

Installation instructions for contractors

VIESSMANN

Vitomax 200-HW

Type M74A

Oil/gas high pressure hot water boiler

Rated heating output 8.0 to 16.5 MW



VITOMAX 200-HW



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 designed for qualified contractors.

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

Regulations

Observe the following when working on this system

- All legal instructions regarding the prevention of accidents
- All legal instructions regarding environmental protection,
- Health and Safety at Work Act (BetSichV) [Germany]

- The Code of Practice of relevant trade associations
- Directive 97/23/EC, as well as the relevant safety regulations of the following countries
 - Ⓓ DVGW, TRGI, TRF and VDE, TRD
 - Ⓐ KG, ABV, LRG-K, LRV-K, DKBG
 - ⒸⒽ SEV, SUVA, SVGW, SVTI, SWKI, VKF and EKAS guideline 1942: LPG, part 2

Working on the system

- Isolate the system from the power supply and check that it is no longer 'live', e.g. by removing the separate fuse or by means of a main isolator.
- Safeguard the system against unauthorised reconnection.
- When using gas as fuel, also close the main gas shut-off valve and safeguard against unauthorised reopening.

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Handling the boiler

Note

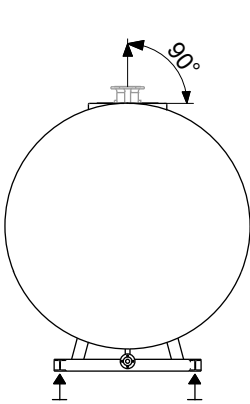
Observe all legal regulations regarding the prevention of accidents.

Only use the marked fixing points.

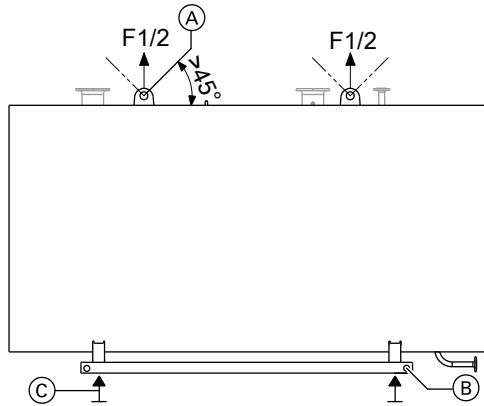
For the boiler weight, see table on page 5.

1. Lifting the boiler

Use lifting eyes (A) (\varnothing 80 mm) or lifting points (C) on the boiler support.

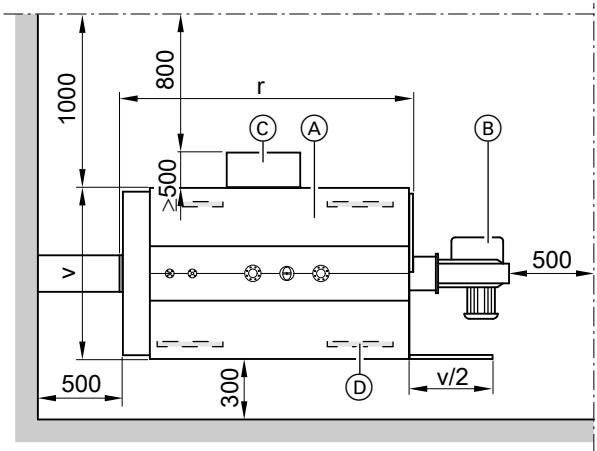


- 2. Moving the boiler**
For this, fit steel rollers underneath base rail (C).
- 3. Attach pulling equipment to the tie-down points (B) (\varnothing 80 mm).**



Schematic diagram

Clearance dimensions



Illustrative example

- (A) Boiler
 (B) Burner
 (C) Control system
 (D) Anti-vibration boiler supports

Boiler size*1		1	2	3	4	5
r	m	6.52	7.06	7.60	8.12	8.66
v	m	2.67	2.84	2.99	3.20	3.48
Max. boiler weight for permiss. operating pressure 16 bar, excl. water content	t	20.5	26.0	30.2	38.4	46.4

Handling and installing the boiler

Level the boiler horizontally.

Note

We recommend installing the boiler on anti-vibration supports.

Connecting on the water side



Danger

Opening the boiler connections whilst the boiler is under pressure can lead to a high risk of severe personal injury.

Only open the connections on the water side after the boiler has been depressurised.

Note

The boiler is only suitable for fully pumped hot water heating systems. Install all pipe connections free of load and torque stresses.

1. Before connecting, thoroughly flush the system (especially when connecting the boiler to an existing system).

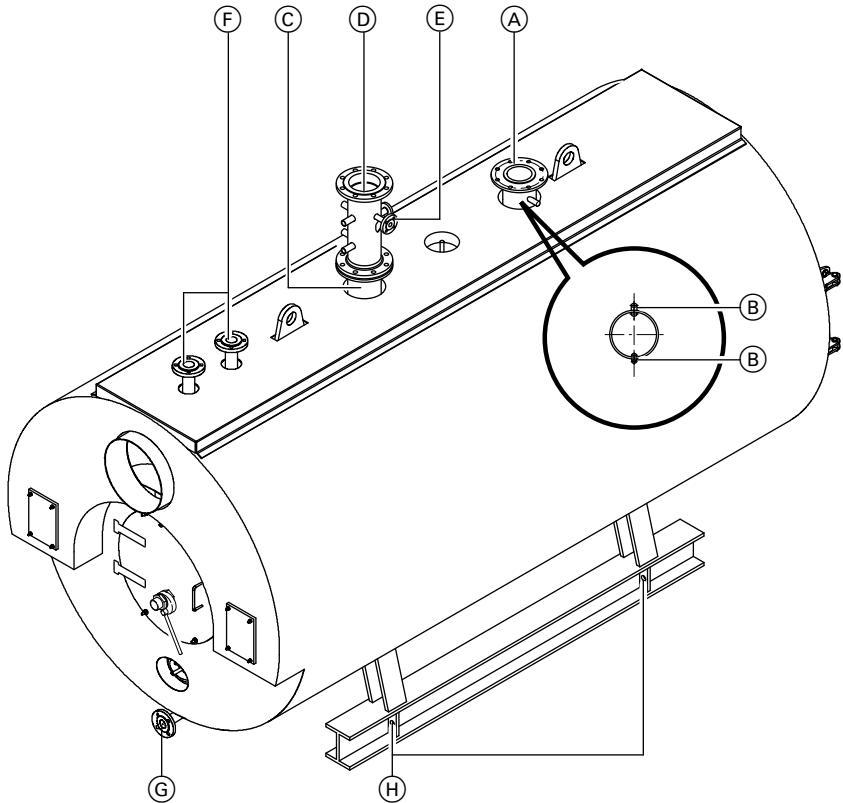
2. Make all necessary connections.
3. Remove and properly dispose of shipping packaging (where provided).



Please note

Unsuitable water quality can damage the boiler body. Only fill the boiler with water that complies with the "Water quality requirements" (see operating and service instructions).

Connecting on the water side (cont.)



Boiler size*1		1	2	3	4	5		
(A)	Boiler return connector							
(C)	Boiler flow connector							
	Temperature spread	40 K	PN 16 DN	200	200	250	250	250
	for permitt. operating	30 K	PN 16 DN	200	250	250	300	300
	pressure 6 and 10 bar	20 K	PN 16 DN	250	300	350	350	400
	Temperature spread	40 K	PN 25 DN	200	200	250	250	250
	for permitt. operating	30 K	PN 25 DN	200	250	250	300	300
	pressure 16 bar	20 K	PN 25 DN	250	300	350	350	400
(B)	Female connections for additional control equipment	R ½						

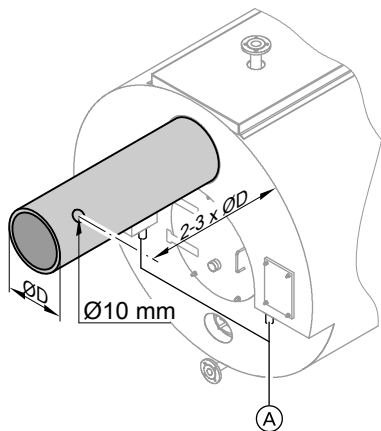
*1 The last digit of the part number indicates the boiler size.



Connecting on the water side (cont.)

Boiler size*1		1	2	3	4	5		
Ⓓ	Intermediate flow piece	See page 10						
Ⓔ	Fitting assembly connector (pressure regulator, pressure limiter and pressure gauge)	See page 12						
Ⓕ	Safety valve connector							
	for permiss. operating pressure	6 bar	PN 40 DN	100	100	100	125	150
		10 bar	PN 40 DN	65*2	80	80	100	100
		16 bar	PN 40 DN	65*2	65*2	65*2	80	80
Ⓖ	Drain connector							
	for permiss. operating pressure 6, 10 and 16 bar		PN 40 DN				40	
Ⓕ	Equipotential bonding hole		∅ mm				13	

Connecting on the flue gas side



(A) Condensate drain (nipple R 1½)

*1 The last digit of the part number indicates the boiler size.

Connecting on the flue gas side (cont.)

Boiler size* ¹		1	2	3	4	5
Flue outlet						
– External	∅ mm	710	810	860	960	1010
– Internal	∅ mm	700	800	850	950	1000

1. Connect the flue outlet with the shortest possible run to the flue system using slightly inclined flue pipes. Avoid sharp bends.

Note

Connect flue pipes to the boiler free of load or torque stresses.

2. Provide a test port (approx. 10 mm ∅) at a distance of two to three times the diameter of the flue pipe downstream of the flue outlet in the on-site flue pipe.
3. Seal flue pipe.

Note

Flue pipe joints must be gas-tight.

4. Insulate the flue pipe.

5. Prevent the return of condensate created inside the flue system by suitable on-site measures (condensate trap).



Danger

Risk of poisoning through escaping flue gas.

The condensate drain connectors (A) (see page 8) must be closed when not in use.

Fitting the test and control equipment

Fit test and control equipment that is pressure tested to the same level as the operating pressure of the boiler and that is suitable for the intended operating mode (operation with or without constant supervision). Agree details with the responsible approval body, which should also approve them.

Note

Carry out the installation in accordance with the instructions supplied with the equipment.

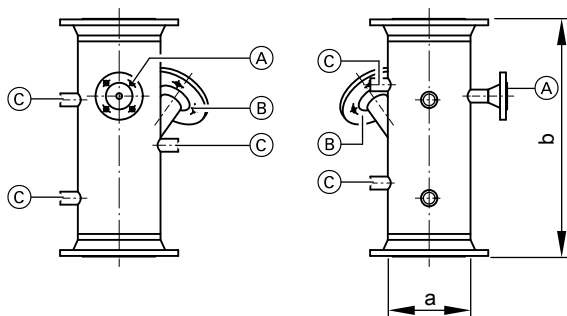
For the electrical connection, see the connection and wiring diagrams provided.

*1 The last digit of the part number indicates the boiler size.

*2 4-hole version.

Fitting the test and control equipment (cont.)

Connecting the intermediate flow piece



- (A) Test nipple DN 20 PN 40 for fitting assembly with pressure limiting equipment (pressure regulator, pressure limiter and pressure gauge)
- (B) Connector DN 50 PN 40 for electrode water level limiter
- (C) 5 female connections $R\frac{1}{2}$ for thermometer, sampling valve and additional control equipment

a	DN	125	150	200	250	300	350	400
b	mm	500	500	500	550	550	600	600

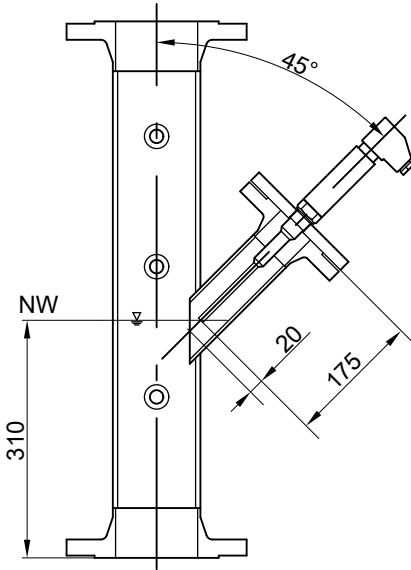
Connect the intermediate flow piece at the boiler flow connector.

Seal all connectors that are not used after fitting the test and control equipment.

Note

2 additional female connections $R\frac{1}{2}$ are located at the boiler return connector for test and control equipment.

Fitting the electrode water level limiter



1. Insert the electrode into the threaded flange.
2. Trim the electrode (175 mm).
3. Fit the threaded flange with electrode into the test nipple.



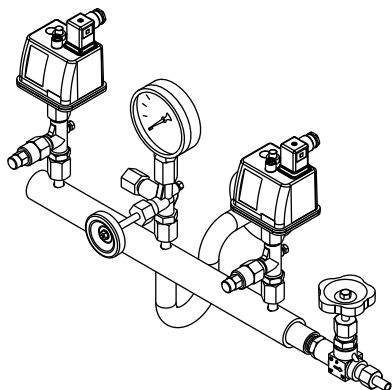
Installation instructions for the electrodes

Note

The electrode supplied by the boiler manufacturer is already trimmed to size.

Fitting the test and control equipment (cont.)

Fitting the pressure limiting equipment



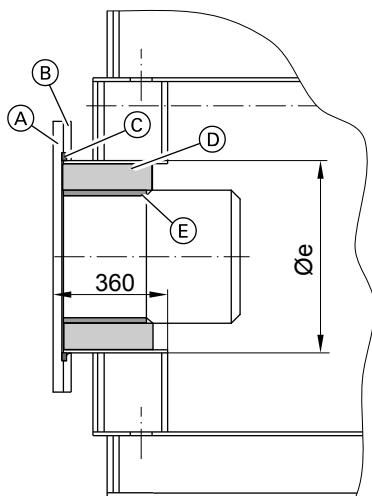
Install the fitting assembly with the pressure limiting equipment at the test nipple of the intermediate flow piece. Subject to system design, several pieces of pressure limiting equipment may be required. Check with the approval body.

Installing the burner



Separate burner documentation

1. Fit burner plate (A) for connecting the burner with seal ring (C) to boiler flange (B).



Note

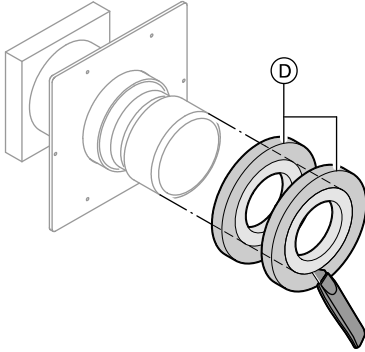
If the burner plate (delivered separately) was not prepared at the factory, drill the burner fixing holes into the burner plate before mounting it on the boiler and cut out the aperture for the flame head.

For max. flame head diameter, see table on page 13.

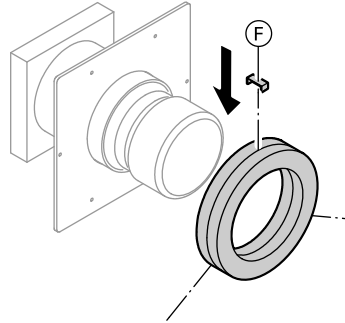
2. Secure the burner to the burner plate.

Installing the burner (cont.)

3. Trim insulation rings (D) (see flame tube pack) in accordance with the flame head diameter.



4. Fit clips (F) (3 pce in pack) and slide insulation rings over the flame head.

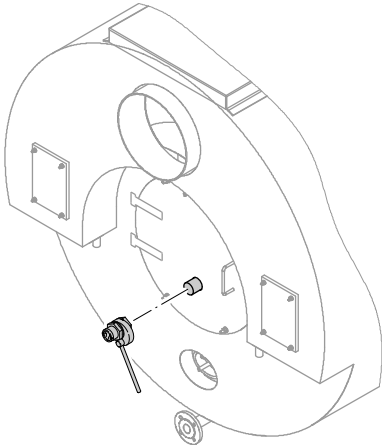


5. Seal annular gap (if present) between flame head and insulation rings with heat-resistant insulation material (E) (in pack).
6. Run the electrical cable/lead and the oil line etc. in a loop.

Burner connection dimensions

Boiler size* ¹		1	2	3	4	5
Max. flame head diameter, dimension e	∅ mm	715	715	815	915	1015
Minimum flame head length	mm	360				

Installing the sight glass



Fit lockable sight glass to cleaning door (back of boiler).

Commissioning



Boiler operating and service instructions and separate burner documentation



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