

TECHNICAL SUBMISSION

Thision S Plus 46 Gas Fired Ultra Low NOx Condensing Boiler

General Description:

The Thision S Plus 46 boiler is one of a range of three wall mounted, stainless steel, fully modulating, ultra-low NOx, gas fired condensing boilers, with maximum outputs ranging between **33.6kW to 52.9kW @ 80/60°C ΔT**. The Thision S Plus 46 boiler uses a downward firing pre-mix burner, which, combined with precise gas to air mixing, results in **extremely low environmental impact, NOx emissions of no more than 24.0mg/kWh**. The boiler is calculated to have a **Seasonal Energy Efficiency for Room Heating of 98.0%**. This figure is based on the performance of the unit using the QAA55 room control unit and the QAC34 outside air sensor supplied with the appliance.

The stainless steel heat exchanger is constructed using multi-pipes with generous wall thickness for strength and durability. These are configured in such a way to return the highest levels of efficiency. The burner air/gas system includes a (flue gas) non-return valve as standard and the appliance is configured to use industry standard 80/125 flue components. The appliance has an **Seasonal Space Heating Efficiency Class Rating of A**

The boiler is supplied in one piece with a fitted robust and stylish outer casing fabricated from stove enabled steel sheet. The boiler includes an integral pump and a diverter valve for **DHW control** can be added as an **optional extra**.

The following **components** are **supplied as standard** for use with the appliance.

- (QAC34) Outside Air Temperature Sensor
- (QAZ36) Immersion Temperature sensor for DHW
- (QAA55) Intelligent Room Control Unit

The boiler is very versatile and capable of operating at design condition anywhere between **Δt 15 °C and Δt 25 °C**.

Compliance with Standards as appropriate with relevant sections of: Gas Appliance Directive 90/396/EEC & Boiler Efficiency Directive 92/42/EEC.



Warranty:

To activate warranty, you **must register your product** within six months of the purchase date. This can be completed by telephone or email.

Tele: **0333 240 8777 option One** - New product registrations.

e-mail: **customer.service.uk@ariston.com**

The following information must be provided:

Appliance serial number

Purchase date

Installation date

Site contact name, email address and telephone number

Product installation address.

On the condition that the product has been installed to manufacturers instructions and the warranty terms and conditions have not been compromised, the standard warranty term for the **THISION S PLUS boilers** is **five years** from date of purchase.

All products that are **not registered**, will have a **one year** warranty period and this will cover **material and manufacture fault**, subject to the product being installed to manufacturers instructions.

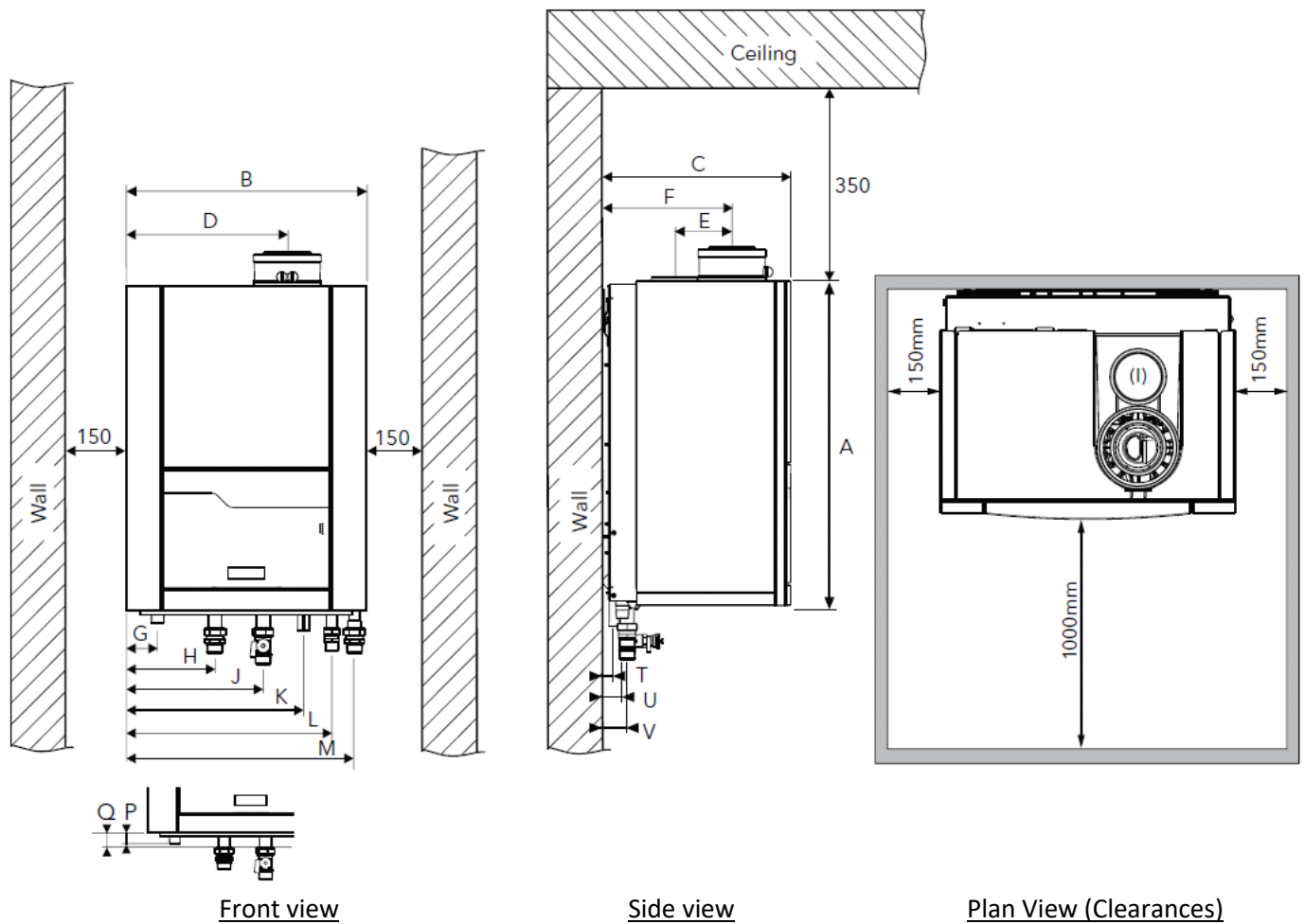
Technical Data:

Boiler Model	Thision S Plus 46	
Seasonal space heating efficiency class ¹	A	-
Nominal heat output at 80°/60°C	44.9	kW
Minimum heat output at 80/60°	8.8	kW
Nominal heat output at 40/30°C	48.7	kW
Minimum heat output at 40/30°C	9.8	kW
Nominal heat input full load Net	45.9	kW
Minimum heat input full load Net	9.0	kW
Efficiency at 80/60°C full load Net/Gross	97.9/88.2	%
Efficiency at 40/30°C min load Net/Gross	109.3/98.5	%
Efficiency at 30°C return 30% load Net	98.9	%
Seasonal energy efficiency of package for room heating*	98	%
Gas consumption max/min nat gas G20	4.86/0.95	m ³ /h
Gas consumption max/min LPG G31	3.76/2.62	Kg/h
Gas inlet pressure max/min nat gas G20	25/17	Mbar
Gas inlet pressure max/min LPG	50/30	Mbar
NOx emissions (EN15502)**	24	mg/kWh
BREEAM Credits	1	-
Flue gas temperature at 80/60°C full load	70	°C
Max permissible flue resistance	90	Pa
Water pressure max/min	3.0/1.0	Bar
Maximum temperature setpoint	85	°C
Water flow at ΔT 20°C	0.5	lit/sec
Residual head of pump at ΔT=20K	20	kPa
Electric power consumption (230V 50Hz) boiler	125	W
Electric power consumption (230V 50HZ) pump min/max	12/45	W
Sound power level	51	dB(A)
Weight (empty)	64	Kg
Water content	7	litres
Dimensions		
Water connections flow and return connections	1½"	BSP-M
Gas connection	¾"	BSP-M
Flue gas connection (concentric)	80/125	mm
Room sealed using separate exhaust and combustion air supply	80	mm
Condense waste & safety valve outlet	φ24 oval	mm
Depth	385	mm
Width	660	mm
Height (excluding connections)	680	mm

* Package (boiler with temperature regulator QAA55 + QAC34 supplied as standard with the boilers)

** NOx values are calculated on GCV

Dimensions & Clearances:



Thision S Plus 46	Units	Dimensions
A – Height	mm	680
B – Width	mm	660
C – Depth	mm	385
D – C/L Concentric Flue/Air connection	mm	495
E – C/L Twin Pipe – Flue & Air Inlet connections	mm	120
F – C/L Concentric Flue/Air connection	mm	270
G – Gas connection	mm	65
H – Flow connection	mm	185
J – Return connection	mm	445
K – Condense outlet	mm	530
L – Expansion Vessel connection (Only when 3-port valve is fitted)	mm	587
M – HWS cylinder return (only when 3-port valve is fitted)	mm	635
P – Connection G projection	mm	18
Q – Connections H, J & K projection	mm	60
T – Condense outlet	mm	25
U – Gas connection	mm	40
Flow & Return connections	mm	50
Concentric Flue/Air connection	mm	80/125
Air Inlet (I) (Alternate parallel tube arrangement)	mm	80
Gas Connection	BSP	R¾"
Flow/Return connections	mm/BSP	28/R1"
Condense connection	mm	24