

Service instructions for contractors

VIESMANN

Vitorondens 200-T
Type J2RA, 67.6 to 107.3 kW
Oil Unit condensing boiler



VITORONDENS 200-T



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.

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

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

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

Safety instructions for working on the system

Working on the system

- Isolate the system from the power supply (e.g. at a separate MCB/fuse or a mains isolator) and check that it is no longer live.
- Safeguard the system against reconnection.
- Wear suitable personal protective equipment when carrying out any work.

-  **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.

Safety instructions (cont.)

- !** **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.

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**
 Auxiliary components, spare parts 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 installation and replacements, use only Viessmann original parts or parts 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 the doors to living spaces to prevent flue gases from spreading.

What to do if water escapes from the appliance

-  **Danger**
 If water escapes from the appliance there is a risk of electric shock. Switch OFF the heating system at the external isolator (e.g. fuse box, domestic distribution board).
-  **Danger**
 If water escapes from the appliance there is a risk of scalding. Never touch hot heating water.

Flue systems and combustion air

Ensure that flue systems are clear and cannot be sealed, for instance due to accumulation of condensate or other external causes. Ensure an adequate supply of combustion air. Instruct system users that subsequent modifications to the building characteristics are not permissible (e.g. cable/pipe-work 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. Vents for supplying combustion air must be non-sealable.

Extractors

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

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 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).

System examples

Available system examples: See www.viessmann-schemes.com.

Spare parts lists

Information about spare parts can be found on the Viessmann spare parts app.





Steps - commissioning, inspection and maintenance

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Filling and commissioning the heating system

 Operating instructions, service instructions – control unit and burner

1. Check that the ventilation air aperture in the installation room is open.
2. Check the pre-charge pressure of the expansion vessel.
If the expansion vessel pre-charge pressure is lower than the static system pressure, top up with nitrogen. Top up with nitrogen until the pre-charge pressure is 0.1 to 0.2 bar (10 to 20 kPa) higher than the static system pressure.
The static pressure corresponds to the static head.

3. Open the check valves.

4.

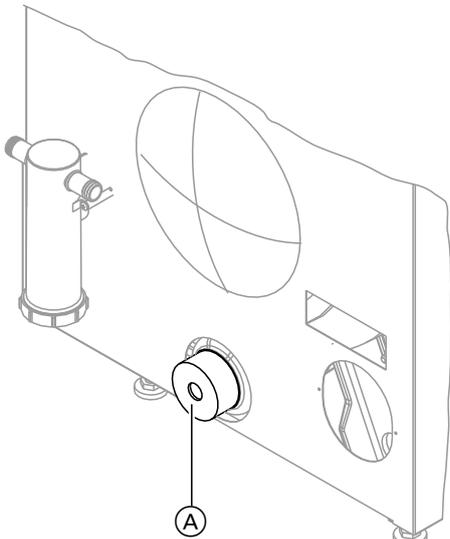


Fig. 1

Ⓐ Filling/draining

Fill the heating system with water and vent the system. The charge pressure of the heating system must be 0.1 to 0.2 bar (10 to 20 kPa) higher than the pre-charge pressure of the expansion vessel: See page 19.

Permiss. operating pressure: 3 bar (0.3 MPa)

Note

Let the heating circuit pump run whilst filling in order to vent the indirect coils.

5.

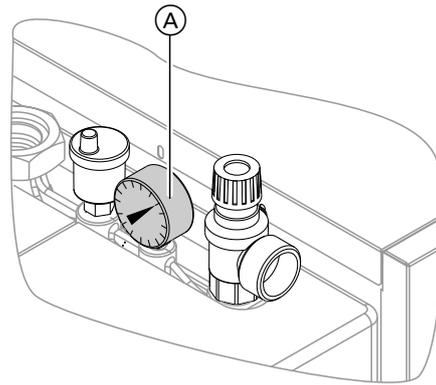


Fig. 2

Mark the charge pressure at pressure gauge Ⓐ.

6. Return the check valves to their operating position.
7. Open the oil shut-off valves.
8. Fill trap with water (see page 18).

Fill water

According to EN 1717 with DIN 1988-100, as a heat transfer medium for DHW heating, the heating water must meet fluid category ≤ 3 . This requirement is met if water of potable quality is used as heating water. For example, if additives are used, the additive manufacturer must specify which category the treated heating water comes under.



Filling and commissioning the heating system (cont.)

! Please note

- Unsuitable fill water increases the level of deposits and corrosion and may lead to appliance damage.
 - Flush the heating system thoroughly before filling.
 - Only use fill water of potable water quality.
 - Special antifreeze suitable for heating systems can be added to the fill water. The antifreeze manufacturer must verify its suitability.
 - Fill and top-up water with a water hardness in excess of the following values must be softened, e.g. with a small softening system for heating water.

Total permissible hardness of the fill and top-up water

Total heating output kW	Specific system volume		
	< 20 l/kW	≥ 20 l/kW to < 50 l/kW	≥ 50 l/kW
≤ 50	≤ 3.0 mol/m ³ (16.8 °dH)	≤ 2.0 mol/m ³ (11.2 °dH)	< 0.02 mol/m ³ (0.11 °dH)
> 50 to ≤ 200	≤ 2.0 mol/m ³ (11.2 °dH)	≤ 1.5 mol/m ³ (8.4 °dH)	< 0.02 mol/m ³ (0.11 °dH)
> 200 to ≤ 600	≤ 1.5 mol/m ³ (8.4 °dH)	≤ 0.02 mol/m ³ (0.11 °dH)	< 0.02 mol/m ³ (0.11 °dH)
> 600	< 0.02 mol/m ³ (0.11 °dH)	< 0.02 mol/m ³ (0.11 °dH)	< 0.02 mol/m ³ (0.11 °dH)



Venting the heating system



Shutting down the system



Draining the heating system (if required)

Drain at filling/draining connector (A).

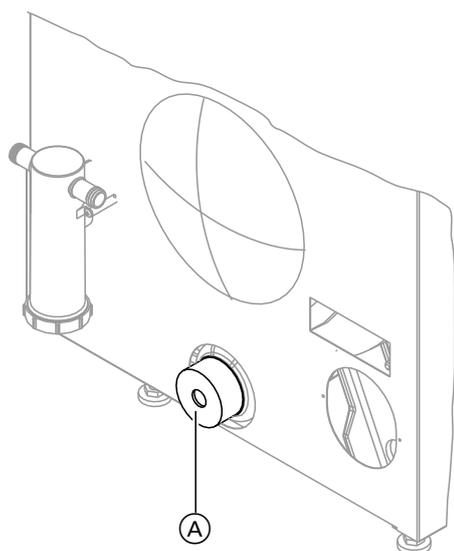


Fig. 3

(A) Filling/draining



Opening the boiler door

Note

If the sound insulation set (accessories) is installed, detach the air supply hose from the burner before opening the boiler door.

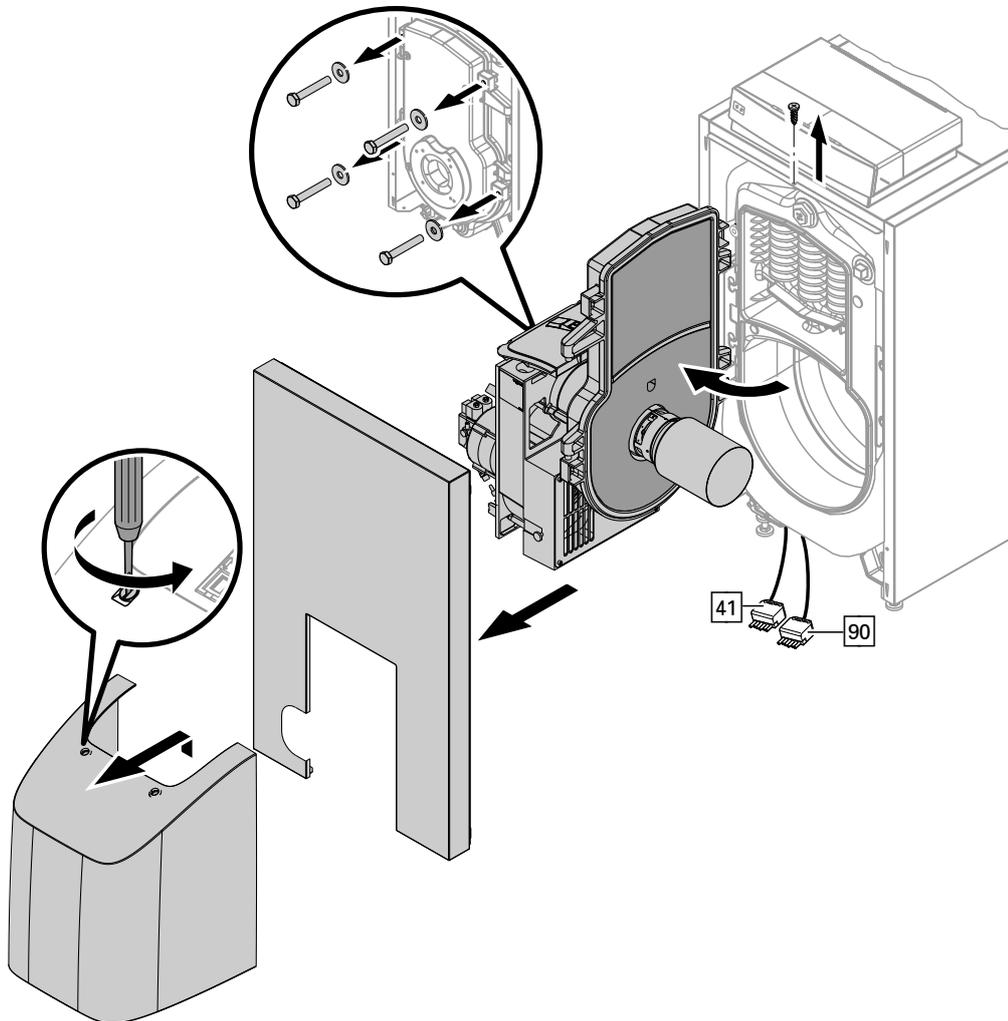


Fig. 4



Cleaning the boiler heating surfaces

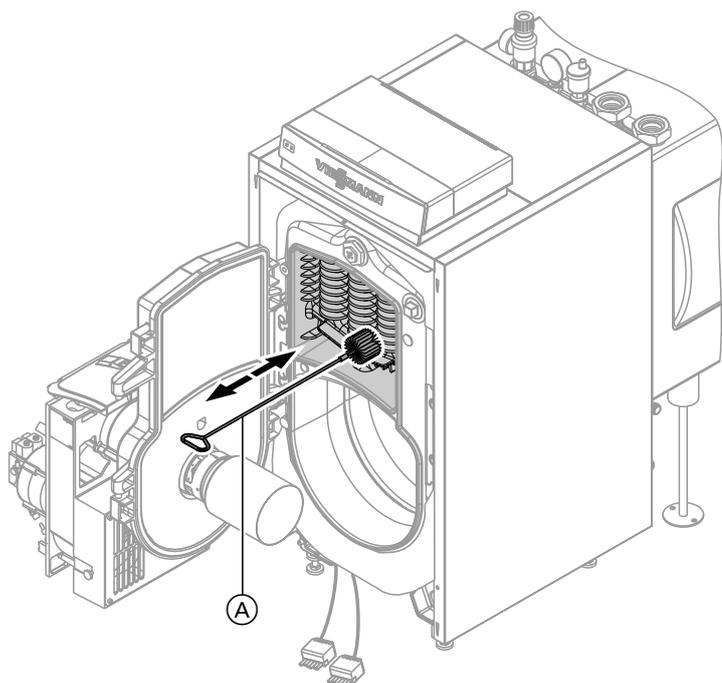


Fig. 5

Ⓐ Cleaning brush (accessories)

1. Clean the boiler heating surfaces with cleaning brush and vacuum cleaner.
2. Remove any stubborn soot deposits with alkaline agents containing a surfactant additive (e.g. Fauch 400^{*1}).

Note

- Ensure that no cleaning agent gets between the boiler body and the thermal insulation.
- Only use solvent-free cleaning agents.



Manufacturer's instructions about the cleaning agent



Checking the gaskets and thermal insulation sections

1. Check gaskets and packing cords in the boiler door for damage.
2. Check the thermal insulation sections of the boiler door for damage.
3. Replace any damaged components.
4. If a sound insulation set (accessories) is connected: Check the exterior grille of the vent on the back of the boiler and clean if required.

^{*1} Manufacturer: Hebro Chemie GmbH, Rostocker Strasse 40, D-41199 Mönchengladbach



Separating the neutralising system (if installed) from the boiler and connecting the drain hose

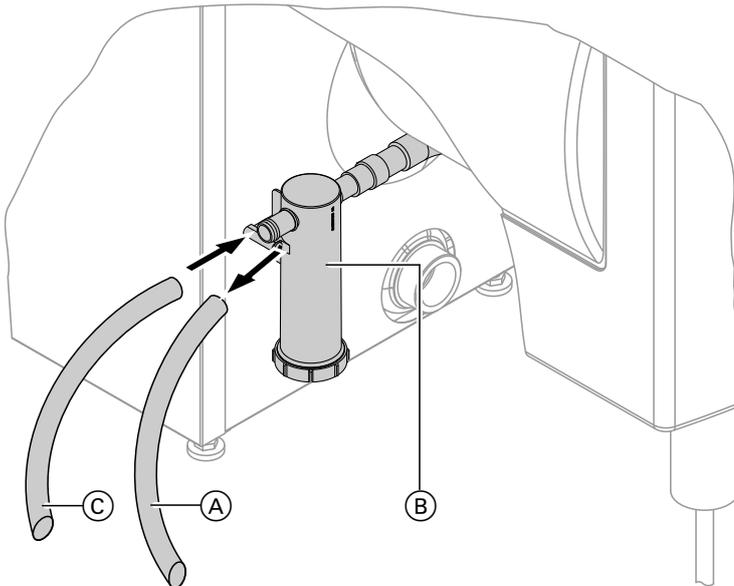


Fig. 7

1. Separate hose (A) to the neutralising system from trap (B).
2. Connect drain hose (C) to the condensate drain of the trap and run to a drainage system.



Checking the neutralising system (if installed)

1. Check the pH value of the condensate downstream of the neutralising system with a pH test strip. Replace the granulate if the pH value is < 6.5.
2. Reinstall the neutralising system in reverse order.

Note

Part no. for pH test strips: 9517678.

Observe manufacturer's instructions for the neutralising system.



Checking the connection on the flue gas side for leaks

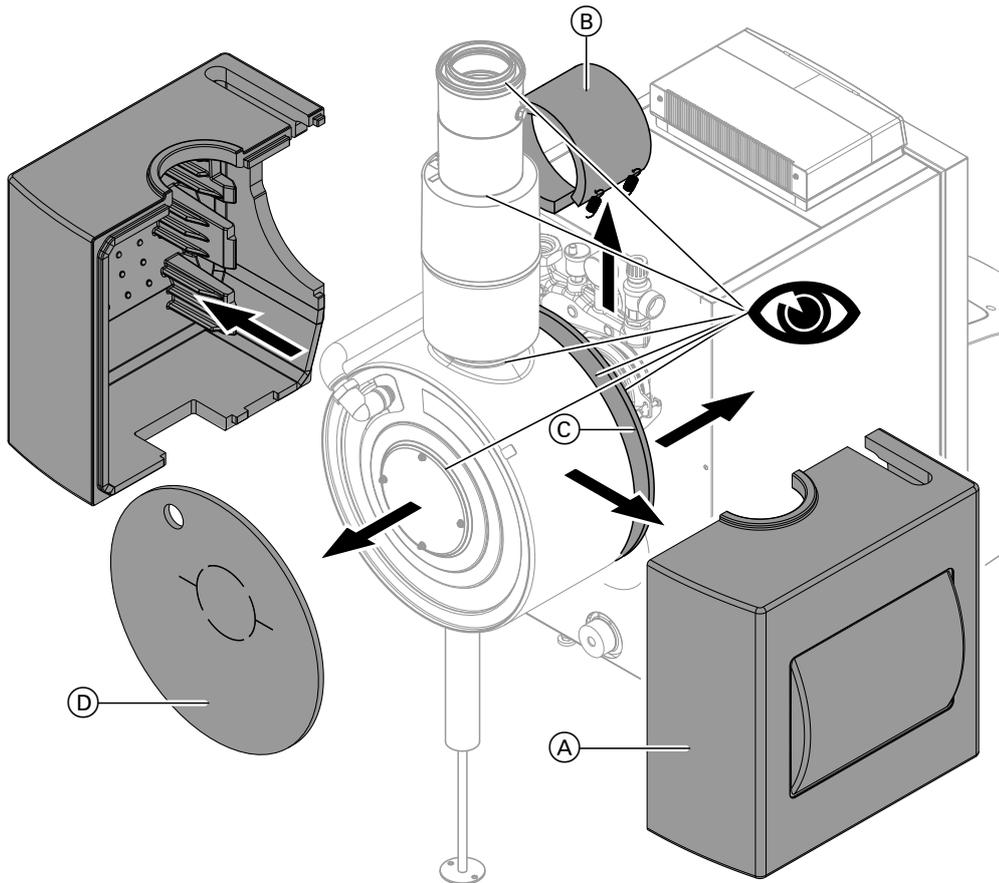


Fig. 8

Note

Traces of condensate indicate a leak.

1. Remove thermal insulation hood (A).
2. Remove thermal insulation strip (B) and pull thermal insulation mat (C) out a little.
3. Remove mat (D).
4. Check the heat exchanger fixings are firmly seated.
5. Check all sealing points on the heat exchanger, boiler flue connection and flue system.



Removing the cover from the heat exchanger

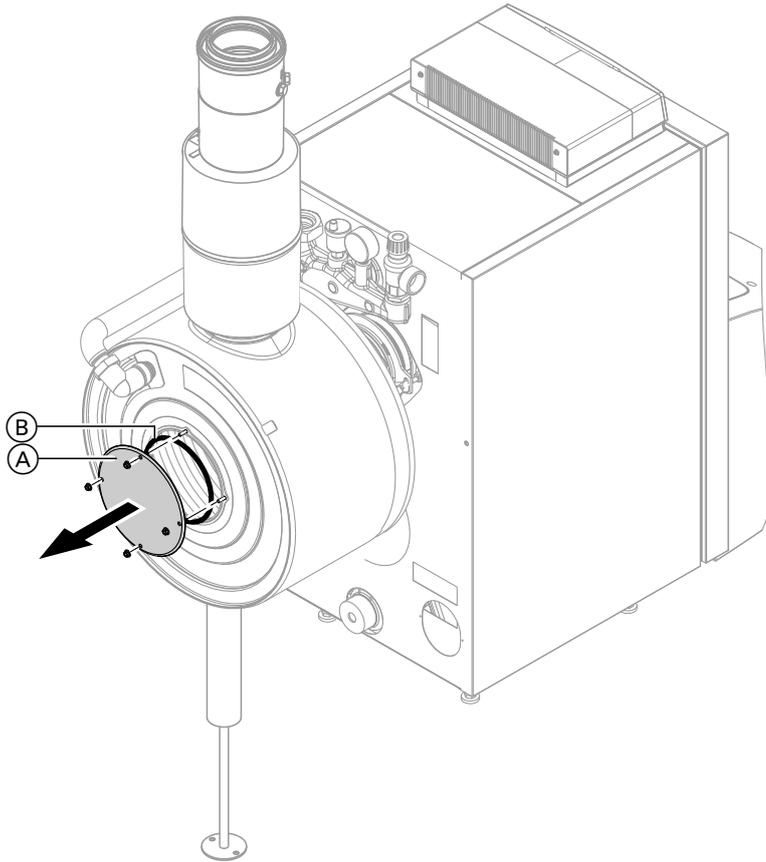


Fig. 9

1. Remove heat exchanger cover (A) by undoing the 4 hexagon nuts.
2. Remove gasket (B) and clean the sealing face.



Cleaning the heat exchanger

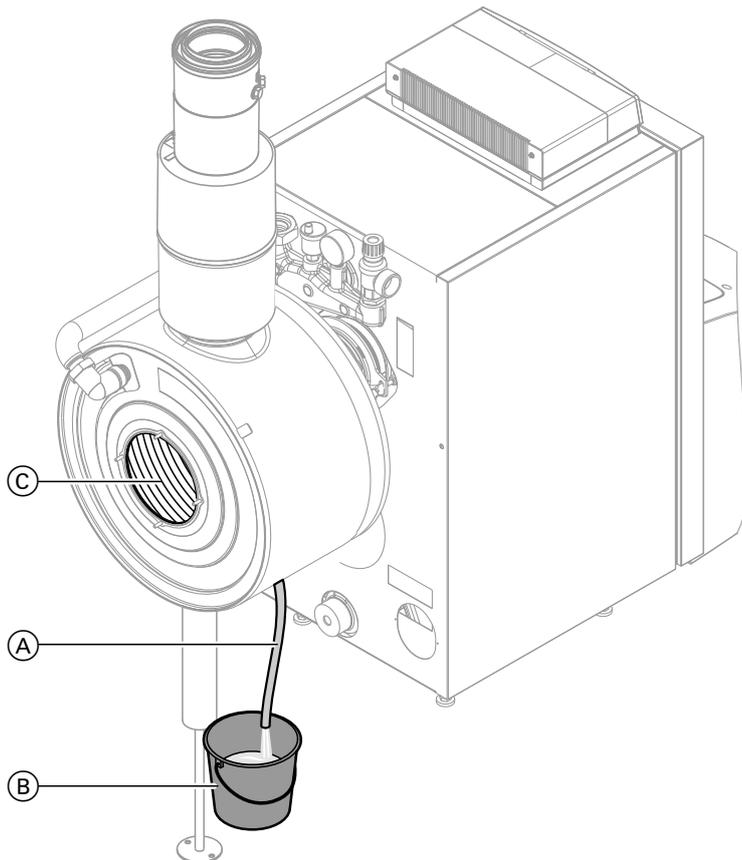


Fig. 10

1. Detach condensate hose (A) from the trap and drain into a suitable container (B).
2. Using a cleaning spatula, loosen heavy deposits on the heat exchanger coils and gaps via cleaning aperture (C) and remove with a vacuum cleaner. Then flush out the heat exchanger with a powerful jet of water.

**Please note**

Prevent stainless steel components that come into contact with hot gas from being scratched or otherwise damaged. Prevent stainless steel components that come into contact with hot gas from contact with pure iron, as corrosion damage can result. Never use a wire brush or sharp objects. If necessary, use plastic brushes or the Viessmann cleaning spatula.

Note

Viessmann cleaning spatula: Part no. 7840112

3. If deposits cannot be removed by flushing with water, we recommend using a smoke resin remover (e.g. as supplied by Sotin or Biocircle). Always observe the instructions provided by the cleaning agent manufacturer. Coat the heat exchanger coil with cleaning agent. Always observe the instructions provided by the cleaning agent manufacturer. Flush thoroughly with water.

When using cleaning agents, please note:

- Combustion residues may create thin, yellow-brown surface stains as well as hard deposits. These may only become visible after the soot deposits have been removed.
- To remove surface discolouration and stubborn deposits, use smoke resin remover.
- Only use solvent-free cleaning agents.

4. Insert new gasket (B, Fig. 9) and fit the cover.

Note

Tighten the hexagon nuts on the cover of cleaning aperture (C) evenly and diagonally.
Torque: 5 Nm

5. Refit the thermal insulation of the heat exchanger in reverse order: See Fig. 8 on page 15.



Commissioning, inspection, maintenance



Cleaning the condensate drain pipe and trap and reconnecting to the drainage system

1. Before installation, check the stench trap and condensate drain for contamination and clean if required.



Danger

Escaping flue gas poses a risk to health. To prevent flue gas from escaping, always connect the condensate drain with a trap.

2. Check that the hoses are routed without kinks and that the condensate can drain freely.

Note

Always route the condensate pipe with a constant fall.

3. Check the neutralising system (accessories).



Neutralising system installation and operating instructions



Filling the trap with water

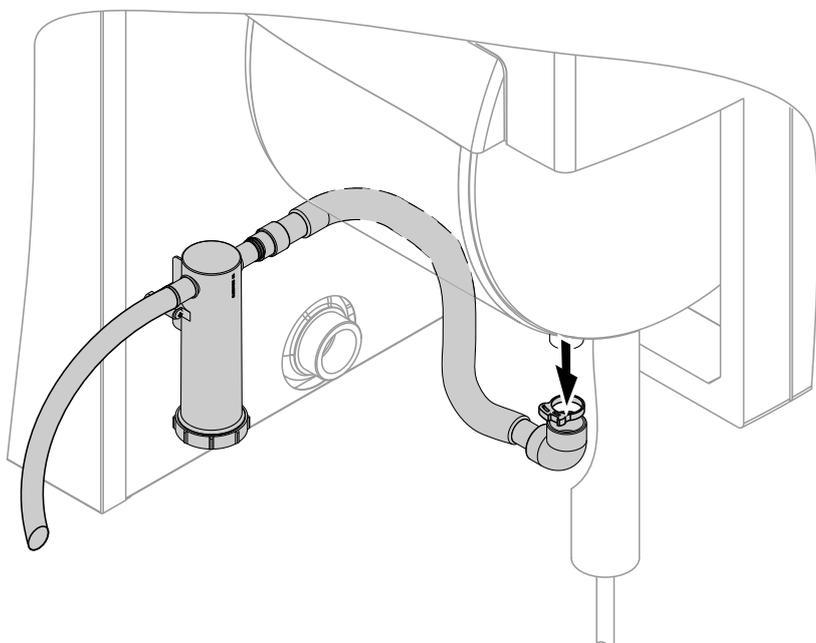


Fig. 11

Remove the supply hose (to the trap) from the boiler condensate drain and fill with a little water.



Checking connections and sensor well on the heating water side for tightness



Checking the function of the safety equipment



Checking the expansion vessel and system pressure

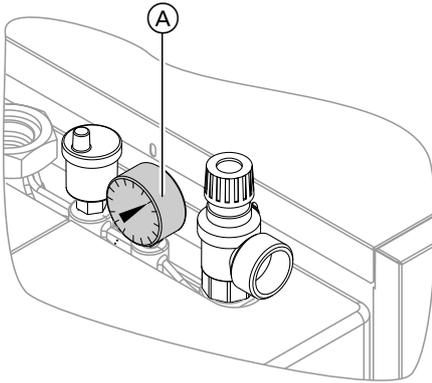


Fig. 12

(A) Pressure gauge

Note

Please observe expansion vessel manufacturer's instructions.

Carry out this test on a cold system.

1. Drain the system until the pressure gauge indicates "0" or close the cap valve on the expansion vessel and reduce the pressure in the expansion vessel.
2. If the pre-charge pressure of the expansion vessel is lower than the static system pressure, top up with nitrogen until the pre-charge pressure is 0.1 to 0.2 bar (10 to 20 kPa) higher.
3. Top up with water until the charge pressure of the cooled system is 0.1 to 0.2 bar (10 to 20 kPa) higher than the pre-charge pressure of the expansion vessel.
Permiss. operating pressure: 3 bar (0.3 MPa)



Checking the thermal insulation for firm seating



Checking the mixer for ease of operation and leaks

1. Remove the motorised lever from the mixer handle and check the mixer for ease of operation.
2. Check the mixer for tightness. Replace the O-rings if the mixer leaks.
3. Click the motorised lever into place.



Adjusting the burner



Burner service instructions



Instructing the system user

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

Commissioning/service reports

Commissioning/service reports

	Commissioning	Maintenance/service	Maintenance/service
Date:			
By:			

	Commissioning	Maintenance/service	Maintenance/service
Date:			
By:			

	Commissioning	Maintenance/service	Maintenance/service
Date:			
By:			

	Commissioning	Maintenance/service	Maintenance/service
Date:			
By:			

	Commissioning	Maintenance/service	Maintenance/service
Date:			
By:			

Specification

Rated heating output				
$T_F/T_R = 50/30 \text{ }^\circ\text{C}$	kW	67.6	85.8	107.3
$T_F/T_R = 80/60 \text{ }^\circ\text{C}$	kW	63	80	100
CE designation		CE-2456 CL102		
Power consumption^{*2} at				
▪ 100 % of rated heating output	W	577	577	577
▪ 30 % of rated heating output	W	274	274	274
Available draught^{*3}				
	Pa	100	100	100
	mbar	1	1	1
Flue gas temperature^{*4}				
▪ At a return temperature of 30 °C	°C	38	38	38
▪ At a return temperature of 60 °C	°C	64	64	64

^{*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.

Shutdown and disposal

Final decommissioning and disposal

Viessmann products can be recycled. Components and substances from the system are not part of ordinary household waste.

For decommissioning the system, 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

EU Declaration of Conformity

Vitorondens 200-T

Applicable for type:
J2RA

We, Viessmann Werke GmbH & Co. KG, D-35107 Allendorf, declare as sole responsible body that the named product complies with the provisions of the following directives and regulations.

92/42/EEC	Efficiency Directive
2014/30/EU	EMC Directive
2014/35/EU	Low Voltage Directive
2006/42/EEC	Machinery Directive
2009/125/EC	Ecodesign Framework Directive
2017/1369/EU	Energy Consumption Labelling
2011/65/EU	RoHS II
811/2013	EU Regulation "Energy Efficiency Label"
813/2013	EU Regulation "Energy Efficiency Requirements"

Applied standards:

EN 267:2009 + A1:2011	EN 55014-2:2015
EN 303-1:2017	EN 60335-1:2012/AC:2014
EN 303-2:2017	EN 60335-2-102:2016
EN 303-4:1999	EN 61000-3-2:2014
EN 303-6:2000	EN 61000-3-3:2013
EN 15035:2006 (for room sealed operation)	EN 62233:2008 + Corr.1:2008-11
EN 55014-1:2017	

In accordance with the listed directives, this product is designated with **CE-2456**.

Allendorf, 1 August 2019

Viessmann Werke GmbH & Co. KG



Authorised signatory Reiner Jansen
Head of Strategic Quality Management

Using the serial number, the full Declaration of Conformity can be found on the following website:
www.viessmann.co.uk/conformity

UK: 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.

Manufacturer's declaration

This product meets the requirements of the Efficiency Directive (92/42/EEC) for **condensing boilers**.

Certificates

Manufacturer's certificate according to the 1st BImSchV [Germany]

We, Viessmann Werke GmbH & Co. KG, D-35107 Allendorf, confirm that the following product meets the NO_x limits specified by the first BImSchV paragraph 6 (1) [Germany]:

Vitorondens 200-T oil Unit condensing boiler

Allendorf, 8 January 2018

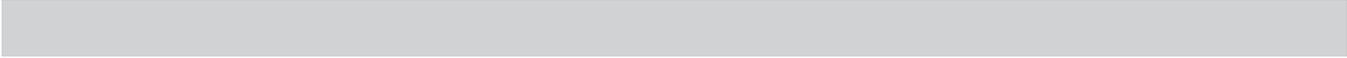
Viessmann Werke GmbH & Co. KG

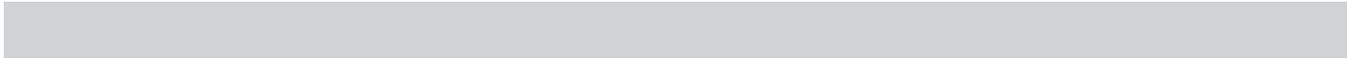
A handwritten signature in black ink, appearing to read 'R. Jansen', with a long horizontal stroke extending to the right.

Authorised signatory Reiner Jansen
Head of Strategic Quality Management

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5831441 Subject to technical modifications.