

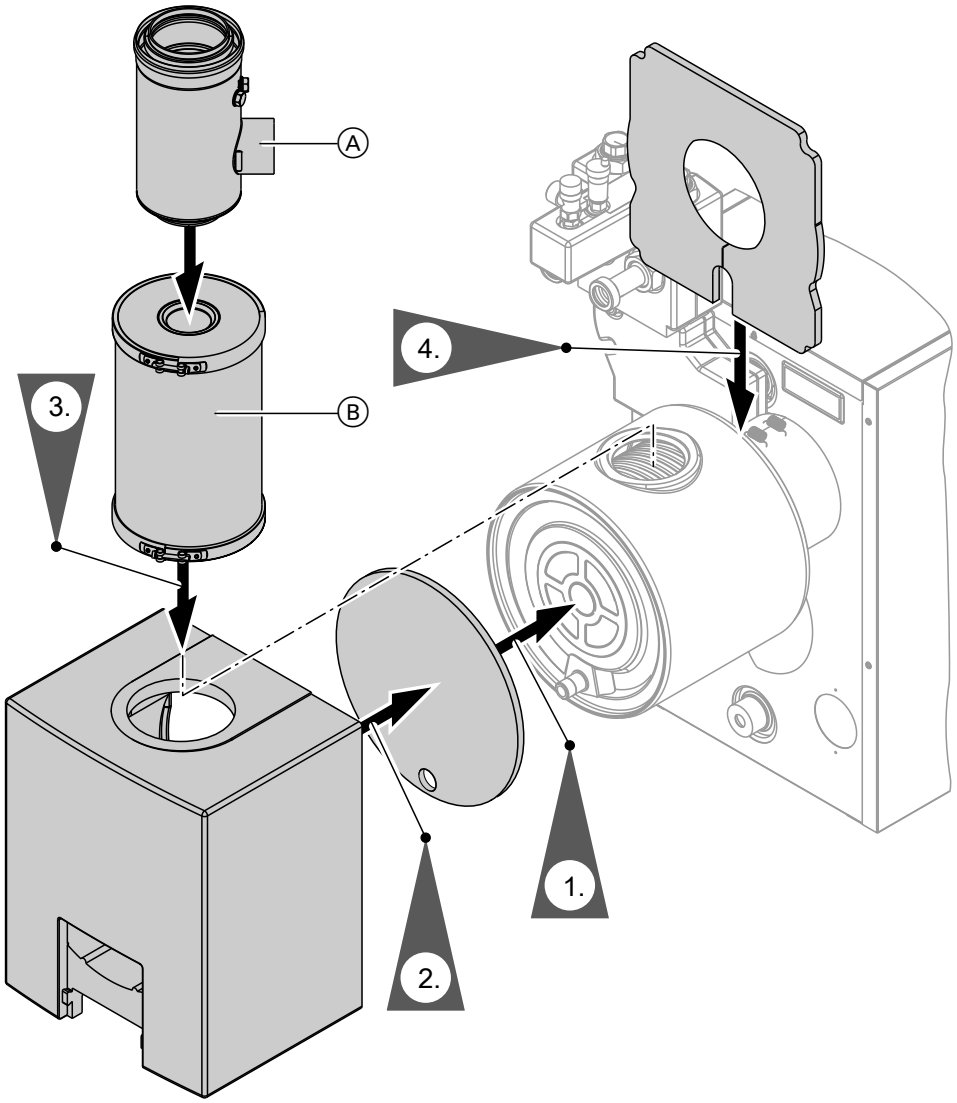

Fig. 11

Ⓐ Boiler flue connection (accessories)
Only in room sealed operation with coaxial balanced flue
Ⓑ Silencer (accessories)

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Fitting the heat exchanger to the boiler (cont.)

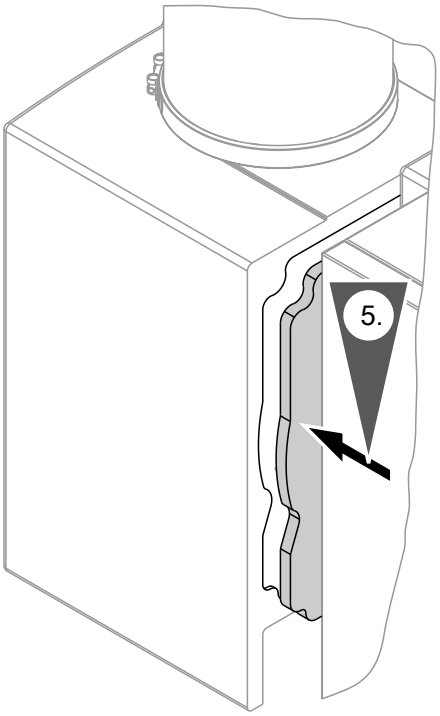

Fig. 12

Press the thermal insulation mat into the heat exchanger thermal insulation casing.

Fitting the heat exchanger to the boiler (cont.)

Pipework

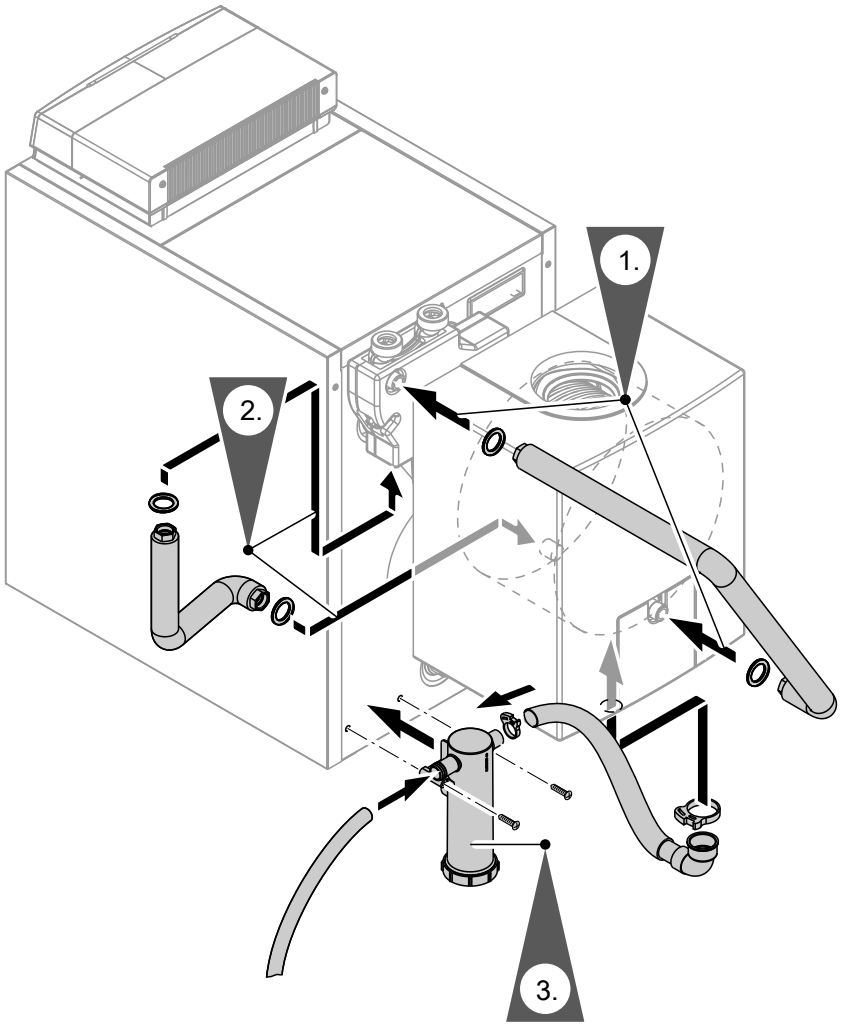

Fig. 13

- Manually bend the flexible pipe into the required shape.
- Fit all connections on the heating water side with suitable flat gaskets.
- Tighten the fittings with a torque of 15 Nm.
- Seal the opening in the heat exchanger thermal insulation with the cover provided.

Note
The trap and connection hose are included in the packaging of the heat exchanger.
Never grease or oil the siphon fitting and gaskets.

Trap installation information

5624305

Condensate connection

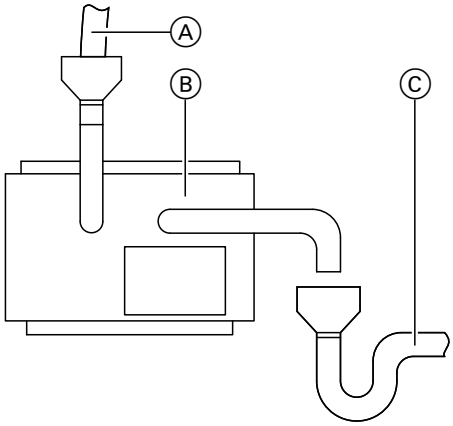

Fig. 14

Ⓐ Inlet from the boiler
Ⓑ Neutralising system or active charcoal filter
Ⓒ Drain to the public sewage system

Connect the condensate pipe to the public sewage system by the shortest route, with a constant fall and a pipe vent. Install a neutralising system if required.

Note

- *ATV-DVWK-A 251 permits boiler use without a neutralising system when operating with low sulphur fuel oil DIN 51605-EL-1 (sulphur content ≤ 50 mg/kg).*
- *If no neutralising system is connected, use the active charcoal filter (accessories).*

Connections on the heating water side

Flow and return

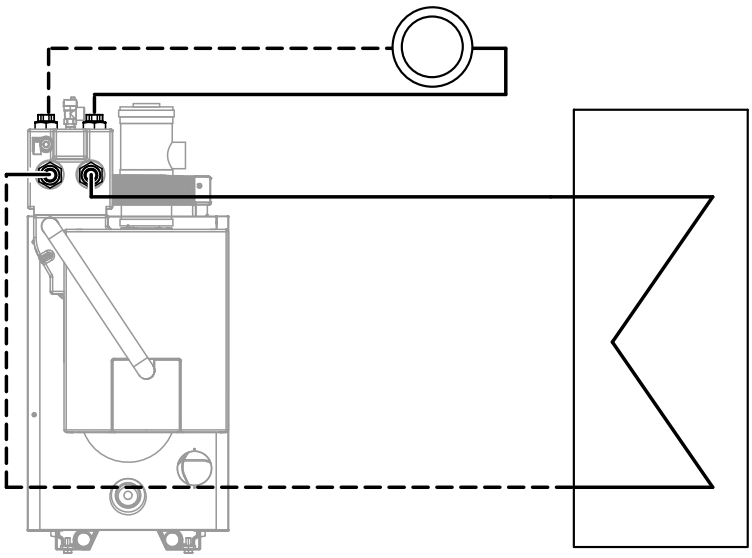

Fig. 15

The flow and return pipes with the heat exchanger connection are fitted to the boiler.
All consumers must be connected to this, so that the heat exchanger will receive a heating water flow under all operating conditions.

Note

- *Connect the heating circuits and DHW cylinder to the common flow and return.*
- *Never connect any consumers to the remaining connectors available at the back of the boiler.*

Filling connection

Fill the system via the fill valve at the safety equipment block (accessories) or via the on-site connection in the return.

Making the safety connections

Permiss. operating pressure:	3 bar (0.3 MPa)
Test pressure:	4 bar (0.4 MPa)

Minimum cross-sections
- Safety valve inlet connection
  20.2 to 53.7 kW: DN 15 (R ½)
- Safety valve discharge pipe
  20.2 to 53.7 kW: DN 20 (R ¾)
- Pipe to the expansion vessel
  20.2 kW: DN 12 (R ½)
  24.6 to 53.7 kW: DN 20 (R ¾)

Low water indicator
Tests have verified that the low water indicator specified by EN 12828 is not required.

Note
Equip boilers with a safety valve that is type-tested to TRD 721 [or local regulations] and is marked according to the system version.

Fitting the safety equipment block (accessories) and connections on the heating water side

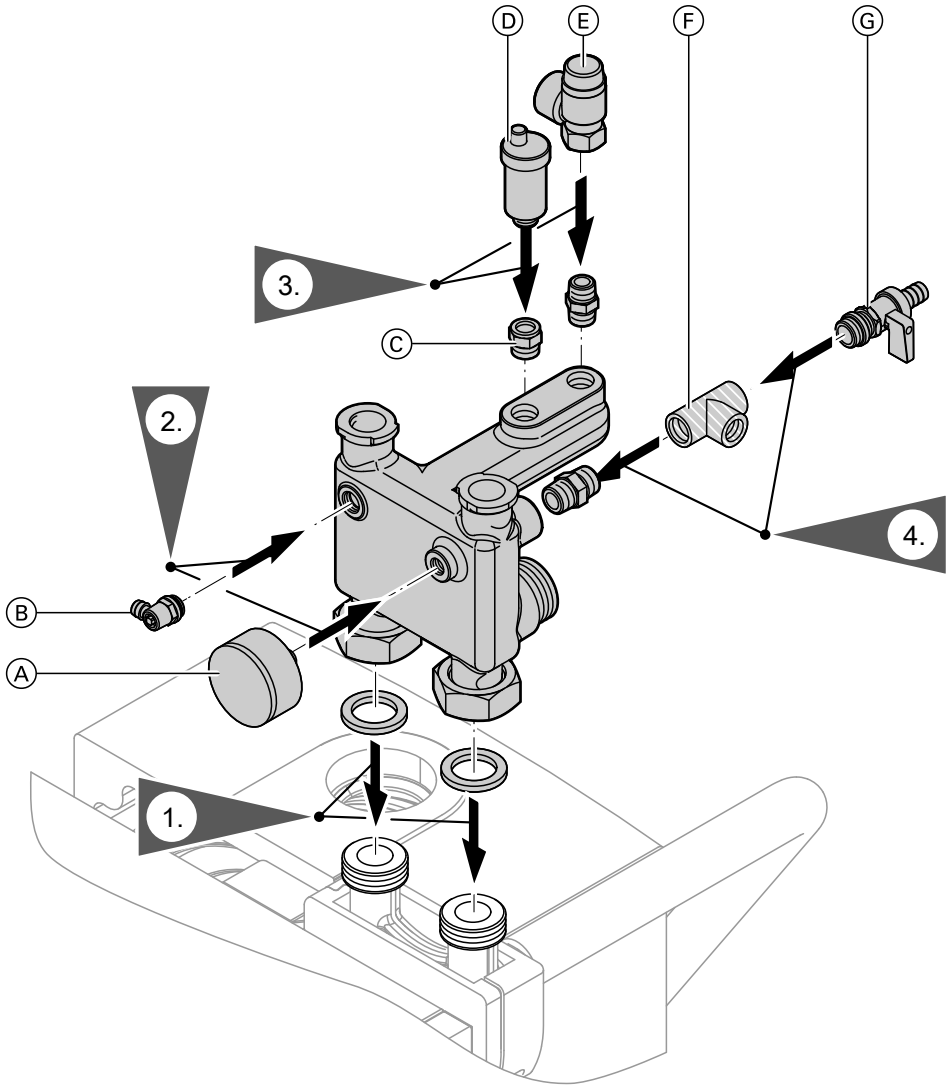

Fig. 16

Ⓐ Pressure gauge
Ⓑ Air vent valve
Ⓒ Automatic shut-off valve
Ⓓ Quick-action air vent valve
Ⓔ Safety valve
Ⓕ Tee Rp ½ (if the expansion vessel is to be fitted here)
Ⓖ Boiler fill valve

5624305

Fitting the safety equipment block… (cont.)

Note
Counterhold the safety equipment block when tightening the fittings.

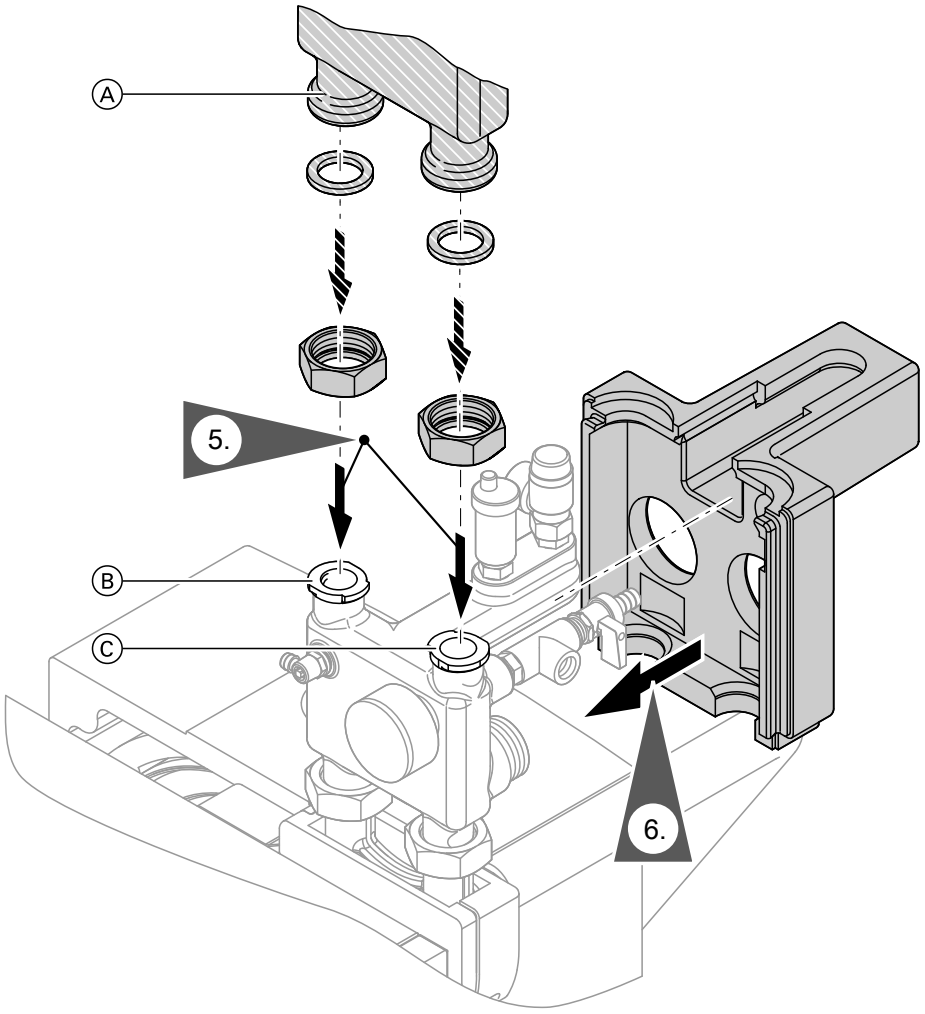

Fig. 17

Ⓐ Heating circuit connections with fittings or Divicon heating circuit distributor (accessories)
Ⓑ Heating flow
Ⓒ Heating return

Fitting the safety equipment block… (cont.)

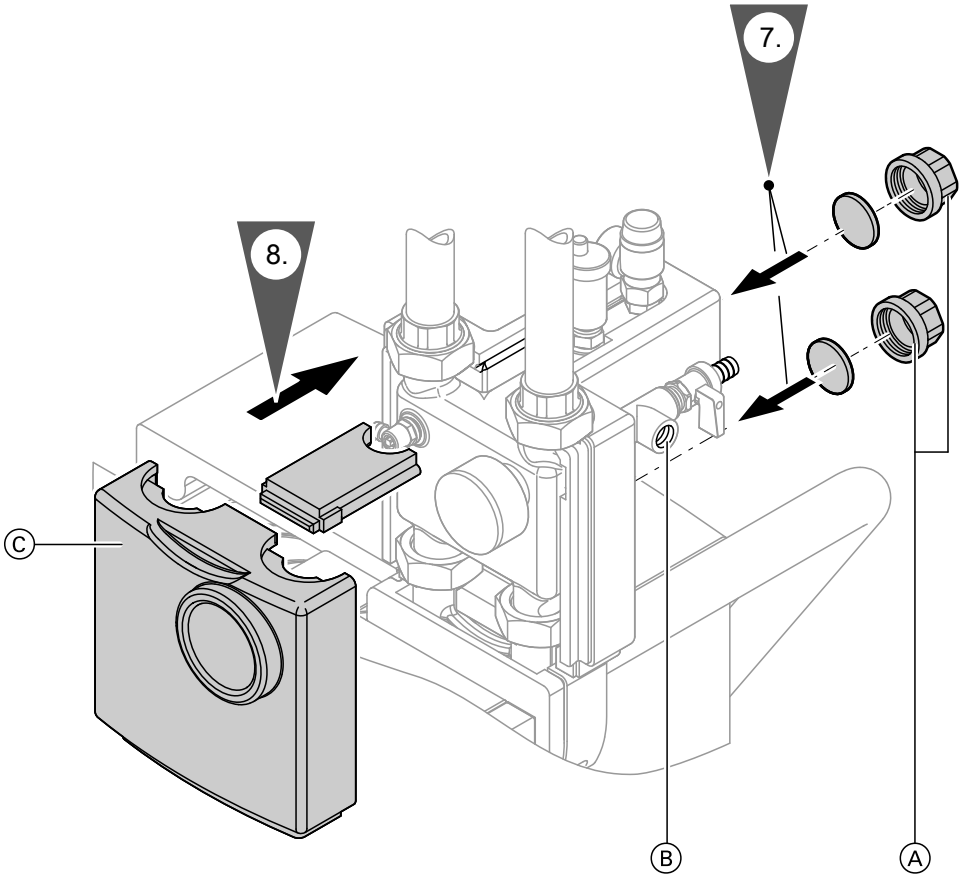

Fig. 18

Ⓐ Caps G 1½ (if no DHW cylinder is to be connected)
Ⓑ Expansion vessel connection

Note
Fit front thermal insulation Ⓒ only after the system has been filled and tested for leaks.

Service instructions

Electrical connections

! **Please note**
Damaged capillary tubes will result in faulty sensor function.
Never kink the capillary tubes.

For opening the control unit and its connections, see the boiler control unit installation instructions

Note
- *Power supply plug 40 and the outside temperature sensor[*1] are packed together with the parts for mounting the control unit and can be found below the "back top panel" of the boiler thermal insulation.*
- *Contrary to the statement in the control unit installation instructions, the coding card is already fitted at the factory.*

! **Please note**
Cables/leads can be damaged by hot components.
Cables/leads must not come into contact with any hot components once installation work has been completed.

- Bundle and route 230 V cables Ⓐ and LV leads Ⓑ **separately**.
- **Secure** all cables with the cable ties supplied.
- Use cable ties (snap hooks) to additionally secure the burner cable at hole Ⓒ on the **inside** of the side panel; which side panel depends on whether the burner is fitted on the right or left.

*[*1] Only in conjunction with Vitotronic 200*

5624305

20.2 and 24.6 kW

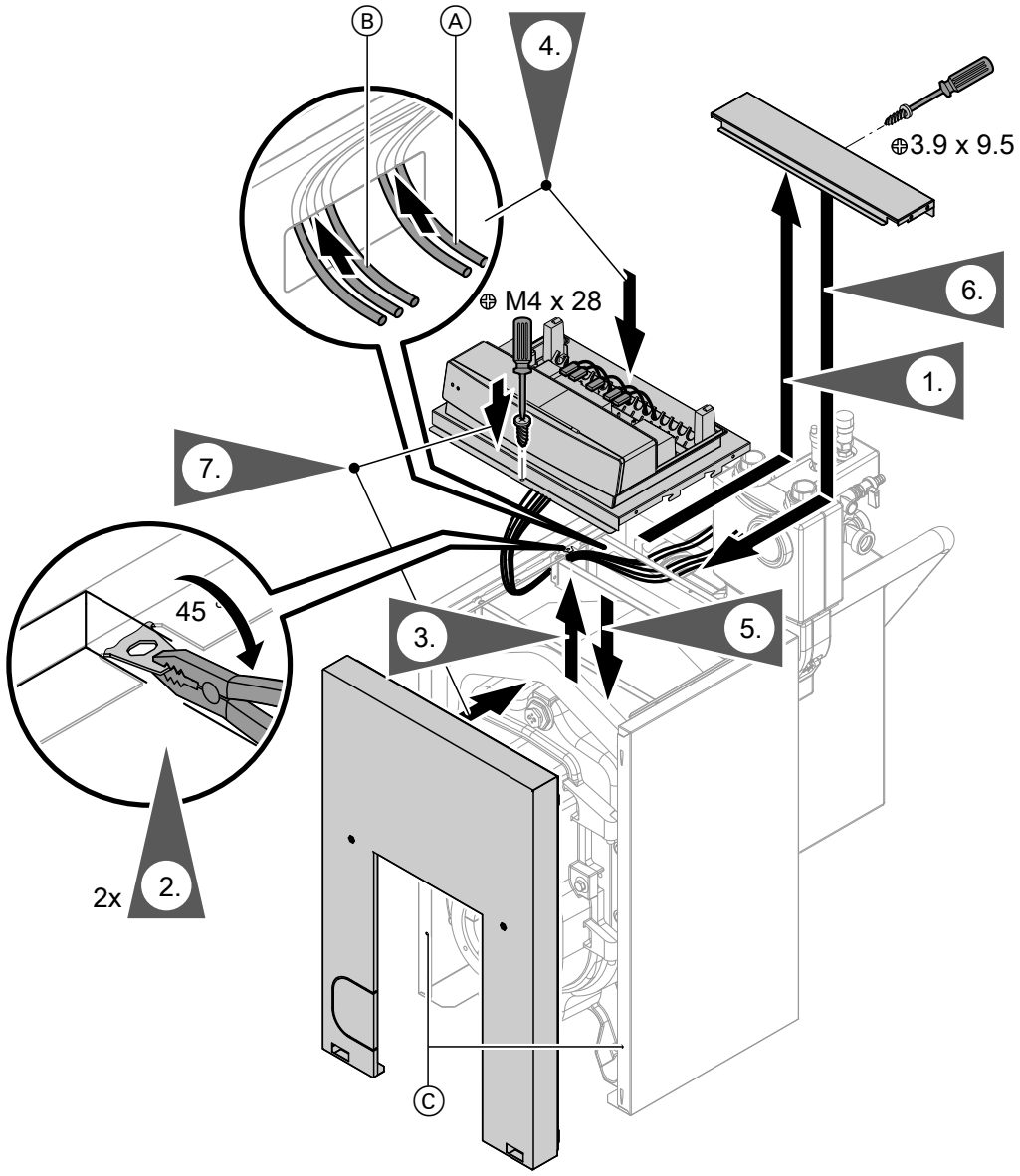

Fig. 19

Ⓐ 230 V cables
Ⓑ LV leads
Ⓒ Holes for securing the burner cable

5624305

Electrical connections (cont.)

28.9 to 53.7 kW

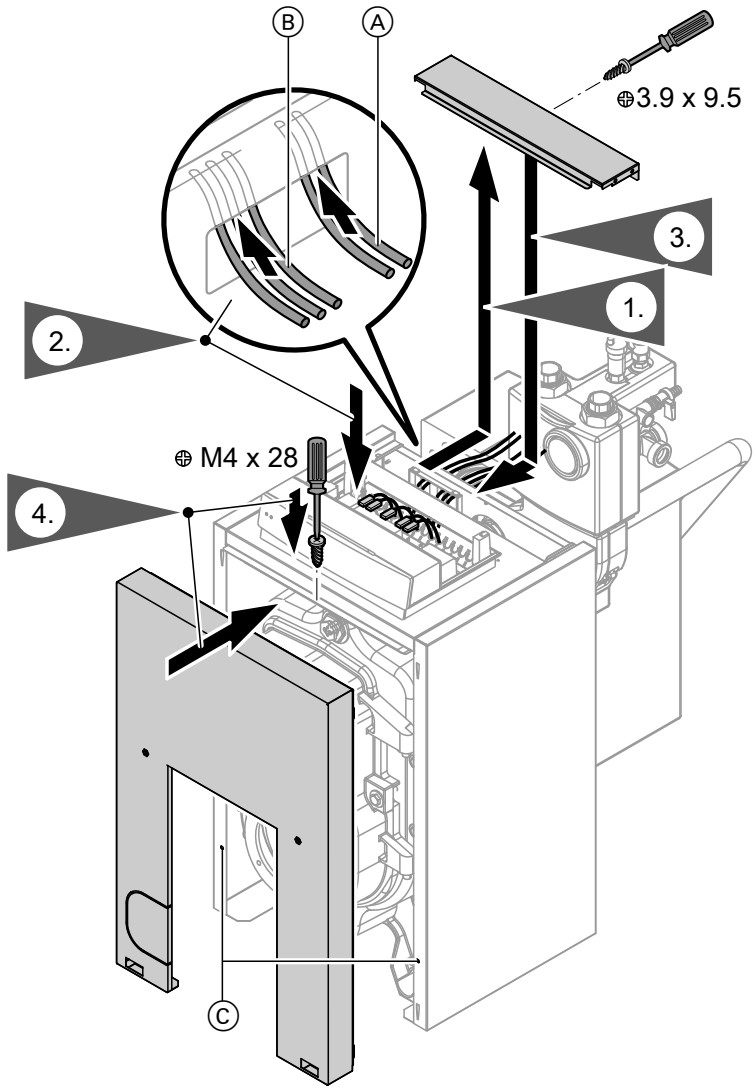

Fig. 20

Ⓐ 230 V cables
Ⓑ LV leads
Ⓒ Holes for securing the burner cable

Mounting the burner

Separate burner documentation

Commissioning and adjustment

Service instructions for boiler, burner and boiler control unit

5624305

Specification

Rated heating output							
T_F/T_R = 50/30 °C	**kW**	**20.2**	**24.6**	**28.6**	**35.4**	**42.8**	**53.7**
T_F/T_R = 80/60 °C	**kW**	**18.8**	**22.9**	**27.0**	**33.0**	**40.0**	**50.0**
CE designation		CE-0035 CL 102					
Power consumption[*2] at							
▪ 100 % of rated heating output	W	226	215	235	235	340	340
▪ 30 % of rated heating output	W	60	66	73	80	113	113
Available draught[*3]							
	Pa	100	100	100	100	100	100
	mbar	1.0	1.0	1.0	1.0	1.0	1.0
Transport dimensions (incl. thermal insulation)							
Length	mm	508	508	645	645	782	782
Width	mm	360	360	360	360	360	360
Height	mm	766	766	766	766	766	766
Overall dimensions							
Total length (incl. heat exchanger and thermal insulation)	mm	1226	1226	1362	1362	1662	1662
Total width	mm	500	500	500	500	500	500
Total height	mm	940	940	940	940	940	940
Plinth height	mm	250	250	250	250	250	250
Weight boiler body	kg	89	89	120	120	152	152
Total weight Boiler incl. thermal insulation, heat exchanger, burner and boiler control unit	kg	147	147	184	184	224	224
Flue gas temperature[*4]							
▪ At a return temperature of 30 °C	°C	32	34	37	39	36	40
▪ At a return temperature of 60 °C	°C	62	63	65	67	64	67

[*2] *Standard parameter (in conjunction with Vitoflame 300 blue flame oil burner).*

[*3] *Observe when sizing the chimney.*

[*4] *Flue gas temperatures as average gross values to EN 304 (captured with 5 thermocouples) at 20 °C combustion air temperature.*

5624305

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