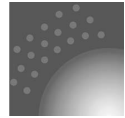


Datasheet
Prices on request



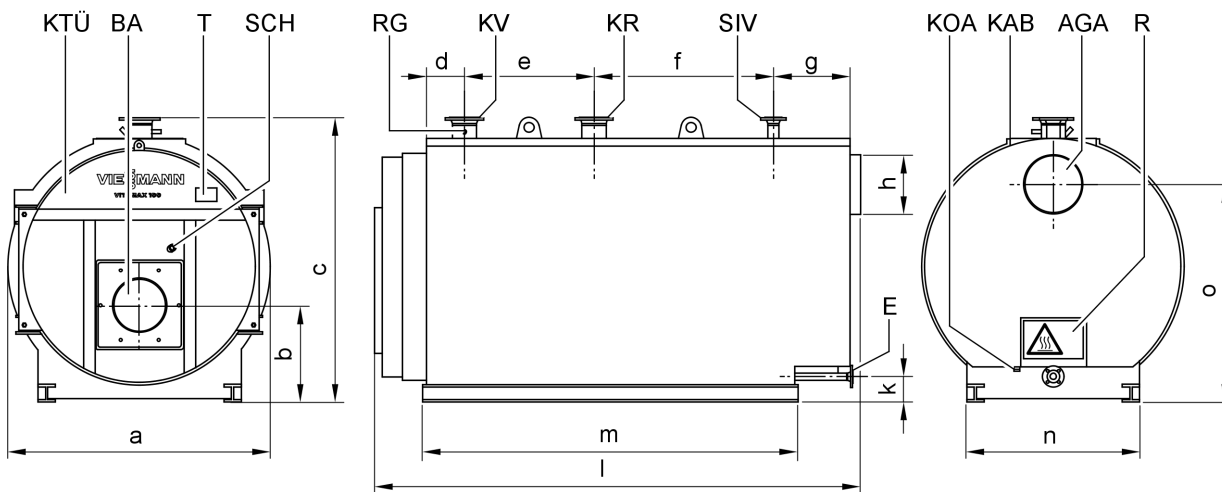
VITOMAX 100-LW Type M148

Oil/gas fired boiler
Permissible operating pressure 6 and 10 bar

Specification

Specification

Boiler size			6	7	8	9	A	B	
Rated output	MW		2.3	2.9	3.5	4.2	5.0	6.0	
CE designation			in accordance with the Gas Equipment Directive						
Permissible flow temperature* ¹ (= safety temperature)									
for permiss. operating pressure	6 bar	°C				110			
	10 bar	°C				110			
Shipping dimensions									
Total length	m		3.4	3.6	3.9	4.4	4.5	4.9	
Total width	m		1.9	2.0	2.1	2.3	2.4	2.5	
Total height	m		2.1	2.2	2.3	2.4	2.5	2.6	
Total weight*²									
Boiler with thermal insulation									
for permiss. operating pressure	6 bar	t	3.7	4.3	5.3	6.4	7.3	8.6	
	10 bar	t	4.4	5.3	6.2	7.8	8.9	10.4	
Content boiler water	m ³		2.3	2.9	3.4	4.5	4.9	5.6	
Boiler connections									
Boiler flow and return at rated output and temperature spread	20 K	PN 16 DN	150		200		250		
Safety valve connector									
for permiss. operating pressure	6 bar	PN 16 DN	65	65	80	80	100	100	
	10 bar	PN 16 DN	50	50	65	65	65	80	



Watch out! Hot surfaces.

AGA Flue gas connection
 BA Burner connection
 E Connector DN 40 PN 16 for drain
 KAB Boiler cover
 KOA Female connection R 1¼" for the condensate drain
 KR Boiler return connector
 KTÜ Boiler door

KV Boiler flow connector
 R Cleaning aperture
 RG 2 fem. connections R ½" for additional control equipment
 SCH Inspection aperture
 SIV Safety valve connector
 T Type plate

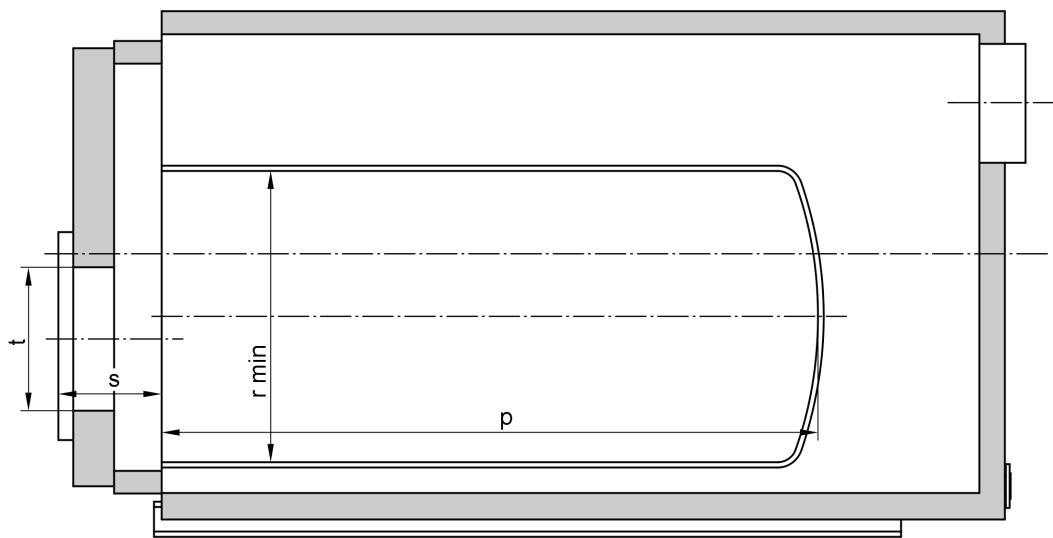
*¹The maximum achievable flow temperature is approx. 15 K below the permissible flow temperature (= safety temperature).

*²Dry. Specific variations are possible.

Specification (cont.)

Dimensions*1

Boiler size		6	7	8	9	A	B
a	mm	1815	1940	2040	2190	2290	2390
b	mm	670	720	778	820	875	908
c	mm	1975	2100	2220	2370	2490	2590
d	mm	265	265	290	290	290	315
e	mm	1015	1115	1215	1415	1485	1575
f	mm	1130	1230	1305	1505	1580	1645
g	mm	435	485	535	585	585	685
h	Ext. Ø mm	410	460	510	560	610	660
h	Internal Ø mm	400	450	500	550	600	650
k	mm	180	180	200	200	220	220
l	mm	3310	3580	3870	4320	4500	4825
m	mm	2600	2800	3050	3450	3595	3825
n	mm	1200	1275	1375	1465	1600	1625
o	mm	1510	1610	1705	1830	1925	2000

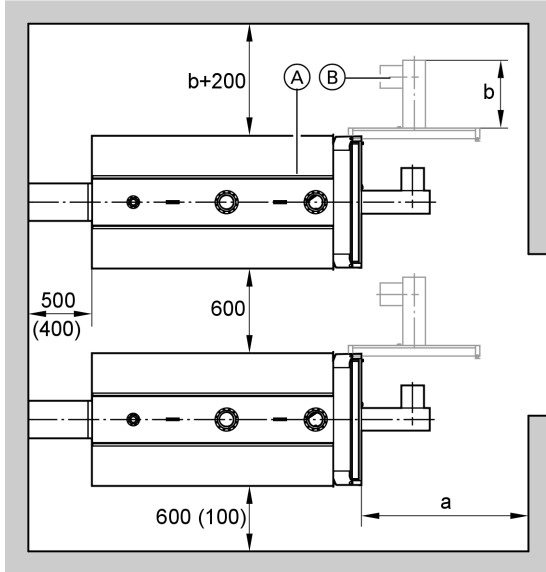


Boiler size		6	7	8	9	A	B	
		Rated output						
Natural gas	MW	2.3	2.9	3.5	4.2	5.0	6.0	
	Flue gas pressure drop mbar	8.2	10.0	11.0	9.4	10.5	11.2	
Fuel EL to EN 12953-3	MW	2.3	2.9	3.5	4.2	5.0	6.0	
	Flue gas pressure drop mbar	7.2	8.9	9.6	8.1	9.0	10.1	
		Combustion chamber dimensions						
Length								
– Flame tube	Dimension p	mm	2450	2650	2900	3300	3470	3700
Diameter								
– Flame tube, internal	Dimension r _{min}	Ømm	966	1064	1139	1212	1310	1383
Combustion chamber volume		m ³	1.85	2.42	3.02	3.88	4.76	5.66
		Burner connection dimensions						
Minimum flame tube length	Dimension s	mm	335	360	400	400	430	480
Max. burner head diameter	Dimension t	Ømm	420	420	530	530	530	600

Specification (cont.)

Positioning

Recommended clearances



The boiler door may be fitted so it opens either to the left or to the right. If the boiler is installed for reasons of space, so that the door needs to open to the left, mirror the dimensions shown in the drawing.

Dimensions in brackets are minimum clearances. Observe the stated dimensions to ensure easy installation and maintenance.

Clearances relate to the boiler.

The clearances must be checked in accordance with the applicable code of practice at the installation site, subject to the equipment (accessories).

- Ⓐ Boiler
- Ⓑ Burner

Boiler size		6	7	8	9	A	B
a	mm	3000	3200	3500	4000	4200	4500
a _{min.}	mm	2000	2100	2200	2400	2500	2600
b	mm	Burner length (installed)					

Dim. a: This clearance is recommended for boiler cleaning.

Dim. a_{min.}: A bigger minimum size may be required because of the burner dimensions.

Positioning

Install hot water boilers in rooms that comply with TRD 403 [or local regulations].

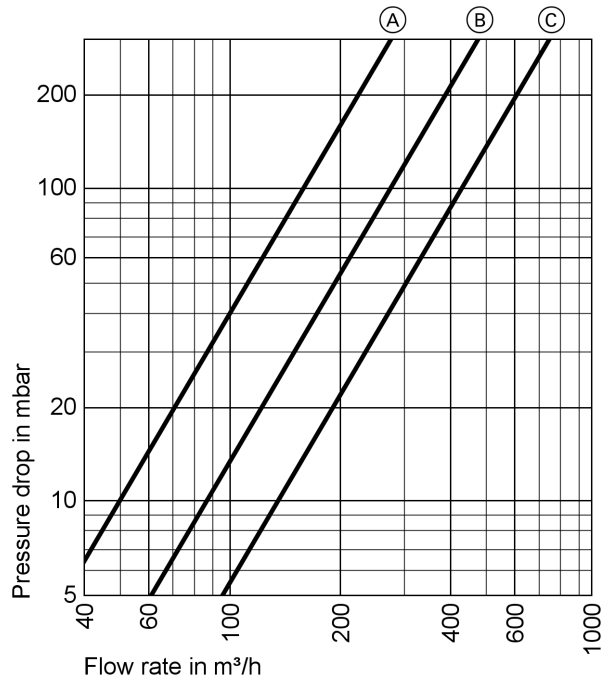
- Avoid very dusty conditions
- Avoid high levels of humidity
- Protect against frost and ensure good ventilation

Otherwise, the system may suffer faults and damage.

In rooms where air contamination through **halogenated hydrocarbons** may occur, install the boiler only if adequate measures can be taken to provide a supply of uncontaminated combustion air.

Specification (cont.)

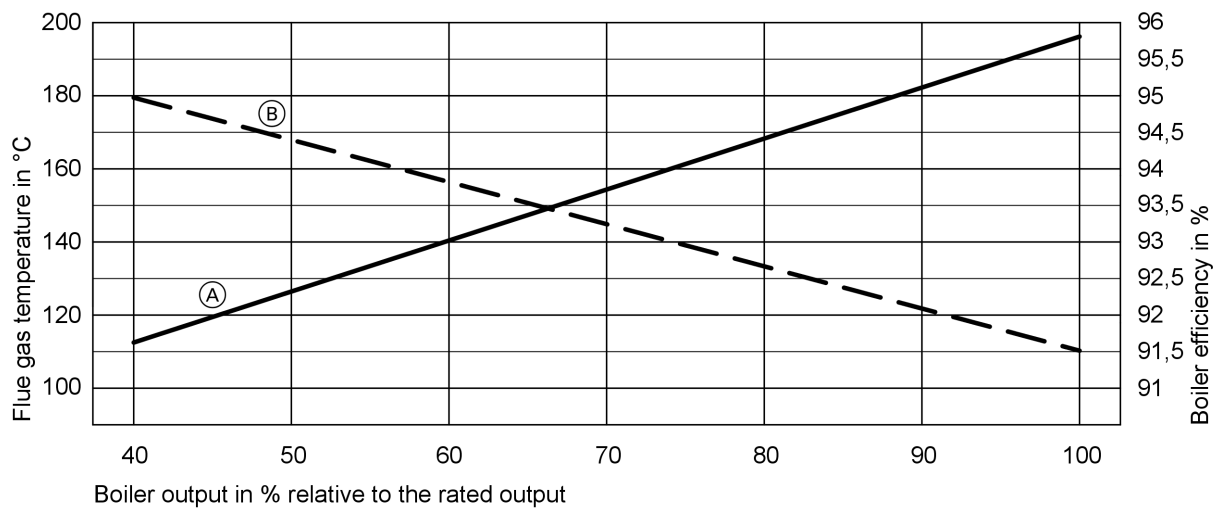
Pressure drop on the heating water side



- (A) Boiler flow and return DN 150
- (B) Boiler flow and return DN 200
- (C) Boiler flow and return DN 250

Flue gas temperature and boiler efficiency

Subject to the rated boiler output at a boiler water temperature of 80/60 °C and a residual oxygen level in the flue gas of 3%.



- (A) Flue gas temperature in °C
- (B) Boiler efficiency in %

Standard delivery

Boiler with fitted door and thermal insulation.
Turbulator extractors, pack for changing over the door jamb, and flame tube gasket.
The burner plate is supplied separately.

Operating conditions

For water quality requirements, see the technical guide to this boiler.

	Requirements
1. Heating water flow rate	None
2. Boiler return temperature (minimum value)* ¹	– Oil operation 50 °C – Gas operation 55 °C
3. Lower boiler water temperature	70 °C
4. Two-stage burner operation	None
5. Modulating burner operation	None
6. Reduced mode	Not possible
7. Weekend setback	Not possible

Design information

Installation of a suitable burner

The burner must be suitable for the respective rated output and the pressure drop on the hot gas side of the boiler (see burner manufacturer's specification).
The material of the burner head must be suitable for operating temperatures of at least 500 °C.

The boiler is not suitable for the use of rotating atomisers.

Pressure-jet oil burner

The burner must be tested and designated to EN 267.

Pressure-jet gas burner

The burner must be tested to EN 676 and CE-designated in accordance with Directive 90/396/EEC.

Burner adjustment

Adjust the oil or gas throughput of the burner to the rated boiler output.

Burner connection

The burner plate can be prepared in the factory on request. For this purpose, please state the burner make and type when ordering. Otherwise, create the necessary blast tube aperture and fixing holes on site in the plain plate supplied.

Fuels


Oil: Fuel oil EL to DIN 51306.
Gas: Natural gas, town gas and LPG according to DVGW Code of Practice G 260/I and II or local regulations.
Alternative fuels on request.

Vitamax 100-LW, type M148 are not approved for fuel oil S (heavy oil).

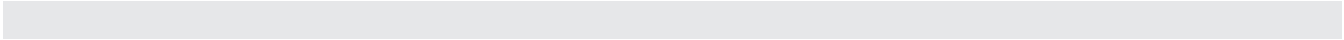
For further information on design/engineering

see the technical guide to this boiler.

Tested quality

 CE designation according to current EC Directives.

*¹The technical guide system examples contains relevant examples for the installation a return temperature raising facility.



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Subject to technical modifications.

Viessmann Werke GmbH&Co KG
D-35107 Allendorf
Telephone: +49 6452 70-0
Fax: +49 6452 70-2780
www.viessmann.com

Viessmann Limited
Hortonwood 30, Telford
Shropshire, TF1 7YP, GB
Telephone: +44 1952 675000
Fax: +44 1952 675040
E-mail: info-uk@viessmann.com

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