

Datasheet

Part no. and prices: see pricelist



VITOPLEX 200 Type SX2A

Low temperature oil/gas boiler

Three-pass boiler

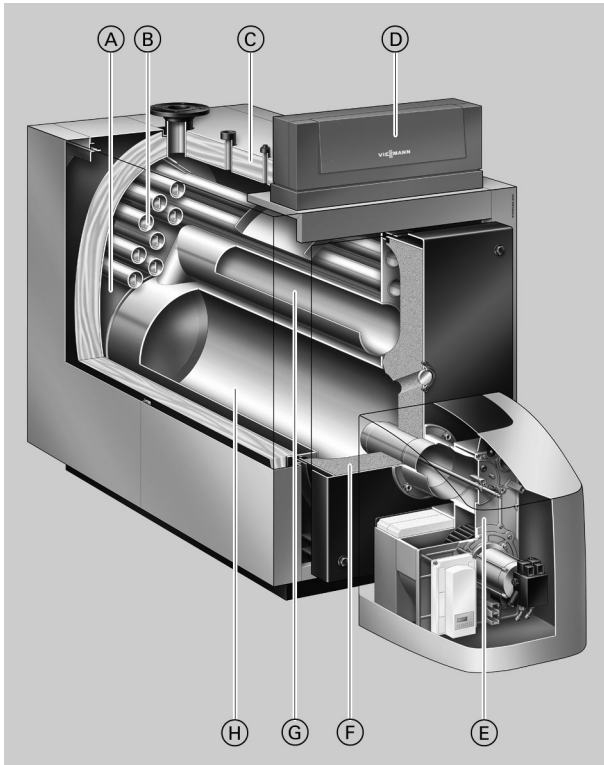
For operation with modulating boiler water temperature

With a Vitotrans 300 as condensing unit

Benefits at a glance

- Economical and environmentally responsible due to modulating boiler water temperature.
- Standard seasonal efficiency [to DIN] for operation with fuel oil: 89 % (H_s) [gross cv] / 95 % (H_i) [net cv].
- Optional stainless steel flue gas/water heat exchanger enables use of condensing technology for higher standard seasonal efficiency [to DIN].
- Three-pass boiler with low combustion chamber loading, resulting in clean combustion with low emissions.
- Wide water galleries and large water content provide excellent natural circulation and reliable heat transfer.

- Integral Therm-Control start-up system for easy hydraulic connection – a shunt pump and a return temperature raising facility are not required.
- Boilers up to 300 kW don't require a low water indicator.
- Compact design for easy transportation into boiler rooms and economical use of space – important for modernisation projects.
- Vitoflame 100 Unit pressure-jet oil/gas burner up to 270 kW is available.
- Fastfix assembly system for control unit and thermal insulation.



- Ⓐ Wide water galleries and large water content ensure excellent natural circulation and easy hydraulic connection
- Ⓑ Third hot gas flue
- Ⓒ Highly effective thermal insulation
- Ⓓ Vitotronic – the new generation of controllers: intelligent and easy to install, operate and service
- Ⓔ Viessmann Vitoflame 100 Unit burner
- Ⓕ Thermal insulation on boiler door
- Ⓖ Second hot gas flue
- Ⓗ Combustion chamber

Boiler specification

Specification

Rated heating output	kW	90	120	150	200	270	350	440	560	
Rated heat input	kW	98	130	163	217	293	380	478	609	
CE designation – compliant with Efficiency Directive – compliant with Gas Appliances Directive		CE-0085BQ0020 CE-0085BQ0020						—	—	
Permiss. flow temperature (= safety temperature)	°C	110 (to 120 °C on request)								
Permiss. operating temperature	°C	95								
Permiss. operating pressure	bar kPa	4 400								
Pressure drop on the hot gas side	Pa mbar	60 0.6	80 0.8	100 1.0	200 2.0	180 1.8	310 3.1	280 2.8	400 4.0	
Boiler body dimensions										
Length (dim. q) ^{*1}	mm	1195	1400	1385	1580	1600	1800	1825	1970	
Width (dim. d)	mm	575	575	650	650	730	730	865	865	
Height (incl. connectors) (dim. t)	mm	1145	1145	1180	1180	1285	1285	1455	1455	
Overall dimensions										
Total length (dim. r)	mm	1260	1460	1445	1640	1660	1860	1885	2030	
Total length with burner and hood (dim. s)	mm	1660	1860	1865	2060	2085	—	—	—	
Total width (dim. e)	mm	755	755	825	825	905	905	1040	1040	
Total height (dim. b)	mm	1315	1315	1350	1350	1460	1460	1625	1625	
Service height (control unit) (dim. a)	mm	1485	1485	1520	1520	1630	1630	1795	1795	
Height										
– adjustable anti-vibration feet	mm	28	28	28	28	28	28	28	28	
– anti-vibration boiler supports (under load)	mm	—	—	—	—	—	37	37	37	
Foundation										
Length	mm	1000	1200	1200	1400	1400	1650	1650	1800	
Width	mm	760	760	830	830	900	900	1040	1040	
Combustion chamber diameter	mm	380	380	400	400	480	480	570	570	
Combustion chamber length	mm	800	1000	1000	1200	1200	1400	1400	1550	
Weight boiler body	kg	315	365	415	460	585	700	895	1100	
Total weight Boiler incl. thermal insulation and boiler control unit	kg	360	410	465	510	635	760	960	1170	
Total weight Boiler with thermal insulation, burner and boiler control unit	kg	390	440	495	540	665	—	—	—	
Boiler water content	litres	180	210	255	300	400	445	600	635	
Boiler connections										
Boiler flow and return	PN 6 DN	65	65	65	65	65	80	100	100	
Safety connection (safety valve)	R	1¼	1¼	1¼	1¼	1¼	1¼	1½	1½	
Drain	R					1¼				
Flue gas parameters^{*2}										
Temperature (at boiler water temperature 60 °C)										
– at rated heating output	°C					180				
– At partial load	°C					125				
Temperature (at boiler water temperature 80 °C)	°C					195				
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				
Required draught	Pa/mbar					0				
Flue outlet	Ø mm	180	180	200	200	200	200	250	250	
Standard seasonal efficiency [to DIN] (for operation with fuel oil) for heating system temperature 75/60 °C	%	89 (H _s) [gross cv] / 95 (H _i) [net cv]								

*1 Boiler door removed.

*2 Values for calculating the size of the flue system to EN 13384, relative to 13.2 % CO₂ for fuel oil EL and 10 % CO₂ for natural gas.

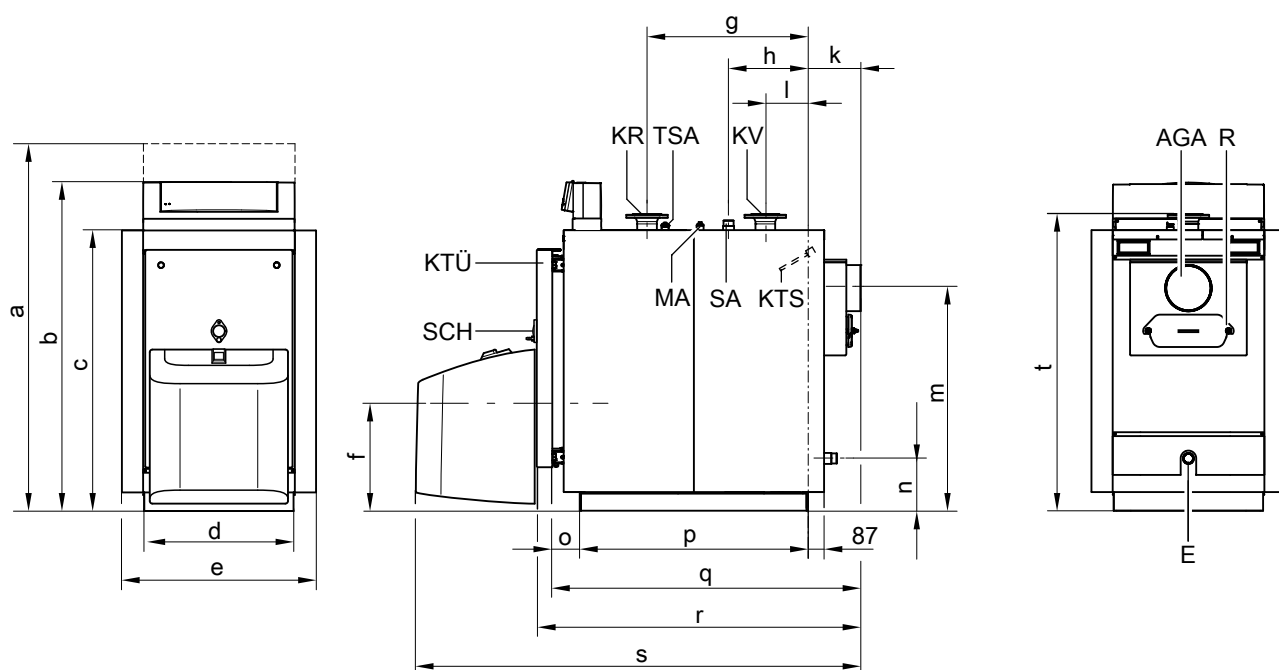
Flue gas temperatures as actual gross values at 20 °C combustion air temperature.

The details for partial load refer to an output of 60 % of the rated heating output. If the partial load differs from that stated above (depending on operating mode), calculate the flue gas mass flow rate accordingly.

Boiler specification (cont.)

Rated heating output	kW	90	120	150	200	270	350	440	560	
Standby loss $q_{B,70}$	%	0.40	0.35	0.30	0.30	0.25	0.25	0.22	0.20	
Sound pressure level ^{*3} 1 m in front of the boiler (stage 1/2)	dB(A)	<68/<69 <96/<103						-		
In the flue pipe (stage 1/2)	dB(A)									
Matching Vitotrans 300										
- gas operation	Part no.	Z010 326		Z010 327		Z010 328		Z010 329		
- oil operation	Part no.	Z010 330		Z010 331		Z010 332		Z010 333		
Rated heating output										
Boiler with Vitotrans 300										
- gas operation	kW	98.7	131.4	164.3	219.0	295.6	383.3	478.7	608.9	
- oil operation	kW	95.8	127.8	159.8	213.0	287.5	372.7	466.4	593.5	
CE designation										
CE-0085BS0287										
Vitotrans 300 in conjunction with boiler as a condensing unit										
Pressure drop on the hot gas side										
Boiler with Vitotrans 300	Pa	125	145	185	285	280	410	385	505	
	mbar	1.25	1.45	1.85	2.85	2.80	4.10	3.85	5.05	
Total length										
Boiler with Vitotrans 300 without burner	mm	1990		2290		2570		2950		

Dimensions

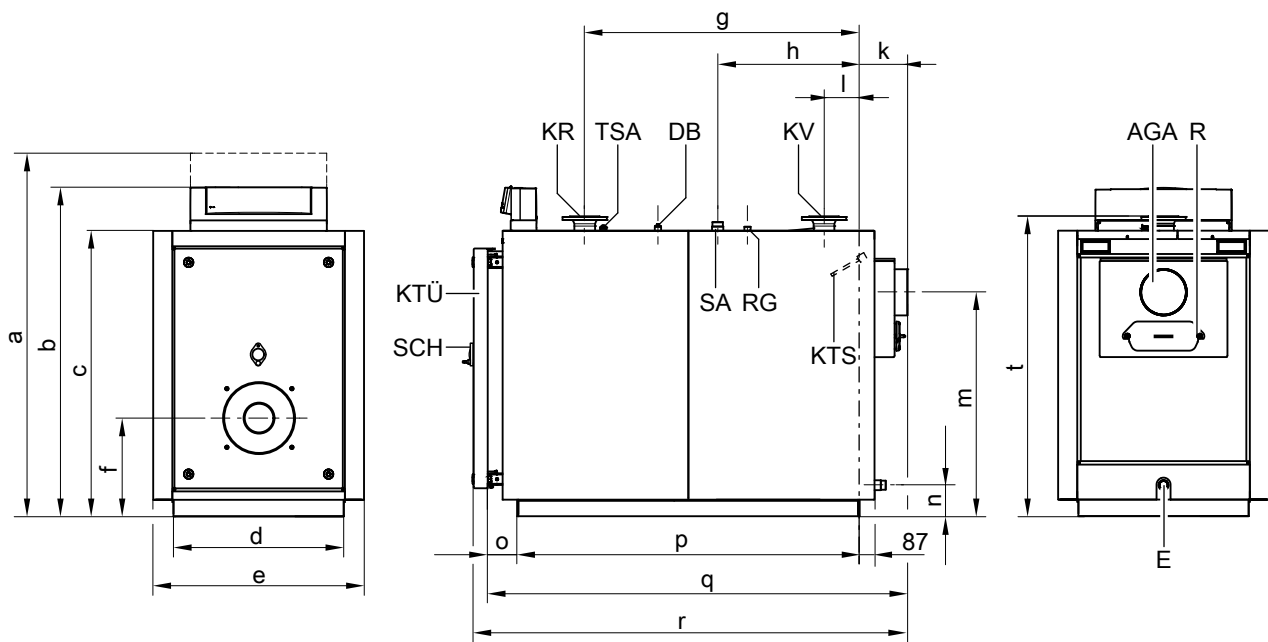


90 to 270 kW

AGA	Flue outlet	MA	Female connection R ½ for pressure gauge
E	Drain	R	Cleaning aperture
KR	Boiler return	SA	Safety connection (safety valve)
KTS	Boiler water temperature sensor	SCH	Inspection port
KTÜ	Boiler door	TSA	Female connection R ½ for Therm-Control temperature sensor
KV	Boiler flow		

*3 Standard values resulting from sound pressure level testing cannot be guaranteed, as sound pressure level tests are always dependent on the specific system. The data provided here refers to Viessmann Vitoflame 100 pressure-jet oil/gas Unit burners.

Boiler specification (cont.)



350 to 560 kW

AGA	Flue outlet	R	Cleaning aperture
DB	Female connection R ½ for maximum pressure limiter	RG	Female connection R ½ for additional control equipment
E	Drain	SA	Safety connection (safety valve)
KR	Boiler return	SCH	Inspection port
KTS	Boiler water temperature sensor	TSA	Female connection R ½ for Therm-Control temperature sensor
KTÜ	Boiler door		
KV	Boiler flow		

Dimensions

Rated heating output	kW	90	120	150	200	270	350	440	560
a	mm	1485	1485	1520	1520	1630	1630	1795	1795
b	mm	1315	1315	1350	1350	1460	1460	1625	1625
c	mm	1085	1085	1115	1115	1225	1225	1395	1395
d	mm	575	575	650	650	730	730	865	865
e	mm	755	755	825	825	905	905	1040	1040
f	mm	440	440	440	440	420	420	470	470
g	mm	622	825	811	1009	979	1179	1146	1292
h	mm	307	395	324	423	409	609	710	783
k	mm	203	203	203	203	203	203	224	224
l	mm	165	165	151	151	153	153	166	166
m	mm	860	860	885	885	960	960	1110	1110
n	mm	200	200	190	190	135	135	135	135
o	mm	110	110	110	110	130	130	130	130
p (length of base rails)	mm	882	1085	1071	1268	1269	1469	1471	1617
q (transport dimensions)	mm	1195	1400	1385	1580	1600	1800	1825	1970
r	mm	1260	1460	1445	1640	1660	1860	1885	2030
s	mm	1670	1875	1880	2075	2095	–	–	–
t	mm	1145	1145	1180	1180	1285	1285	1455	1455

Where access to the boiler room is difficult the boiler door can be removed.

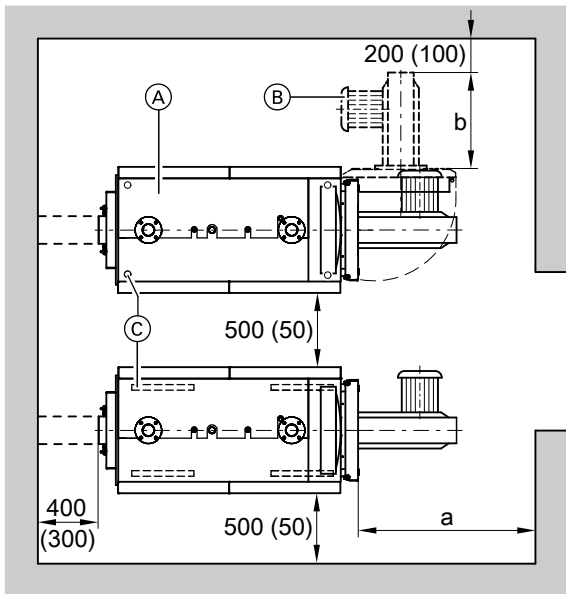
Dim. f: Observe the installed burner height.

Dim. q: Boiler door removed.

Boiler specification (cont.)

Siting

Minimum clearances



To enable convenient installation and maintenance, observe the stated clearance dimensions; where space is tight, only the minimum clearances (dimensions in brackets) need to be maintained. In the delivered condition, the boiler door opens to the left. The hinge pins can be repositioned so the door swings open to the right.

- (A) Boiler
- (B) Burner
- (C) Adjustable anti-vibration feet (90 to 560 kW) or anti-vibration boiler supports (350 to 560 kW)

Rated heating output	kW	90	120	150	200	270	350	440	560
a	mm		1100		1400			1600	

Dim. a: Maintain this space in front of the boiler to enable removal of the turbulators and cleaning of the hot gas flues.

Dim. b: Observe the installed burner length.

Siting conditions

- Prevent air contamination by halogenated hydrocarbons (e.g. as contained in sprays, paints, solvents and cleaning agents)
- Prevent very dusty conditions
- Prevent high levels of humidity
- Prevent 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.

Burner installation

Boilers up to 120 kW:

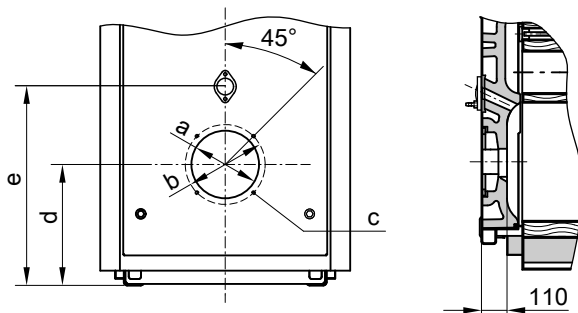
The burner fixing hole circle, burner fixing holes and flame tube aperture comply with EN 226.

Boilers from 150 kW:

The burner fixing hole circle, burner fixing holes and flame tube aperture are as detailed in the table below.

The burner may be mounted directly on the hinged boiler door. If the burner dimensions deviate from those stated in the table below, use the burner plate included in the standard delivery.

Burner plates may be factory fitted on request (chargeable option). If this is required, please state the burner make and type when ordering. The flame tube must protrude from the thermal insulation of the boiler door.

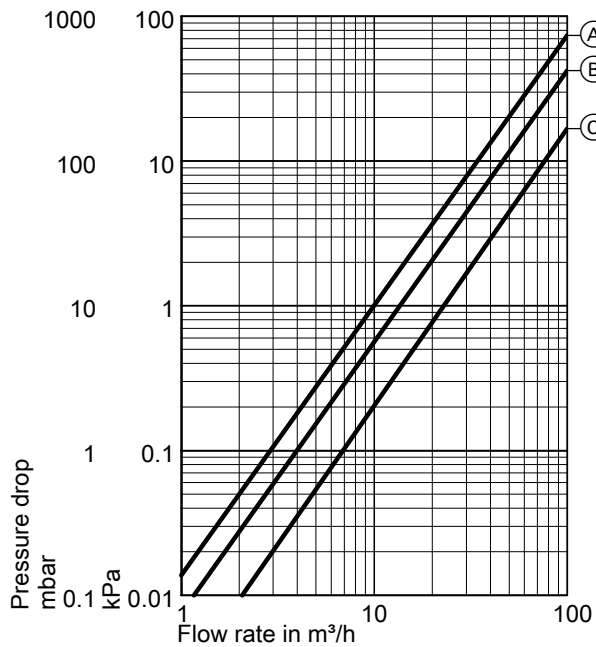


Rated heating output	kW	90	120	150	200	270	350	440	560
a	Ø mm	135	135	240	240	240	240	290	290
b	Ø mm	170	170	270	270	270	270	330	330
c	Number/thread	4/M 8	4/M 8	4/M 10	4/M 10	4/M 10	4/M 10	4/M 12	4/M 12

Boiler specification (cont.)

Rated heating output	kW	90	120	150	200	270	350	440	560
d	mm	440	440	440	440	420	420	470	470
e	mm	650	650	650	650	670	670	780	780

Pressure drop on the heating water side



The Vitoplex 200 is only suitable for fully pumped hot water heating systems.

- Ⓐ Rated heating output 90 to 270 kW
- Ⓑ Rated heating output 350 kW
- Ⓒ Rated heating output 440 and 560 kW

Vitotrans 300 specification

Specification

Vitotrans 300					
– Gas operation	Part no.	Z010 326	Z010 327	Z010 328	Z010 329
– Oil operation	Part no.	Z010 330	Z010 331	Z010 332	Z010 333
Rated boiler heating output	kW	90-125	140-200	230-350	380-560
Rated heating output range of the Vitotrans 300 for					
– Gas operation	from kW	8.7	12.7	21.8	33.3
	to kW	11.9	19.0	33.3	48.9
– Oil operation	from kW	5.8	8.8	14.9	22.9
	to kW	8.1	13.0	22.7	33.5
Permiss. operating pressure	bar	4	4	4	6
	MPa	0.4	0.4	0.4	0.6
Permiss. flow temperature (= safety temperature)	°C	110	110	110	110
Pressure drop on the hot gas side	mbar	0.65	0.85	1.00	1.05
	Pa	65	85	100	105
Flue gas temperature					
– Gas operation	°C	65	65	65	65
– Oil operation	°C	70	70	70	70
Flue gas mass flow rate	from kg/h	136	213	383	546
	to kg/h	213	341	596	954
Overall dimensions					
Total length (dimension h), incl. mating flanges	mm	666	777	856	967
Total width (dimension b)	mm	714	760	837	928
Total height (dimension c)	mm	1037	1152	1167	1350
Transport dimensions					
Length excl. mating flanges	mm	648	760	837	928
Width (dimension a)	mm	618	636	706	839
Height (dimension d)	mm	1081	1098	1172	1296
Heat exchanger weight	kg	94	119	144	234
Total weight	kg	125	150	188	284
Heat exchanger with thermal insulation					
Capacity					
Heating water	litre	70	97	134	181
Flue gas	m ³	0.055	0.096	0.133	0.223
Connections					
Heating water flow and return	DN	40	50	50	65
Condensate drain	R	½	½	½	½
Flue gas connection					
– To the boiler	DN	180	200	200	250
– To the flue system	DN	150	200	200	250

Rated heating output range of the Vitotrans 300 and flue gas temperature

Heating output of the Vitotrans 300 with flue gas of 200/65 °C for gas operation and 200/70 °C for oil operation, with a heating water temperature rise in the Vitotrans 300 from 40 °C to 42.5 °C.

For conversion to other temperatures, see chapter "Output data".

Pressure drop on the hot gas side

Pressure drop on the hot gas side at rated heating output. The burner must be able to overcome the hot gas pressure drop of the boiler, that of the Vitotrans 300 and that of the flue. Viessmann Vitoflame 100 burners are unsuitable for use with the Vitotrans 300.

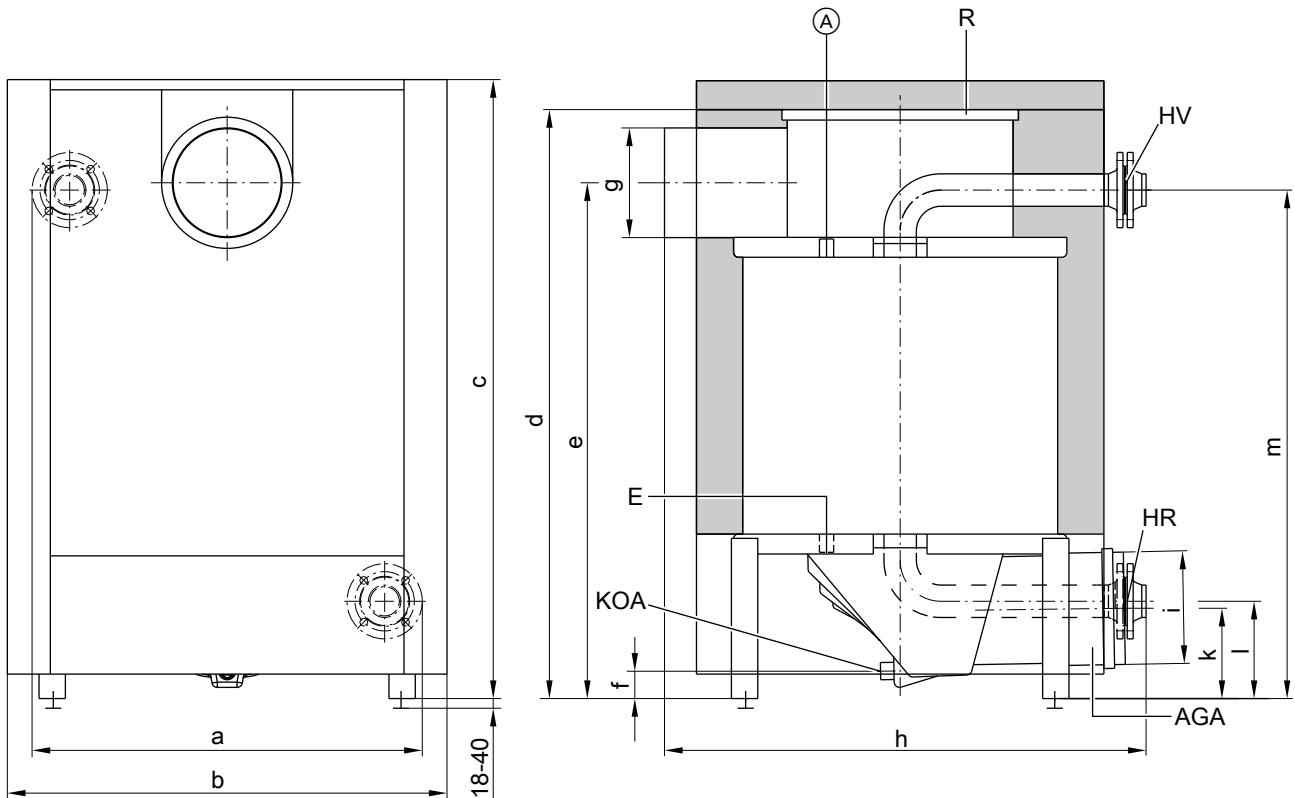
Tested quality



CE designation according to current EC Directives at a permissible flow temperature (safety temperature) of up to 110 °C to EN 12828.

Vitotrans 300 specification (cont.)

Dimensions



(A) Additional fem. connection R ½
 AGA Flue outlet
 E Drain R ½
 HR Heating water return (inlet)

HV Heating water flow (outlet)
 KOA Condensate drain Ø 32
 R Cleaning aperture

Dimensions

Part no.		Z010 326 Z010 330	Z010 327 Z010 331	Z010 328 Z010 332	Z010 329 Z010 333
a	mm	628	656	726	839
b	mm	714	746	818	912
c	mm	1022	1098	1151	1308
d	mm	965	1043	1096	1245
e	mm	851	907	960	1080
f	mm	73	53	51	88
g (internal)	Ø mm	181	201	201	251
h	mm	707	818	896	1015
i (internal)	Ø mm	151	201	201	251
k	mm	165	170	168	230
l	mm	170	172	181	232
m	mm	851	899	946	1075

Delivered condition

Heat exchanger body with fitted flue gas collector. Mating flanges are fitted to all connectors

1 box with thermal insulation

Connection on the flue gas side

Connect the boiler flue outlet and offset flue adaptor of the flue gas/water heat exchanger through a connection collar (accessories) (do not weld).

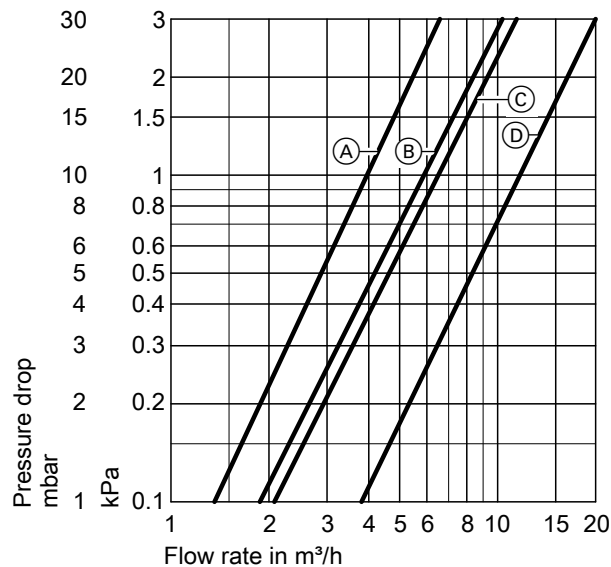
Height compensation:

- Vitoplex boiler through adjusting screws
- Vitorond boiler through on-site adaptor

Vitotrans 300 specification (cont.)

Pressure drop on the heating water side

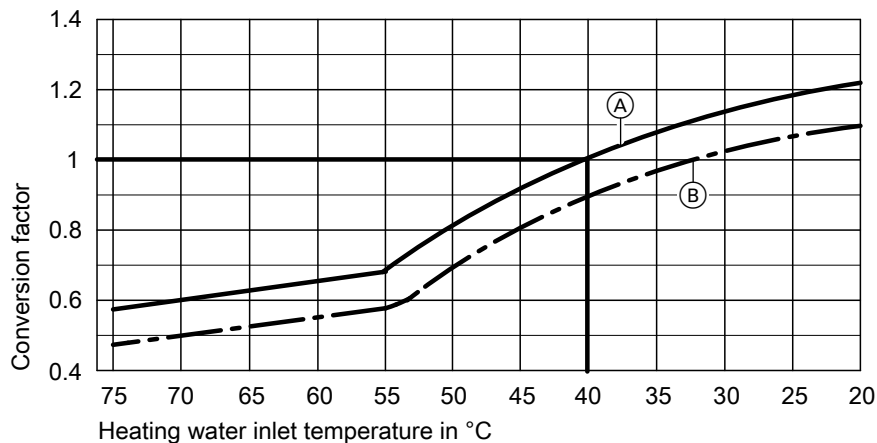
Part no. Z010 326 to Z010 333



Part no.	Curve
Z010 326	Ⓐ
Z010 330	Ⓐ
Z010 327	Ⓑ
Z010 331	Ⓑ
Z010 328	Ⓒ
Z010 332	Ⓒ
Z010 329	Ⓓ
Z010 333	Ⓓ

Output data

Vitotrans 300 for gas operation



- Ⓐ Flue gas inlet temperature 200 °C
- Ⓑ Flue gas inlet temperature 180 °C

Conversion of the output data

The heating output data of the Vitotrans 300 flue gas/water heat exchanger refers to a flue gas inlet temperature of 200 °C and a heating water inlet temperature into the heat exchanger of 40 °C.

For different conditions the heating output can be calculated by multiplying the specified rated heating output by the conversion factor established from the diagram.

Boiler delivered condition

Boiler body with fitted boiler door and cleaning cover.
Mating flanges are fitted to all connectors.
Adjusting screws are supplied in the combustion chamber.
Cleaning equipment can be found on top of the boiler.

- 2 boxes with thermal insulation
- 1 box with boiler control unit and 1 bag with technical documentation
- 1 Therm-Control

Boiler delivered condition (cont.)

- 1 product pack (Vitoplex 200 coding card and technical documentation)
- 1 burner plate (from 150 kW)
- Vitoplex 200, 90 to 270 kW:
Vitoflame 100 pressure-jet oil or gas burner, depending on order.
- Vitoplex 200, 350 to 560 kW:
Suitable pressure-jet oil/gas burners are available from Weishaupt or ELCO and should be ordered separately (see pricelist). Delivery directly from Weishaupt or ELCO.

Control unit versions

For single boiler systems:

- **Vitotronic 100** (type GC1B)
Boiler control unit for constant boiler water temperature
- **Vitotronic 200** (type GW1B)
Weather-compensated boiler control unit
- **Vitotronic 300** (type GW2B)
Weather-compensated boiler and heating circuit control unit for up to 2 heating circuits with mixers
- **Vitotronic 200-H** (type HK1B or HK3B)
Weather-compensated heating circuit control unit for 1 or up to 3 heating circuits with mixers
- **Vitocontrol control panel**

For multi boiler systems (up to 4 boilers):

- **Vitotronic 100** (type GC1B) and **LON module** with **Vitotronic 300-K** (type MW1B)
For weather-compensated cascade control of up to 4 boilers and control of up to 2 heating circuits with mixers.
(The first boiler is delivered with the standard control equipment for the multi boiler system.)
- **Vitotronic 100** (type GC1B) and **LON module** for every additional boiler in the multi boiler system
- **Vitotronic 200-H** and **LON module** (type HK1B or HK3B) for 1 or up to 3 heating circuits with mixers
- **Vitocontrol control panel**

Boiler accessories

See pricelist and "Boiler accessories" datasheet.

Operating conditions with Vitotronic boiler control units

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

Operation with burner load	Requirements	
	≥ 60 %	< 60 %
1. Heating water flow rate	None	
2. Boiler return temperature (minimum value)*4	None*5	
3. Lower boiler water temperature	– Oil operation 50 °C – Gas operation 60 °C	– Oil operation 60 °C – Gas operation 65 °C
4. Two-stage burner operation	Stage 1: 60 % of rated heating output	No minimum load required
5. Modulating burner operation	Between 60 and 100 % of rated heating output	No minimum load required
6. Reduced mode	Single boiler systems and lead boiler of multi boiler systems – Operation with lower boiler water temperature Lag boilers of multi boiler systems – Can be shut down	
7. Weekend setback	As per reduced mode	

Design/engineering information

Mounting a suitable burner

The burner must be suitable for the relevant 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.

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 2009/142/EC.

Burner adjustment

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

*4 The technical guide "System examples" contains relevant sample systems for use of the Therm-Control start-up system.

*5 No requirements; only in conjunction with Therm-Control.

Design/engineering information (cont.)

Low water indicator

A low water indicator to EN 12828 is not required for Vitoplex 200 boilers up to 300 kW (except in attic heating centres), provided the standard boiler control unit is fitted in accordance with the installation instructions.

In the event of a water shortage due to a leak in the heating system and simultaneous burner operation, the control unit will automatically shut down the burner before the boiler and/or flue system reach impermissible high temperatures.

Permissible flow temperatures

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

Up to 110 °C

■ CE designation:

CE-0085 (90 to 350 kW) compliant with Efficiency Directive and
CE-0085 compliant with the Gas Appliances Directive

Above 110 °C (up to 120 °C) (with individual test certification on request)

■ CE designation:

CE-0035 in compliance with the Pressure Equipment Directive
For operation with safety temperatures in excess of 110 °C additional safety equipment is required.

Boilers with a safety temperature **above 110 °C** require supervision, according to the Health & Safety at Work Act [Germany]. In accordance with the conformity assessment diagram no. 5 of the EU Pressure Equipment Directive, these boilers must be classed as category III.

The system must be tested prior to commissioning.

- Annually: External inspection, inspection of the safety equipment and water quality.
- Every 3 years: Internal inspection (or water pressure test as an alternative).
- Every 9 years: Water pressure test (for max. test pressure see type plate).

An approved inspection body (e.g. TÜV [in Germany]) must carry out the test.

For further information on design/engineering

See the technical guide to this boiler.

Tested quality



CE designation according to current EC directives.



ÖVGW Quality Mark pursuant to quality symbol regulation 1942 DRGBI. I for gas and water equipment.



Subject to technical modifications.

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