VIESMANN

VITOMAX 200-LW

Low pressure hot water boiler for permissible flow temperatures up to 120 °C
Rated heating output 8.0 to 20.0 MW

Datasheet

Part no. and prices on request

VITOMAX 200-LW Type M64A

Oil/gas low pressure hot water boilers
Compliant with the requirements of the Pressure Equipment Directive 97/23/EC and the TRD regulations (up to 16.5 MW), in conjunction with the [German] trade association agreements.
Three-pass boiler
For operation at a constant boiler water temperature
Permissible operating pressures: 6, 10, 16 bar

Specification

Specification

Boiler size		1	2	3	4	5	6
Permissible flow temperature 110 °C							
Rated heating output, natural gas	MW	8.00	10.00	12.00	14.20	16.50	20.00
Combustion output, natural gas	MW	8.70	10.87	13.04	15.43	17.93	21.74
Pressure drop on the flue gas side, natural gas	mbar	11.3	11.8	15.7	14.2	15.4	18.8
Rated heating output, fuel oil EL	MW	7.75	8.55	10.12	11.78	13.43	15.09
Combustion output, fuel oil EL*1	MW	8.42	9.30	11.00	12.80	14.60	16.40
Pressure drop on the flue gas side, fuel oil EL	mbar	10.2	9.0	9.9	8.5	8.8	9.2
Permissible flow temperature 120 °C							
Rated heating output, natural gas	MW	8.00	10.00	12.00	14.20	16.50	16.74
Combustion output, natural gas	MW	8.70	10.87	13.04	15.43	17.93	18.20
Pressure drop on the flue gas side, natural gas	mbar	11.3	11.8	15.7	14.2	15.4	13.0
Rated heating output, fuel oil EL	MW	7.75	8.55	10.12	11.78	12.88	12.88
Combustion output, fuel oil EL*1	MW	8.42	9.30	11.00	12.80	14.00	14.00
Pressure drop on the flue gas side, fuel oil EL	mbar	10.2	9.0	9.9	8.5	8.0	6.5
Permiss. flow temperature*2	°C	See page					
Permiss. operating pressure	bar	6, 10 or 16					
Transport dimensions (incl. packaging)							
Total length	m	6.60	7.10	7.65	8.15	8.70	9.50
Total width	m	2.70	2.90	3.00	3.25	3.50	3.70
Total height	m	3.10	3.30	3.45	3.70	4.00	4.20
Total weight*3							
Boiler with thermal insulation for permissible operating pressure							
6 bar	t	15.1	19.2	22.8	27.8	35.8	40.1
10 bar	t	17.7	22.7	24.8	31.4	39.8	48.0
16 bar	t	20.5	26.0	30.2	38.4	46.4	56.3
Capacity boiler water	m^3	15.3	18.7	22.2	26.6	33.8	39.8
Connections							
Connectors for boiler flow and return							
6 and 10 bar	PN 16 DN	250	300	350	350	400	400
16 bar	PN 25 DN	250	300	350	350	400	400
Safety valve connector							
6 bar	PN 16 DN	100	100	125	150	150	2 x 100
10 bar	PN 16 DN	80	80	100	100	125	125
16 bar	PN 40 DN	65	65	80	80	100	100
Drain connector							
6 and 10 bar	PN 16 DN	50	50	50	50	50	50
16 bar	PN 40 DN	50	50	50	50	50	50
Flue gas mass flow rate*4							
Natural gas	t/h	1.5225 x combustion output in MW					
Fuel oil EL	t/h	1.5 x combustion output in MW					
Flue outlet	external ∅ mm	710	810	860	960	1010	1110
	internal ∅ mm	700	800	850	950	1000	1100
Flue gas volume	m^3	10.5	13.4	16.5	21.5	27.5	35.5
CE designation		See page					

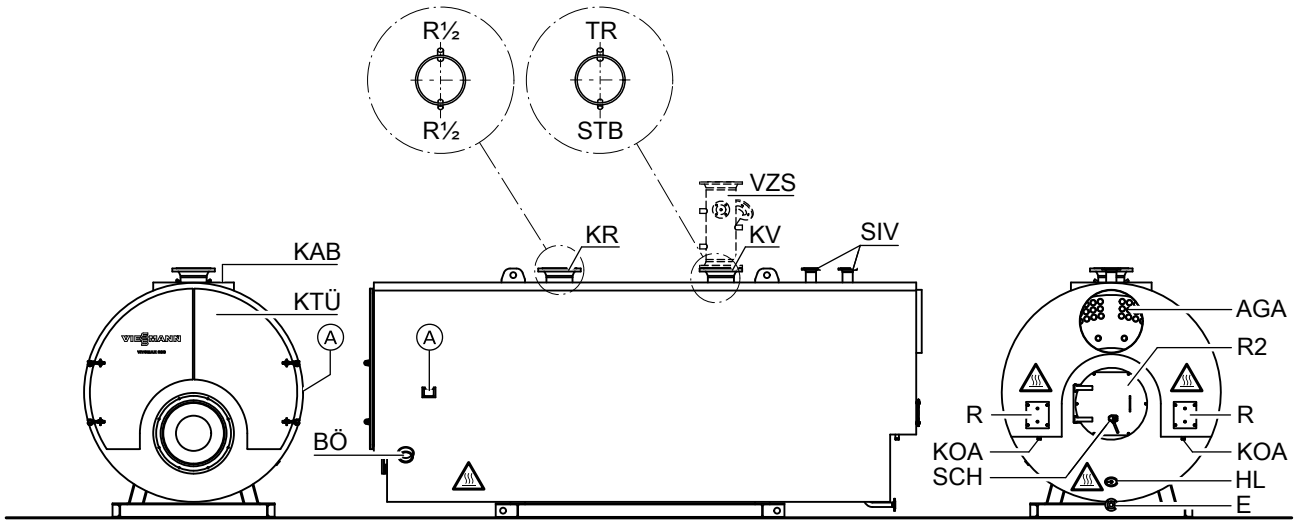
*1 *In accordance with EN 12953, the internal diameter of the flame tube limits the maximum combustion output in oil operation.*

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

*3 *Deviations of 10 % are possible, subject to order.*

*4 *Values for sizing the flue system to EN 13384 relative to 13 % CO_2 for fuel oil EL and 10 % CO_2 for natural gas. The flue gas temperature at a boiler water temperature of 80 °C is used to determine the size of the flue system and the application range of flue pipes with maximum permissible operating temperatures.*

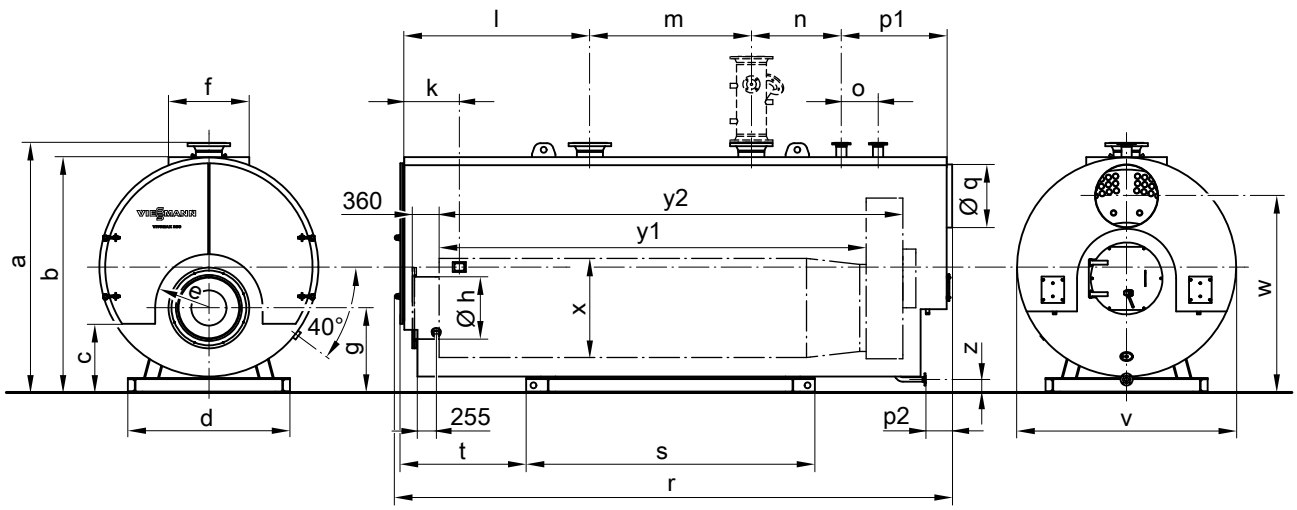
Specification (cont.)



Caution – hot surface!

Ⓐ Type plate
AGA Flue outlet
BÖ Inspection port
E Drain
HL Hand hole (100 x 150)
KAB Boiler cover
KOA Condensate drain (nipple R 1½)
KR Boiler return
KTÜ Boiler door
KV Boiler flow
R Cleaning aperture
R2 Cleaning aperture
SCH Inspection port
SIV Safety valve connector
STB Female connection R ½ for high limit safety cut-out
TR Female connection R ½ for thermostat
VZS Intermediate flow piece as accessory (required for 120 °C)

Specification (cont.)



Dimensions[*5]

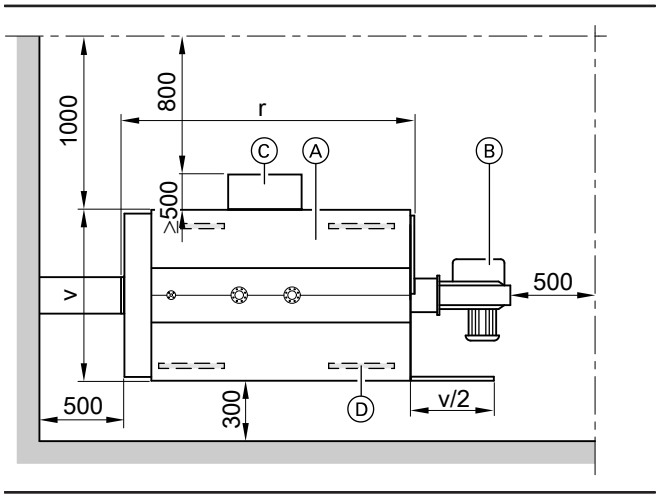
Boiler size		**1**	**2**	**3**	**4**	**5**	**6**
Rated heating output	**MW**	**8.0**	**10.0**	**12.0**	**14.2**	**16.5**	**20.0**
a	mm	3090	3260	3405	3660	3975	4150
b	mm	2895	3065	3210	3465	3780	3955
c	mm	915	910	935	1015	1145	1200
d	mm	2050	2140	2210	2450	2720	2820
e	mm	625	660	725	800	875	950
f	mm	1000	1100	1100	1100	1200	1200
g	mm	1052	1090	1154	1271	1442	1518
h	∅ mm	718	718	818	918	1018	1118
k	mm	710	750	750	790	830	890
l	mm	2145	2350	2530	2690	2855	2990
m	mm	1900	2050	2200	2400	2650	3150
n	mm	982	1167	1227	1337	1462	1537
o	mm	–	–	–	–	–	500
p1	mm	1285	1285	1435	1485	1485	1535
p2	mm	310	310	360	410	410	460
q (external)	∅ mm	710	810	860	960	1010	1110
q (internal)	∅ mm	700	800	850	950	1000	1100
r	mm	6516	7056	7596	8116	8656	9416
s	mm	3435	3685	3935	4265	4635	4965
t	mm	1430	1595	1715	1805	1910	2130
u (width boiler saddle profile IPB)	mm	200	200	200	240	280	280
v	mm	2670	2840	2985	3200	3475	3650
w	mm	2365	2550	2680	2930	3150	3290
x (internal smooth tube 6 bar)	∅ mm	1145	1218	1316	1462	1608	–
x (internal smooth tube 10 bar)	∅ mm	1135	1208	–	–	–	–
x (internal/external corrugated tube 6 bar)	∅ mm	–	–	–	–	–	1750/1850
x (internal/external corrugated tube 10 bar)	∅ mm	–	–	1300/1400	1450/1550	1600/1700	1750/1850
x (internal/external corrugated tube 16 bar)	∅ mm	1125/1225	1200/1300	1275/1425	1425/1575	1565/1735	1715/1885
y1 (length excl. reversing chamber)	mm	4830	5330	5820	6250	6750	7400
y2 (length incl. reversing chamber)	mm	5330	5830	6320	6750	7250	7900
Permissible flame length	mm	5080	5580	6070	6500	7000	7650
z	mm	180	180	180	220	260	260

*[*5] Nominal dimensions, subject to modification.*

Specification (cont.)

Siting

Minimum clearances



Observe the stated dimensions to ensure easy installation and maintenance. Where space is tight, only the minimum clearances must be maintained. Check clearances in accordance with the applicable regulations at the installation site, subject to the fitted equipment (accessories).

Ⓐ Boiler
Ⓑ Burner
Ⓒ Regulating and control system
Ⓓ Anti-vibration boiler supports
r and v Please see the dimensions tables of the corresponding boilers for these values.

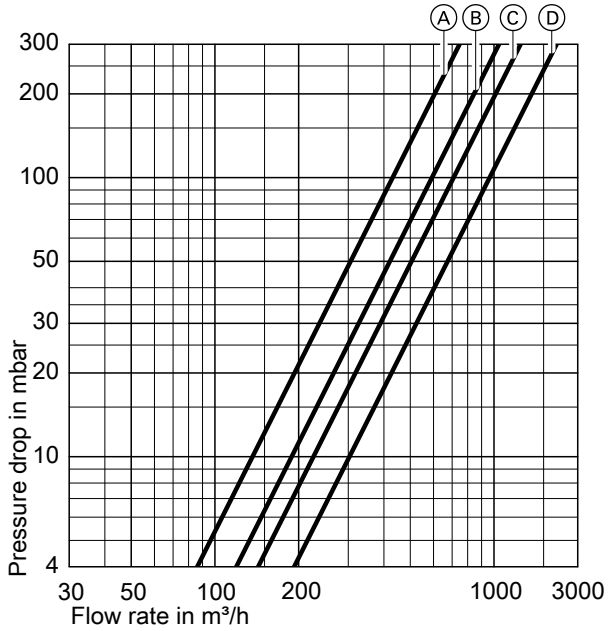
Installation conditions

To avoid system faults and damage, install hot water boilers in rooms that comply with TRD 403. Additionally observe the following conditions:

- In rooms where air contamination through **halogenated hydrocarbons** (e.g. as contained in sprays, paints, solvents and cleaning agents) may occur, install the boiler only if adequate measures can be taken to provide a supply of uncontaminated combustion air.
- Avoid very dusty conditions
- Avoid high levels of humidity
- Prevent frost and ensure good ventilation
- Installation on a level surface.

Specification (cont.)

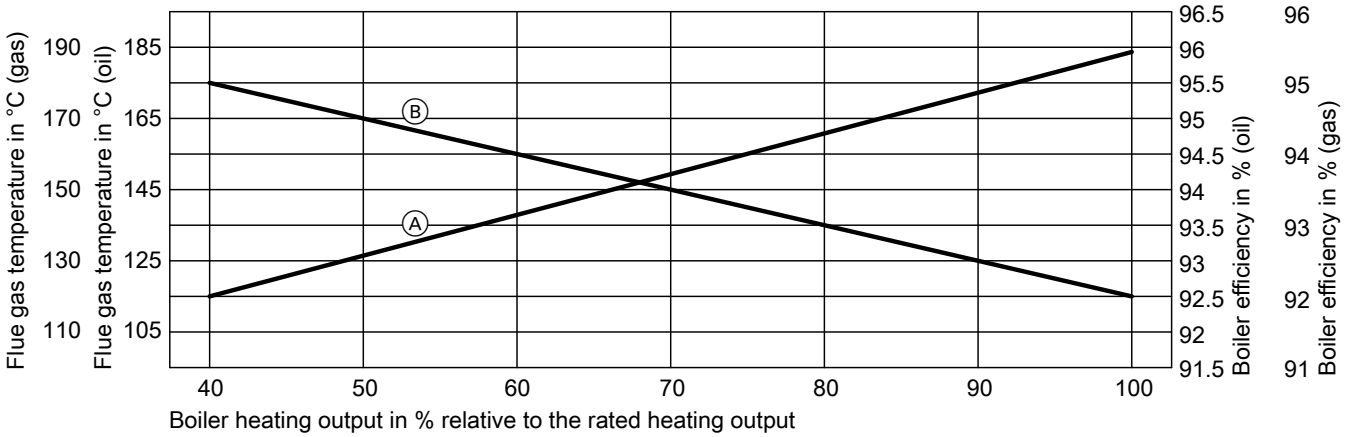
Pressure drop on the heating water side



Ⓐ Connectors for boiler flow and return DN 250
Ⓑ Connectors for boiler flow and return DN 300
Ⓒ Connectors for boiler flow and return DN 350
Ⓓ Connectors for boiler flow and return DN 400

Flue gas temperature and boiler efficiency

Depending on the boiler's heating output at a boiler water temperature of 80/60 °C and a residual oxygen content in the flue gas of 3 %.



Ⓐ Flue gas temperature in °C
Ⓑ Boiler efficiency in %

Components of the M64A in delivered condition

- Boiler body with burner connection flange and burner plate supplied
- Fitted boiler doors
- Bolted down cleaning cover
- Fitted thermal insulation
- Fitted load-bearing boiler cover
- Turbulator extractor (if turbulators are installed)
- Version with thermally insulated flue gas collector
- Packaging

5724 022 GB

Boiler accessories (optional)

- Flue gas/water heat exchanger
- Regulating and control systems
- Safety equipment
- Return temperature raising facility
- Pressure-maintaining facility

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)*6	– Oil operation 50 °C – Gas operation 55 °C
3.	Maximum spread	40 K
4.	Two-stage burner operation	None
5.	Modulating operation	None
6.	Reduced mode and weekend setback	Lag boilers in multi boiler systems can be shut down

Design information

Installation of a suitable burner

The burner must be suitable for the respective rated heating 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.
Burners with a special design, e.g. rotary atomisers, require consultation prior to ordering.

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 heating output.

Burner connection
On request, the burner plate can be prepared at the factory. For this, please state the burner make and type when ordering. Otherwise, create the blast tube aperture and fixing holes on site in the dummy plate supplied.

Fuels

Oil: Fuel oil EL to DIN 51603.
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.

Permissible flow temperatures

Hot water boilers for permissible flow temperatures (= safety temperatures)

- up to 110 °C
  CE designation:
  CE–0085 in accordance with the Gas Appliances Directive
- up to 120 °C
  CE designation:
  CE-0035 in accordance with the Pressure Equipment Directive
  For operation with a safety temperature of 120 °C, additional pieces of safety equipment are required.
  According to the Health & Safety at Work Act [Germany], these boilers must be supervised. In accordance with the conformity assessment diagram no. 5 of the EU Pressure Equipment Directive, these boilers must be classed as category IV.
  Assembly, installation and operation are subject to approval by the appropriate local authority [check local regulations]. The system must be tested prior to commissioning. Instead of an internal inspection, an external inspection is required every year, and a pressure test at least every 3 years.
  The test must be carried out by an authorised body (e.g. TÜV [in Germany]).

*6 *The technical guide "System examples" contains a relevant system example for the installation of a return temperature raising facility.*

Design information (cont.)

Further information on design/engineering

See the technical guide to this boiler.

Tested quality

CE designation according to current EC Directives.

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

5724 022 GB