Floorstanding gas condensing boiler

VITOCROSSAL 100



VITOCROSSAL 100 CI

- Compact design is ideal for smaller plant rooms
- NOx <24mg/kWh (2 Credit Points)*
- Cascade up to 636 kW
- Qualified for the Energy Technology List (ETL)
- HVR Awards Winner 2017



*NOx <24mg/kWh (2 Credit Points) in line with 'BREEAM UK New Construction 2018 – Technical Manual' assessment criteria

VITOCROSSAL 100 80-318 KW

The Vitocrossal 100 is a compact gas-fired condensing boiler with one of the smallest footprints in the market. It measures only 680 mm in width and is perfect for smaller plant rooms and applications, especially when replacing boilers in confined spaces.

The Vitocrossal 100 is a pre-wired and pre-assembled unit, which significantly reduces installation time. It combines proven Viessmann technology with a brand new stainless steel heat exchanger, robust MatriX cylinder burner and Lambda Pro combustion controller.

Take advantage of these benefits

- Gross efficiency up to 98%
- Small dimensions for easy installation
- Compact width of 680 mm
- Operating pressure up to 6 bar
- Max. flow temperature 95°C
- Water content 65 to 180 litres
- Modulation range up to 1:5
- NOx <24mg/kWh (2 Credit Points)*

Lambda Pro control reduces costs

The integrated Lambda Pro combustion controller automatically adjusts the burner to the natural gas type. This ensures consistently high and efficient combustion quality with low emissions and very low noise levels.

Proven Vitotronic control

The integrated Vitotronic control allows for quick commissioning and simple service. With the optional WiFi module Vitoconnect 100, the boiler can be controlled via the ViCare app.

Output range

- 80, 120, 160, 200, 240, 280, 318 kW

Easy installation and efficient operation

- Easy access to components for convenient service and maintenance
- Pre-wired and pre-assembled
- Added wheels for ease of movement
- Low power consumption – does not require a boiler circuit pump
- Quiet operation – no additional noise protection necessary

VITOCROSSAL 100

1. Vitotronic control unit
2. Return connection
3. Flow connection
4. Large water content
5. MatriX cylinder burner
6. Stainless steel heat exchanger
7. Highly effective thermal insulation
8. Service aperture
9. Wheels for manoeuvring



Qualified for Energy Technology List ™

Energy Technology List (ETL)

The ETL (or Energy Technology Product List, ETPL) is a government-managed list of energy-efficient plant and machinery. It is part of the Enhanced Capital Allowance (ECA) tax scheme for businesses.

If you're a business that pays income or corporation tax, you'll be able to claim 100% first year capital allowance on a product if it's on the ETL at the time of purchase. If it's been taken off the list, or is added at a later date, you will not.

Vitocrossal 100 is listed on the ETL, for all outputs. For more information see, www.gov.uk/guidance/energy-technology-list



VITOCROSSAL 100 CASCADE 240-636 KW

The Vitocrossal 100 is available as a twin boiler unit, housed inside a single casing. It is fully wired and pre-assembled as a complete unit, which significantly reduces installation time.

Product features

- Gas types: natural gas
- As a twin boiler unit: 240 to 636 kW
- Standard seasonal efficiency [to DIN]: 109%
- Modulation range: down to 1:10
- Operating pressure: 6 bar
- Maximum flow temperature: 95°C
- Water capacity: 206 to 360 litres
- Energy efficiency class: A
- NOx <24mg/kWh (2 Credit Points) in line with 'BREEAM UK New Construction 2018 – Technical Manual' assessment criteria

Benefits for installers

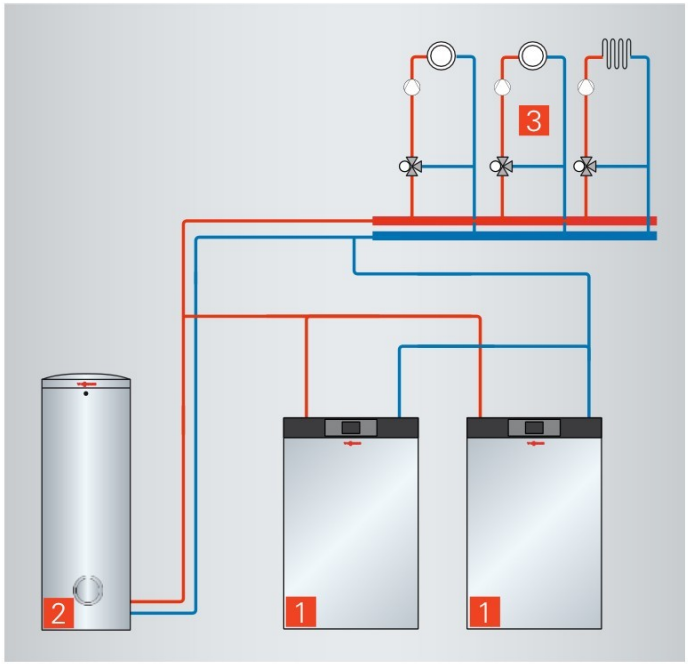
- Pre installed unit: quick and simple installation thanks to fully wired and pre assembled components
- Compact dimensions for easy handling: 450 mm (80 kW), 570 mm (120 and 160 kW) in case of dismantled boiler
- Lambda Pro combustion controller for automatic adaptation in case of changing gas qualities
- Good accessibility of all components from the front for ease of servicing and maintenance
- Twin boiler in a single casing from 240 to 636 kW
- Proven Vitotronic control unit with user prompts and plain text display

Benefits for users

- Extremely compact, easy to integrate into various heating centres
- Robust operation and a long service life, modulation down to 1:10 and long burner runtimes with a low cycling frequency
- Consistently high efficiency in case of changing gas qualities thanks to Lambda Pro combustion controller
- Self cleaning stainless steel heat exchanger for consistently high efficiency
- Low power consumption, as large water content means no need for boiler circuit pump
- Quiet operation through integral MatriX cylinder burner
- Can be controlled via the ViCare app

MATCHED SYSTEM COMPONENTS

1. Vitocrossal 100 gas condensing boiler
2. Vitocell 100-V DHW cylinder
3. Heating circuits



Twin boiler schematic

Delivery and components

The Vitocrossal boiler is delivered pre-wired and pre-assembled on a pallet to aid installation and save time for the installer.

With nearly all parts already integrated into the boiler casing, the Vitocrossal 100 is designed to save the installer time in setting up the system and to fit into any plant room.

When delievered the front panel of the pallet acts as a ramp when moving the boiler to aid installation. The boiler can be easily moved using the three integrated wheels and then fixed in place using the fully adjustable integrated feet.

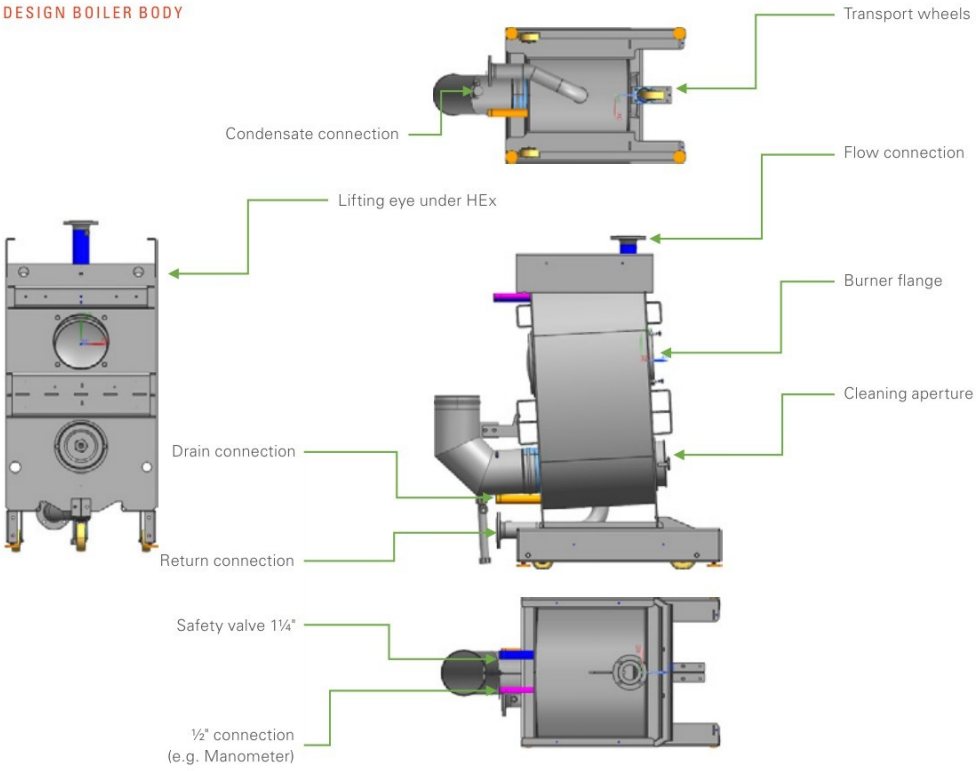
Delivery Content

Each Vitocrossal 100 unit is delivered with the following components:

- Boiler unit pre-assembled including: gas burner, controller, casing, insulation and wiring
- User display panel
- Technical documentation
- Venturi extension from 200 kW (only room sealed)
- Cascade controller provided with multiple boilers



DESIGN BOILER BODY





Example plant room



Ideal for confined spaces

Stainless steel heat exchanger

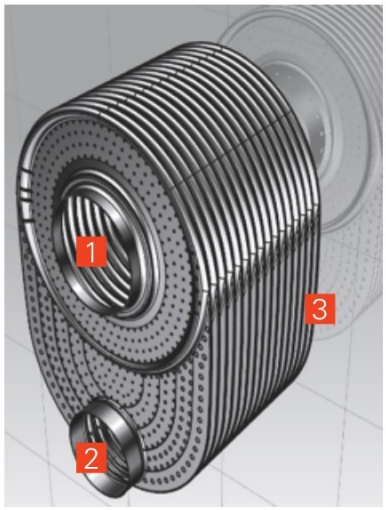
The Vitocrossal 100 features a brand new stainless steel heat exchanger that provides reduced dimensions and cost compared to other models.

The compact design of the Vitocrossal 100 stainless steel heat exchanger delivers exceptionally accurate temperature distribution and maintains the high standard of all Viessmann components. It provides a high volume of water with very low pressure losses but also enables the Vitocrossal 100 boiler to operate without a minimum flow rate.

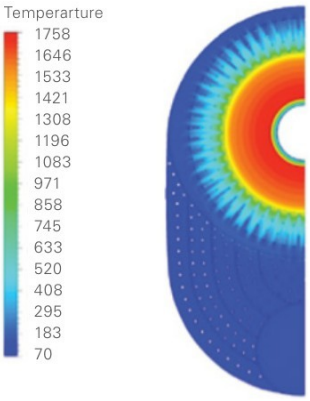
Combined with the MatriX cylinder burner, this delivers the 98% high efficiency you expect from a Viessmann boiler.

Benefits

- High water volume
- No low loss header required
- No minimum flow rate
- Simple design with fewer circulating pumps



1 Burner flange /combustion chamber
2 Cleaning aperture
3 Flue outlet



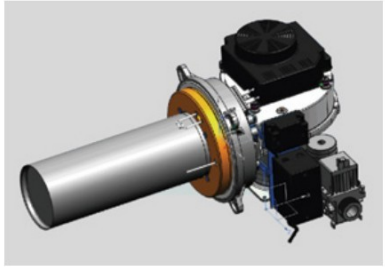
Exceptionally accurate temperature distribution

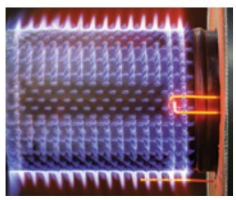
MatriX cylinder burner

State-of-the-art combustion management which continously adapts to the gas quality and always delivers high performance.

With gas sourced increasingly from around the world, we now experience varying qualities of gas in the grid. This can affect the performance of the boiler, however thanks to the Lambda Pro combustion control inside the Vitocrossal 100 boiler, we can guarantee high performance regardless of the gas quality. The combustion management within the MatriX cylinder burner. continously adapts to the gas quality, so that no nozzle change is required.

The modulation range of 1:5 as a single unit or 1:10 as a double cascade ensures that the output of the unit can be reduced to suit demand. This enables the boiler to deliver exceptionally low NOx levels down to <24mg/kWh.





MatriX cylinder burner with large modulation range

Benefits

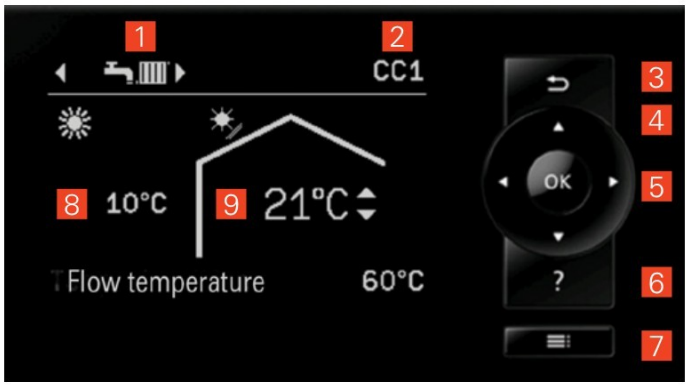
- Automatic combustion controller
- Consistent efficiency
- Very quiet
- Low NOx
- Easy commissioning e.g. no gas valve adjustment

VITOCROSSAL 100 CONTROLS

From single boiler to multi boiler systems, Vitotronic digital control units are essential for the economic and effective operation of your heating system.

FEATURES

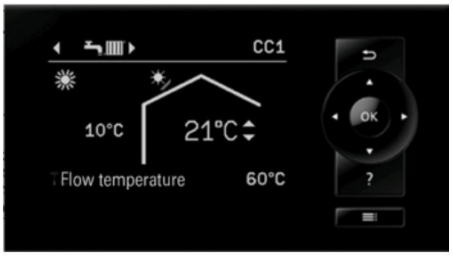
1. Operating mode: - standby - DHW only - heating and DHW
2. Selecting the heating circuit: CC1, CC2 or CC3
3. Return key
4. Selection Cursors
5. 'OK' button for validation
6. Contextual Help
7. Menu key
8. Outdoor temperature
9. Indoor temperature setpoin

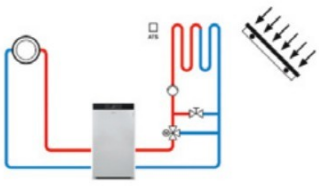






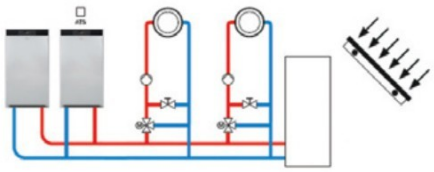
Vitotronic 100 (single boiler)
Constant boiler water temperature control, equipped with a fault self-diagnosis system and DHW control.





Vitotronic 200 (single boiler)
Weather compensation boiler control for installations up to 3 heating circuits, one direct and two with mixer, plus DHW and solar control.

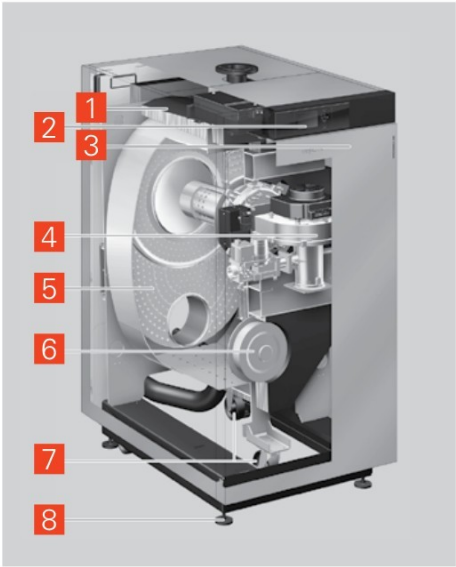




Vitotronic 300-K (multi boiler)
Weather compensation cascade control allowing the control of 4 boilers equipped with Vitotronic 100.

VITOCROSSAL 100

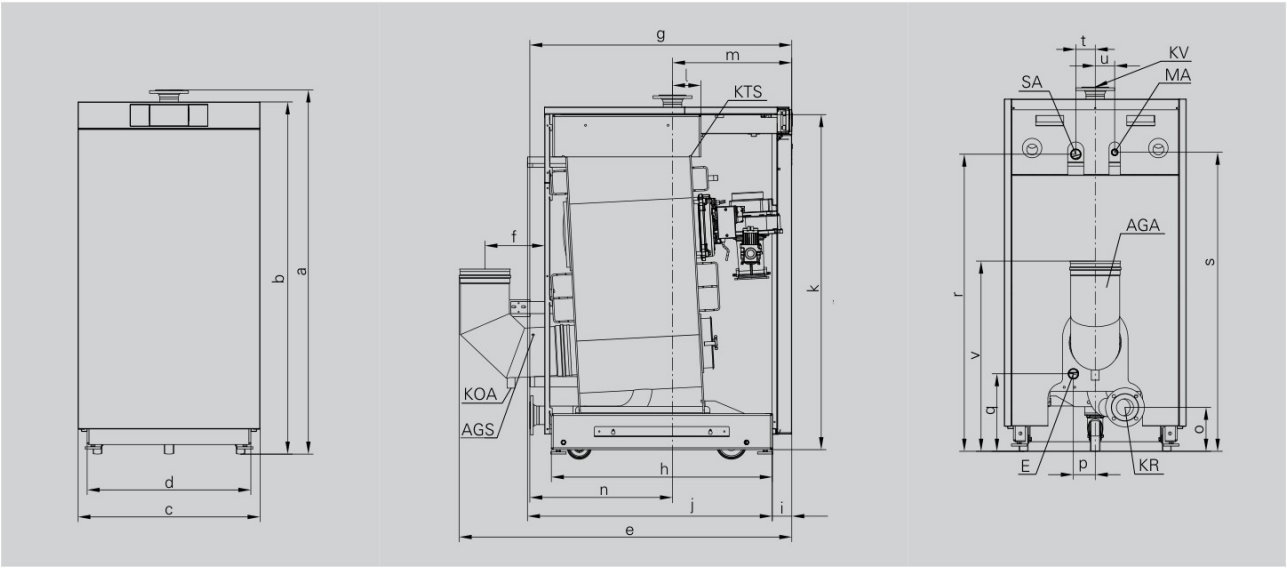
Rated heating output	kW	Up to 80	120 and 160	200 and 240	280 and 318
a	mm		1500		
b	mm		1450		
c	mm		750		
d	mm		674		
e	mm	1024	1148	1251	1370
f	mm	235	235	241	245
g	mm	745	875	980	1090
h	mm	570	682	798	910
i	mm	83	92	77	80
j	mm	660	780	900	1010
k	mm		1380		
l		168	198	166	117
m	mm	491	500	486	892
n	mm	250	360	485	588
o	mm	213	209	183	181
p	mm		90		
q	mm	337	331	325	319
r		1240	1234	1228	1223
s	mm	1249	1242	1236	1230
t	mm		80		
u	mm		80		
v	mm	80	794	788	783



VITOCROSSAL 100 80 TO 318KW

1. Highly effective thermal insulation
2. Vitotronic boiler control unit
3. High grade casing
4. Modulating MatriX cylinder burner with Lambda Pro control
5. Stainless steel heat exchanger
6. Inspection cover for easy maintenance
7. Integrated castors for easy handling
8. Height-adjustable feet

AGS	Flue gas temperature sensor R ⅛
AGA	Flue outlet DN 200
E	Drain
KOA	Condensate drain
KR	Boiler return
KTS	Boiler water temperature sensor R ⅛
KV	Boiler flow
MA	Pressure gauge R ½
SA	Safety connection (safety valve)



VITOCROSSAL 100, SINGLE UNIT

Rated heating output range								
TF/TR = 50/30	**kW**	**16 – 80**	**32 – 120**	**32 – 160**	**48 – 200**	**48 – 240**	**64 – 280**	**64 – 318**
TF/TR = 80/60	**kW**	**15 – 74**	**29 – 110**	**29 – 146**	**44 – 184**	**44 – 220**	**58 – 258**	**58 – 291**
Rated heat input	kW	76	113	151	189	226	264	300
Product ID		CE-0085CR0391						
Permiss. operating temperature	°C	95						
Permiss. flow temperature (= safety temperature)	°C	110						
Max. permiss. operating pressure	bar	6						
	MPa	0.6						
Min. permiss. operating pressure	bar	0.5						
	MPa	0.05						
Test pressure	bar	7.8						
	MPa	0.78						
Boiler body dimensions								
Length/handling dimension *1	mm	660/450	780/570	780/570	900	900	1010	1010
Width	mm	680	680	680	680	680	680	680
Height	mm	1459	1459	1459	1459	1459	1459	1459
Overall dimensions without boiler flue connection								
Length g	mm	745	875	875	980	980	1090	1090
Width c	mm	750	750	750	750	750	750	750
Height a	mm	1500	1500	1500	1500	1500	1500	1500
Foundation dimensions								
Length	mm	750	850	850	1000	1000	1100	1100
Width	mm	800	800	800	800	800	800	800
Height	mm	100	100	100	100	100	100	100
Weight								
Overall unit weight	kg	238	295	295	340	340	385	385
Packed unit	kg	288	345	345	390	390	435	435
Boiler body	kg	183	230	230	265	265	300	300
Boiler body with transport pallet	kg	210	260	260	295	295	330	330
Burner	kg	10	11	11	15	15	15	15
Water capacity	litres	65	103	103	145	145	180	180
Connections								
Boiler flow	PN 6 DN	50	50	50	65	65	65	65
Boiler return	PN 6 DN	50	50	50	65	65	65	65
Safety connection	R	1¼	1¼	1¼	1¼	1¼	1¼	1¼
Drain	R	1¼	1¼	1¼	1¼	1¼	1¼	1¼
Trap with condensate drain	mm	20	20	20	20	20	20	20
Flue gas parameters *2								
Temperature (at a return temperature of 30°C)								
– At rated heating output	°C	45	45	45	45	45	45	45
– At partial load	°C	35	35	35	35	35	35	35
Temperature (at a return temperature of 60°C)		65	65	65	65	65	65	65
Mass flow rate (for natural gas)								
– At rated heating output	kg/h	120	180	240	300	360	420	477
– At partial load	kg/h	36	54	72	90	108	126	143
Flue gas connection	DN	200	200	200	200	200	200	200
Draught at flue outlet	mbar	0.7	0.7	0.7	0.7	0.7	0.7	0.7
	Pa	70	70	70	70	70	70	70
Product parameters according to EnEV								
Standard seasonal efficiency [to DIN]								
For heating system temperature 40/30°C	%	Up to 98 (Hs) [gross cv] / 109 (Hi) [net cv]						
For heating system temperature 75/60°C	%	Up to 96 (Hs) [gross cv] / 106 (Hi) [net cv]						
Rated heating output range								
TF/TR = 50/30	**kW**	**16 – 80**	**32 – 120**	**32 – 160**	**48 – 200**	**48 – 240**	**64 – 280**	**64 – 318**
TF/TR = 80/60	**kW**	**15 – 74**	**29 – 110**	**29 – 146**	**44 – 184**	**44 – 220**	**58 – 258**	**58 – 291**
Standby loss qB,70	%	0.6	0.5	0.3	0.6	0.6	0.6	0.6
NOx		*NOx, < 24 mg/kWh						

**1 With unassembled base rail*

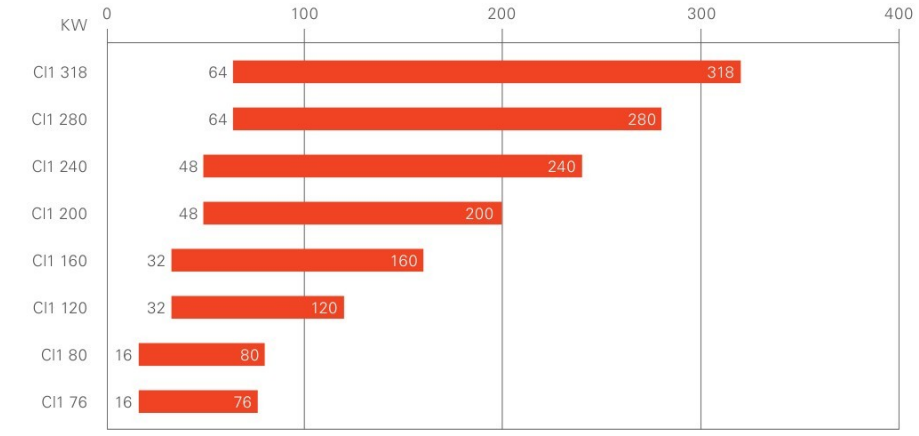
**2 Values for calculating the size of the flue system to EN 13384, based on 10% CO_2 for natural gas.*
Flue gas temperatures as actual gross values at 20°C combustion air temperature. The details for partial load refer to an output of 30% of the rated heating putput.
If the partial load differs (subject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

** NOx <24mg/kWh (2 Credit Points) in line with 'BREEAM UK New Construction 2018 – Technical Manual' assessment criteria*

VITOCROSSAL 100, TWIN UNIT

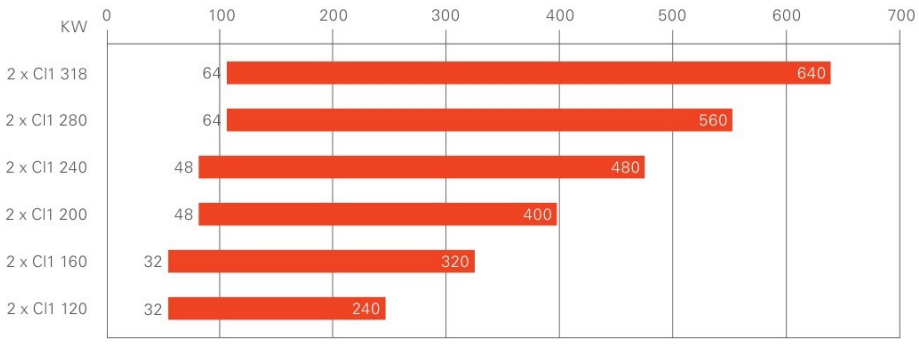
Rated heating output	**kW**	**240**	**318**	**400**	**480**	**560**	**636**
Twin boiler comprises 2 boilers, each with	kW	120	156	200	240	280	318
Overall dimensions without boiler flue connection							
Length	mm	875	875	980	980	1090	1909
Width	mm	1500	1500	1500	1500	1500	1500
Height	mm	1500	1500	1500	1500	1500	1500
Total weight	kg	590	590	680	680	770	770
Water capacity	litres	206	206	290	290	360	360

SINGLE UNIT OUTPUT RANGE





TWIN UNIT OUTPUT RANGE





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Your trade partner:

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Toelichting grondslagen

In dit document kunt u secties vinden die onleesbaar zijn gemaakt. Deze informatie is achterwege gelaten op basis van de Wet open overheid (Woo). De letter die hierbij is vermeld correspondeert met de bijbehorende grondslag in onderstaand overzicht.

J Art. 5.1 lid 2 sub e

Het belang van de openbaarmaking van deze informatie weegt niet op tegen het belang van de eerbiediging van de persoonlijke levenssfeer van betrokkenen