

Instantaneous heating water heater

For the following heat pumps:

- Type BWT/BWT-M 221.A06 to A10
 - Type BWT/BWT-M 241.A06 to A10
 - Type BWT/BWT-NC 331.A06 to A10
 - Type BWT 341.A06 to A10
 - Type AWT-AC 221.A04 bis A13, B10, B13, B16
 - Type AWT-AC 241.A04 bis A13, B10, B13, B16
-

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.

Installation, commissioning, inspection, maintenance and repairs must only be carried out by a competent person (heating engineer/installation contractor).

Before working on the appliance/heating system, isolate the system from the power supply (e.g. by removing a separate mains fuse or by means of a mains isolator) and safeguard against unauthorised reconnection.

Note

In addition to the control circuit, there may be several power circuits (e.g. compressor, instantaneous heating water heater).



Danger

If not all electrical circuits are isolated, injury through electric shock and appliance damage may result.

Isolate all existing electrical circuits from the power supply and safeguard against reconnection.

Repairing components that fulfil a safety function can compromise the safe operation of your system.

Safety instructions (cont.)

For replacements, use only original spare parts supplied or approved by Viessmann.

Opening the heat pump

1. Isolate the system from the power supply.



Heat pump installation and service instructions

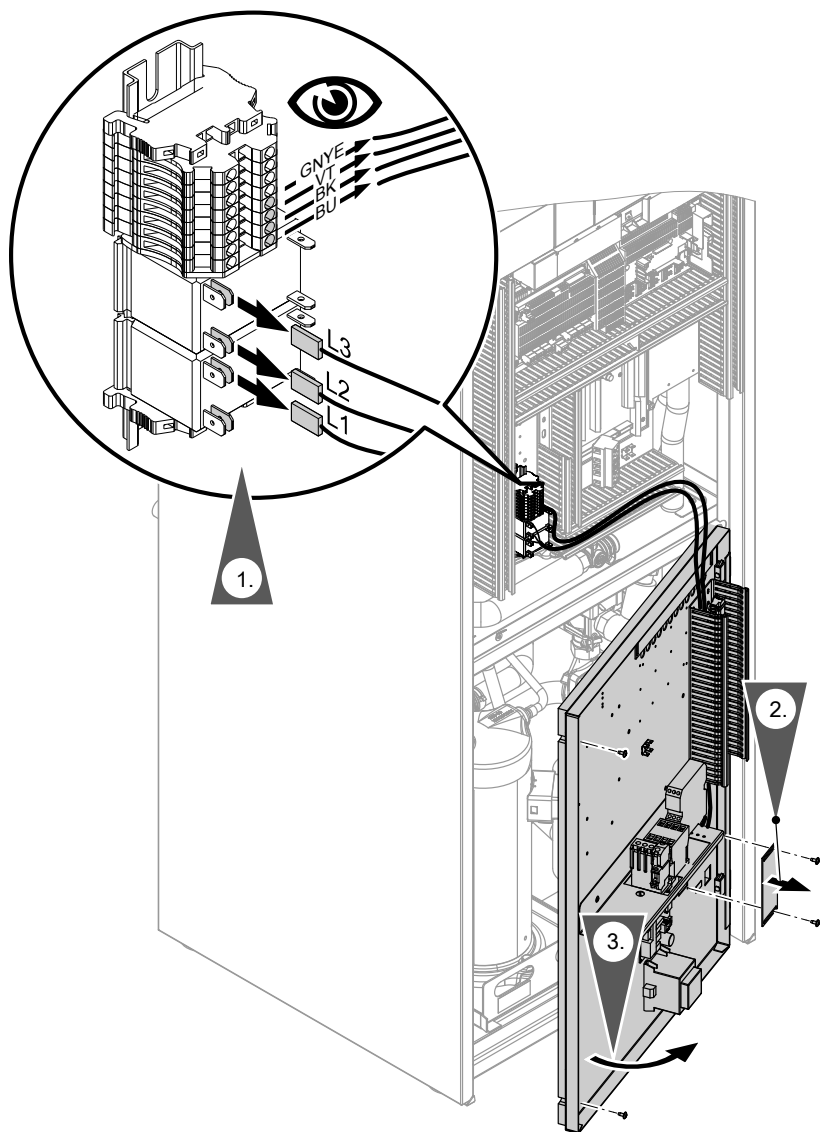
3. Remove front panels.



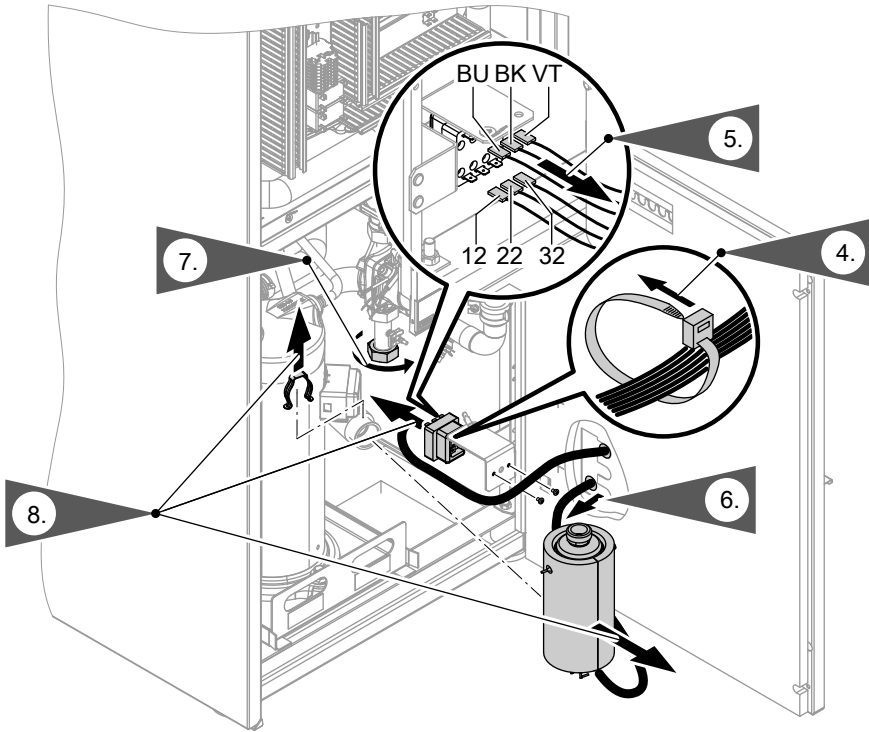
Heat pump installation and service instructions

2. Drain the system.

Removing the instantaneous heating water heater



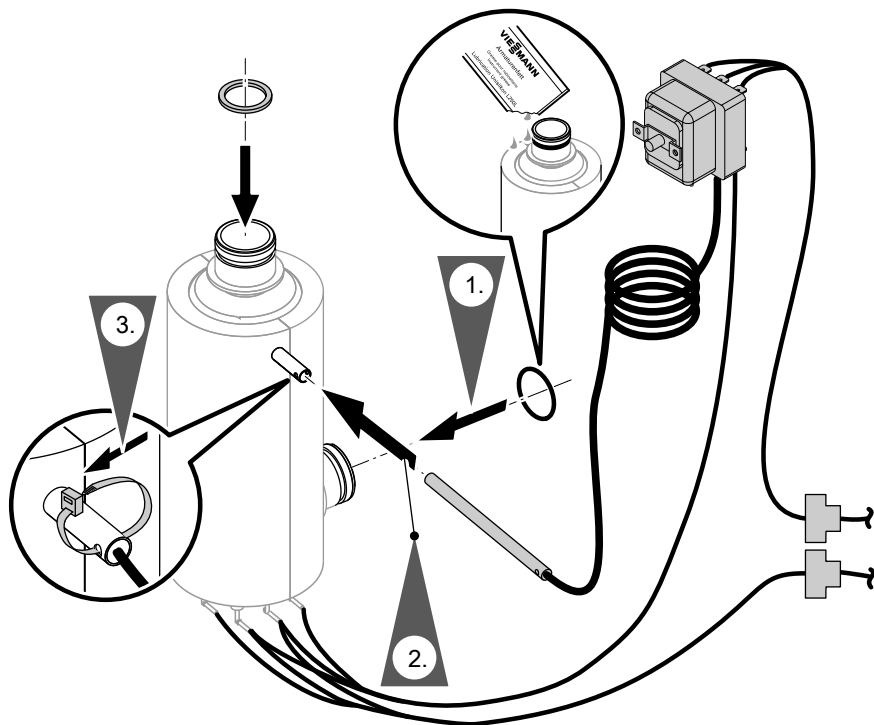
Removing the instantaneous heating water heater (cont.)



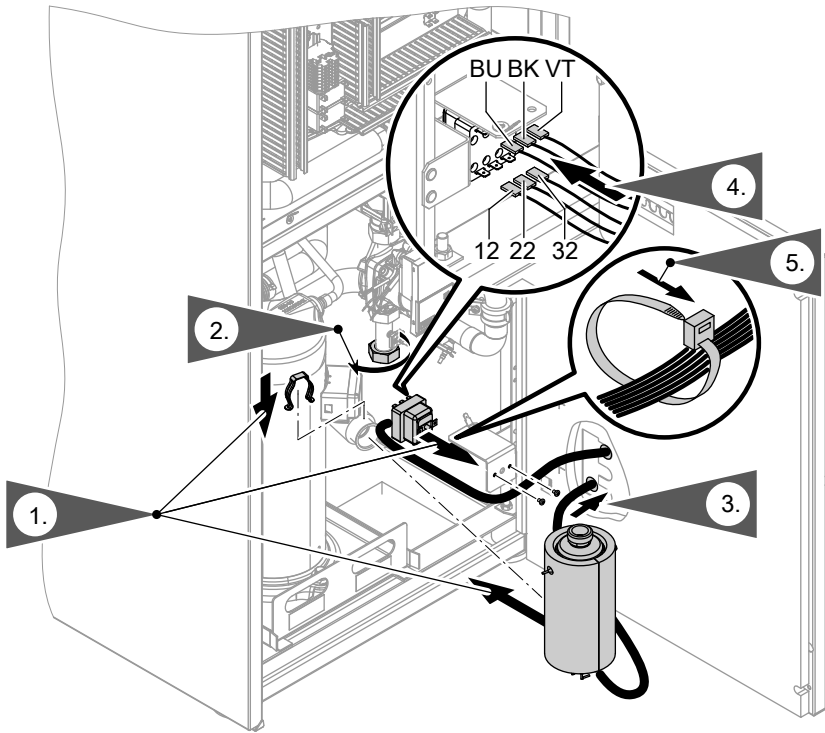
Note

The high limit safety cut-out can only be replaced together with the instantaneous heating water heater.

Preparing for installation



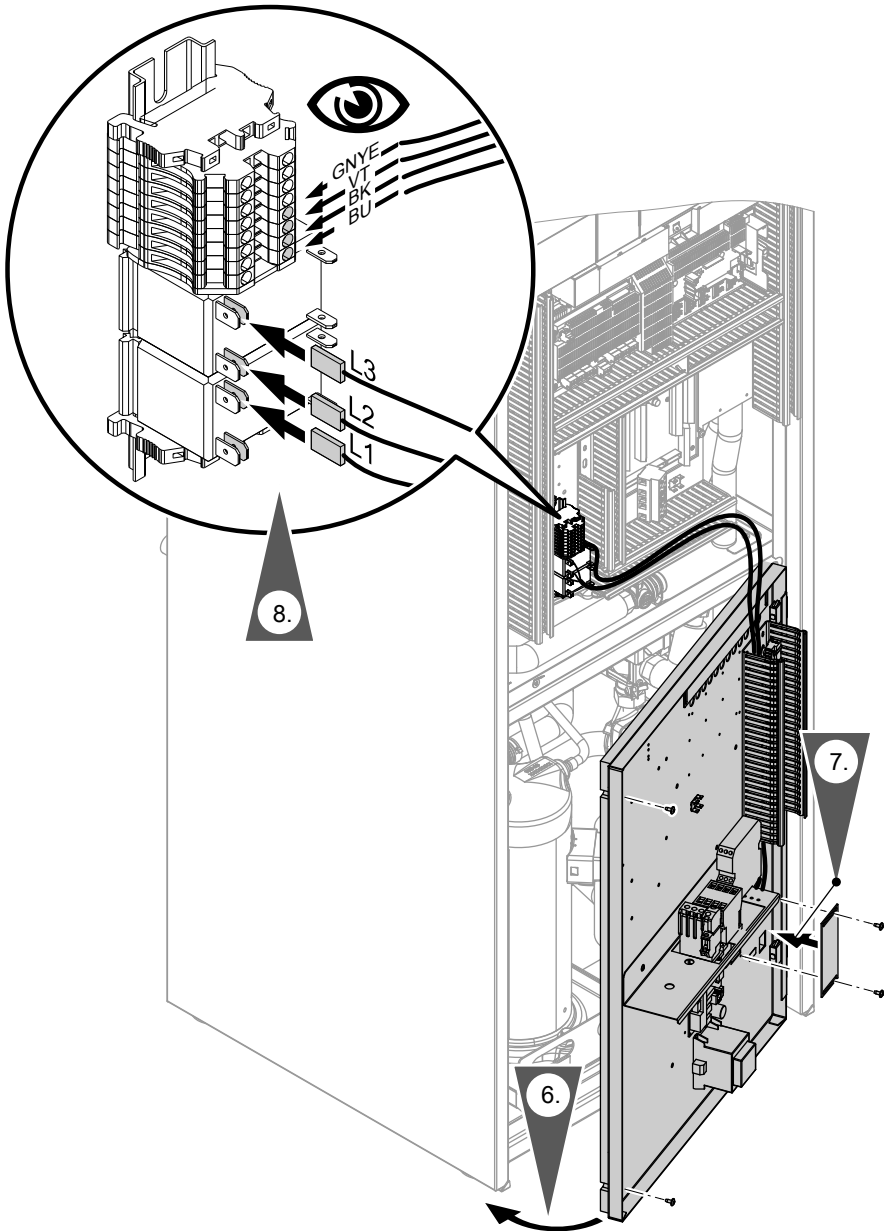
Installing the instantaneous heating water heater





Notes on steps 1 and 2:
Ensure the O-ring and flat gasket are seated correctly.

Note on step 3:
Bundle the cables below the instantaneous heating water heater so that they do **not** touch the base plate.

Installing the instantaneous heating water... (cont.)



Commissioning

- !** **Please note**
If the heating circuit is not sufficiently filled with water, the instantaneous heating water heater will overheat. This can damage the instantaneous heating water heater.
Fill the heating system completely and vent.
- Check for leaks.
- Carry out a function check; see next chapter.
- Close the heat pump in reverse order.
 Vitocal installation and service instructions
- Start the heat pump.
 Vitocal installation and service instructions

Carrying out a function check

The function check ascertains whether the set heating output of the instantaneous heating water heater is available and whether the high limit safety cut-out responds.


Note

Read through **all steps before** carrying out the check.

Carrying out a check with excessively high flow temperature

- Prevent DHW circulation in the secondary circuit via valve. The line between heat pump and on-site safety valve must remain open during this test.
- Start the instantaneous heating water heater separately via the heat pump control unit.

Service menu:

- Hold down **OK** +  simultaneously for approx. 4 s.
- "Actuator test"**.
- "All actuators"** set to **"OFF"**
- "Inst.water. stage 1"** set to **"ON"**
- "Inst.water. stage 2"** set to **"ON"**

Carrying out a function check (cont.)

Note

The secondary pump must **not** be switched on.

3. Measure the current through the instantaneous heating water heater:

Measure the current using a clamp ammeter (current clamp) at every conductor (L1, L2, L3) of the power cable for the switching module.

During heat-up, current is present; the current is interrupted if the high limit safety cut-out responds.

4. Observe the electricity meter for the instantaneous heating water heater and switch OFF other consumers in the building if required.

Max. heating output	Current per conductor
8.8 kW	approx. 13 A
5.8 kW	approx. 9 A
3 kW	approx. 4 A




Please note

If the instantaneous heating water heater overheats over a prolonged period, this may damage the appliance.

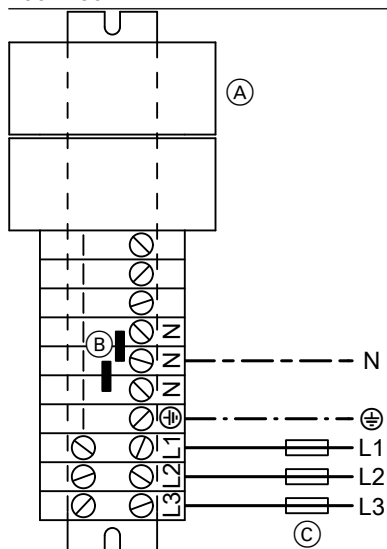
If the high limit safety cut-out does not respond, switch OFF the instantaneous heating water heater via the heat pump control unit.

Service menu:

1. Hold down **OK** +  simultaneously for approx. 4 s.
2. **"Actuator test"**.
3. **"All actuators"** set to **"OFF"**

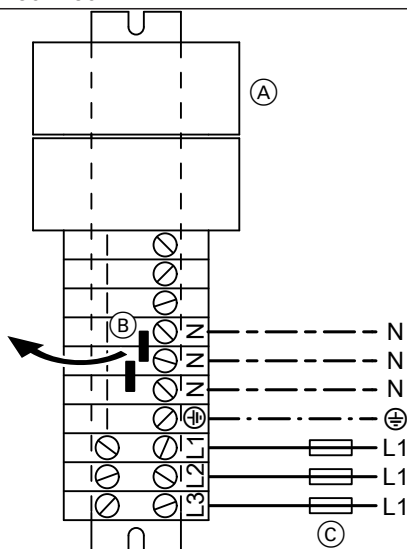
Carrying out a function check (cont.)

Power supply
400 V/50 Hz



- (A) Switching module
- (B) Jumpers
- (C) Max. fuse rating 16 A

230 V/50 Hz




- (A) Switching module
- (B) Jumpers
- (C) Max. fuse rating 16 A

Lowering the temperature in the secondary circuit

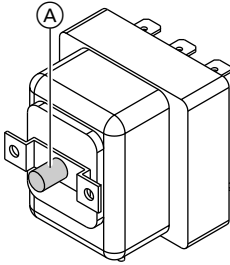
1. Re-enable DHW circulation in the secondary circuit.
2. Switch ON the secondary pump separately via the heat pump control unit for approx. 60 s.
3. Isolate the system from the power supply.

Service menu:

1. Hold down **OK** +  simultaneously for approx. 4 s.
2. **"Actuator test"**.
3. **"All actuators"** set to **"OFF"**
4. **"Secondary pump"** set to **"ON"**

Carrying out a function check (cont.)

Resetting the high limit safety cut-out



Press reset button (A).

Note

The high limit safety cut-out can only be reset if the flow temperature lies below 78 °C.

Fault analysis

If the instantaneous heating water heater is not heating (no current) or the high limit safety cut-out does not respond, this may have the following causes:

Cause	Steps to take
Airlock in the system	Vent the secondary circuit.
Incorrect electrical connection to switching module	Check connection of instantaneous heating water heater to switching module; check switching module power supply; see Vitocal installation and service instructions.
Jumpers incorrectly set at the switching module	Check jumpers; see Vitocal installation and service instructions.
High limit safety cut-out faulty	Replace the high limit safety cut-out together with the instantaneous heating water heater.
Temperature sensor in high limit safety cut-out faulty or capillaries kinked/broken	Replace the high limit safety cut-out together with the instantaneous heating water heater.
Instantaneous heating water heater faulty	Replace the instantaneous heating water heater together with the high limit safety cut-out.
Switching module for instantaneous heating water heater faulty	Replace switching module for instantaneous heating water heater.



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