



# Baxi HE Plus. Revealed.

Five new highly developed, high efficiency boilers covering every conceivable application.



The Baxi name has been at the forefront of design innovation for 150 years. As part of the Baxi Group, the UK's leading heating company, we're specialists in gas boilers, cylinders, fires, water heaters and commercial heating. Our products are not just tried and tested, but trusted. Whatever the heating problem, we have an energy efficient, environmentally friendly solution. We also believe that in the future, high efficiency will be nothing without high reliability. That's why we've dedicated more time, energy and resource to developing HE technology than any other manufacturer.

## You and HE.

The Government's Energy White Paper has introduced fresh challenges for the heating industry. From April 2005 (with some exclusions and exceptions), all boilers installed should be either SEDBUK Band A (with efficiencies greater than 90%) or SEDBUK Band B (with efficiencies from 86.1% to 90%). Baxi has successfully met this challenge, with a range which takes high efficiency to a new level.

## Baxi and HE.

The Baxi HE Plus range has been developed to meet every conceivable requirement. From the Baxi Combi 133 HE Plus, 100 HE Plus and 80 HE Plus (offering outputs of 24, 30 & 39kW) to the 100/2 HE Plus wall mounted boiler for open vented systems (modulating between 30-9kW) and the System 100 HE Plus boiler (offering variable self-selecting outputs from 9-30kW) we have a boiler for all application and system types.

## Know one, know them all.

All boilers in the Baxi HE Plus range feature the same basic architecture and the same technology platform. So once you familiarise yourself with the layout of one, you literally know them all, with spares and flue components being universal across the range.

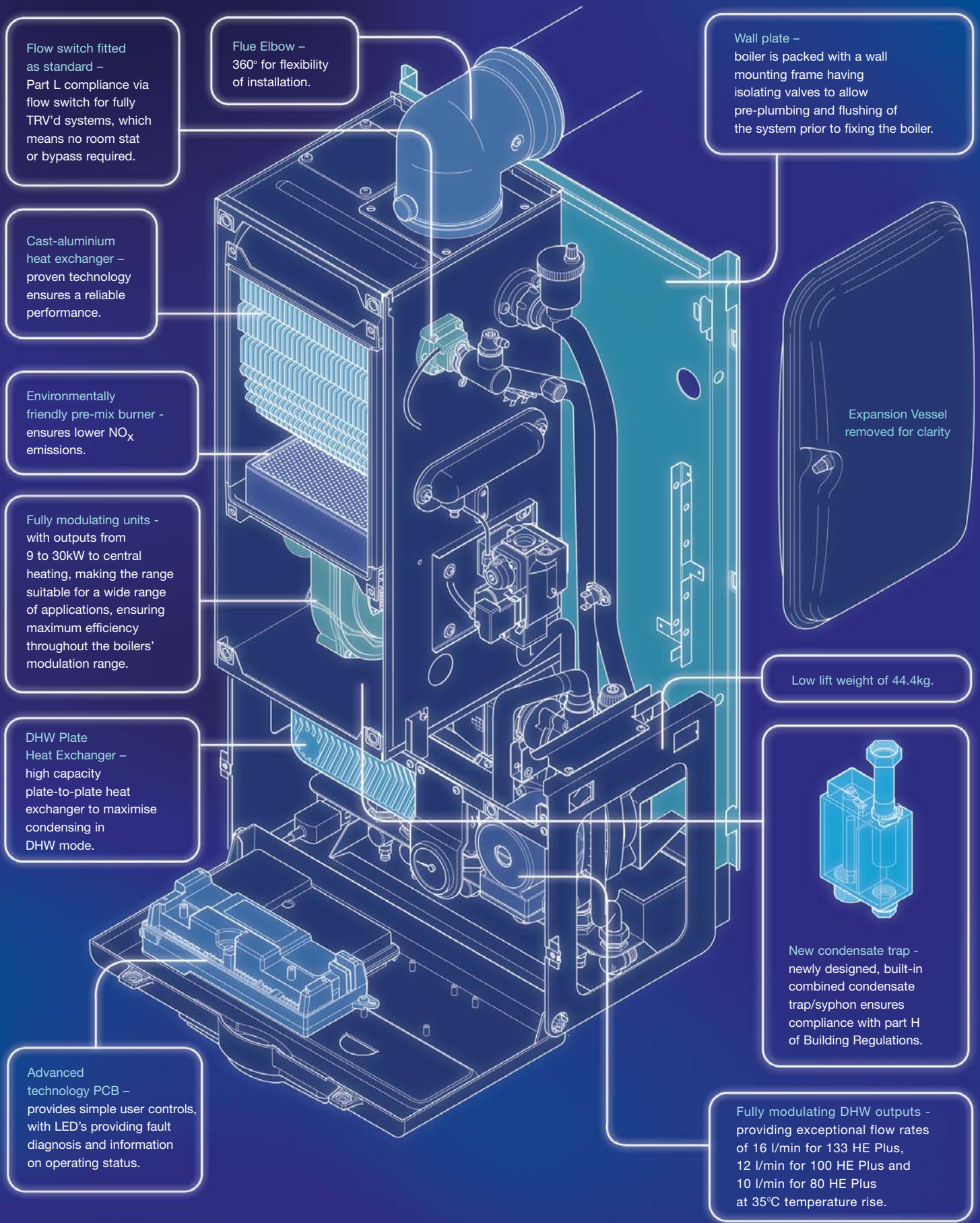
## Rigorously tested to the nth degree.

At our new £2 million Product Design Centre, each new boiler in the Baxi HE Plus range has been rigorously tested. To ensure that they offer service above and beyond the call of duty, we put our boilers through everything from accelerated test cycles to simulated environmental conditions. With the capabilities to test individual components at temperatures ranging from -40°C to +180°C.

## Unbeatable Heateam back up.

Should you ever need it, you'll be able to call on the finest technical back up and the widest spares network in the industry. With over 180 service engineers covering the whole of the UK, supported by dedicated teams of Call Centre support staff operating on a true seven-day basis, 363 days per year, Heateam is the benchmark service for the industry. Whilst to ensure easy installation and trouble free maintenance, Baxi Training also provides a range of courses available to all engineers who install or service Baxi appliances.

# Baxi Combi 133 HE Plus revealed >>



Flow switch fitted as standard – Part L compliance via flow switch for fully TRV'd systems, which means no room stat or bypass required.

Flue Elbow – 360° for flexibility of installation.

Wall plate – boiler is packed with a wall mounting frame having isolating valves to allow pre-plumbing and flushing of the system prior to fixing the boiler.

Cast-aluminium heat exchanger – proven technology ensures a reliable performance.

Environmentally friendly pre-mix burner – ensures lower NO<sub>x</sub> emissions.

Fully modulating units – with outputs from 9 to 30kW to central heating, making the range suitable for a wide range of applications, ensuring maximum efficiency throughout the boilers' modulation range.



Low lift weight of 44.4kg.

DHW Plate Heat Exchanger – high capacity plate-to-plate heat exchanger to maximise condensing in DHW mode.



Advanced technology PCB – provides simple user controls, with LED's providing fault diagnosis and information on operating status.

Fully modulating DHW outputs – providing exceptional flow rates of 16 l/min for 133 HE Plus, 12 l/min for 100 HE Plus and 10 l/min for 80 HE Plus at 35°C temperature rise.

# Baxi Combi 80, 100 and 133 HE Plus in close up.

## Three impressive outputs, one great boiler design.

The result of a £2 million investment in new product design, the Baxi Combi HE Plus range comprises three outstanding wall mounted condensing combination boilers, each fully automatic and gas fired. Room sealed and fan assisted, they will serve central heating and mains-fed domestic hot water, offering all the performance efficiencies today's customers demand. They are all SEDBUK Band A rated, and their uniform architecture ensures 'know one, know them all' ease of fixing. Choose from the Baxi Combi 80 HE Plus, the Baxi Combi 100 HE Plus, and the Baxi Combi 133 HE Plus.

## Additional information

- The boilers are suitable for use only on fully pumped sealed heating systems.
- Priority is given to domestic hot water.
- Automatic flow temperature reduction for optimum HE operation.
- Concealed User controls.
- User adjustable CH & DHW temperature.
- Optional integral 12 hour electro-mechanical timer kit.
- Optional remote 7 day programmable room stat (Intellistat).
- Anti-cycle to extend product life.
- Quick Installation guide included.
- Optional horizontal flue deflector minimises plumbing.
- Extensive flue options.
- Boiler frost protection as standard.
- 80, 100 - IPX2, 133 - IPX4.

### Wall plate –

boiler is packed with a wall mounting frame having isolating valves to allow pre-plumbing and flushing of the system prior to fixing the boiler.

Flow switch fitted as standard – Part L compliance via flow switch for fully TRV'd systems, which means no room stat or bypass required.

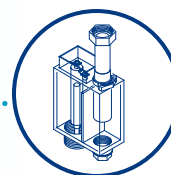
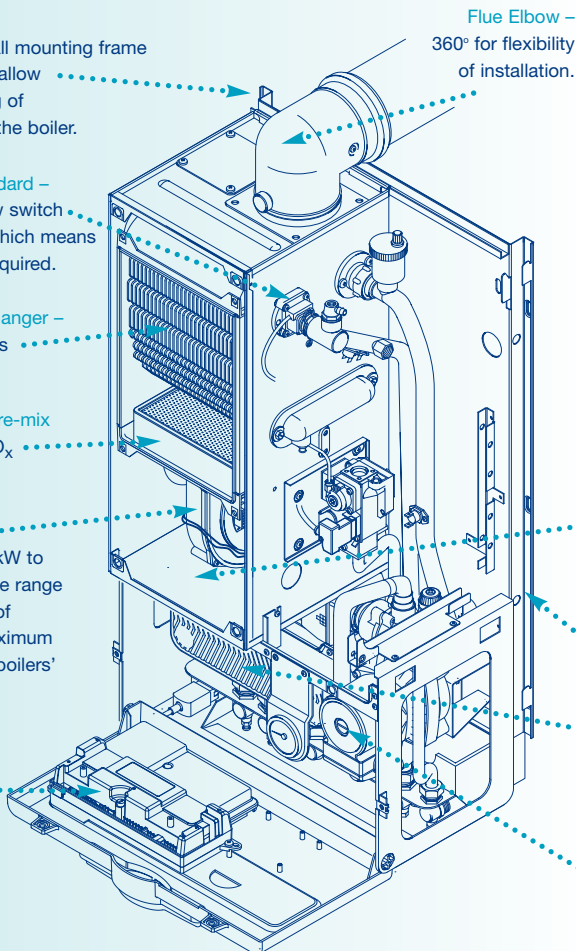
Cast-aluminium heat exchanger – proven technology ensures a reliable performance.

Environmentally friendly pre-mix burner – ensures lower NO<sub>x</sub> emissions.

Fully modulating units – with outputs from 9 to 30kW to central heating, making the range suitable for a wide range of applications, ensuring maximum efficiency throughout the boilers' modulation range.

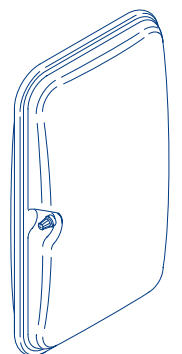
Advanced technology PCB – provides simple user controls, with LED's providing fault diagnosis and information on operating status.

Flue Elbow – 360° for flexibility of installation.



New condensate trap – newly designed, built-in combined condensate trap/syphon ensures compliance with part H of Building Regulations.

Expansion Vessel removed for clarity



Low lift weight of 44.4kg.

DHW Plate Heat Exchanger – high capacity plate-to-plate heat exchanger to maximise condensing in DHW mode.

Fully modulating DHW outputs – providing exceptional flow rates of 10 l/min for 80 HE Plus, 12 l/min for 100 HE Plus and 16 l/min for 133 HE Plus at 35°C temperature rise.



Exceptional flow rates of 10, 12 and 16 l/min at 35°C temp rise



Can be located in unventilated cupboards or compartments



NO<sub>x</sub> emissions class 5



Intelligent hot water pre-heat function

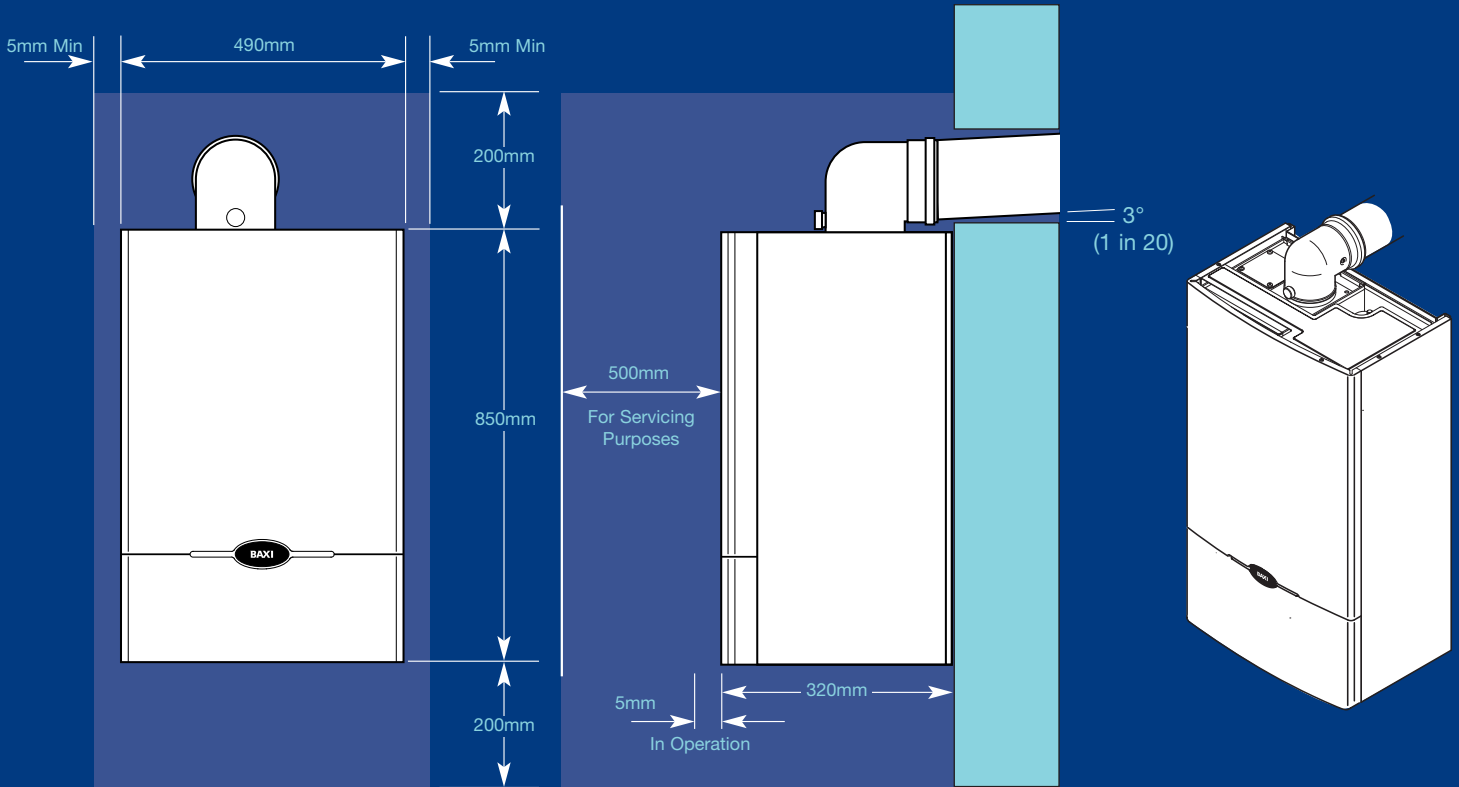


SEDBUK 90.8% Band A (133 HE Plus 90.7%)

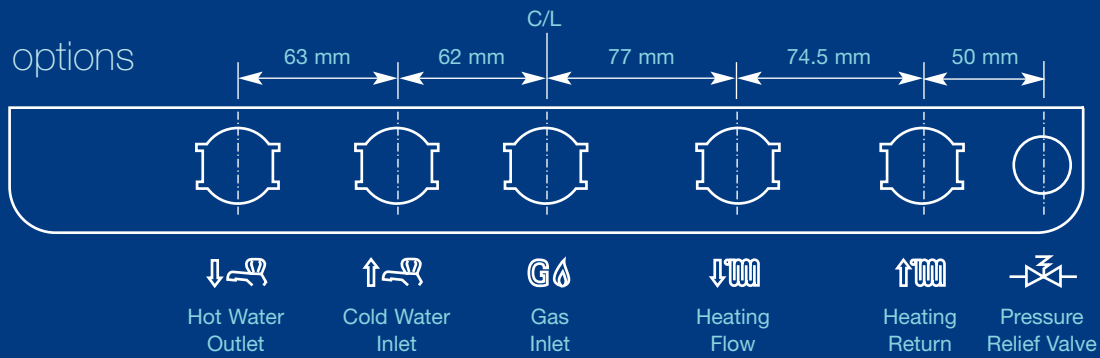


Fully modulating outputs from 9 to 30kW to CH

# Dimensions and minimum clearance mm



## Piping options



Top View of Tap Rail

Technical information	Units	80 HE Plus	100 HE Plus	133 HE Plus
Max Continuous DHW flow rate raised 35°C	litres/min	10	12	16
Max heat input CH and DHW modes	kW	26.95/26.95	33.7/33.7	33.7/45.45
Max heat output CH and DHW modes	kW	24/24	30/30	30/39
Max gas rate	m <sup>3</sup> /hr	2.5	3.1	4.2
NO <sub>x</sub> Class		5	5	5
Min DHW flow rate	litres/min	1.9	1.9	1.9
Min DHW operating pressure	bar	0.1	0.1	0.1
Max DHW system pressure	bar	10	10	10
Safety discharge pressure	bar	3	3	3
Automatic bypass		No bypass req.	No bypass req.	No bypass req.
Max capacity of CH system	litres	125	125	125
Filling loop		Optional	Optional	Optional
Pre-plumbing wall plate		Yes	Yes	Yes
Gas connection	BSPF	1/2"	1/2"	1/2"
Flow and return compression fitting	mm	22	22	22
DHW inlet and outlet compression fitting	mm	15	15	15
Pressure relief discharge compression fitting	mm	15	15	15
Installation lift weight	kg	44.4	44.4	44.4
Electrical supply	V/Hz	230/50	230/50	230/50
Power consumption	watts	200	200	200
Electrical protection		IPX2	IPX2	IPX4
Electronic ignition		Yes	Yes	Yes
Frost protection		Yes	Yes	Yes
24hr pump exercise		Yes	Yes	Yes
Concentric flue terminal diameter	mm	110	110	110
Standard concentric flue length	m	0.8	0.8	0.8
Max concentric horizontal flue length (equivalent)	m	4 (plus terminal)	4 (plus terminal)	4 (plus terminal)
Max concentric vertical flue length (equivalent)	m	5 (plus terminal)	5 (plus terminal)	5 (plus terminal)
Max twin tube horizontal flue length (equivalent)	m	40	40	40
Max twin tube vertical flue length (equivalent)	m	40	40	40

# Baxi 100/2 HE Plus in close up.

## Advanced technology meets simple fixing.

The Baxi 100/2 HE Plus is a gas fired wall mounted boiler for open vented systems, with a 'ledge and latch' wall mounting plate that makes it famously easy to install. It has a seasonal efficiency (SEDBUK A) of 90.9%, and its Part L compliance via an internal flow switch for fully TRV'd systems means that no room thermostat is required. Designed to serve central heating and indirect domestic hot water systems, it is room sealed and fan assisted, operating on a switched live demand from the external control system and delivering a maximum heat output up to 30.18kW.

## Additional information

Concealed user controls.

User adjustable CH temperature.

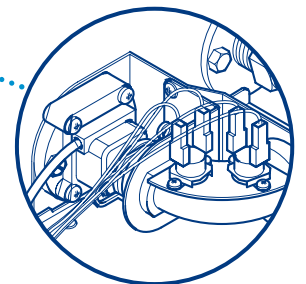
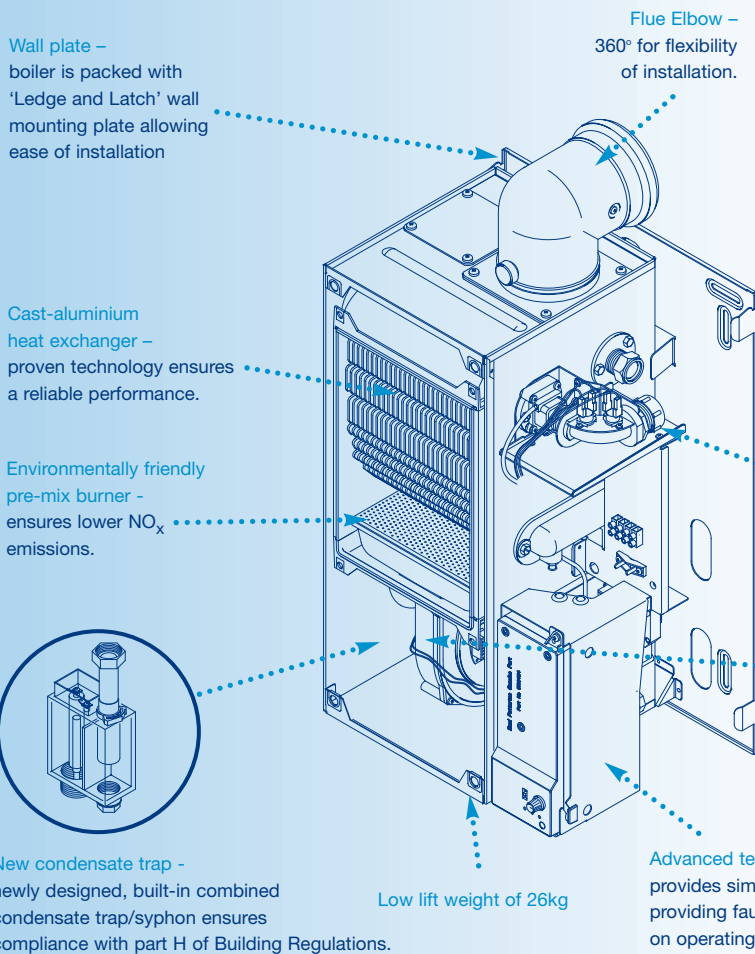
Quick installation guide.

Output is fully modulating.

NO<sub>x</sub> emissions Class 5.

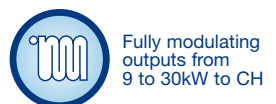
Anti-cycle inbuilt to extend product life.

IPX2.

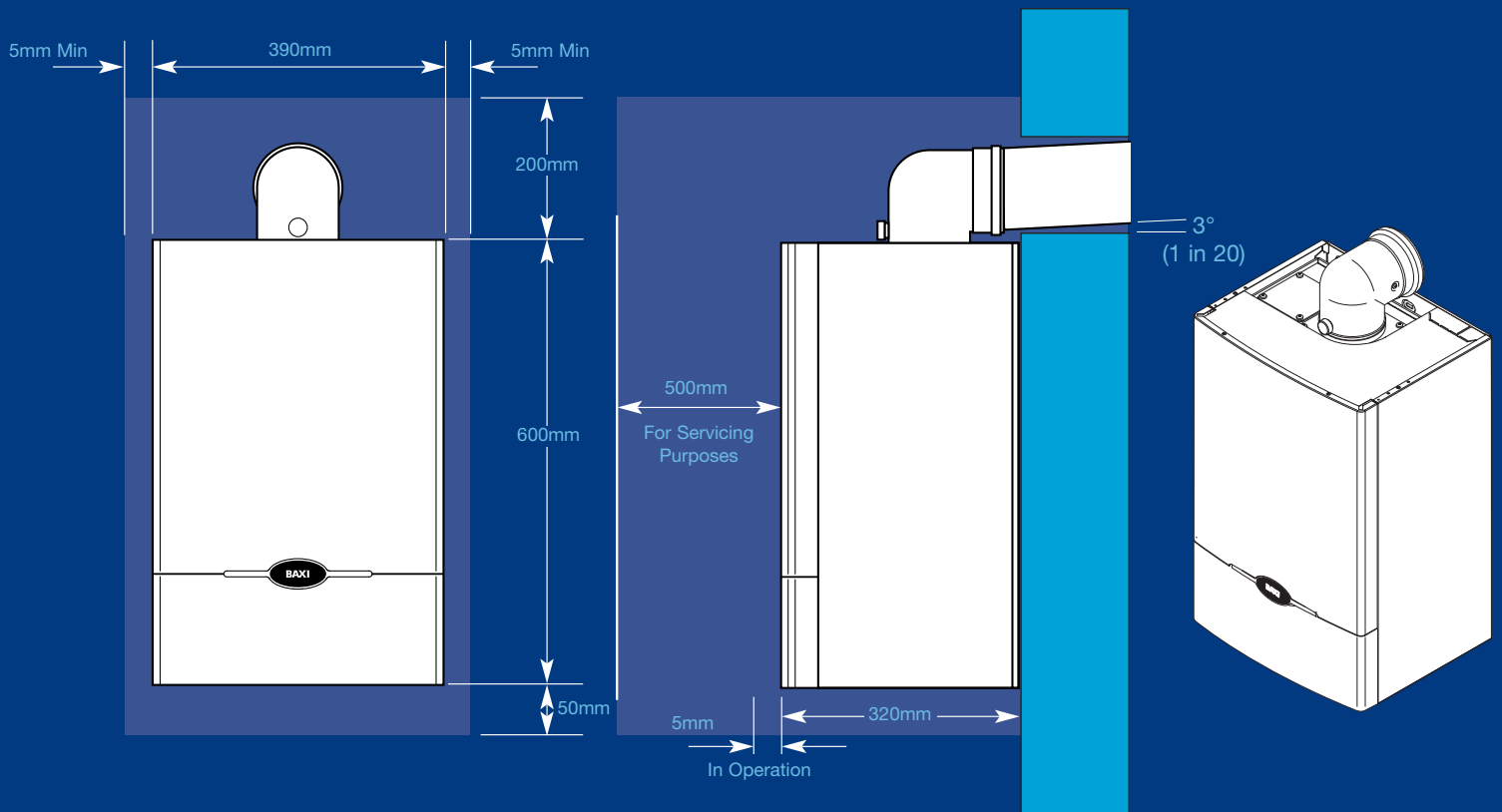


Fully modulating units – with outputs from 9 to 30kW to central heating, making the range suitable for a wide range of applications, ensuring maximum efficiency throughout the boiler's modulation range.

Flow switch fitted as standard – Part L compliance via flow switch for fully TRV'd systems, which means no room stat or bypass required.



## Dimensions and minimum clearance mm



Technical information	Units	100/2 HE Plus
Heat output condensing/non-condensing - maximum	kW	32.61 Con. 30.18 Non Con
Heat output condensing/non-condensing - minimum	kW	10 Con. 9.2 Non Con
Heat input	kW	33.8
Gas rate	m <sup>3</sup> /hr	2.95
NO <sub>x</sub> Class		5
Max static head	m	30m
Min static head	m	1m
Flow and return connections	mm	28
Gas connection		Rc1/2
Electrical supply	V/Hz	230/50
Installation lift weight	kg	26
Power consumption	watts	80
Standard flue terminal diameter	mm	110
Standard flue length	m	0.8
Max concentric horizontal flue length (equivalent)	m	4 (plus terminal)
Max concentric vertical flue length (equivalent)	m	4 (plus terminal)
Max twin tube horizontal flue length (equivalent)	m	150
Max twin tube vertical flue length (equivalent)	m	150

# Baxi System 100 HE Plus in close up.

## Dependability and efficiency hand in hand.

Rigorously tested to deliver performance that exceeds expectations in every area of design, the Baxi System 100 HE Plus is a fully automatic wall mounted condensing system boiler that more than lives up to its high efficiency description. It's room sealed and fan assisted, designed to serve central heating and indirect domestic hot water systems. Amongst its labour-saving features is a wall mounting frame with isolating valves to allow pre-plumbing and flushing of the system prior to fixing to boiler. Suitable for use with fully pumped sealed heating systems it delivers variable self-selecting outputs between 9kW and 30kW.

## Additional information

Concealed user controls.

User adjustable CH temperature.

NO<sub>x</sub> emissions class 5.

Boiler is packed with a wall mounting frame having isolating valves to allow pre-plumbing and flushing of the system prior to fixing to boiler.

Anti-cycle inbuilt to extend product life.

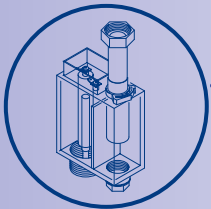
No permanent live.

IPX2.

Wall plate – boiler is packed with a wall mounting frame having isolating valves to allow pre-plumbing and flushing of the system prior to fixing the boiler.

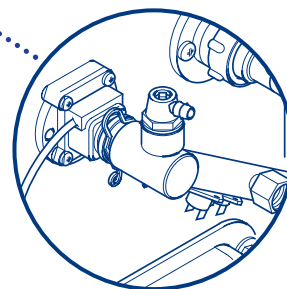
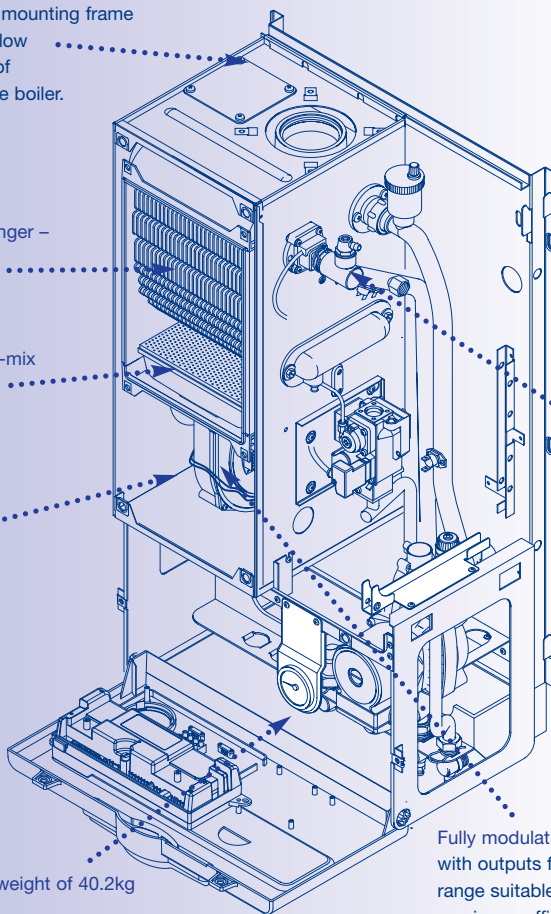
Cast-aluminium heat exchanger – proven technology ensures a reliable performance.

Environmentally friendly pre-mix burner - ensures lower NO<sub>x</sub> emissions.

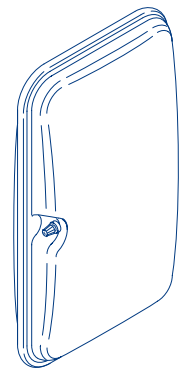


New condensate trap - newly designed, built-in combined condensate trap/syphon ensures compliance with part H of Building Regulations.

Low lift weight of 40.2kg



Flow switch fitted as standard – Part L compliance via flow switch for fully TRV'd systems, which means no room stat or bypass required.



Expansion Vessel removed for clarity

Fully modulating units - with outputs from 9 to 30kW to central heating, making the range suitable for a wide range of applications, ensuring maximum efficiency throughout the boiler's modulation range.



Wall mounting frame for ease of installation



Can be located in unventilated cupboards or compartments



NO<sub>x</sub> emissions class 5



Low lift weight of 40.2kg



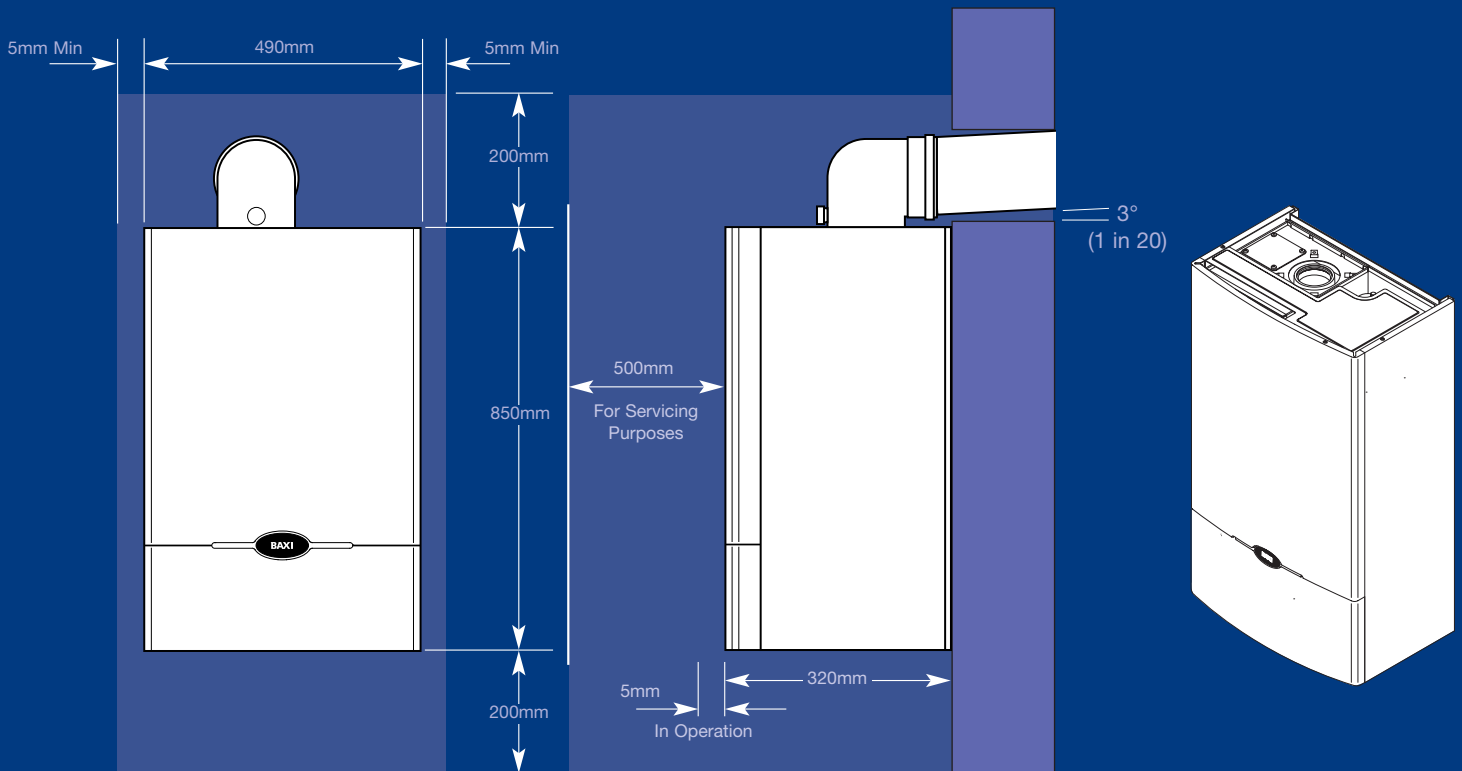
SEDBUK 90.9% Band A



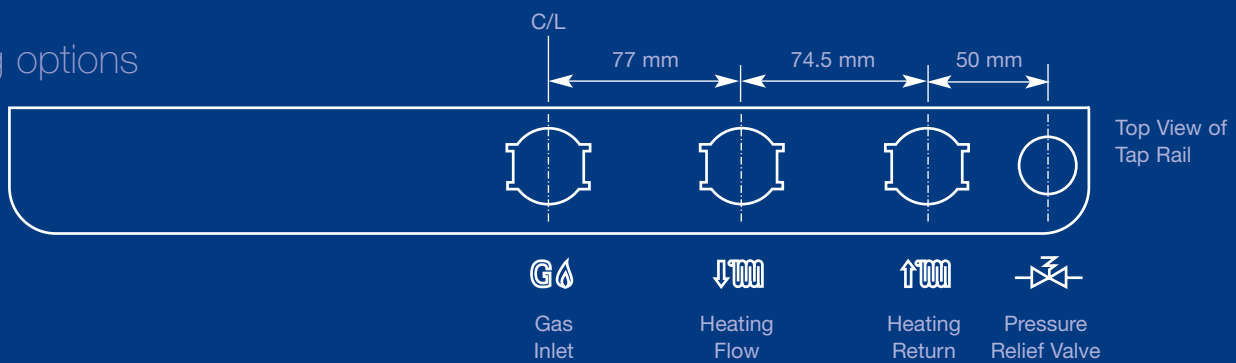
Fully modulating outputs from 9 to 30kW to CH



## Dimensions and minimum clearance mm



## Piping options



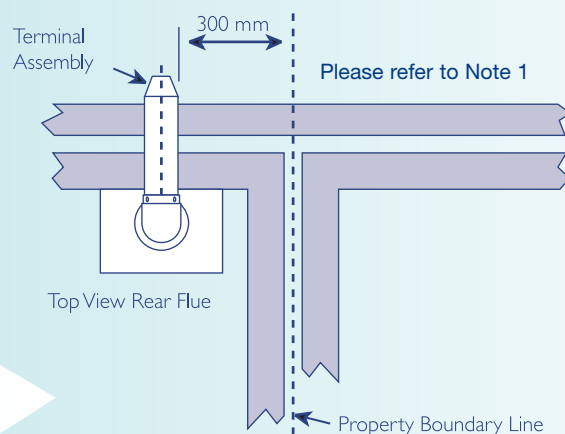
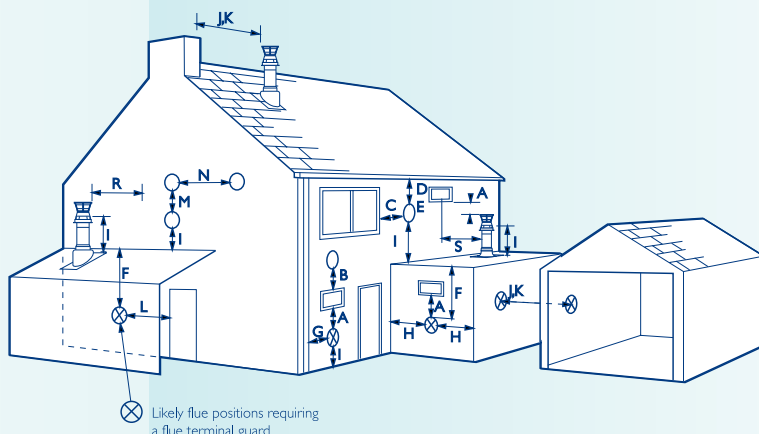
Technical information	Units	System 100 HE Plus
Heat output condensing/non-condensing - maximum	kW	32.61 Con. 30.18 Non Con
Heat output condensing/non-condensing - minimum	kW	10 Con. 9.2 Non Con
Heat input	kW	33.8
Max gas rate	m <sup>3</sup> /h	2.95
NO <sub>x</sub> Class		5
Max capacity of CH system	litres	125
Safety discharge pressure	bar	3
Automatic bypass		No bypass required
Gas connection	BSPF	1/2"
Flow and return compression fitting	mm	22
Pressure relief discharge compression fitting	mm	15
Electrical supply	V/Hz	230/50
Power consumption	W	200
Electrical protection		IPX2
Installation lift weight	kg	40.2
Standard flue terminal diameter	mm	110
Standard concentric flue length	m	0.8
Max concentric horizontal flue length (equivalent)	m	4 (plus terminal)
Max concentric vertical flue length (equivalent)	m	4 (plus terminal)
Max twin tube horizontal flue length (equivalent)	m	150
Max twin tube vertical flue length (equivalent)	m	150

# Baxi Flues and fitting

Terminal Position with Minimum Distance (Fig. 10)	(mm)
A <sup>a</sup> Directly below an opening, air brick, opening windows, etc.	300
B <sup>a</sup> Above an opening, air brick, opening window etc.	300
C <sup>a</sup> Horizontally to an opening, air brick, opening window etc.	300
D Below gutters, soil pipes or drain pipes.	25
E Below eaves.	25
F Below balconies or car port roof.	25
G From a vertical drain pipe or soil pipe.	25
H From an internal (i) or external (ii) corner.	(i) 25 (ii) 115
I Above ground, roof or balcony level.	300
J From a surface or boundary line facing a terminal.	600
K From a terminal facing a terminal (Horizontal flue). From a terminal facing a terminal (Vertical flue).	1200 600
L From an opening in carport (e.g. door, window) into the dwelling.	1200
M Vertically from a terminal on the same wall.	1500
N Horizontally from a terminal on the same wall.	300
R From adjacent wall to flue (vertical only).	300
S From an adjacent opening window (vertical only).	1000

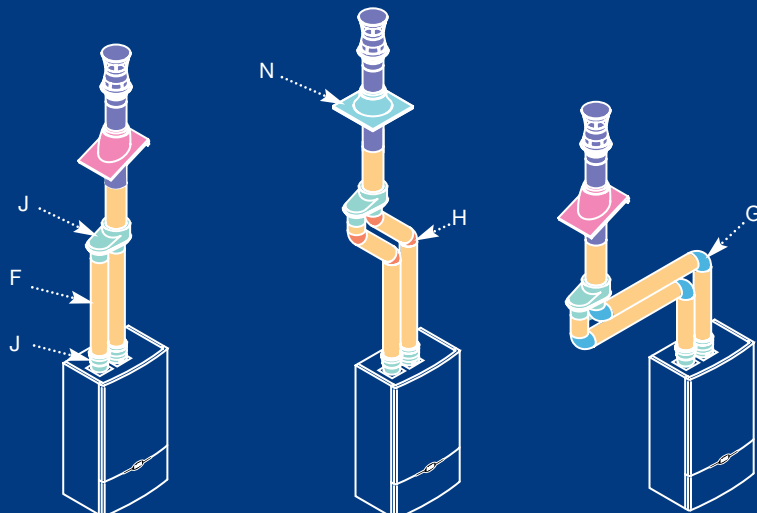
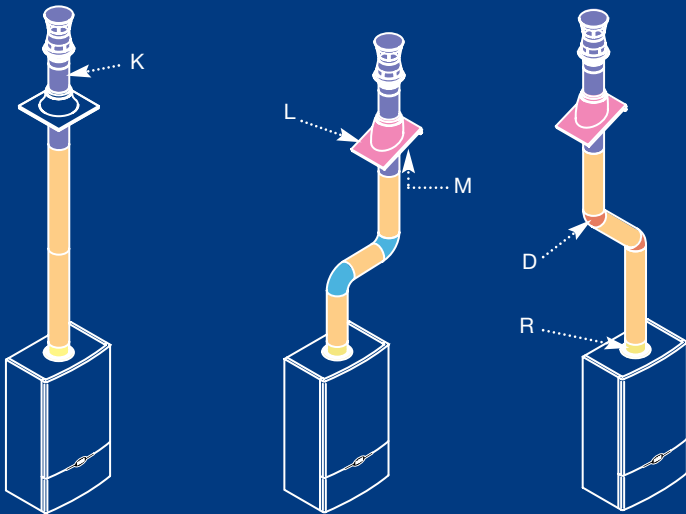
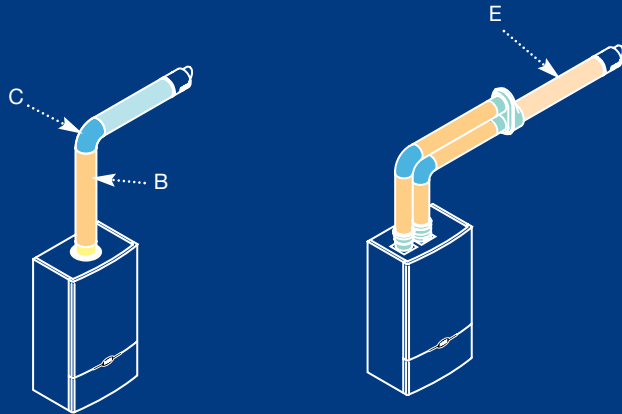
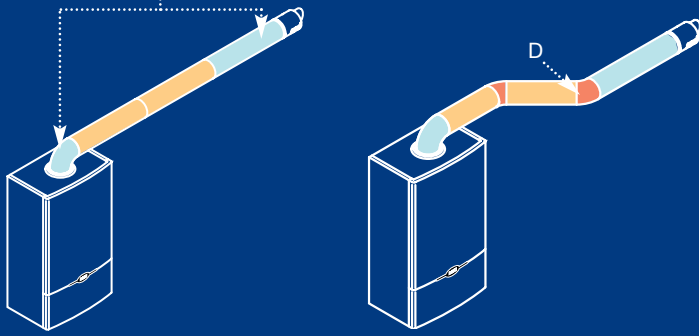
<sup>a</sup> In addition, the terminal should be no nearer than 150mm to an opening in the building fabric formed for the purpose of accommodating a built-in element such as a window frame. See BS 5440 Pt. 1.

NOTE 1: The distance from a fanned draught appliance terminal installed parallel to a boundary may not be less than 300mm in accordance with the diagram opposite



Key	Accessory	Size	Baxi code no. Number
Concentric Flue System 110mm diameter			
A	Horizontal flue kit	850mm	236921
B	Straight extension kit	1000mm	241695
		500mm	241694
		250mm	241692
C	Bend kit	93°	241687
D	Bend kit (pair)	45°	241689
E	Horizontal flue terminal		243013BAX
	Clamp	110mm	243014BAX
Twin Flue System 80mm diameter			
F	Straight extension kit	1000mm	238690
		500mm	238692
		250mm	238694
G	Bend kit	90°	246139
H	Bend kit (pair)	45°	246138
Universal Vertical Flue Kits			
J	Twin flue adaptor kit		242757
K	Vertical flue terminal		242802
L	Universal roof tile	25°/50°	243015
M	Roof cover plate kit		243131
N	Flat roof flashing		243016BAX
P	Boiler connection vertical concentric for all Combi HE Plus		242886
R	Boiler connection vertical concentric for 100/2 HE Plus and System 100 HE Plus		5106888
	Clamp	80mm	238684

A - Standard Flue



## Flue options

### Concentric

The maximum equivalent lengths are 4m (horizontal) or 5m (vertical). These lengths exclude the standard elbow and flue/terminal assembly (horizontal) and terminal assembly (vertical).

### Twin Flue

The total maximum equivalent flue length is 40m. NOTE: Each 1m of flue duct should be calculated as 2m.

Any additional "in line" bends in the flue system must be taken into consideration. Their equivalent lengths are:

Concentric Pipes:	45° bend	0.5 m
	93° bend	1.0 m
Twin Flue Pipe:	45° bend (air duct)	1.3 m
	45° bend (flue duct)	2.6 m
	90° bend (air duct)	4.8 m
	90° bend (flue duct)	9.6 m

Detailed examples of equivalent flue length calculation are given in the Installation Guidance Notes for each flue system type. (Documents 243501 and 243502 for concentric and twin pipe respectively).

## General principles

Flue systems must be constructed using the Baxi accessories approved for the particular product and installed in accordance with BS5440 part 1 - flues.

This information is provided for guidance only and is not intended to substitute for Installation Instructions, copies of which are included with the product and also available on request.

Note: These are general illustrations only - detailing of actual components will vary from model to model. For clarity, on occasions items have been labelled once only.

## Optional Extras

Item	Model	Baxi Code No.
Integral Timer Kit	HE Plus Combi's	5111128
Filling Loop Kit	HE Plus Combi's	5111095
Remote Baxi Intellistat	HE Plus Combi's	247495
Flue Deflector	HE Plus Range	248167

# Baxi HE Plus Range

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The Baxi Combi HE Plus Range has an energy rating A on a scale of A to G. For more information see [www.boilers.org.uk](http://www.boilers.org.uk). This is a certification mark.



The code of practice for the installation, commissioning & servicing of central heating systems



FM35908  
BSEN ISO 9001  
QUALITY MANAGEMENT  
SYSTEM STANDARD

## BAXI

BAXI POTTERTON

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HEPLUS/05/04/03

Keeping Britain Warm