VIESMANN

VITOCROSSAL 300

Gas condensing boiler
187 to 635 kW

Datasheet

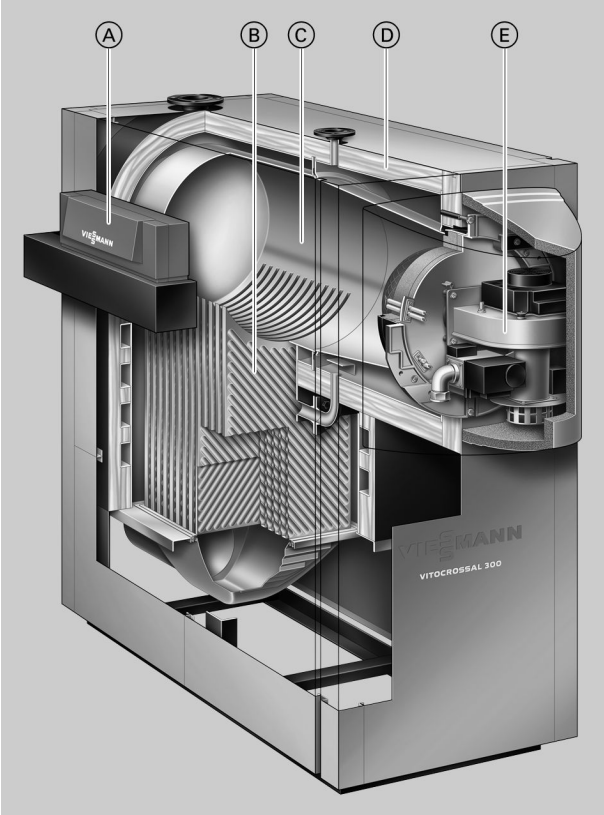
Part no. and prices: see pricelist

VITOCROSSAL 300 Type CT3B

Gas condensing boiler for natural gas E, LL and LPG
With modulating MatriX radiant burner up to 314 kW (natural gas E and LL)

Benefits at a glance

- Standard seasonal efficiency [to DIN]: up to 98 % (H_s) [gross cv] / 109 % (H_i) [net cv].
- The stainless steel, corrosion-resistant Inox-Crossal heat exchanger ensures high operational reliability and a long service life.
- Inox-Crossal heat exchanger for highly effective heat transfer and condensation rate.
- Self-cleaning effect through smooth stainless steel surface.
- Clean combustion through low combustion chamber loading and straight-through design.
- With MatriX radiant burner up to 314 kW for particularly economical and environmentally responsible operation, with a modulation range from 30 to 100 %.
- Alternatively with ELCO or Weishaupt pressure-jet gas burner.
- Two return connectors for hydraulic connection optimised for condensing technology.
- Vitotronic control unit that is easy to operate with plain text and graphic display.



Ⓐ Vitotronic control unit
Ⓑ Stainless steel Inox-Crossal heat exchanger
Ⓒ Water-cooled stainless steel combustion chamber
Ⓓ Highly effective thermal insulation
Ⓔ Modulating MatriX radiant burner

5614 838 GB

Boiler specification

Specification

Rated heating output							
T_V/T_R = 40/30 °C	**kW**	**187**	**248**	**314**	**408**	**508**	**635**
T_V/T_R = 80/60 °C	**kW**	**170**	**225**	**285**	**370**	**460**	**575**
Rated heat input	kW	177	234.5	297	385.5	479	599
Product ID		CE-0085AQ0257					
Permiss. operating temperature	°C	100	100	100	100	100	100
Permiss. flow temperature (= safety temperature)	°C	110	110	110	110	110	110
Max. permiss. operating pressure	bar	4	4	4	5.5	5.5	5.5
Min. permiss. operating pressure[*1]	bar	0.5	0.5	0.5	0.5	0.5	0.5
Pressure drop on hot gas side	Pa	100	140	160	200	220	270
	mbar	1.0	1.4	1.6	2.0	2.2	2.7
Boiler body dimensions							
Length c +d (excl. boiler door)	mm	1650	1728	1783	1823	1901	2057
Width t	mm	684	684	684	800	800	800
Height n (incl. connectors)	mm	1745	1794	1794	2012	2012	2012
Overall dimensions							
Total length b	mm	1636	1714	1795	1871	1949	2105
Total length a (incl. MatriX burner)	mm	1889	1967	2045	—	—	—
Total width q	mm	988	988	988	1104	1104	1104
Total height p	mm	1959	2009	2032	2290	2290	2290
Width u (incl. thermal insulation)	mm	821	821	821	937	937	937
Foundations							
Length	mm	1350	1450	1500	1600	1650	1800
Width	mm	800	800	800	900	900	900
Height	mm	100	100	100	100	100	100
Weight							
– Boiler body	kg	445	490	510	740	780	890
– Removable combustion chamber without boiler door	kg	96	96	96	124	124	124
Total weight Boiler with thermal insulation and boiler control unit	kg	608	660	683	937	982	1098
Capacity boiler water	l	240	265	300	460	500	540
Boiler connections							
Boiler flow	PN 6 DN	65	65	80	100	100	100
Boiler return 1[*2]	PN 6 DN	65	65	80	100	100	100
Boiler return 2[*2]	PN 6 DN	50	50	50	80	80	80
Safety connection (safety valve)	R	1¼	1¼	1¼	1¼	1½	1½
Drain	R	1	1	1	1	1	1
Condensate drain	R	½	½	½	½	½	½
Flue gas parameters[*3]							
Temperature (at 30 °C return temperature)							
– at rated heating output	°C	45	45	45	45	45	45
– at partial load	°C	40	40	40	40	40	40
Temperature (at 60 °C return temperature)	°C	75	75	75	75	75	75
Mass flow rate (for natural gas)							
– at rated heating output	kg/h	269	357	452	586	727	909
– at partial load	kg/h	81	107	136	176	218	272
Available draught	Pa	70	70	70	70	70	70
at the flue outlet	mbar	0.7	0.7	0.7	0.7	0.7	0.7
Flue gas connection	∅ mm	200	200	200	250	250	250
Standard seasonal efficiency [to DIN]							
at heating system temp. 40/30 °C	%	up to 98 (H_s) [gross cv] /109 (H_i) [net cv]					
at heating system temp. 75/60 °C	%	up to 95 (H_s) [gross cv] /106 (H_i) [net cv]					
Standby loss $q_{B,70}$	%	0.40	0.30	0.30	0.30	0.28	0.25

*[*1] For safe operation, a minimum operating pressure of 0.5 bar is essential. For this, a minimum pressure switch can be used.*

*[*2] When connecting 2 heating circuits, connect the heating circuit with the lowest temperature level to boiler return 1.*

*[*3] Values for sizing the flue system to EN 13384, based on 10 % CO_2 for natural gas*

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

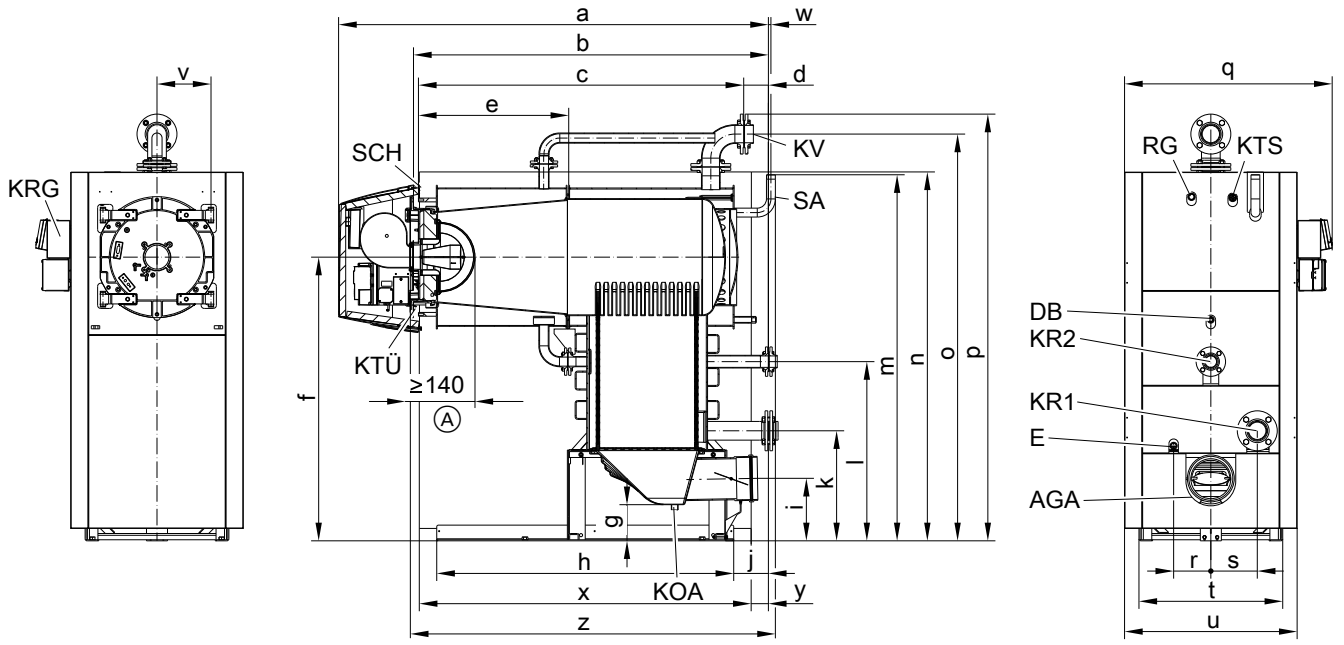
The details for partial load refer to 30 % of the rated heating output. Calculate the flue gas mass flow rate accordingly when the partial load differs from that stated above (subject to burner operating mode).

Boiler specification (cont.)

Note

The available draught is achieved at the flue outlet with the MatriX radiant burner from our product range (up to 314 kW), with pressure-jet gas burners (from Weishaupt or ELCO) and many other pressure-jet gas burners.

For alternative draughts, refer to the relevant burner manufacturer. If using the Vitocrossal 300 with moisture-resistant chimneys, the draught must be no more than 0 Pa.



Ⓐ To safeguard perfect function, maintain the required minimum blast tube length.
AGA Flue outlet
DB R ½ female connection for pressure limiter
E Drain
KOA Condensate drain
KR 1 Boiler return 1
KR 2 Boiler return 2
KTS Boiler water temperature sensor
KTÜ Boiler door with burner connection flange
KRG Vitotronic control unit
KV Boiler flow
RG R ¾ female connection for additional control equipment
SA Safety connection (safety valve)
SCH Inspection port (boiler with 187 to 314 kW: 90° offset)

Dimensions

Rated heating output	kW	187	248	314	408	508	635
a	mm	1889	1967	2045	—	—	—
b	mm	1636	1714	1795	1871	1949	2105
c	mm	1509	1587	1665	1743	1821	1977
d	mm	141	141	118	80	80	80
e	mm	715	715	715	751	751	751
f	mm	1299	1349	1349	1500	1500	1500
g	mm	194	194	194	190	190	190
h (length of the base rails)	mm	1257	1335	1413	1488	1566	1722
i	mm	298	298	298	325	325	325
j	mm	165	165	165	168	168	168
k	mm	518	518	523	577	577	577
l	mm	802	852	852	921	921	921
m	mm	1704	1755	1755	1962	1962	1962
n (transport dimension)	mm	1745	1794	1794	2012	2012	2012
o	mm	1879	1928	1935	2185	2185	2185
p	mm	1959	2009	2032	2290	2290	2290
q	mm	988	988	988	1104	1104	1104
r	mm	177	177	177	200	200	200
s	mm	227	227	221	221	241	241
t (transport dimension)	mm	684	684	684	800	800	800
u	mm	821	821	821	937	937	937
v	mm	257	257	257	284	284	284
w	mm	12	12	12	25	25	25
x	mm	1423	1501	1579	1654	1732	1888
y	mm	82	82	82	85	85	85
z (transport dimension)	mm	1600	1678	1756	1850	1928	2084

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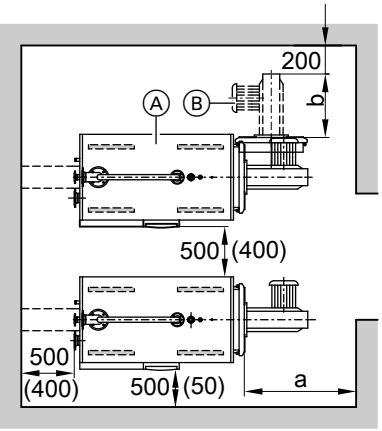
Boiler specification (cont.)

The boiler door can be removed where access to the boiler room is difficult. If this is not sufficient, the boiler front panel can be delivered separately (please state when ordering).

Siting

Minimum clearances



To enable convenient installation and maintenance, observe the stated clearance dimensions; maintain the minimum clearances where space is tight (dimensions in brackets). In the delivered condition, the boiler door opens to the right. You can reposition the hinge pins so that the door opens to the left.

Ⓐ Boiler
Ⓑ Burner

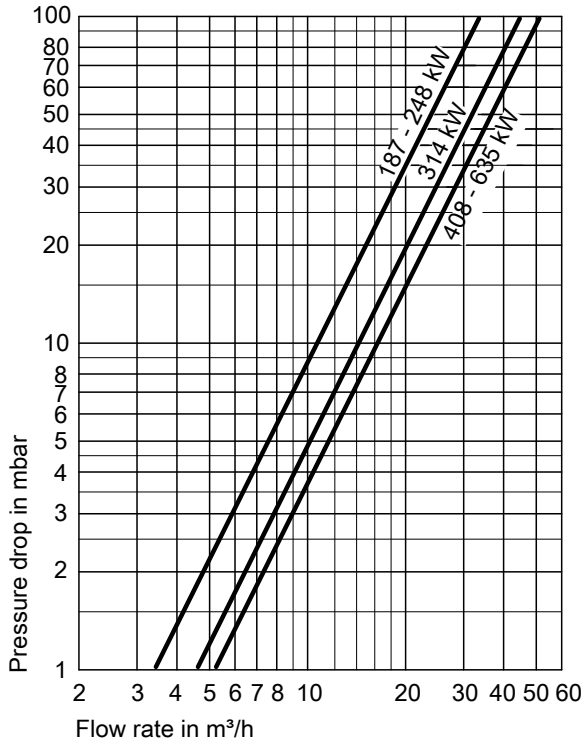
Rated heating output	kW	187	248	314	408	508	635
a	mm	930	1000	1100	1500	1500	1500
b		Installed burner length					

Siting
- Avoid air contamination by halogenated hydrocarbons (e.g. as contained in sprays, paints, solvents and cleaning agents)
- Avoid very dusty conditions
- Avoid high levels of humidity
- Free from frost and well ventilated

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.

Boiler specification (cont.)

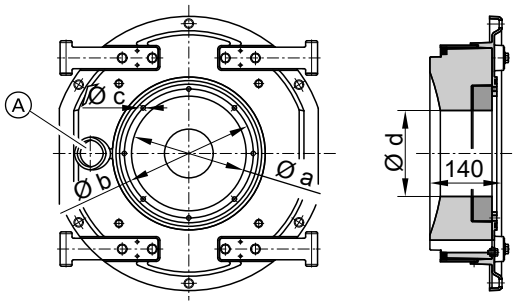
Pressure drop on the heating water side



The Vitocrossal 300 is only suitable for fully pumped hot water heating systems.

Burner installation

(MatriX radiant burner, see page 7)



The hole circle of burner fixing holes and the blast tube aperture match the dimensions of many well known burner makes.
If the dimensions vary from the standard supplied, first drill the burner fixing holes into the burner plate and then cut out the blast tube aperture, before mounting the burner plate on the boiler door.
Burner plates may be factory-fitted on request (chargeable option). For this, please state the burner make and type when ordering.
The blast tube must protrude through the thermal insulation on the boiler door.

Ⓐ Sight glass for 408 to 635 kW with 90° offset (central vertical)

Rated heating output	kW	187	248	314	408	508	635
a	Ø mm	240	240	240	290	290	290
b	Ø mm	270	270	270	330	330	330
c	Thread	M 10	M 10	M 10	M 12	M 12	M 12
d	Ø mm	123	123	123	196	196	196

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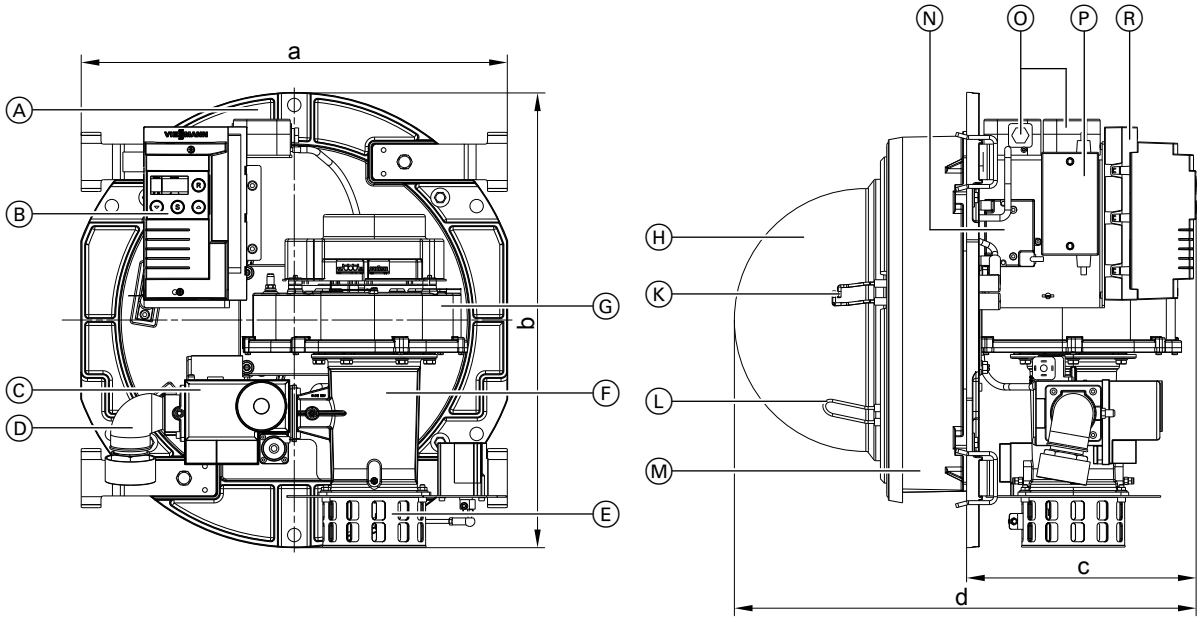
Specification – MatriX radiant burner

Specification for use in conjunction with a Vitocrossal 300 (type CT3B)

Rated boiler heating output (at T_V/T_R 40/30 °C)	kW	187	248	314
Burner heating output, lower/upper*4	kW	43/177	77/234	98/296
Burner type		VM III-4	VM III-5	VM III-6
Product ID		CE-0085 BL 0403		
Voltage	V	230	230	230
Frequency	Hz	50	50	50
Power consumption				
at upper heating output	W	225	335	385
at lower heating output	W	35	40	55
Version		Modulating		
Dimensions				
Length c	mm	290	290	290
Total length d	mm	585	585	585
Width a	mm	540	540	540
Height b	mm	576	576	576
Weight	kg	43.5	45	47
Burner with combination valve and burner hood				
Gas supply pressure	mbar	20	20	20
Gas connection	R	1	1¼	1¼
Connection values relative to the max. load with				
– Natural gas E	m^3/h	4.5–18.7	8.2–24.8	10.3–31.3
– Natural gas LL	m^3/h	5.3–21.8	9.5–28.8	12.0–36.4
NO_x category (to EN 676)		3	3	3



Ⓐ Boiler door
Ⓑ Display and programming unit
Ⓒ Gas train
Ⓓ Gas supply pipe
Ⓔ Rotary damper with servomotor
Ⓕ Venturi mixing pipe
Ⓖ Fan
Ⓗ Burner gauze assembly
Ⓚ Ignition electrode
Ⓛ Ionisation electrode
Ⓜ Thermal insulation block
Ⓝ Ignition unit
Ⓞ Air pressure switch
Ⓟ Suppressor choke box
Ⓡ Burner control unit

Delivered condition

Boiler body with fitted cleaning cover, fitted mating flanges with gaskets at all connectors, fitted protective crate and flue gas collector.

For delivery of a MatriX radiant burner (up to 314 kW) the boiler door is fitted to the MatriX radiant burner; from 408 kW the boiler door is fitted to the boiler body.

**4 Corresponds to the rated heat input of the boiler.*

Delivered condition (cont.)

Where access to the boiler room is difficult, the Vitocrossal 300 may also be delivered in sections. The front panel of the combustion chamber can be removed on site, taken into the installation room separately and refitted.

1 or 2 boxes with thermal insulation
1 box with MatriX radiant burner and burner hood (up to 314 kW)
1 box with boiler control unit and 1 bag with technical documentation
1 connection line on the water side secured to the boiler plinth (from 408 kW)
1 burner plate pack (only for delivery without MatriX radiant burner)

Suitable pressure-jet gas burners (from 187 kW) are available from Weishaupt or ELCO and should be ordered separately (see pricelist).
Delivery by the burner manufacturer. The use of burners from other manufacturers is possible.

Control unit versions

For single boiler systems:

- Without Vitocontrol control panel
  Vitotronic 100 (type GC1B)
  For operation with a constant boiler water temperature or for weather-compensated operation in conjunction with a control panel (see below) or an external control unit.
  Vitotronic 200 (type GW1B)
  For modulating boiler water temperature without mixer control
  Vitotronic 300 (type GW2B)
  For modulating boiler water temperature with mixer control, for up to 2 heating circuits with mixer
- With Vitocontrol control panel
  Vitotronic 100 (type GC1B)
  and
  Vitocontrol control panel with Vitotronic 300-K (type MW1B) for weather-compensated operation and mixer control for up to 2 heating circuits with mixer and additional Vitotronic 200-H, type HK1B or HK3B for 1 or up to 3 heating circuits with mixer
  or
  Control panel with external control unit (on site)

For multi boiler systems:
(up to 4 boilers)

- Without Vitocontrol control panel
  Vitotronic 100 (type GC1B) **and LON module in conjunction with Vitotronic 300-K** (type MW1B)
  For modulating boiler water temperature (one boiler is supplied with the standard control equipment for a multi boiler system)
  and
  Vitotronic 100 (type GC1B) **and LON module** for modulating boiler water temperature
  for each additional boiler in a multi boiler system
- With Vitocontrol control panel
  Vitotronic 100 (type GC1B) **and LON module**
  For modulating boiler water temperature for each boiler in a multi boiler system
  and
  Vitocontrol control panel with Vitotronic 300-K (type MW1B) for multi boiler systems, weather-compensated operation and mixer control for up to 2 heating circuits with mixer and additional Vitotronic 200-H, type HK1B or HK3B for 1 or up to 3 heating circuits with mixer
  or
  Control panel with external control unit (on site)

Boiler accessories

See pricelist and "Boiler accessories" datasheet.

Operating conditions

Operating conditions with Vitotronic boiler control units

For water quality requirements, see the technical guide "Standard values for water quality"

		Requirements
1.	Heating water flow rate	None
2.	Boiler return temperature (minimum value)	None
3.	Lower boiler water temperature	None
4.	Two-stage burner operation	None
5.	Modulating burner operation	None
6.	Reduced mode	None – total reduction is possible
7.	Weekend setback	None – total reduction is possible

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Design information

Installation for open flue operation

(B_{23})
For open flue combustion equipment with a total rated output in excess of 50 kW, the fresh ventilation is deemed to have been verified if the combustion equipment is located in areas which provide an aperture or duct leading outdoors.
The cross-section of the aperture must be at least 150 cm^2 and must be 2 cm^2 larger for each additional kW above 50 kW rated output.

Pipes must be sized to provide equivalent flow rates. The required cross-section may be split over a maximum of two apertures or pipes.

Neutralisation

During condensation an acidic condensate with a pH value of between 3 and 4 is produced. This condensate can be neutralised by processing it through a neutralising system.

For further information, see the technical guide and "Boiler accessories" datasheet.

Installation of 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.

The blast tube must have a minimum length of 140 mm (see page 4).
The burner must be tested to EN 676 and be identified with the CE designation in accordance with Directive 90/396/EEC.

Burner adjustment

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

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.

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VIESMANN

VITOCROSSAL 300

Gas condensing boiler
787 to 1400 kW

Datasheet

Part no. and prices: see pricelist

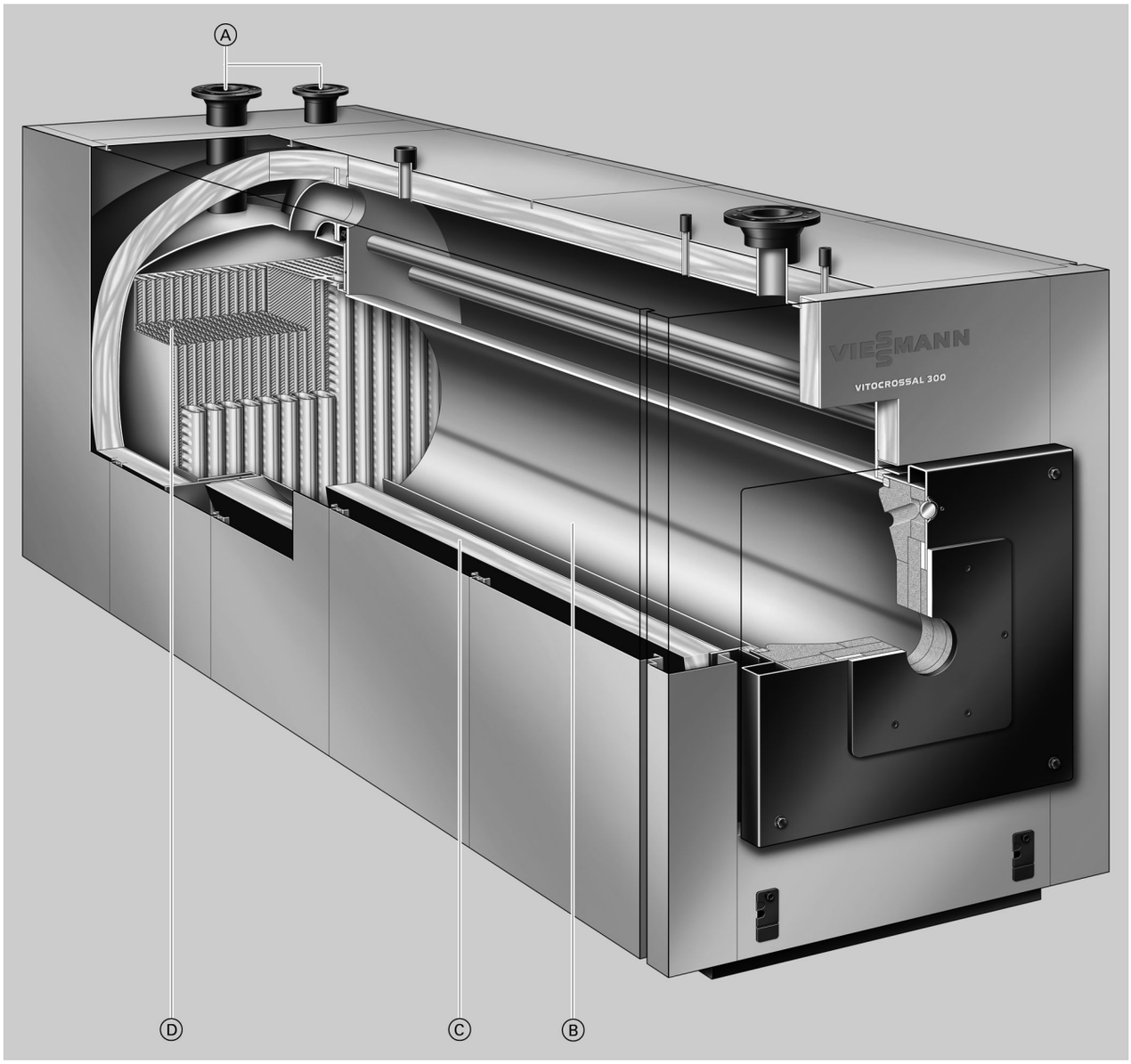
VITOCROSSAL 300 Type CR3B

Gas condensing boiler for natural gas E, LL and LPG

5606 748 GB 9/2011

Benefits at a glance

- Standard seasonal efficiency [to DIN]: up to 98 % (H_s) [gross cv] / 109 % (H_i) [net cv].
- The stainless steel, corrosion-resistant Inox-Crossal heat exchanger ensures high operational reliability and a long service life.
- Inox-Crossal heat exchanger for highly effective heat transfer and condensation rate.
- Self-cleaning effect through smooth stainless steel surface.
- Clean combustion through low combustion chamber loading and straight-through design.
- As Unit version with Elco or Weishaupt pressure-jet gas burner.
- Split version for easy handling.
- Two return connectors for hydraulic connection optimised for condensing technology.
- Easy-to-use Vitotronic control unit with plain text and graphic display.



Ⓐ Two return connectors
Ⓑ Stainless steel combustion chamber
Ⓒ Highly effective thermal insulation
Ⓓ Inox-Crossal heat exchanger made from stainless steel

5606 748 GB

Specification

Specification

Rated heating output					
T_V/T_R = 50/30 °C	**kW**	**787**	**978**	**1100**	**1400**
T_V/T_R = 80/60 °C	**kW**	**720**	**895**	**1006**	**1280**
Rated heat input	kW	742	923	1038	1320
Product ID		CE-0085AU0315			
Permiss. operating temperature	°C	100	100	100	100
Permissible flow temperature (= safety temperature)	°C	110	110	110	110
Permiss. operating pressure	bar	6	6	6	6
Pressure drop on the hot gas side	Pa	420	420	460	480
	mbar	4.2	4.2	4.6	4.8
Boiler body dimensions					
Length b	mm	2894	3094	3193	3543
Width c	mm	960	960	1200	1200
Height (incl. connectors)	mm	1676	1676	1676	1676
Module dimensions					
Length of the combustion chamber module g	mm	1938	2138	2237	2587
Length of the heat exchanger module o	mm	1198	1198	1216	1216
Overall dimensions					
Total length a	mm	3021	3221	3338	3688
Overall width of thermal insulation	mm	1114	1114	1296	1296
Total width incl. control unit f	mm	1281	1281	1463	1463
Total height	mm	1550	1550	1550	1550
Foundations					
Length	mm	3100	3350	3450	3900
Width	mm	1200	1200	1350	1350
Weight					
– Combustion chamber module	kg	780	845	1060	1160
– Heat exchanger module	kg	615	615	720	810
Total weight Boiler with thermal insulation and boiler control unit	kg	1553	1635	1980	2185
Content boiler water	l	1407	1552	1558	1833
Boiler connections					
Boiler flow	PN 6 DN	100	100	125	125
Boiler return 1 *1	PN 6 DN	100	100	125	125
Boiler return 2 *1	PN 6 DN	100	100	100	100
Safety connection	R	2	2	2	2
Drain	R	1¼	1¼	1¼	1¼
Condensate drain	R	½	½	½	½
Flue gas parameters *2					
Temperature (at return temp. 30 °C)					
– At rated heating output	°C	40	40	40	40
– At partial load	°C	30	30	30	30
Temperature (at return temperature 60 °C)	°C	70	70	70	70
Mass flow rate (for natural gas)					
– At rated heating output	kg/h	1140	1415	1640	2025
– At partial load	kg/h	340	425	490	605
Available draught	Pa	70	70	70	70
to the flue outlet *3	mbar	0.7	0.7	0.7	0.7
Flue gas connection	∅ mm	300	300	350	350
Standard seasonal efficiency [to DIN] for heating system temperature 40/30 °C	%	Up to 98 (H_s) [gross cv] / 109 (H_i) [net cv]			

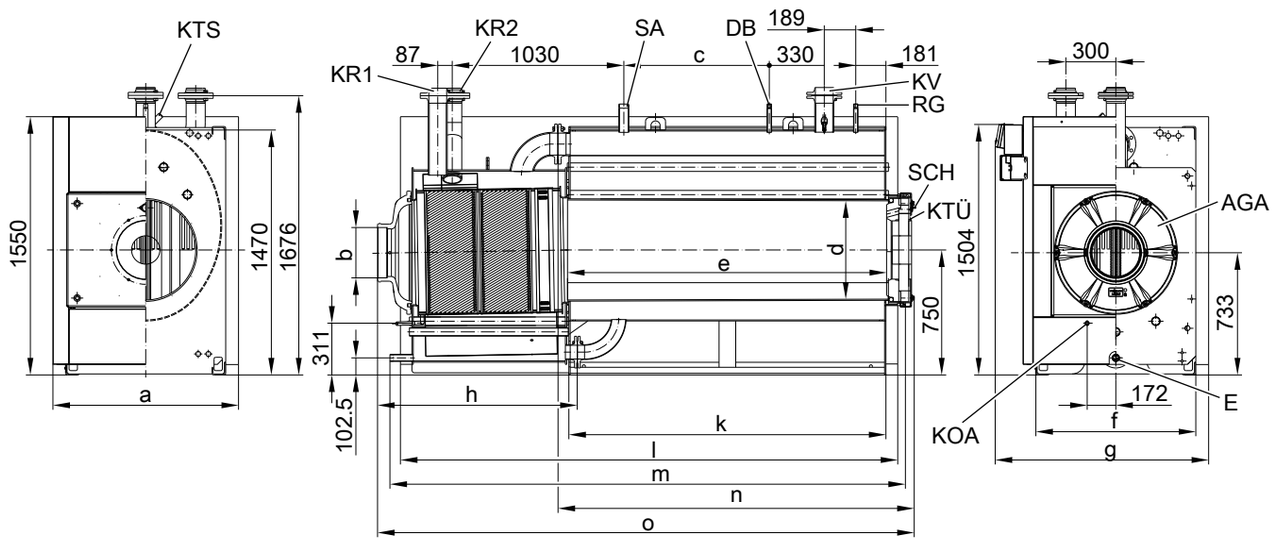
*1 *When connecting 2 heating circuits, connect the heating circuit with the lowest temperature level to boiler return 1.*

*2 *Values for calculating the size of the flue system to EN 13384, based on 10 % CO_2 for natural gas.*
Flue gas temperatures measured as gross values at 20 °C combustion air temperature.
The details for partial load refer to 30 % of the rated heating output. Calculate the flue gas mass flow rate accordingly when the partial load differs from that stated above (subject to burner operating mode).

*3 *The available draughts are achieved with the pressure-jet gas burners (from Weishaupt or Elco) in our product range and with many other pressure-jet gas burners.*
For alternative draughts, refer to the relevant burner manufacturer. When using the Vitocrossal 300 with moisture-resistant stacks, the draught may be max. 0 Pa.

Specification (cont.)

Rated heating output					
T_V/T_R = 50/30 °C	**kW**	**787**	**978**	**1100**	**1400**
T_V/T_R = 80/60 °C	**kW**	**720**	**895**	**1006**	**1280**
75/60 °C	%	Up to 95 (H_s) [gross cv] / 106 (H_i) [net cv]			
Standby loss $q_{B,70}$	%	0.25	0.25	0.25	0.25



AGA Flue outlet
DB Female connection Rp ½ for pressure limiter
E Drain R 1¼
KOA Condensate drain R ½
KR 1 Boiler return 1
KR 2 Boiler return 2
KTS Boiler water temperature sensor Rp ¾
KTÜ Boiler door
KV Boiler flow
RG Female connection Rp ½ for additional control equipment
SA Safety connection R 2
SCH Inspection port

Dimensions

Rated heating output	**kW**	**787**	**978**	**1100**	**1400**
a	mm	1114	1114	1296	1296
b	mm	302	302	352	352
c	mm	673	873	972	1322
d	mm	590	590	669	669
e	mm	1726	1926	2025	2375
f	mm	960	960	1200	1200
g	mm	1281	1281	1463	1463
h	mm	1198	1198	1216	1216
k	mm	1703	1903	2002	2352
l	mm	2785	2985	3085	3435
m	mm	2894	3094	3193	3543
n	mm	1938	2138	2237	2587
o	mm	3021	3221	3338	3688

Where access to the boiler room is difficult, remove the boiler door and the flue gas header cover.

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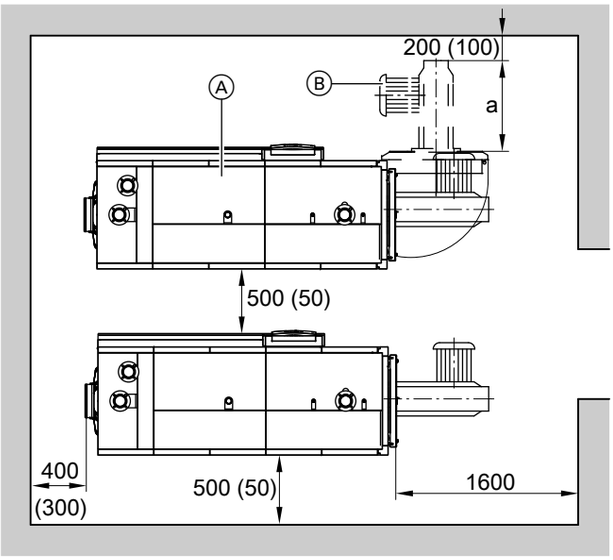
Specification (cont.)

Siting

Minimum clearances



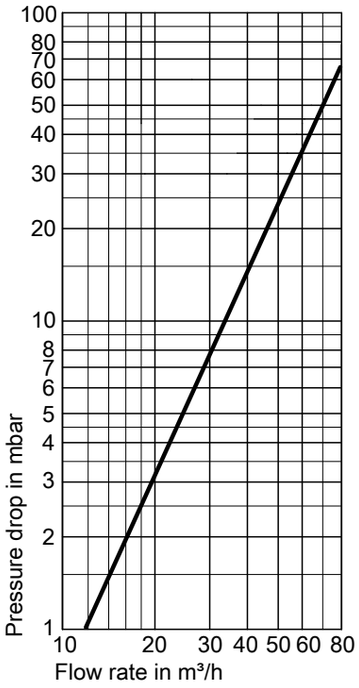
Dim. a: Installed burner length
Ⓐ Boiler
Ⓑ Burner

To enable convenient installation and maintenance, observe the stated clearance dimensions; maintain the minimum clearances where space is tight (dimensions in brackets). In the delivered condition, the boiler door opens to the right. You can reposition the hinge pins so that the door opens to the left.

Siting
- Avoid air contamination by halogenated hydrocarbons (e.g. as in sprays, paints, solvents and cleaning agents)
- Avoid very dusty conditions
- Avoid 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.

Pressure drop on the heating water side



The Vitocrossal 300 is only suitable for fully pumped hot water heating systems.

5606 748 GB

Delivered condition

Standard delivery:
- Boiler body with thermal insulation
  (Combustion chamber and heat exchanger module are only supplied separately.)
- Boiler control unit, fully wired
- Boiler door with burner plate
- Mating flanges with screws and gaskets
- Connection for safety equipment – no additional intermediate flow piece required

Suitable pressure-jet gas burners are available from Weishaupt or ELCO and should be ordered separately (see pricelist).
Delivery by the burner manufacturer. The use of burners from other manufacturers is possible.

Control unit versions

For single boiler systems:
- Without Vitocontrol control panel
  Vitotronic 100 (type GC1B)
  For operation with a constant boiler water temperature or for weather-compensated operation in conjunction with a control panel (see below) or an external control unit.
  Vitotronic 200 (type GW1B)
  For modulating boiler water temperature
  Without mixer control
  Vitotronic 300 (type GW2B)
  For modulating boiler water temperature
  With mixer control for up to 2 heating circuits with mixer
- With Vitocontrol control panel
  Vitotronic 100 (type GC1B)
  and
  Vitocontrol control panel with Vitotronic 300-K (type MW1B) for weather-compensated operation and mixer control for up to 2 heating circuits with mixer and additional Vitotronic 200-H, type HK1B or HK3B for 1 or up to 3 heating circuits with mixer
  or
  Control panel with external control unit (on site)

For multi boiler systems:
(up to 4 boilers)
- Without Vitocontrol control panel
  Vitotronic 100 (type GC1B) **and LON module in conjunction with a Vitotronic 300-K** (type MW1B)
  for modulating boiler water temperature (one boiler is supplied with the standard control equipment for a multi boiler system)
  and
  Vitotronic 100 (type GC1B) **and LON module** for modulating boiler water temperature
  for each additional boiler in a multi boiler system
- With Vitocontrol control panel
  Vitotronic 100 (type GC1B) **and LON module** for modulating boiler water temperature
  for each boiler in a multi boiler system
  and
  Vitocontrol control panel with Vitotronic 300-K (type MW1B) for multi boiler system, weather-compensated operation and mixer control for up to 2 heating circuits with mixer and additional Vitotronic 200-H, type HK1B or HK3B for 1 or up to 3 heating circuits with mixer
  or
  Control panel with external control unit (on site)

Boiler accessories

See pricelist and "Boiler accessories" datasheet.

Operating conditions

Operating conditions with Vitotronic boiler control units

For water quality requirements, see the technical guide "Standard values for water quality"

	Requirements
1. Heating water flow rate	None
2. Boiler return temperature (minimum value)	None
3. Low-end boiler water temperature	None
4. Low-end boiler water temperature with frost protection	10 °C – ensured through the Viessmann control unit
5. Two-stage burner operation	None
6. Modulating burner operation	None
7. Reduced mode	None – total reduction is possible
8. Weekend setback	None – total reduction is possible

Design information

Installation for open flue operation

(B_{23}, B_{33})

Design information (cont.)

For open flue combustion equipment with a total rated output in excess of 50 kW, the fresh ventilation is deemed to have been verified if the combustion equipment is located in areas which provide an aperture or duct leading outdoors.
The cross-section of the aperture must be at least 150 cm^2 and must be 2 cm^2 larger for each additional kW above 50 kW rated output.

Pipes must be sized to provide equivalent flow rates. The required cross-section may be split over a maximum of two apertures or pipes.

Neutralisation

During condensation an acidic condensate with a pH value of between 3 and 4 is produced. This condensate can be neutralised by processing it through a neutralising system.

For further information, see the technical guide and "Boiler accessories" datasheet.

Installation of 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.
The blast tube must be at least 135 mm long.
The burner must be tested to EN 676 and CE-designated in accordance with Directive 90/396/EEC.

Burner adjustment
Adjust the gas throughput of the burner to the rated boiler heating output.

Burner connection
The blast tube aperture meets the requirements of EN 303-1.

Use the burner plate (part of the standard delivery) to mount the burner.
If the plate is not factory-fitted, drill the burner fixing holes into the burner flange and cut out the burner aperture with an oxy-acetylene torch.
Max. blast tube aperture Ø 350 mm.
In the case of different dimensions, adjust the cut-out in the thermal insulation of the boiler door according to the blast tube diameter.
After the burner installation, seal the annular gap between the blast tube and the thermal insulation block with the heat-resistant insulation material supplied.
Burner plates may be factory-fitted on request (chargeable option). For this, please state the burner make and type when ordering.
The blast tube must protrude through the thermal insulation on the boiler door.

Further information on design/engineering

See the technical guide to this boiler.

Tested quality

CE designation according to current EC Directives.

Qualitätsmarke der ÖVGW gem. Gütezeichenverordnung 1942 DRGBl. I für Erzeugnisse des Gas- und Wasserfachs.

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