

## Datasheet

Part no. and prices: See pricelist



### VITORONDENS 200-T Type BR2A

20.2 to 53.7 kW

#### Cast iron oil condensing boiler

With Vitoflame 300 blue flame oil burner (20.2 to 53.7 kW). Suitable for **open flue** and **room sealed** operation and for operation with EL Standard fuel oil DIN 51603-1, **low sulphur** EL fuel oil DIN 51603-1 and fuel oil DIN 51603-6 EL A Bio 10: **Low sulphur** EL fuel oil with blends of up to **10 %** biocomponents (FAME).

### VITORONDENS 200-T Type J2RA

67.6 to 107.3 kW

#### Cast iron oil condensing boiler

With Vitoflame 300 blue flame oil burner (67.6 to 107.3 kW). Suitable for **open flue** operation and for operation with EL Standard fuel oil DIN 51603-1, **low sulphur** EL fuel oil DIN 51603-1 and fuel oil DIN 51603-6 EL A Bio 10: **Low sulphur** EL fuel oil with blends of up to **10 %** biocomponents (FAME).

## Vitorondens 200-T

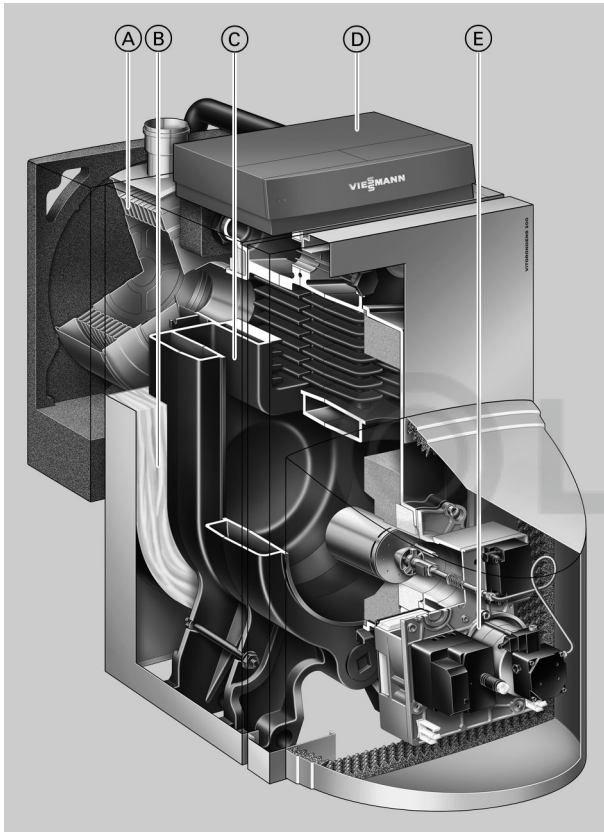
The Vitorondens 200-T is an advanced cast iron oil condensing boiler at an attractive price.

The sectional cast iron Eutectoplex heating surface guarantees high operational reliability. By ensuring an even heat flux, stress fractures are virtually eliminated. The wide water galleries prevent sedimentation and boiling noises.

Flexible gaskets permanently seal the individual sections on the hot gas side. The horizontal layout of the hot gas flues also permits thorough and easy cleaning of the boiler.

The corrosion-resistant stainless steel Inox-Radial heat exchanger downstream ensures an efficient heat recovery, with residue-free condensation of the flue gases.

The Unit blue flame oil burner stands for particularly clean, environmentally responsible and efficient combustion.



- Ⓐ Inox-Radial heat exchanger
- Ⓑ Highly effective thermal insulation
- Ⓒ Eutectoplex heating surface made of homogeneous special cast iron
- Ⓓ Vitotronic digital boiler control unit
- Ⓔ Vitoflame 300 Unit oil burner

- Standard seasonal efficiency [to DIN] up to 97 % ( $H_s$ ) [gross cv] / 103 % ( $H_i$ ) [net cv].
- Eutectoplex heating surface for high operational reliability and a long service life.
- Cast sections with flexible gaskets for durable sealing on the hot gas side.
- Corrosion-resistant stainless steel Inox-Radial heat exchanger.
- JetFlow system for optimum heating water distribution.

- Easy to use Vitotronic control unit with plain text and graphic display.
- All commercially available EL fuel oils can be used. Also for fuel oil DIN 51603-6-EL A Bio 10: Low sulphur EL fuel oil with blends of up to 10 % bio-components (FAME).
- Quiet operation thanks to externally fitted silencer.
- Horizontal hot gas flue layout enables simple and affordable maintenance.

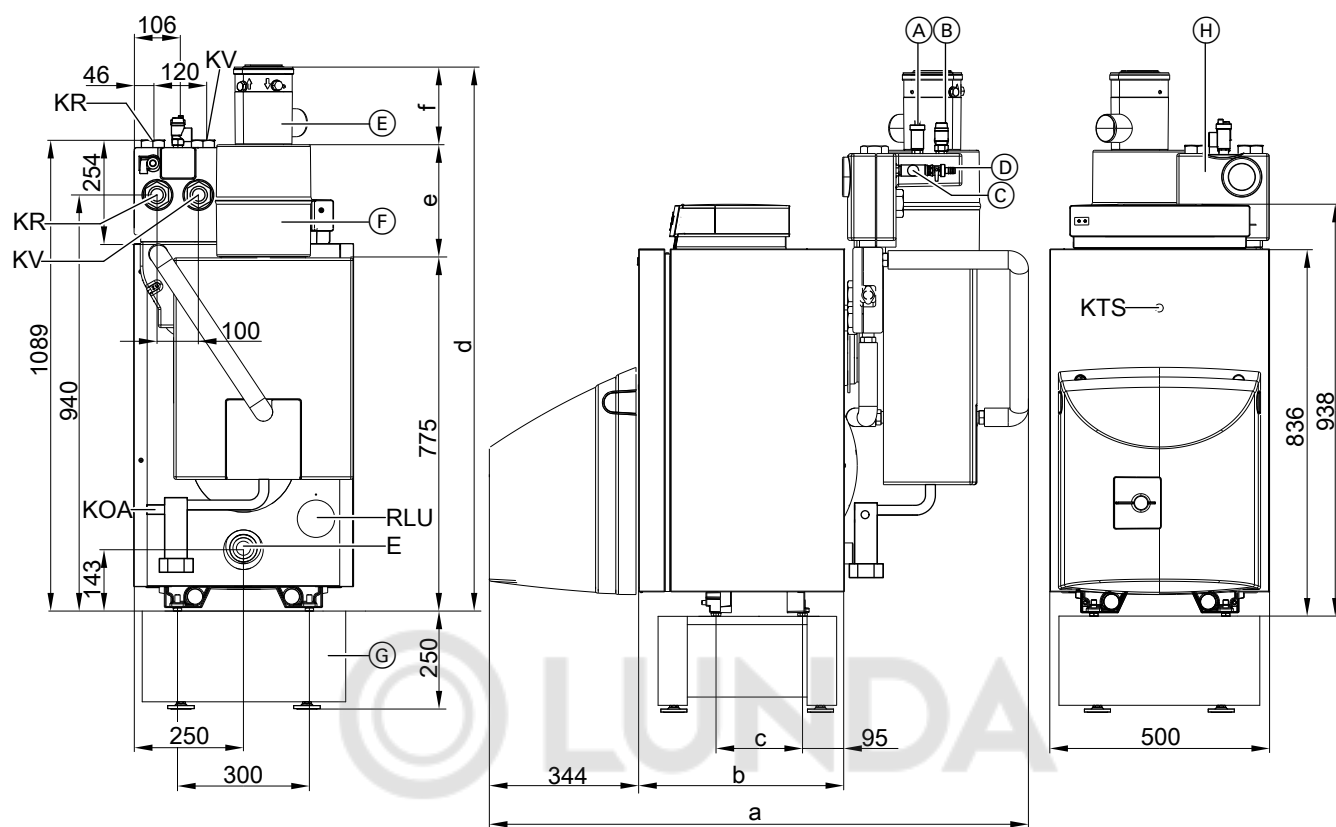
## Specification – type BR2A, 20.2 to 53.7 kW

<b>Rated heating output</b>							
$T_F/T_R = 50/30\text{ °C}$	kW	<b>20.2</b>	<b>24.6</b>	<b>28.6</b>	<b>35.4</b>	<b>42.8</b>	<b>53.7</b>
$T_F/T_R = 80/60\text{ °C}$	kW	<b>18.8</b>	<b>22.9</b>	<b>27</b>	<b>33</b>	<b>40</b>	<b>50</b>
<b>Rated heat input</b>	kW	19.6	23.9	28.1	34.4	41.6	52.1
<b>Product ID</b>		CE-2456CL102.3					
<b>Transport dimensions</b> (incl. thermal insulation)							
Length	mm	515	515	650	650	810	810
Width	mm	500	500	500	500	500	500
Height	mm	940	940	940	940	940	940
<b>Total dimensions</b>							
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
Height of DHW cylinder DHW cylinder							
– Capacity 130 to 200 litres	mm	654	654	654	654	654	654
– Capacity 350 litres	mm	–	–	786	786	786	786
<b>Weight boiler body</b>	kg	89	89	120	120	152	152
<b>Total weight</b>	kg	147	147	184	184	224	224
Boiler incl. thermal insulation, heat exchanger, burner and boiler control unit							
<b>Capacity boiler</b>	litres	27	27	35	35	44	44
<b>Capacity boiler water</b>	litres	32	32	40	40	52	52
<b>Permiss. operating pressure</b>							
	bar	3	3	3	3	3	3
	MPa	0.3	0.3	0.3	0.3	0.3	0.3
<b>Boiler connections</b>							
Boiler flow and return	G	1½	1½	1½	1½	1½	1½
Safety connection (Safety valve at the safety equipment block)	G	1½	1½	1½	1½	1½	1½
Drain	G	1½	1½	1½	1½	1½	1½
Condensate drain	∅ mm	20	20	20	20	20	20
<b>Flue gas parameters*1</b>							
Temperature at							
– 30 °C return temperature	°C	32	34	37	39	36	40
– 60 °C return temperature	°C	62	63	65	67	64	67
Mass flow rate for EL fuel oil	kg/h	31	38	46	56	68	85
<b>Standard seasonal efficiency [to DIN]</b> at heating system temp. 50/30 °C	%	97 (H <sub>s</sub> ) [gross cv]					
<b>Maximum condensate volume</b> to DWA-A 251	l/h	1.9	2.3	2.7	3.4	4.1	5.1
<b>Flue gas connection</b>	∅ mm	80	80	80	80	110	110
<b>Ventilation air connection</b>	∅ mm	80	80	80	80	80	80
<b>Boiler gas capacity</b>	litres	27	27	39	39	51	51
<b>Available draught*2</b>							
	Pa	100	100	100	100	100	100
	mbar	1.0	1.0	1.0	1.0	1.0	1.0
<b>Sound power level</b> (to EN ISO 9614-2)							
– In room sealed operation	dB(A)	60					
– In open flue operation	dB(A)	63					
<b>Energy efficiency class</b>		A	A	A	A	A	A

\*1 Values for calculating the size of the flue system to EN 13384 relative to 13 % CO<sub>2</sub> for EL fuel oil.  
Flue gas temperatures as average gross values to EN 304 at 20 °C combustion air temperature.

\*2 Observe when sizing the chimney.

## Specification – type BR2A, 20.2 to 53.7 kW (cont.)



- |  |  |
|--|--|
| (A) Air vent valve                         | (H) Safety equipment block (accessories)                 |
| (B) Safety valve                           | E Drain  |
| (C) Connection, diaphragm expansion vessel | KTS Boiler water temperature sensor                      |
| (D) Fill valve                             | KV Boiler flow   |
| (E) Boiler flue connection                 | KR Boiler return   |
| (F) Silencer                               | RLU Ventilation air connection for room sealed operation |
| (G) Plinth                                 | KOA Condensate drain                                     |

### Note

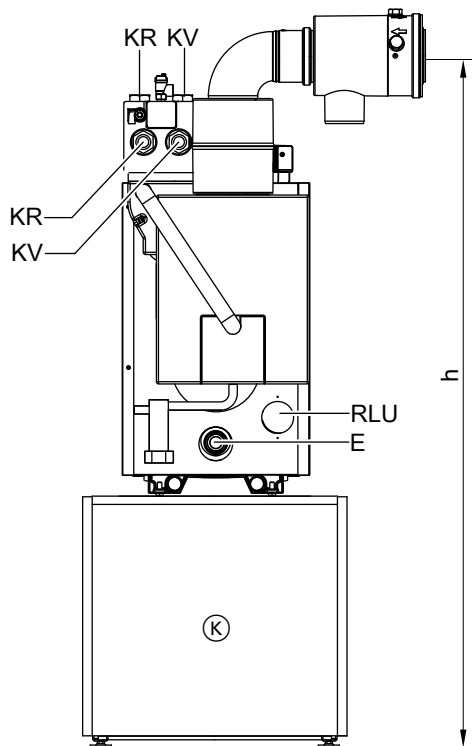
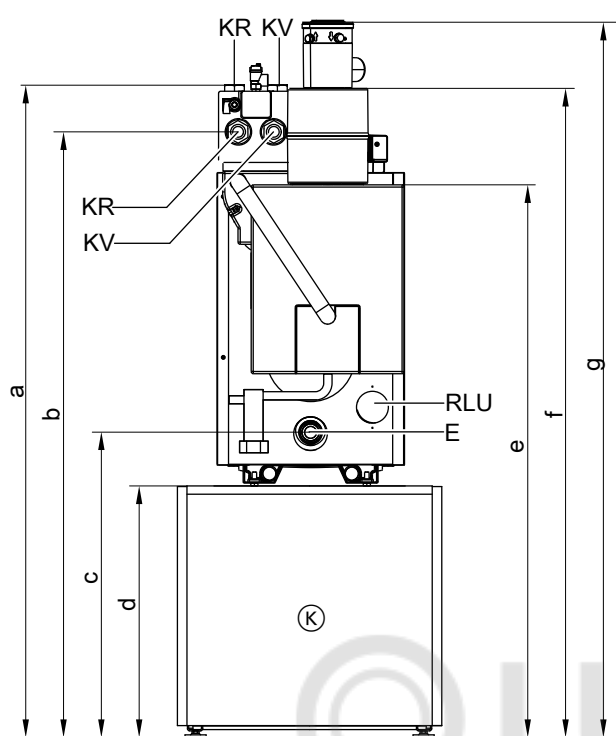
Minimum total height incl. plinth when using a balanced flue bend (87°) up to the centre of the bend with

- System size  $\varnothing$  80 mm: 1545 mm
- System size  $\varnothing$  100 mm (42.8 and 53.7 kW): 1777 mm

### Table of dimensions

Rated heating output	kW	20.2	24.6	28.6	35.4	42.8	53.7
a	mm	1226	1226	1362	1362	1663	1663
b	mm	469	469	606	606	778	778
c	mm	200	200	334	334	468	468
d	mm	1210	1210	1210	1210	1410	1410
e	mm	255	255	255	255	357	357
f	mm	176	176	176	176	278	278

Specification – type BR2A, 20.2 to 53.7 kW (cont.)



- Ⓚ Vitocell 100-H or 300-H  
(For specification see chapter "DHW cylinder")
- E Drain outlet and diaphragm expansion vessel
- KR Boiler return

- KV Boiler flow
- RLU Ventilation air connection for room sealed operation

## Specification – type BR2A, 20.2 to 53.7 kW (cont.)

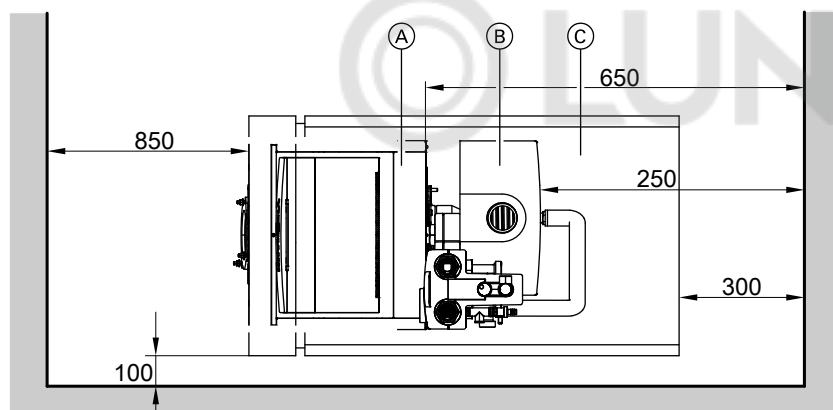
Table of dimensions

Rated heating output	kW	20.2	24.6	28.6 and 35.4		42.8 and 53.7	
With DHW cylinder below the boiler	litres	130 to 200	130 to 200	130 to 200	350	160 and 200	350
a	mm	1720	1720	1720	1852	1720	1852
b	mm	1589	1589	1589	1721	1589	1721
c	mm	792	792	792	924	792	924
d	mm	654	654	654	786	654	786
e	mm	1424	1424	1424	1556	1424	1556
f	mm	1680	1680	1680	1812	1781	1913
g	mm	1857	1857	1857	1989	2059	2191
g (when using a balanced flue bend (87°) up to the centre of the bend)	mm	1952	1952	1952	2084	2180	2312
h (with horizontal flue gas connection)	mm	1772	1772	1772	1904	—	—

### Information on the Vitorondens 200-T up to 35.4 kW when using a DHW cylinder installed below the boiler:

To reduce the installed height, the boiler can be ordered with accessories for horizontal room sealed operation (comprising an 87° flue bend and a suitable boiler flue connection).

### Minimum clearances



- (A) Boiler
- (B) Heat exchanger
- (C) DHW cylinder

## Specification – type J2RA, 67.6 to 107.3 kW

<b>Rated heating output</b>				
$T_F/T_R = 50/30\text{ °C}$	<b>kW</b>	<b>67.6</b>	<b>85.8</b>	<b>107.3</b>
$T_F/T_R = 80/60\text{ °C}$	<b>kW</b>	<b>63</b>	<b>80</b>	<b>100</b>
<b>Rated heat input</b>	<b>kW</b>	65.6	83.3	104.2
<b>Product ID</b>		CE-0035CL102		
<b>Transport dimensions</b>				
Length	mm	694	694	694
Width	mm	480	480	480
Height	mm	935	935	935
<b>Total dimensions</b>				
Total length (incl. heat exchanger and thermal insulation)	mm	1704	1704	1704
Total width	mm	600	600	600
Total height	mm	1149	1149	1149
Plinth height	mm	250	250	250
<b>Weight boiler body</b>	kg	237	237	237
<b>Total weight</b>	kg	348	348	348
Boiler incl. thermal insulation, heat exchanger, burner and boiler control unit				
<b>Capacity boiler</b>	litres	63	63	63
<b>Capacity boiler water</b>	litres	76	76	76
<b>Permiss. operating pressure</b>	bar	3	3	3
	MPa	0.3	0.3	0.3
<b>Boiler connections</b>				
Boiler flow and return	G	2	2	2
Safety connection (Safety valve at the safety equipment block)	G	1½	1½	1½
Drain	G	1½	1½	1½
Condensate drain	Ø mm	20	20	20
<b>Flue gas parameters*<sup>3</sup></b>				
Temperature at				
– 30 °C return temperature	°C	38	38	38
– 60 °C return temperature	°C	59	58	61
Mass flow rate for EL fuel oil	kg/h	107	136	170
<b>Standard seasonal efficiency [to DIN]</b> at heating system temp. 50/30 °C	%	97 (H <sub>s</sub> ) [gross cv] / 103 (H <sub>i</sub> ) [net cv]		
<b>Maximum condensate volume</b> to DWA-A 251	l/h	6.4	8.2	10.2
<b>Flue gas connection</b>	Ø mm	100	100	100
<b>Boiler gas capacity</b>	litres	82	82	82
<b>Available draught*<sup>4</sup></b>	Pa	100	100	100
	mbar	1.0	1.0	1.0
<b>Sound power level</b> (to EN ISO 9614-2)	dB(A)	70	72	80
<b>Energy efficiency class</b>		A	A	A

### Note

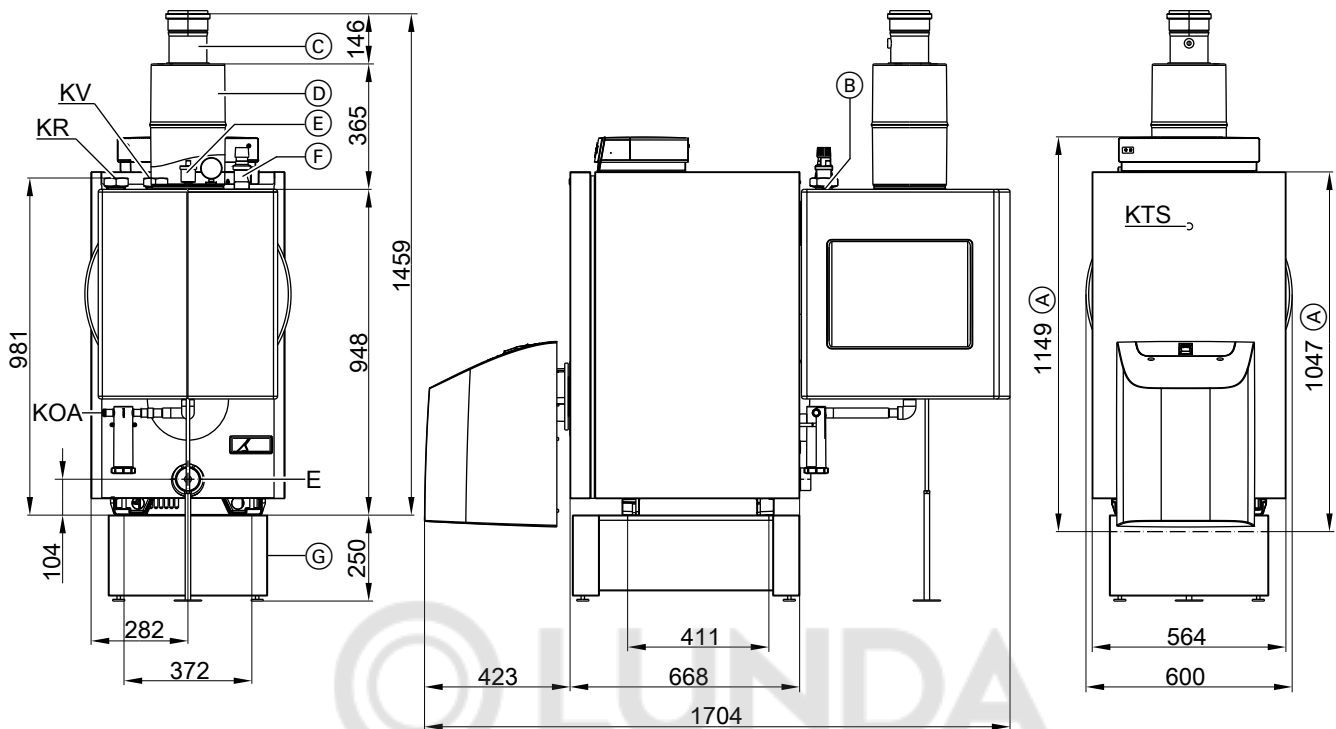
Vitorondens 200-T, type J2RA, should be provided with sound attenuation if sited near rooms that are sensitive to noise. A sound insulation kit for open flue operation (see page) can be used, which reduces noise emissions by around 6 dB(A).

\*<sup>3</sup> Values for calculating the size of the flue system to EN 13384 relative to 13 % CO<sub>2</sub> for EL fuel oil.

Flue gas temperatures as average gross values to EN 304 at 20 °C combustion air temperature.

\*<sup>4</sup> Observe when sizing the chimney.

## Specification – type J2RA, 67.6 to 107.3 kW (cont.)

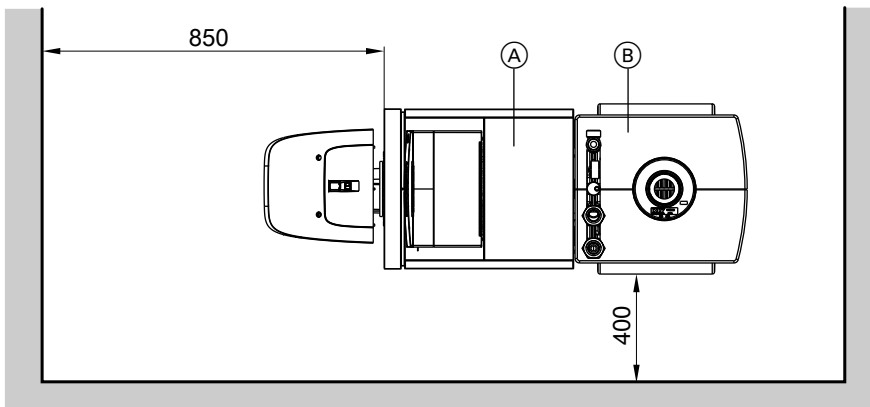


- |   |                                     |
|---|-------------------------------------|
| (A) Dimension incl. adjustable feet (when installing without plinth)    | (F) Safety valve                    |
| (B) Boiler flow/return distributor with integral safety equipment block | (G) Plinth                          |
| (C) Boiler flue connection  | E Drain                             |
| (D) Silencer  | KTS Boiler water temperature sensor |
| (E) Air vent valve  | KV Boiler flow                      |
|   | KR Boiler return                    |
|   | KOA Condensate drain                |

### Note

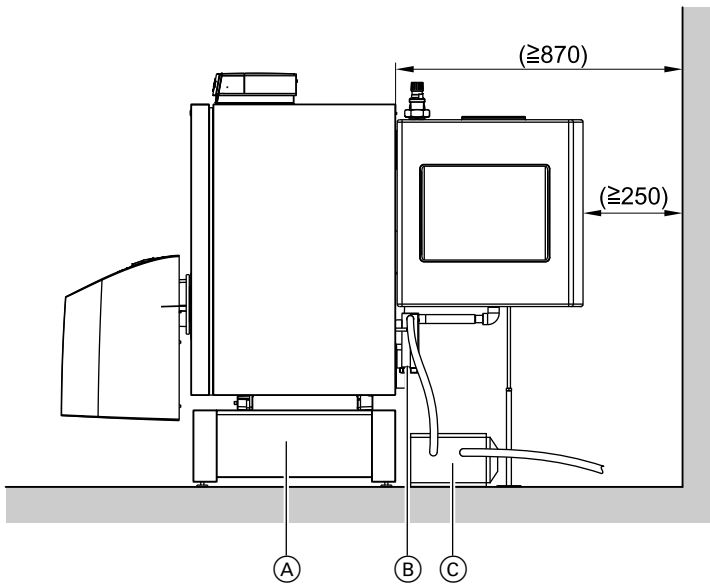
Due to the design, the burner silencer hood protrudes beyond the front of the boiler. With the Vitorondens 67.6 to 107 kW, we recommend ordering a boiler plinth separately. If a boiler plinth is not ordered, the boiler must be sited on a suitable base.

### Minimum clearances



- |                    |
|--------------------|
| (A) Boiler         |
| (B) Heat exchanger |

Specification – type J2RA, 67.6 to 107.3 kW (cont.)

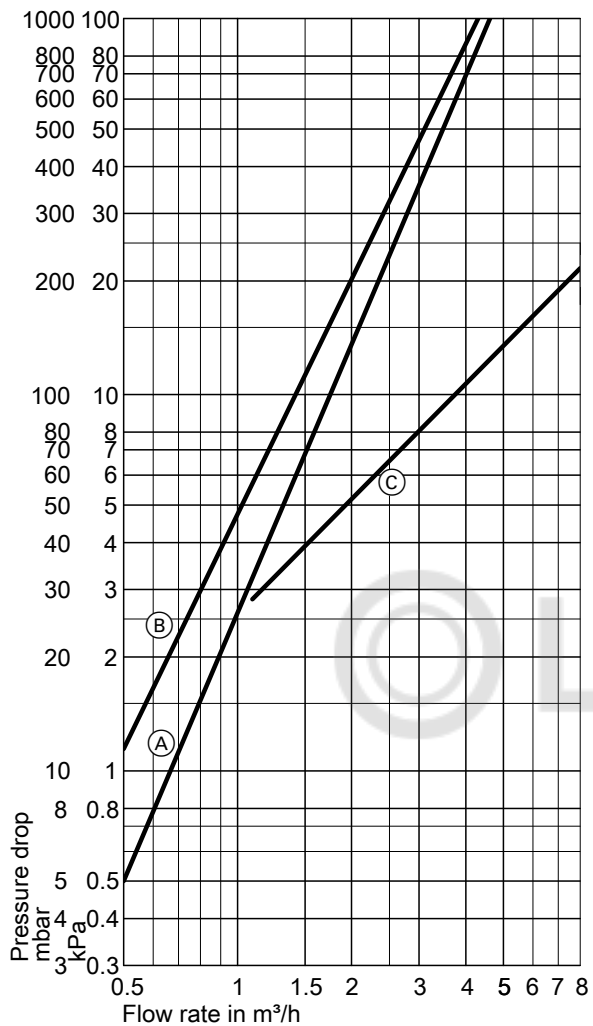


- Ⓐ Plinth (accessories)
- Ⓑ Trap
- Ⓒ Neutralising system (accessories)



## Specification

### Pressure drop on the heating water side



- Ⓐ For 20.2 to 35.4 kW
- Ⓑ For 42.8 and 53.7 kW
- Ⓒ For 63.7 to 107.3 kW

The Vitorondens 200-T is only suitable for fully pumped hot water heating systems.

Subject to technical modifications.

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