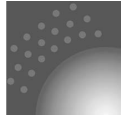


Datasheet

Order number and prices upon request

Not suitable for sizing the boiler. For this, see the separate technical guide.



VITOMAX 200-HW Type M236

Oil/gas fired high pressure hot water boiler
in accordance with the requirements of the EC Pressure
Equipment Directive and the TRD code of practice

Three-pass boiler

Permissible operating pressure 6 to 25 bar

Specification

Specification

Boiler size		1	2	3	4	5	6	7	8
Combustion output * ¹ according to EN 12953-3 MW		0.52	0.67	0.85	1.04	1.30	1.70	2.16	2.84
CE designation		in accordance with the Pressure Equipment Directive							
Permissible flow temperature * ² (= safety temperature)									
for permissible operating pressure	6 bar °C					145			
	8 bar °C					155			
	10 bar °C					165			
	13 bar °C					175			
	16 bar °C					185			
	18 bar °C					190			
	20 bar °C					195			
	22 bar °C					200			
	25 bar °C					205			
Boiler return temperature (minimum value)* ³	°C	65							
Flue gas pressure drop									
- for natural gas	mbar	5.3	7.6	8.3	9.3	11.0	9.9	10.0	11.9
- for fuel oil EL	mbar	4.8	6.9	7.6	8.4	10.0	8.9	9.0	10.7
Shipping dimensions									
Total length	m	2.7	2.9	3.2	3.2	3.4	3.7	4.0	4.4
Total width	m	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.3
Total height	m	1.8	1.9	2.0	2.1	2.1	2.3	2.4	2.6
Total weight * ⁴									
Boiler with thermal insulation									
for permissible operating pressure	6 bar t	2.1	2.3	2.6	3.0	3.5	4.3	5.3	6.9
	8 bar t	2.2	2.4	2.7	3.5	3.7	5.0	5.5	7.0
	10 bar t	2.3	2.5	3.0	3.7	3.9	5.2	6.2	7.5
	13 bar t	2.4	2.6	3.2	3.8	4.5	5.4	6.5	8.5
	16 bar t	2.7	2.8	3.5	4.1	4.9	5.9	7.2	9.0
	18 bar t	3.0	3.2	3.7	4.4	5.1	6.2	7.5	9.0
	20 bar t	3.4	3.6	4.0	5.0	6.0	7.0	8.0	–
	22 bar t	3.8	4.0	4.4	5.5	6.5	7.5	–	–
	25 bar t	4.2	4.5	5.0	6.0	7.0	–	–	–
Contents boiler water	m ³	1.7	2.0	2.5	2.9	3.4	4.6	5.5	7.3
Boiler connections									
Boiler flow and return* ⁵ at rated output* ⁶ and temperature spread	20 K DN	65	65	80	100	100	125	125	150
Safety valve connector for permissible operating pressure	6 bar PN 40 DN	20	25	32	32	32	40	50	50
	8 bar PN 40 DN	20	20	25	32	32	40	40	50
	10 bar PN 40 DN	20	20	25	25	32	32	40	40
	13 bar PN 40 DN	20	20	20	25	25	32	32	40
	16 bar PN 40 DN	20	20	20	20	25	25	32	32
	18 bar PN 40 DN	20	20	20	20	20	25	32	32
	20 bar PN 40 DN	20	20	20	20	20	25	25	–
	22 bar PN 40 DN	25	25	25	25	25	25	–	–
	25 bar PN 40 DN	25	25	25	25	25	–	–	–
Feedwater connector	PN 40 DN	25	25	25	32	32	32	32	32
Flue gas mass flow rate									
- for natural gas	kg/h	1.5225 x combustion output in kW							
- for fuel oil EL	kg/h	1.5 x combustion output in kW							
Flue gas volume	m ³	0.60	0.75	0.95	1.10	1.40	1.95	2.55	3.35
Flue gas connection	Ext. Ø mm	250	250	300	300	350	350	450	450
	Int. Ø mm	240	240	290	290	340	340	440	440

*¹The maximum boiler output varies subject to the required emission values, the pressure stage and the fuel used. Check with the burner manufacturer.

*²The maximum achievable flow temperature is approx. 15 K below the permissible flow temperature (= safety temperature).

*³During the combustion of fuel oil S according to DIN 51603-5 the average boiler temperature must be at least 90 °C.

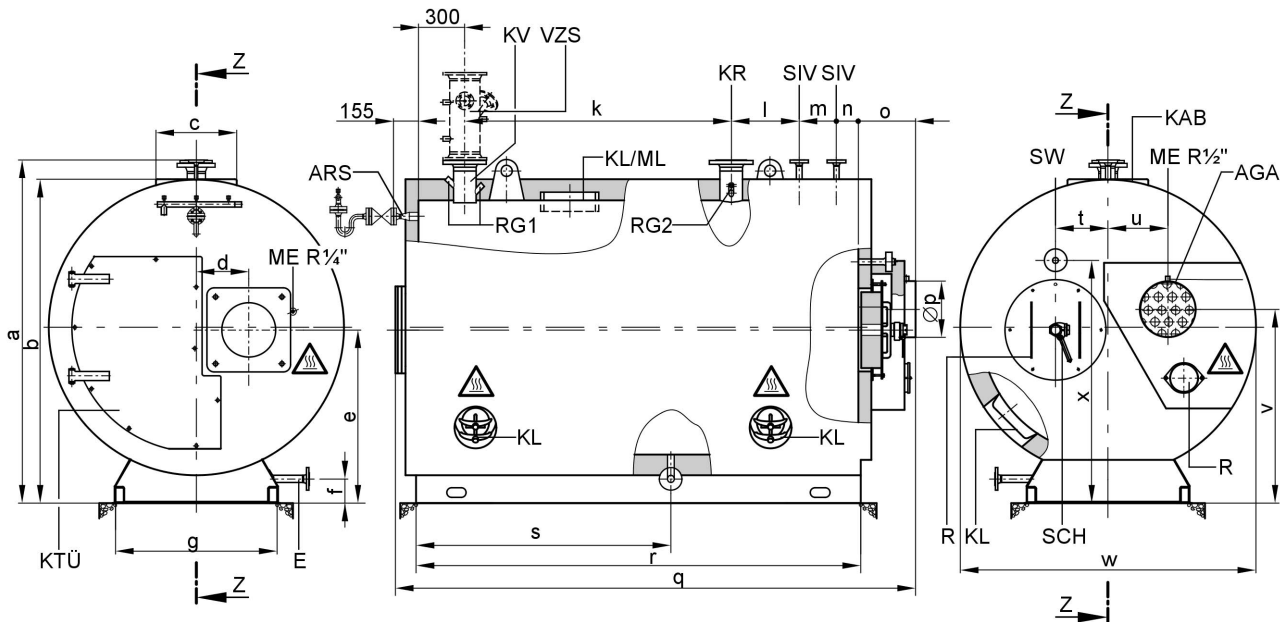
*⁴Specific variations are possible.

*⁵For boilers up to 10 bar, the flange connections are PN 16, from 13 to 18 bar they are PN 25 and from 20 to 25 bar they are PN 40.

*⁶Alternative internal diameters are possible when the output is adjusted.

Specification (cont.)

Dimensions



Watch out! Hot surfaces.

AGA	Flue outlet	ML	Manhole (from boiler size 4)
ARS	Connector DN 20 PN 40 for instrument base (pressure regulator, pressure limiter and pressure gauge)	R	Cleaning aperture
E	Connector DN 25 PN 40 for drain	RG1	2 fem. connections R 1/2" for temperature controller and high limit safety cut-out
KAB	Boiler cover	RG2	Female connection R 1/2" for additional control equipment
KL	Head hole	SCH	Inspection aperture
KR	Boiler return	SIV	Safety valve connector
KTÜ	Boiler door	SW	Feedwater connector
KV	Boiler flow	VZS	Intermediate flow piece as accessory
ME	Test (fem.) connection		

Note

Illustration of standard version. The boiler can be mirrored along the Z-Z axis if required.

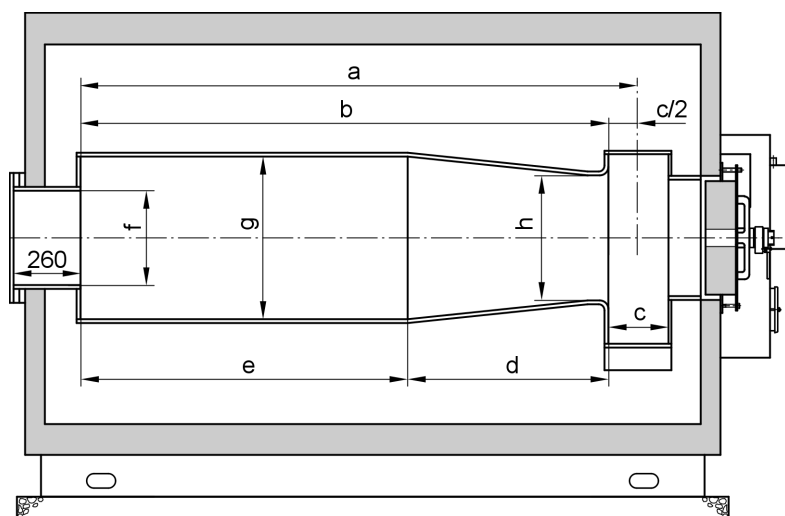
Dimensions*1

Boiler size		1	2	3	4	5	6	7	8
a	mm	1830	1880	1950	2050	2130	2300	2380	2550
b	mm	1710	1760	1830	1930	2010	2180	2260	2430
c	mm	500	500	500	600	600	600	600	600
d	mm	285	285	305	320	325	365	380	425
e	mm	935	950	995	1030	1075	1145	1195	1275
f	mm	140	140	140	140	150	160	160	160
g	mm	950	970	1000	1020	1060	1110	1130	1170
k	mm	1205	1360	1470	1470	1520	1670	2020	2190
l	mm	250	250	300	350	500	600	600	600
m	mm	200	200	250	250	250	250	250	380
n	mm	75	100	150	150	150	150	150	200
o	mm	315	315	340	340	340	340	340	340
p	Internal Ø mm	240	240	290	290	340	340	440	440
q	mm	2500	2680	2960	3010	3230	3480	3820	4150
r	mm	2060	2240	2500	2550	2750	3000	3350	3700
s	mm	1030	1120	1250	1275	1575	1500	1675	1850
t	mm	265	275	295	320	325	365	380	425
u	mm	300	300	325	335	370	370	405	410
v	mm	1050	1085	1100	1150	1200	1375	1380	1430
w	mm	1530	1580	1650	1750	1830	2000	2080	2250
x	mm	1270	1305	1358	1430	1500	1660	1715	1790

*1 Nominal dimensions, subject to modification.

Specification (cont.)

Specification, for burner selection



Boiler size		1	2	3	4	5	6	7	8	
Maximum permissible combustion output according to EN 12953-3	MW	0.52	0.67	0.85	1.04	1.30	1.70	2.16	2.84	
Flue gas pressure drop										
- for natural gas	mbar	5.3	7.6	8.3	9.3	11.0	9.9	10.0	11.9	
- for fuel oil EL	mbar	4.8	6.9	7.6	8.4	10.0	8.9	9.0	10.7	
Length		Combustion chamber dimensions								
- Approved for flames	Dimension a	mm	1635	1815	2075	2125	2325	2575	2925	3375
- Flame tube	Dimension b	mm	1510	1690	1950	2000	2200	2450	2800	3250
- Flame tube	Dimension e	mm	800	980	1240	1240	1365	1680	1990	2440
- Flame tube	Dimension d	mm	710	710	710	760	835	770	810	810
- Reversing chamber	Dimension c	mm	250							
Diameter 1	Dimension g	∅ mm	540	565	590	630	690	760	800	870
Diameter 2	Dimension h	∅ mm	372	397	422	635	520	596	636	706
Minimum flame tube length		mm	260							
Max. burner head diameter	Dimension f	∅ mm	290		350		380		410	
Flame tube		m ³	Combustion chamber volume							
Flame tube and reversing chamber		m ³	0.300	0.376	0.483	0.625	0.752	1.041	1.330	1.847
		m ³	0.328	0.407	0.518	0.705	0.805	1.111	1.409	1.945

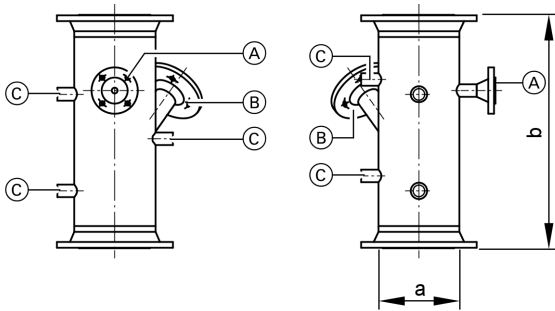
Note

Max. installed height 500 m above sea level, max. boiler flow temperature 190 °C.

Specification (cont.)

Intermediate flow piece

(order separately)

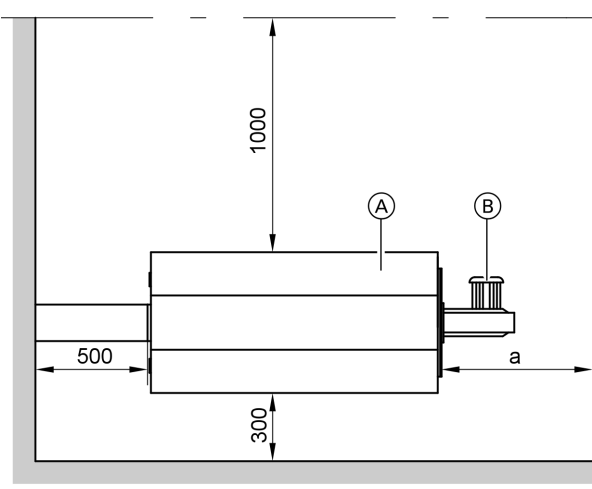


a	DN	65	80	100	125	150
b	mm	500				

- (A) Connector DN 20 PN 40 for instrument base (pressure regulator, pressure limiter and pressure gauge)
- (B) Connector DN 50 PN 40 for electrode water level limiter
- (C) 5 fem. connections R 1/2" for thermometer, sample valve and additional control equipment

Positioning

Recommended 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 fitted equipment (accessories).

- (A) Boiler
- (B) Burner

Boiler size		1	2	3	4	5	6	7	8
a	mm	2000	2200	2400	2500	2700	2900	3200	3500
a _{min.}	mm	1000	1100	1300	1300	1400	1500	1700	1900

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

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

Installation conditions

- 5822 479 GB
- 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.

Standard delivery

Boiler with fitted door and thermal insulation.
Sight glass and flame tube gasket are supplied inside the boiler.
The burner plate is supplied separately.

Printed on environmentally friendly,
chlorine-free bleached paper



Subject to technical modifications.

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