

TECHNICAL SUBMISSION

Trigon XL 250 H2 Gas Fired Ultra Low NOx Condensing Boiler

General Description:

The Trigon XL 250 H2 boiler is one of a range of seven floor standing, stainless steel, fully modulating, ultra-low NOx, gas fired condensing boilers, with maximum outputs ranging between **142.3kW to 540.2kW @ 80/60°C ΔT**. Trigon XL boilers use high efficiency pre-mix combustion system, water cooled burners which, combined with precise gas to air mixing, results in **extremely low environmental impact. NOx emissions of no more than 24.3mg/kWh**. The boiler is calculated to have a **Gross Seasonal Efficiency of 96.4%** which meets with the efficiency criteria as set out in the Non-domestic Building Services Guide Compliance Guide 2010 Edition (with 2011 amendments).

The Trigon XL 250 H2 boiler is supplied with the option to provide two system return connections. This facility enables the boiler to provide higher efficiency of operation, when serving both a high and low temperature heating circuit. The higher temperature return can be directed to miss the condensing heat exchanger and thus increase efficiency of operation, by preventing blending and a resultant increased system water return temperature to the condensing heat exchanger.

The Trigon XL H2 boilers are low water content appliance that offer compact dimensions with easy manoeuvrability. The boiler includes a comprehensive controller that features integrated master-slave cascade functionality. Multiple boilers in a cascade installation can satisfy a large range of heat demands for commercial buildings.

The boiler is supplied in one piece, with a fitted robust and stylish outer casing fabricated from stove enabled steel sheet. If access to the plant room is difficult, then our engineers can dismantle the boiler into manageable sections, transport the parts to the desired location and then re-assemble the boilers. This service is a chargeable extra.

The boiler is very versatile and capable of operating at design condition anywhere between **Δt 15 °C and Δt 30 °C**.

The TRIGON XL 250 H2 boiler is certified as being H2 ready. This means that the appliance is suitable for use with a fuel supply consisting of up-to a maximum of a 20% hydrogen and 80% natural gas. The same appliance can operate using natural gas only, with no modifications.



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 **TRIGON XL boilers is two 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.

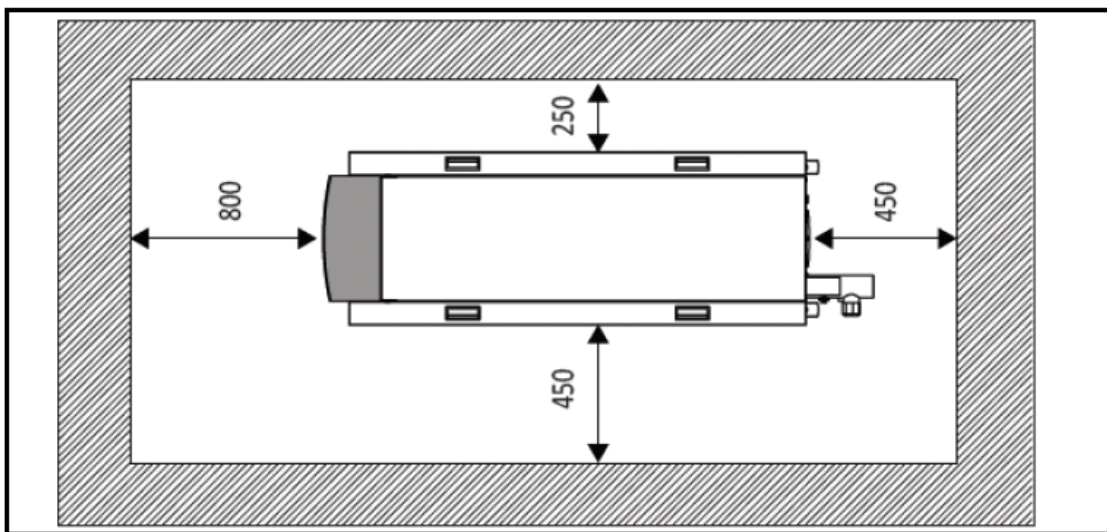
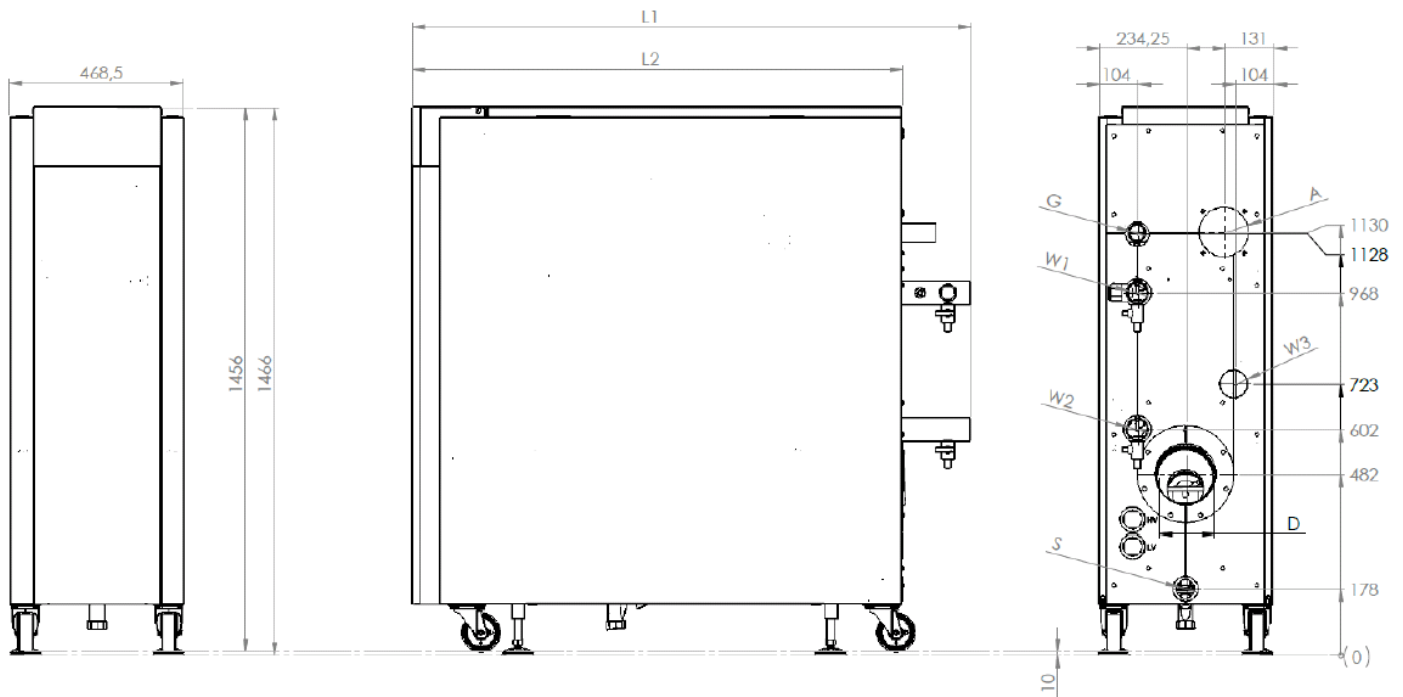
Technical Data:

| Boiler Model | Trigon XL 250 H2 | |
|---|------------------|-------------------|
| Nominal heat output at 80/60°C | 237.6 | kW |
| Minimum heat output at 80/60°C | 47.0 | kW |
| Nominal heat output at 40/30°C | 252.3 | kW |
| Minimum heat output at 40/30°C | 53.4 | kW |
| Nominal heat input full load Net | 242.0 | kW |
| Minimum heat input min load Net | 48.4 | kW |
| Efficiency at 80/60°C full load Net/Gross | 98.2/88.5 | % |
| Efficiency at 40/30°C min load Net/Gross | 110.4/99.5 | % |
| Efficiency at 30°C return 30% load Gross | 98.3 | % |
| Gross seasonal efficiency* | 96.4 | % |
| Gas consumption max/min nat gas G20 | 22.2/4.4 | m ³ /h |
| Gas consumption max/min LPG G31 | 18.9/3.8 | kg/h |
| Gas inlet pressure max/min nat gas G20 | 50/20 | mbar |
| Gas inlet pressure max/min LPG G31 | 50/30 | Mbar |
| NOx annual emissions (EN 15502) | 24.3 | mg/kWh |
| BREEAM Credits** | 1 | - |
| Flue gas temperature at 80/60°C full load | 75 | °C |
| Max permissible flue resistance | 200 | Pa |
| Water pressure max/min | 8/1 | bar |
| Maximum temperature setpoint | 90 | °C |
| Water flow at ΔT=11K | 5.2 | lit/sec |
| Hydraulic resistance at ΔT=11K | 107 | kPa |
| Water flow at ΔT=20K | 2.8 | lit/sec |
| Hydraulic resistance at ΔT=20K | 31 | kPa |
| Water flow at ΔT=30K | 1.9 | lit/sec |
| Hydraulic resistance at ΔT=30K | 14 | kPa |
| Electrical connection | 230/400 | V |
| Electrical power consumption boiler | 286 | W |
| Sound Power Level | 70.3 | dB(A) |
| Weight (empty) | 366 | kg |
| Water content | 33 | |
| Dimensions | | |
| Water connections (W1/W2) | R2" | - |
| Gas connection (G) | R1½" | - |
| Flue gas connection (D) | 200 | mm |
| Air intake connection (A) (for room sealed use) | 130 | mm |
| Condensate connection (S) | 32 | mm |
| Boiler length with water connection (L1) | 1649 | mm |
| Boiler length without water connection (L2) | 1465 | mm |
| Width | 468.5 | mm |
| Height (incl. cargo wheels) | 1466 | mm |

* Calculated in accordance with Equation 2 in the Non-domestic Building Services Compliance Guide

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Dimensions & Clearances:



| Dimensions mm | Trigon XL 250 H2 |
|------------------------------------|------------------|
| L1 | 1649 |
| L2 | 1465 |
| A - (combustion air supply) | 130Ø |
| G - (gas connection) | 1½" |
| D - (flue gas exhaust) | 200Ø |
| S - (condense drain) | 32 |
| W1 – (primary flow) | 2" |
| W2 – (primary return) | 2" |
| W3 - (Optional – high temp return) | 2" |

To optimize the position of the boiler in the room it is possible to exchange the position of the electrodes from the right side of the boiler to the left side of the boiler. This also means that the required space as indicated in the picture will be mirrored.
 Normal: Left 250mm / Right 450mm
 Modified: Left 450mm / Right 250mm