

Exclusive Green E

Condensing Wall-Hung Boilers

he BERETTA HIGH-EFFICIENCY



Residential Heating



Energy efficiency at its best

EXCLUSIVE GREEN E is Beretta top of the range condensing appliance.
The following features make it one of the most energy efficient boilers available on the market.

NEW, FRONT ACCESS CONDENSING HEAT-EXCHANGER PROVIDING HIGHEST EFFICIENCY

Designed to provide high efficiency in compliance with the strictest European Directives in terms of efficiency and low emissions, this innovative heat exchanger allows front access to simplify maintenance and servicing. Thanks to this new aluminium heat exchanger, Exclusive GREEN E reaches the highest performance on the market: 94% seasonal space heating energy efficiency on 25 kW models!

SUITABLE FOR THE WIDEST VARIETY OF INSIDE-CHIMNEY FLUES, INCLUDED Ø 50mm!

With Exclusive GREEN E, the inside chimney installation is allowed also for Ø50 mm flues, in addition to Ø60mm and Ø80mm.

Maximum extension lengths inside-chimney flue lengths: up to 285 meters of Ø 80mm!

LOW ENERGY MODULATING SYNCHRONOUS PUMP

Reduction of the electrical consumption up to 60%, thanks also to the proportional self-adjustment to the instantaneous power or to the flow/return operation with constant ΔT .

10:1 MODULATION RATIO

The highest range of modulation, to match the real energetic needs, achieving in this way a significant further saving in the gas consumption.

COMFORT

Highest DHW comfort is ensured thanks to the state-of-the-art technology combined with advanced electronics (flowmeter, increased plate heat-exchanger and high modulation).

EXCLUSIVE GREEN E range is ErP compliant

Beretta EXCLUSIVE GREEN E range complies with the European ErP regulations, which came into force on 26.09.2015.

From that date onwards, a new energy labelling was implemented for appliances and systems producing heating and domestic hot water and a series of efficiency and emissions constraints automatically excluded the less performing classes of appliances. The new ErP regulations aim to help the EU countries to reach by 2020 the “20-20-20” target, meaning a 20% reduction of gas emissions; a 20% increase in the use of renewable energies; a 20% reduction in global energy consumptions.



CO₂ reduction



renewable
energies



energy
consumptions

Space heating function

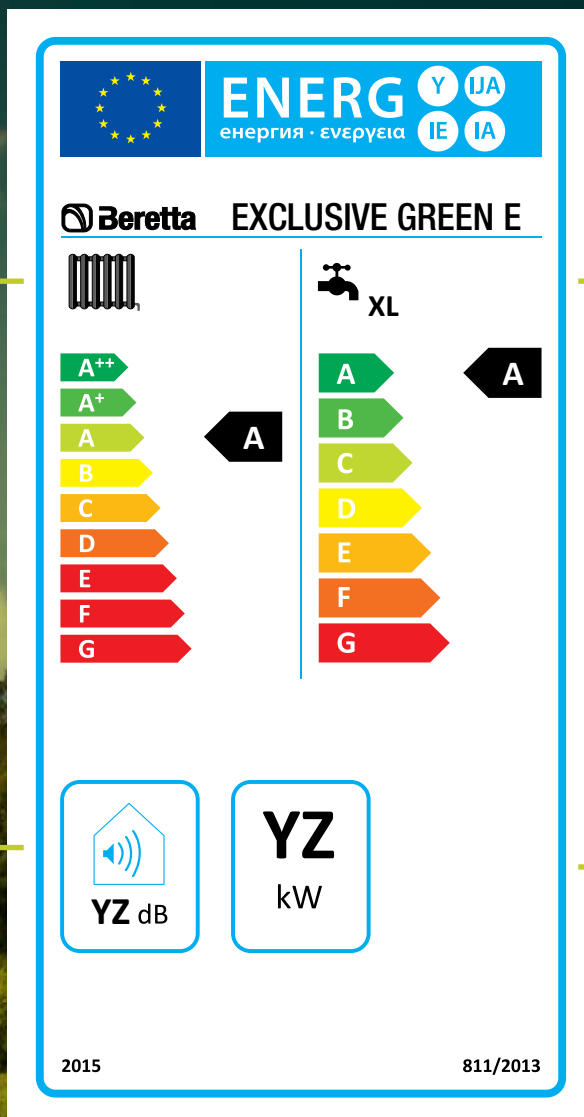
Seasonal space heating
energy efficiency class:
A (on all models)

Sound power level inside

Specifications for each
model are detailed on the
inside back cover page

Water heating function

This section refers only to
combi models:
- Load profile: XL
- Energy Efficiency Class: A



Saving energy, saving money

The new energy labelling, that according to the ErP directive was implemented in September 2015 for appliances and systems producing heating and domestic hot water, means that all boilers and heating systems are labelled in the same way as “white goods”, like washing machines and refrigerators. The energy labelling enables the end-users to make realistic comparisons among different products. By choosing high efficiency products, the end-users can lower their energy bills, helping to safeguard the environment.

Exclusive Green E



EXCLUSIVE GREEN E range fully complies with the European ErP regulations:



seasonal space heating energy efficiency class



water heating energy efficiency class and water heating load profile



system energy class A+ (in combination with Remote Control Panel Rec 07)

- New, front access, condensing heat-exchanger in extruded aluminium assists in simple maintenance and servicing.
- Low Energy modulating synchronous pump ($EEI \leq 0.20$), PWM controlled (6 metres residual head adjustable up to 7 metres) with different working options and selectable speeds.
- Highest DHW comfort, thanks to the state-of-the-art technology combined with advanced electronics.
- ErP seasonal space heating energy efficiency 94% (93% on 35kW models).
- 10:1 premix modulation ratio: the highest range of modulation, to match the real energetic needs, increasing efficiency and component longevity.

- "Survivor" function in DHW mode, allowing the boiler, in the event of failure of the DHW NTC probe, to continue to operate.
- Reduced waiting time for DHW supply thanks to pre-heating function.
- Built-in climatic thermoregulation that can be activated through the external probe (supplied as standard) for a high comfort level inside the house.
- S.A.R.A. system: automatic temperature control in heating mode.
- Easy filling system (semi-automatic).
- Electrical protection IPX5D.
- Lower hydraulic connections cover supplied as standard to ensure a tidy installation.
- Widest variety of flue options for inside-chimney installation, including Ø50 on all models. Maximum extension lengths on 25kW model: Ø60 flue range in plastic PP (up to 23m), Ø50 in PPs, H1 Class (up to 19m) and Ø80 in PP, H1 Class (up to 285m).
- Hydraulic fittings supplied as standard (gas tap, cold water tap, copper pipe connections with brass nipple).
- EXCLUSIVE GREEN E can be converted to LPG through the specific LPG kit, available as option.



"Survivor" function



10:1 premix modulation ratio



Low Energy modulating synchronous pump ($EEI \leq 0.20$), with 6m residual head adjustable up to 7 m



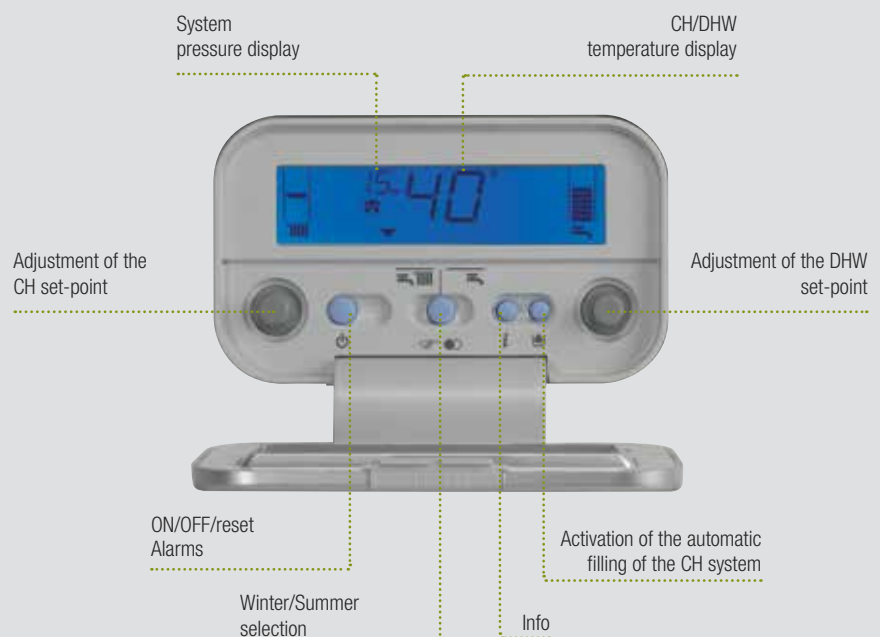
New, front access, condensing heat-exchanger

Ø50
19 m

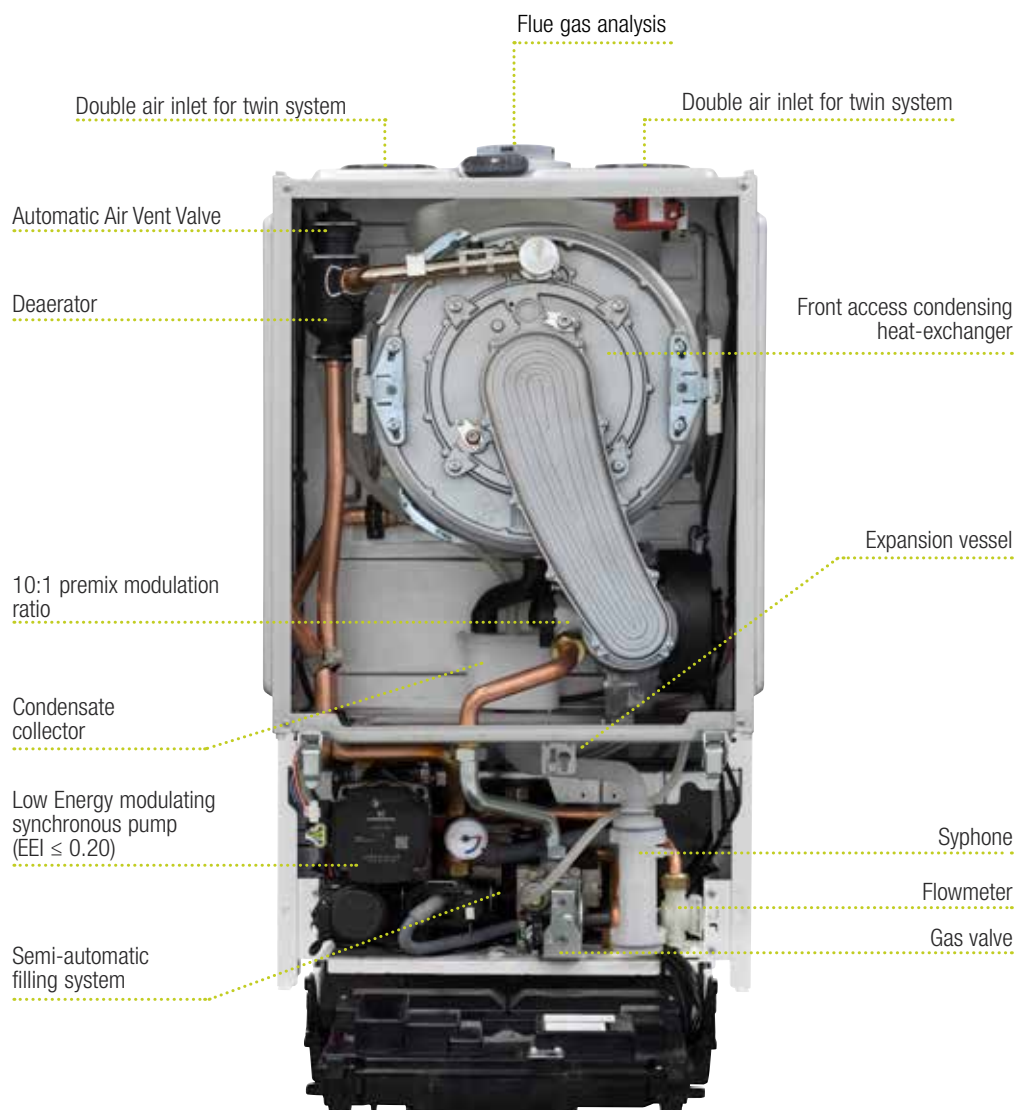
suitable also for Ø50 mm flue range in PPs (H1 Class) for inside-chimney installation; up to 19m flue length on Exclusive Green E 25kW!

Smart control panel

EXCLUSIVE GREEN E features a smart control panel located under a silver flap, from which a wide LCD display appears. By simply rotating two knobs, it is possible to set CH and DHW temperature. The choice of the season, the automatic filling of the system, the thermoregulation function with external probe can be easily activated by pressing the relevant buttons. By combining user-friendliness and multifunctionality, EXCLUSIVE GREEN E control panel provides complete peace of mind to installer and end-user.



The advanced condensing solution from Beretta



RANGE RATED

EXCLUSIVE GREEN E IS CERTIFIED AT DIFFERENT LEVELS OF HEAT INPUT TO ALLOW THE ADJUSTMENT OF THE BOILER TO THE REAL THERMAL NEEDS OF THE CENTRAL HEATING.



Exclusive Green E

The innovative Beretta condensing heat-exchanger with front access

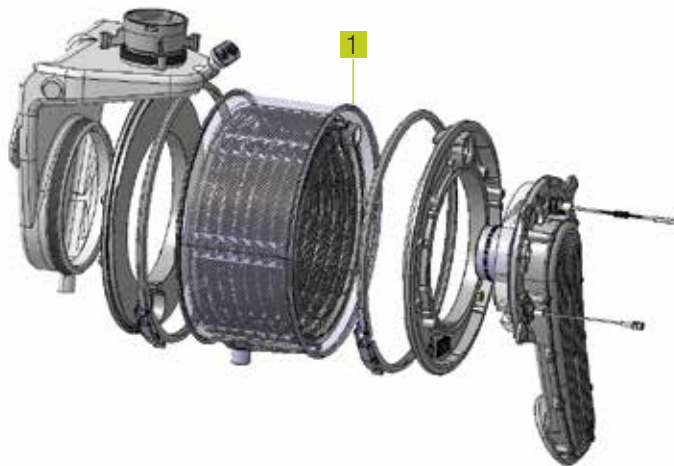
Exclusive Green E features the new Beretta condensing heat-exchanger with front access.

An innovative system of rails allows the movement of the heat-exchanger like a drawer, enabling easier and more rapid cleaning, maintenance and servicing.

Thanks to the continuous research, Beretta succeeded in getting a heat-exchanger characterized by higher efficiency: 94% of seasonal space heating energy efficiency (93% on 35kW models), calculated according to the European directive ErP.

The heat-exchanger is made of a single aluminium pipe, without weldings, thanks to an innovative production process. The excellent thermal transfer properties of aluminium, much higher than the stainless steel ones, allow a more uniform temperature distribution.

The single-pipe layout (in-series circuit) enables a wide section for the water passage, with the consequent advantage of reducing the head losses while preventing the impurities deposit, thus ensuring long-lasting efficiency to the heat exchanger.



1 Exploded view

2 Front view



Thanks to the new Beretta condensing heat-exchanger, boiler performance is increased up to 94% of space heating energy efficiency, translating into further energy saving and helping to safeguard the environment.

Flex modulating pump: optimized efficiency, low consumption

Exclusive Green E features a new Low Energy modulating synchronous pump, complying with the ErP Directive.

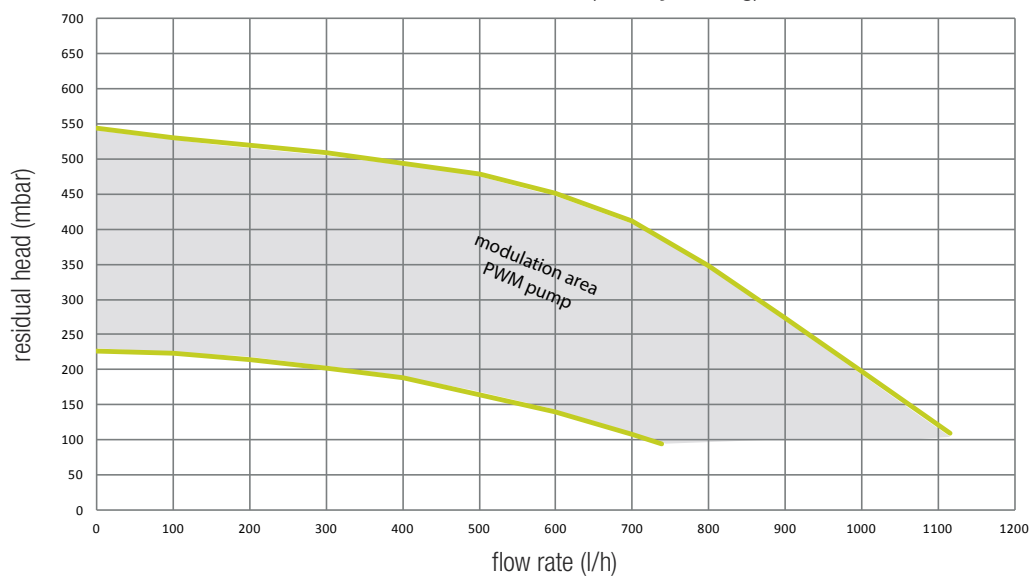
Thanks to this new technology, the electric motor of the pump offers an Energy Efficiency Index lower than 0,20, meaning dramatically reduced electrical consumption.

The new pump works in proportion to the power supplied by the boiler, thus contributing to a further reduction of power consumption.

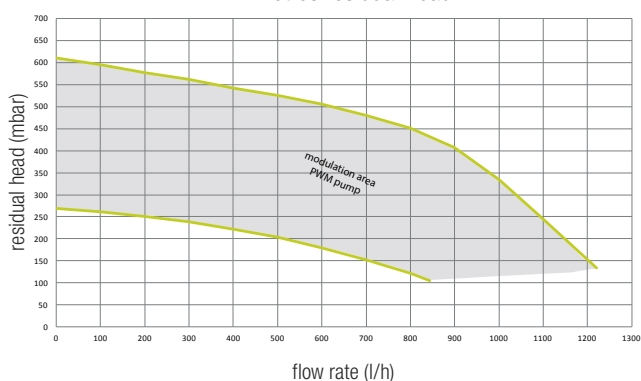
The name "Flex" originates from the feature that, in case of need on the heating system, it is possible to modify the head without replacing the built-in pump with a high head one.



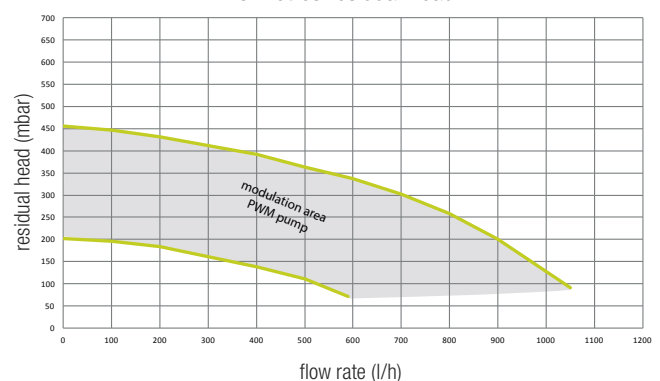
6 metres residual head (factory setting)



7 metres residual head



5 metres residual head



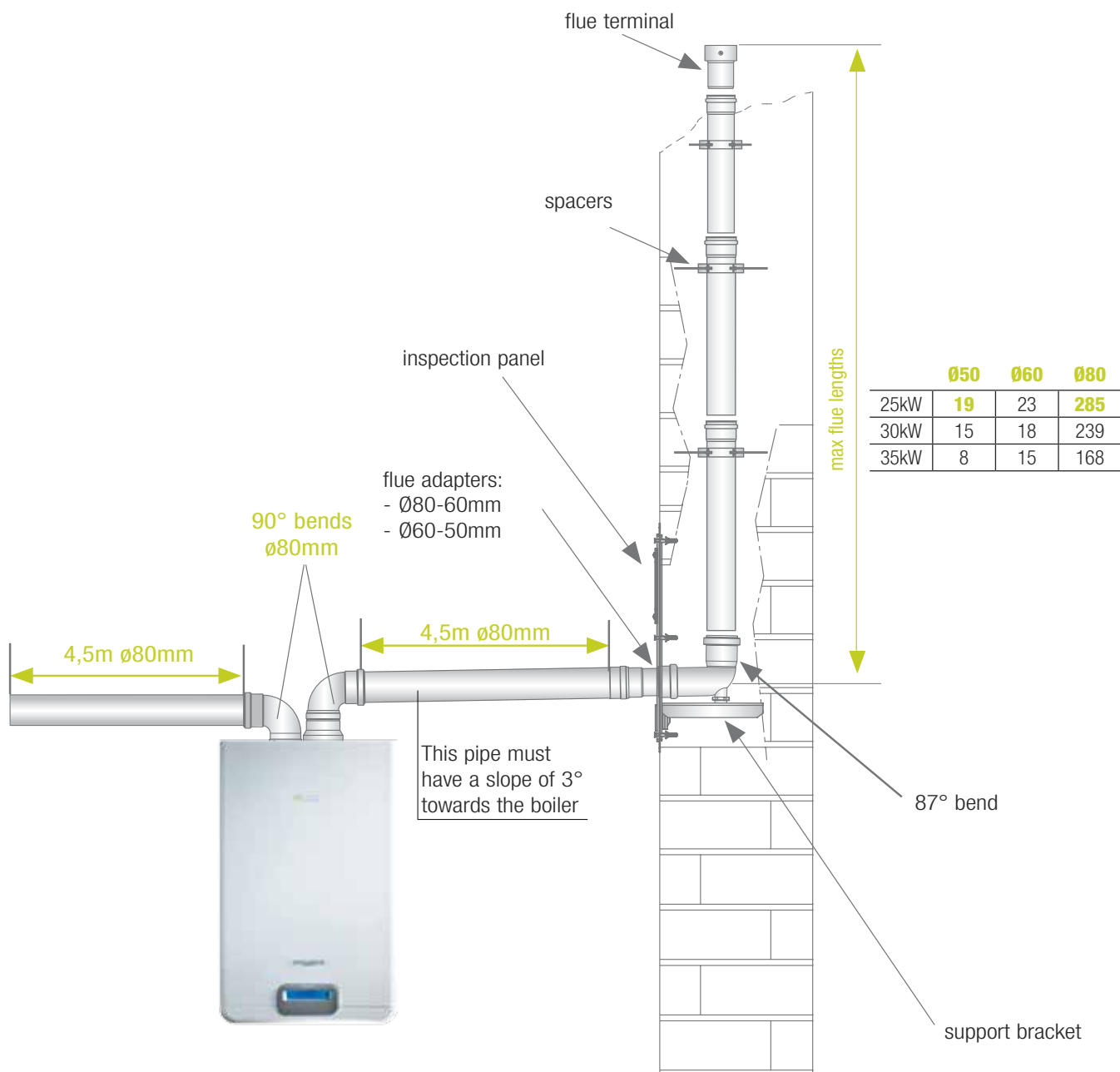
Exclusive Green E

Flue options Ø50mm for inside-chimney installation

Up to 19 metres of inside-chimney flue for Exclusive Green E 25kW!

With Exclusive Green E, the inside-chimney installation is possible also for the most “difficult” flues, thanks to the certification for Ø50mm flues, in addition to the Ø80mm e Ø60mm flues, traditionally suitable for inside-chimney installation.

The main Ø50mm flue options are available in the Beretta catalogue, while the detailed indications for the maximum flue lengths, that are different according to the power of the boiler, can be found in the installer manual. See also the flue lengths table in the picture.



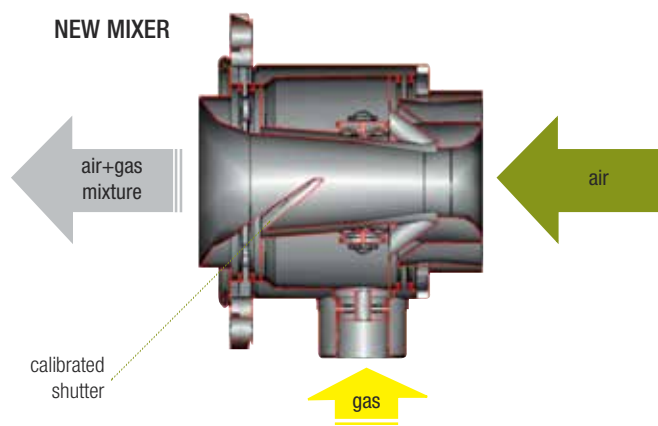
10:1 premix modulation ratio, technology at its best

EXCLUSIVE GREEN E offers an extremely wide modulation range on every model, to match the real energetic needs of the installation at any time, achieving in this way a significant further saving in the gas consumption. For instance, on the 25kW models, EXCLUSIVE GREEN E offers 2,8kW as minimum output, allowing a further reduction on consumptions of 8%, if compared with another condensing boiler without 10:1 modulation ratio.

Beretta features a system that is fully pneumatic, without the addition of further electronic boards, hence safe and reliable.

The main electronic board sets only the number of revolutions of the fan (air inlet) and does not intervene on the gas injection, that is instead automatically taken in.

Thus, Beretta introduces a double-step mixer: a mechanical shutter, whose weight has been attentively sized, opens or closes a section of the Venturi pipe so to divide the modulation range in two sections (smaller section with low air flow, or larger section with higher air flow). Beretta has moreover developed a specific silencer (on the air intake) to abate any possible resonances that may occur



S.A.R.A. and S.A.R.A. Booster systems

S.A.R.A. and S.A.R.A. Booster systems (Automatic Temperature Control), patented by Beretta, are designed to provide a high comfort level in the central heating mode, allowing you to reach the desired room temperature more rapidly.

When there is a demand for heating, the appliance will automatically raise the heating flow temperature **every 20 minutes with S.A.R.A.** or **every 10 minutes with S.A.R.A. Booster**, by 5 °C steps (see diagram).

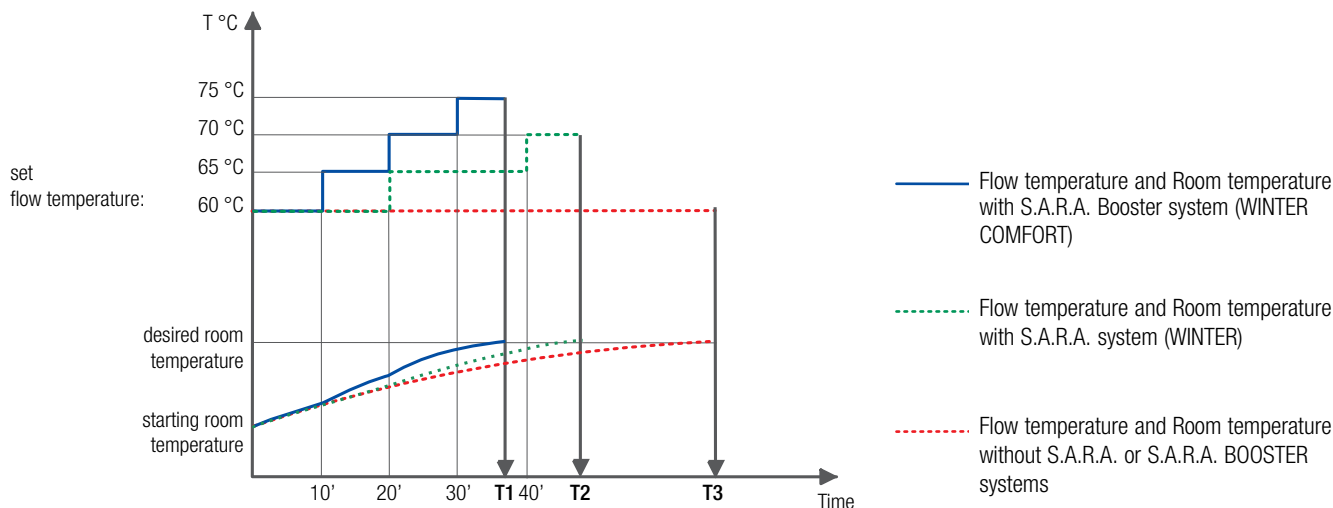
When the heating request has been satisfied, the boiler automatically restores the flow temperature to the settled value, thus allowing a better temperature stability of the radiators.

EXCLUSIVE GREEN E integrates on all combi models both systems, providing **maximum comfort in every climate condition**.

S.A.R.A. Booster is automatically activated by selecting WINTER COMFORT on the control panel. This setting is recommended in cold areas, or during the hard winter periods.

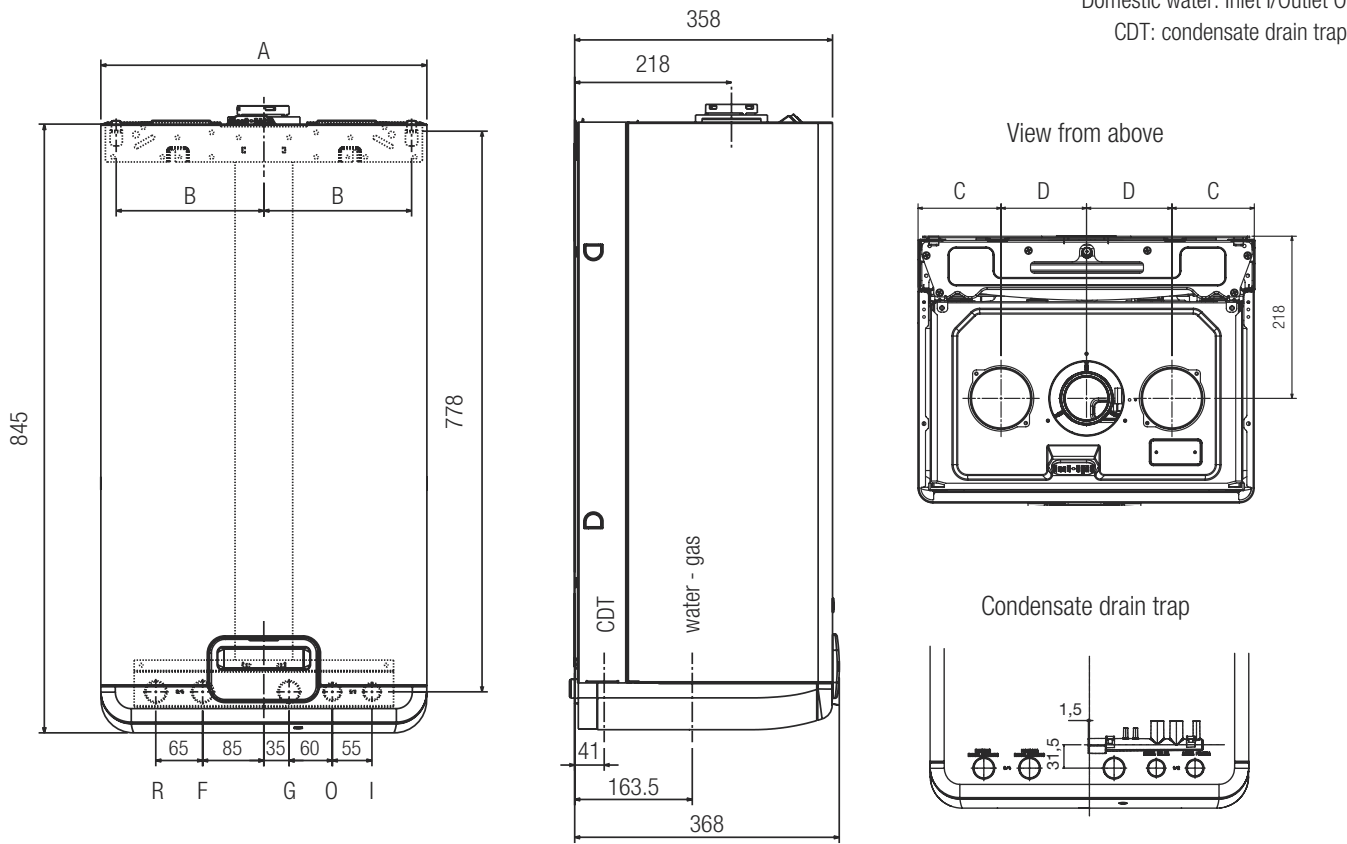
S.A.R.A. is activated by selecting WINTER on the control panel and by setting the temperature of the central heating circuit between 55°C and 65°C. This setting is recommended in spring and autumn, or in areas or periods when winter is not hard.

On the only heating models, S.A.R.A. Booster is always activated in WINTER mode.



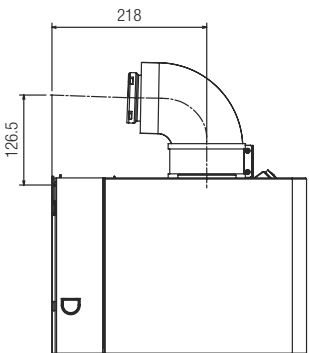
Exclusive Green E

Technical drawings

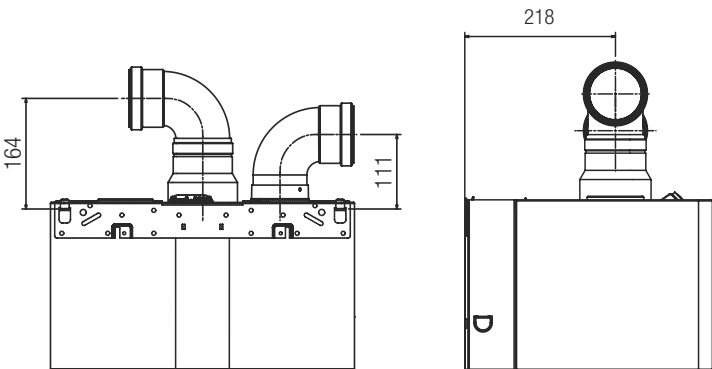


	net weight	A	B	C	D
25 C.S.I.	41	400	180	102	98
30 C.S.I.	42	452	205	111	115
35 C.S.I.	43	452	205	111	115
25 R.S.I.	40	400	180	102	98
35 R.S.I.	41	452	205	111	115

CONCENTRIC OUTLETS



TWIN OUTLETS



Technical data

C Combi model (CH + DHW)

R Heating Only model

S Room-sealed

I Ionisation flame control


ENERGY LABELLING SPECIFICATIONS (according to ErP regulations)

		EXCLUSIVE GREEN E 25 C.S.I.	EXCLUSIVE GREEN E 30 C.S.I.	EXCLUSIVE GREEN E 35 C.S.I.	EXCLUSIVE GREEN E 25 R.S.I.	EXCLUSIVE GREEN E 35 R.S.I.
Seasonal space heating energy efficiency class		A	A	A	A	A
Water heating energy efficiency class		A	A	A	-	-
Declared load profile		XL	XL	XL	-	-
Rated heat output	kW	20	25	29	20	29
Sound power level inside	dB	52	54	TBD	52	TBD
Seasonal space heating energy efficiency	%	94	94	93	94	93
AUXILIARY ELECTRICITY CONSUMPTION						
At full load	W	30,0	46,0	48,0	30,0	48,0
At part load	W	12,0	16,8	17,4	12,0	17,4
In Stand-by mode	W	4,3	4,3	4,3	4,3	4,3

OTHER SPECIFICATIONS

CH nominal heat input	kW	20,00	25,00	30,00	20,00	30,00
CH nominal heat output (80°-60° C)	kW	19,62	24,58	29,25	19,62	29,25
CH nominal heat output (50°-30° C)	kW	21,44	26,70	31,77	21,44	31,77
CH minimum heat input (G20/G31)	kW	2,80/4,00	3,20/4,50	3,60/5,00	2,80/4,00	3,60/5,00
CH minimum heat output (80°-60° C) (G20/G31)	kW	2,76/3,95	3,16/4,45	3,50/4,87	2,76/3,95	3,50/4,87
CH minimum heat output (50°-30° C) (G20/G31)	kW	3,00/4,20	3,44/4,74	3,80/5,29	3,00/4,20	3,80/5,29
DHW nominal input	kW	25,00	30,00	34,60	25,00**	34,60**
DHW maximum output*	kW	25,00	30,00	34,60	25,00**	34,60**
DHW minimum input (G20/G31)	kW	2,80/4,00	3,20/4,50	3,50/5,00	2,80**/4,00**	3,50**/5,00**
DHW minimum output* (G20/G31)	kW	2,80/4,00	3,20/4,50	3,50/5,00	2,80**/4,00**	3,50**/5,00**
Efficiency at max nominal output (80°-60° C)	%	98,1	98,3	97,5	98,1	97,5
Efficiency at min output (80°-60° C)	%	98,7	98,9	97,2	98,7	97,2
Efficiency at partial load 30% (47°C return)	%	102,4	103,3	102,8	102,4	102,8
Efficiency at max nominal output (50°-30° C)	%	107,2	106,8	105,9	107,2	105,9
Efficiency at min output (50°-30° C)	%	107,0	107,6	105,6	107,0	105,6
Efficiency at partial load 30% (30°C return)	%	109,6	109,6	109,2	109,6	109,2
NOx class		5	5	5	5	5
Electrical protection	IP	X5D	X5D	X5D	X5D	X5D
Max power consumption	W	93	108	115	93	115

CENTRAL HEATING

Maximum pressure - temperature	bar - °C	3 - 90	3 - 90	3 - 90	3 - 90	3 - 90
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DHW

Maximum - minimum pressure	bar	6 - 0,2	6 - 0,2	6 - 0,2	-	-
DHW production ΔT=25°C	l/min	14,3	17,2	19,8	-	-
Adjustable hot water temperature range	°C	35 - 60	35 - 60	35 - 60	-	-

CONNECTIONS

CH flow - return/Gas	Ø	3/4"	3/4"	3/4"	3/4"	3/4"
DHW inlet - outlet	Ø	1/2"	1/2"	1/2"	3/4"***	3/4"***

FLUE PIPES AND AIR INTAKE

Max length (including 90° bend) for concentric 60-100mm	m	7,80	7,80	7,85	7,80	7,85
Max length for concentric 80-125mm	m	20	20	14,85	20	14,85
Max length for twin 80+80mm	m	50+50	50+50	38+38	50+50	38+38

GAS

Certified gas types		II2H3P/II2E3P	II2H3P/II2E3P	II2H3P/II2E3P	II2H3P/II2E3P	II2H3P/II2E3P
Available gas versions		NG, LPG***	NG, LPG***	NG, LPG***	NG, LPG***	NG, LPG***

* average among the different functioning conditions in DHW

** values of DHW function are to be considered only in case of connection with an external tank

*** LPG version available with conversion kit (available as option)

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