



# **ProTec Plus 50-115kW**

Wall Mounter Condensing Boilers  
Technical Brochure

# **ProTec Plus high efficiency fan-assisted condensing boilers are ideally suited to large domestic projects or commercial applications.**

Easy to install, ProTec Plus boilers can be wall mounted or fixed to our free-standing frames. With outputs ranging from 50kW to over 500kW, they combine high efficiency with low emissions. They can also be configured as either a single unit or in simple modular formation for even greater outputs.

## **PRODUCT CHOICE**

- Four models with outputs from 50-115kW
- Can be cascaded for higher output requirements - up to five boilers (575kW)
- Natural Gas or LPG options available
- Single unit or modular formation options

## **PERFORMANCE BENEFITS**

- Wide 1:10 modulation range to enable reduced output when required
- High energy efficiency
- Ultra low NOx emissions ( $\leq 23$ PPM)
- Stainless steel heat exchanger for maximum combustion performance and safety
- Fully modulated built-in circulator pump
- Weather Compensation compatible

## **INSTALLATION ADVANTAGES**

- Can be wall hung or fixed to ProTec Plus freestanding frames
- Open or room-sealed flueing options



**It is often necessary to add boilers to increase the overall output. It can also be preferable to spread the total heating output required over two or more boilers in a cascade system. Boilers can be mounted side-by-side or back-to-back.**

The individual boilers are connected hydraulically, something which can be easily achieved thanks to the availability of a comprehensive accessories range. This includes a thermoregulation device which is capable of managing a maximum of eight boilers in sequence.

### **DISTRIBUTING THE HEAT EXAMPLE OF CASCADE FUNCTIONING OUTPUT ACROSS MORE THAN ONE UNIT BRINGS MANY KEY ADVANTAGES**

- Higher efficiency compared with the use of a single boiler of higher heat output, which will have to work under a reduced heating load for large periods of the heating cycle, with lower system efficiency.
- Multiple boiler cascade systems can be a very cost effective solution compared to single boiler installation.
- Multiple boiler applications are more reliable than a single stand alone boiler and can maintain the heating function even when maintenance on one of the connected appliances is required. ProTec Plus boilers are designed to be very easy to service with commonality of parts.
- Even distribution of the heating load on all the appliances, which avoids the premature deterioration of one lead boiler compared to the other.
- Cascade solutions offer a very flexible space saving alternative allowing the use of wall mounted boilers where the total required output may normally only be available from larger floor standing units.

# ProTec Plus Technical Data

ProTec model		50	70	90	115
Net input.	W	51.3	69.9	92.3	114.1
Nominal output in condensing 30/50°C	kW	54.8	74.5	98.8	121.7
Minimal output in condensing 30/50°C	kW	5	7.2	9.4	11
Nominal output in standard conditions 60/80°C	kW	49.9	68	90	111
Efficiency at maximum load condensing	%	106.8	106.6	107	106.7
Efficiency at part load condensing	%	107	107.2	107.8	107.6
NOx class		6	6	6	6
Natural gas consumption (gross)	m <sup>3</sup> /h	5.43	7.4	9.77	12.07
Flue gas temperature rise (max)	°C	53	58	53	56
Flue gas mass flow (max)	kg/h	81	106	146	178
Max flue resistance	Pa	110	305	208	145
Maximum operational electrical consumption	W	155	195	345	385
Stand-by consumption	W	6	5	5	5
Flue connection (Single/Concentric)	mm	80/125	80/125	80/125	80/125
Gas connection (G)	mm(inch)	28(1)	28(1)	28(1)	28(1)
Flow/Return (F/R)	mm(inch)	42(1.1/2)	42(1.1/2)	42(1.1/2)	42(1.1/2)
Protection rating	IP	IPX5D	IPX5D	IPX5D	IPX5D
Min-max water pressure	bar	0.5-3.5	0.5-3.5	0.5-3.5	0.5-3.5
Water content	ltr	3	4	10	11
Gross weight including packaging	kg	51	85	96	103

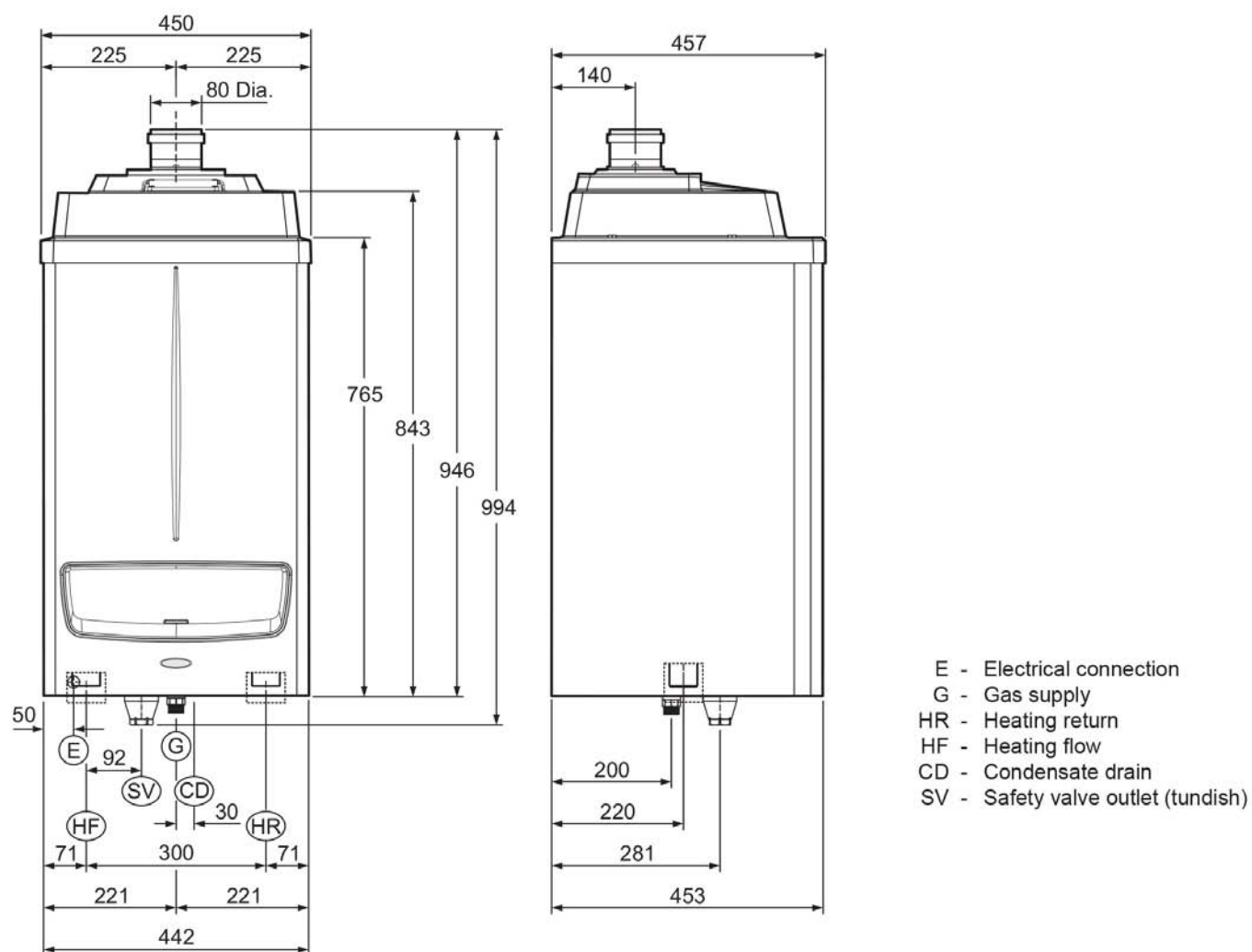
## Central heating (sealed system)

Max working system pressure	3.5 bar
Min system pressure	0.5 bar
Max system temperature ProTec Plus 50	85°C
Max system temperature ProTec Plus 70	85°C
Max system temperature ProTec Plus 90	85°C
Max system temperature ProTec Plus 115	85°C
Pressure relief valve setting	4 bar (58.8 PSI)
Flow connection	1.1/2" BSP
Return connection	1.1/2" BSP
Relief valve connection	3/4" BSP
Recommended system pressure (cold)	1.0 bar
CH water temp. (approx. max.) ProTec Plus 50	85°C
CH water temp. (approx. max.) ProTec Plus 70	85°C
CH water temp. (approx. max.) ProTec Plus 90	85°C
CH water temp. (approx. max.) ProTec Plus 115	85°C

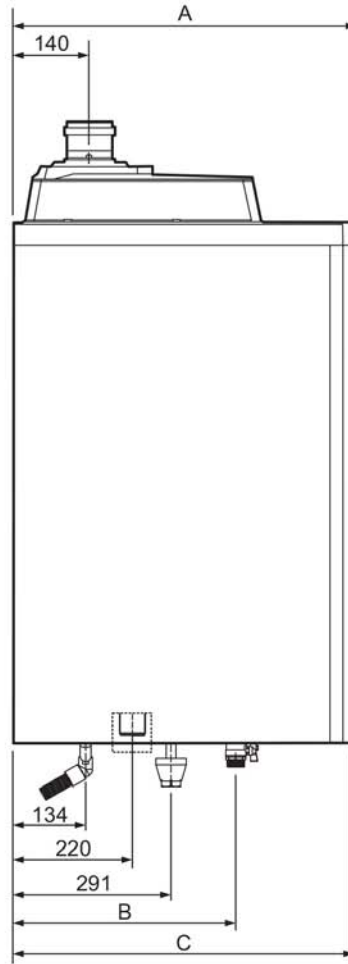
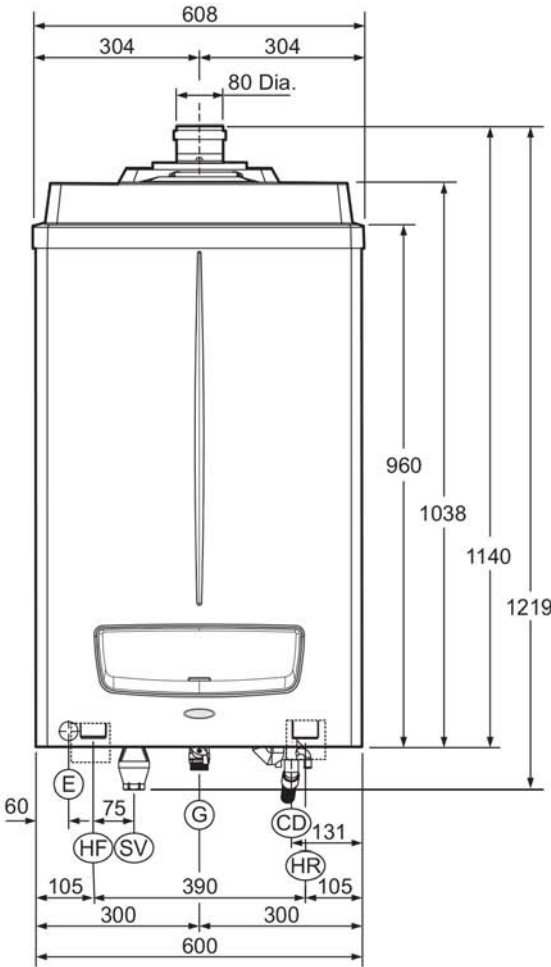
## Clearances

Min clearances for servicing (from casing) Top	300mm
Min clearances for servicing (from casing) Bottom	400mm
Min clearances for servicing (from casing) Sides	10mm
Min clearances for servicing (from casing) Front	500mm

## ProTec Plus 50kW Dimensions



# ProTec Plus 70-115kW Dimensions



	Pro Tec Plus 70	Pro Tec Plus 90, 115
<b>A</b>	502 mm	632 mm
<b>B</b>	265 mm	410 mm
<b>C</b>	497 mm	627 mm

- E - Electrical connection
- G - Gas supply
- HR - Heating return
- HF - Heating flow
- CD - Condensate drain
- SV - Safety valve outlet (tundish)



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