

Datasheet

Part no. and prices on request



VITOMAX 200-HW Type M72A

Oil/gas high pressure hot water boiler

Compliant with the requirements of the Pressure Equipment Directive 97/23/EC and the TRD regulations, in conjunction with the [German] trade association agreements.

Three-pass boiler

Permissible operating pressure 6, 10 and 16 bar

Specification

Specification

Boiler size			1	2	3	4	5
Combustion output*1 to EN 12953-3							
- for natural gas	MW		2.53	3.08	3.86	4.95	6.60
- for fuel oil EL	MW		2.51	3.06	3.82	4.91	6.54
CE designation			according to the Pressure Equipment Directive				
Permiss. flow temperature*2 (= safety temperature)							
for permiss. operating pressure	6 bar	°C	145				
	10 bar	°C	150				
	16 bar	°C	150				
Boiler return temperature (minimum value)			65				
Flue gas pressure drop at 120/80 °C							
- for natural gas	mbar		7.9	9.0	10.6	12.1	14.9
- for fuel oil EL	mbar		7.1	8.1	9.5	10.9	13.3
Shipping dimensions incl. packaging							
Total length	m		4.20	4.50	4.85	5.30	5.90
Total width	m		1.95	2.04	2.18	2.31	2.43
Total height	m		2.24	2.33	2.47	2.63	2.75
Total weight*3							
Boiler with thermal insulation							
for permiss. operating pressure	6 bar	t	4.9	5.6	6.6	8.0	9.8
	10 bar	t	5.6	6.4	7.6	9.2	11.6
	16 bar	t	6.7	7.6	9.1	11.0	14.0
Capacity boiler water			4.9	5.6	7.0	8.7	10.5
Boiler connections			Connectors for boiler flow and return				
Temperature spread at 6 and 10 bar	40 K	PN 16 DN	100	125	125	150	150
	30 K	PN 16 DN	125	125	150	150	200
	20 K	PN 16 DN	150	150	200	200	250
Temperature spread at 16 bar	40 K	PN 25 DN	-	-	-	-	-
	30 K	PN 25 DN	-	-	-	-	200
	20 K	PN 25 DN	-	-	200	200	250
	40 K	PN 40 DN	100	125	125	150	150
	30 K	PN 40 DN	125	125	150	150	-
	20 K	PN 40 DN	150	150	-	-	-
			Safety valve connector				
for permiss. operating pressure	6 bar	PN 40 DN	50	50	65*4	65*4	80
	10 bar	PN 40 DN	40	40	50	50	65*4
	16 bar	PN 40 DN	32	32	40	50	50
Drain connector			PN 40 DN				
Flue gas mass flow rate			1.5225 x combustion output in kW				
- for natural gas	kg/h		1.5 x combustion output in kW				
- for fuel oil EL	kg/h						
Flue gas volume			2.8	3.4	4.3	5.6	7.3
Flue outlet							
	Ext. Ø mm		410	460	510	560	660
	Int. Ø mm		400	450	500	550	650

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

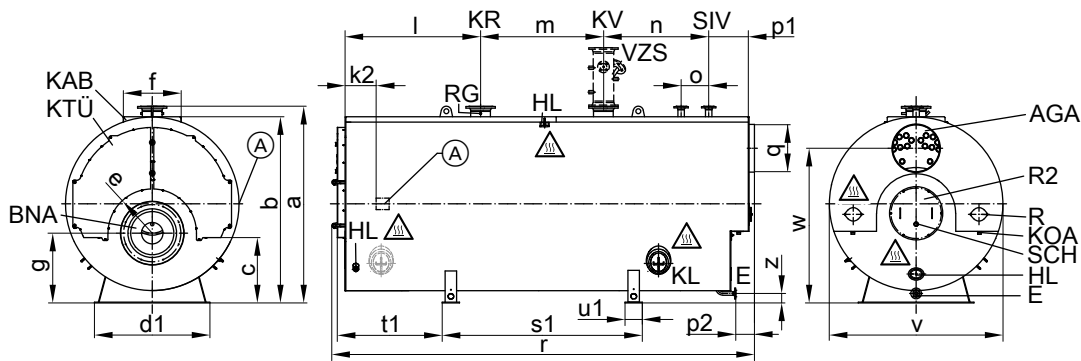
*2 The maximum achievable flow temperature is approx. 15 K below the permissible flow temperature (= safety temperature).

*3 Because of production methods, the total weight (weight when empty) can vary by up to 10 %.

*4 4-hole version

Specification (cont.)

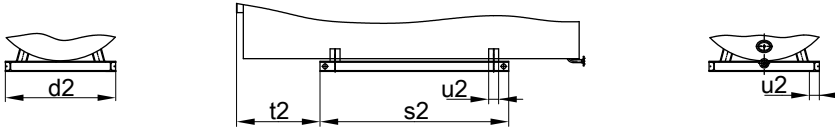
Dimensions



Caution – hot surface!

Ⓐ Type plate	KTÜ Boiler door
AGA Flue outlet	KV Boiler flow
BNA Burner connection	R Cleaning aperture
E Drain	R2 Cleaning aperture
HL Handhole (100 x 150 mm)	RG Two female connections (R ½) for additional control equipment
KAB Boiler cover	SCH Inspection port
KL Headhole (220 x 320 mm)	SIV Safety valve connector
KOA Condensate drain (nipple R ½)	VZS Intermediate flow piece as accessory (required for $\geq 120\text{ °C}$)
KR Boiler return	

Alternative boiler support



Dimensions*⁵

Boiler size		1	2	3	4	5
a	mm	2215	2300	2440	2600	2720
b	mm	2070	2155	2295	2455	2575
c	mm	740	760	830	870	900
d1	mm	1250	1300	1400	1550	1600
d2	mm	1380	1430	1520	1700	1760
e	mm	435	460	510	550	600
f	mm	700	700	700	800	800
g	mm	752	782	847	915	965
k2	mm	510	510	530	530	560
l	mm	1235	1440	1535	1670	1876
m	mm	1100	1150	1350	1500	1700
n	mm	1057	1072	1137	1272	1457
o	mm	300	300	400	400	400
p1	mm	510	510	510	560	560
p2	mm	210	210	210	260	260
q (external)	∅ mm	410	460	510	560	660
q (internal)	∅ mm	400	450	500	550	650
r	mm	4161	4429	4789	5259	5850
s1	mm	1935	2070	2240	2480	2770
s2	mm	2095	2230	2400	2730	3010
t1	mm	1025	1093	1198	1288	1453
t2	mm	945	1013	1118	1163	1333
u1	mm	200	200	200	240	240
u2 (width boiler support, I-beam)	mm	120	120	120	160	160
v	mm	1925	2010	2150	2280	2400

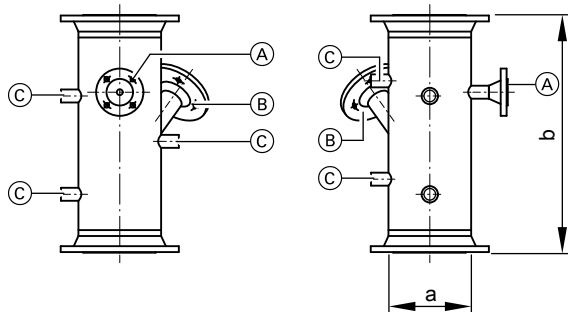
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*⁵ Nominal dimensions, subject to modification.

Specification (cont.)

Boiler size		1	2	3	4	5
w	mm	1725	1805	1930	2025	2140
z	mm	100	100	100	130	130

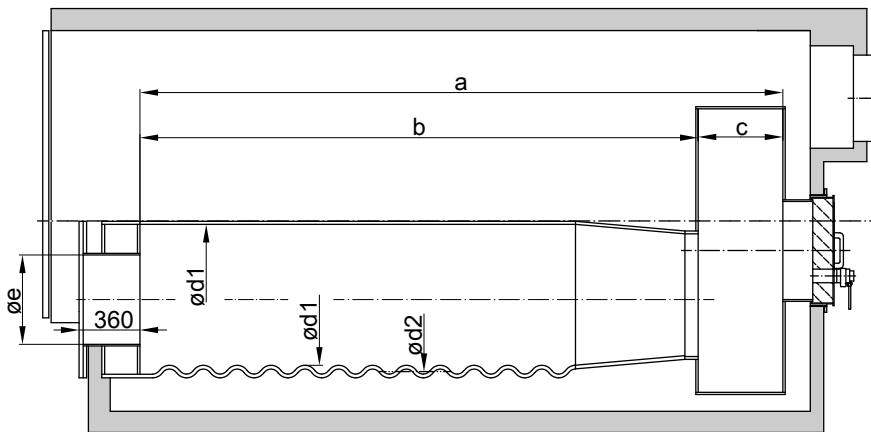
Intermediate flow piece
(order separately)



- (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 female connections R 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

Specification, for burner selection



Boiler size		1	2	3	4	5	
Maximum permissible combustion output to EN 12953-3							
– Natural gas	MW	2.53	3.08	3.86	4.95	6.60	
Flue gas pressure drop	mbar	7.9	9.0	10.6	12.1	14.9	
– Fuel oil EL	MW	2.51	3.06	3.82	4.91	6.54	
Flue gas pressure drop	mbar	7.1	8.1	9.5	10.9	13.3	
Combustion chamber dimensions							
Length							
– Approved for flames	Dimension a	mm	3130	3400	3740	4160	4720
– Flame tube	Dimension b	mm	2630	2900	3240	3660	4220
– Reversing chamber	Dimension c	mm	500	500	500	500	500
Diameter*6							
– Smooth tube, internal 6 bar	Dimension d1	Ø mm	803	853	901	974	1072
– Smooth tube, internal 10 bar	Dimension d1	Ø mm	797	845	893	968	1064
– Smooth tube, internal 16 bar	Dimension d1	Ø mm	785	835	885	-	-
– Corrugated pipe, internal 16 bar	Dimension d1	Ø mm	-	-	-	950	1050
– Corrugated pipe, average 16 bar	Dimension d2	Ø mm	-	-	-	1000	1100
Burner connection dimensions							

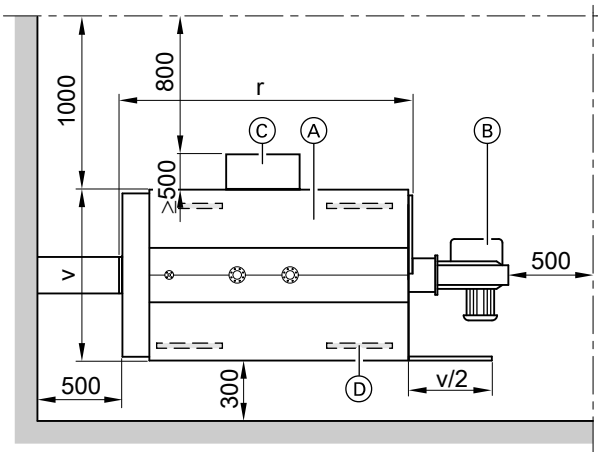
*6 Product-dependent tolerances are not taken into consideration.

Specification (cont.)

Boiler size			1	2	3	4	5
Minimum flame head length	mm		360	360	360	360	360
Max. flame head diameter	Dimension e Ø mm		420	420	520	520	590
			Combustion chamber volume				
Flame tube (corrugated pipe)	m ³		1.31	1.63	2.03	2.69	3.75
Flame tube and reversing chamber	m ³		1.91	2.31	2.84	3.62	4.83

Siting

Minimum clearances



Observe the stated dimensions to ensure easy installation and maintenance. Where space is tight, maintain these minimum clearances.

- (A) Boiler
- (B) Burner
- (C) Regulating and control system
- (D) Anti-vibration boiler supports (optional when using the alternative boiler support, see page 3)

r and v For dimension values, see dimensions table on page 3.

Delivered condition

Boiler body with burner flange and burner plate supplied. With fitted boiler doors, fitted cleaning covers, fitted thermal insulation and fitted load-bearing boiler cover.

Turbulator extractor (if turbulators are installed).
Version with thermally insulated flue gas collector.
Packaging.

Boiler accessories (optional)

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

Tested quality

CE CE designation according to current EC Directives.

Printed on environmentally friendly,
chlorine-free bleached paper



Subject to technical modifications.

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