

# TECHNICAL SUBMISSION

## Trigon XXL ECO 650 Gas Fired Ultra Low NOx Condensing Boiler

### General Description:

The Trigon XXL ECO boiler is one of a range of 9 floor standing, stainless steel, fully modulating, ultra-low NOx, gas fired condensing boilers, with maximum outputs ranging between **615 & 1568kW @ 80/60°C ΔT**. Trigon XXL ECO boilers use downward firing pre-mix, water cooled burners which, combined with precise gas to air mixing, results in **extremely low environmental impact NOx emissions (EN 15502) of 20 mg/kWh**. The boiler is calculated to have a **Gross Seasonal Efficiency of 91.2%** which meets with the efficiency criteria as set out in the Non-domestic Building Services Guide Compliance Guide 2010 Edition (with 2011 amendments).

The boiler is very versatile and capable of operating at design condition from  $\Delta T 10^{\circ}C$  and  $\Delta T 30^{\circ}C$ .

The Trigon XXL ECO Boiler is supplied with three heat exchangers. The first and the third are constructed from smooth stainless steel tubes, whilst the second heat exchanger is assembled using laser welded stainless finned tubes for enhanced heat transfer.

### Compliance with Conformity with the following:

#### Standards:

EN 15502-1  
EN 15502-2-1  
EN 55014-1/-2  
EN 61000-3-2—3  
EN 60335-1/-2

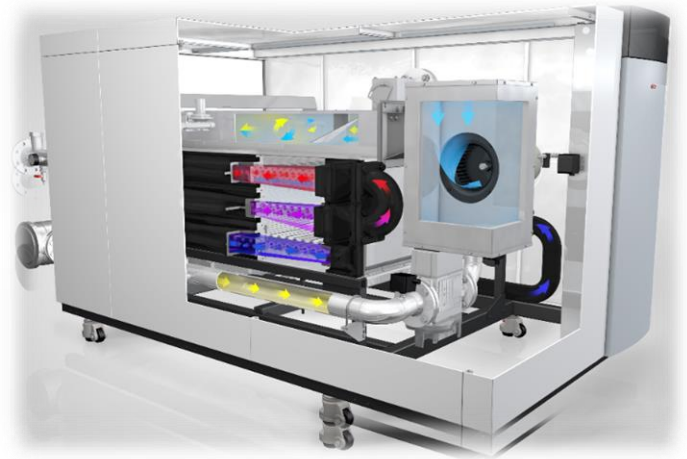
#### Directives:

1992/42/EEC (Boiler Efficiency Directive)  
2016/426/EEC (Gas Appliance Regulation)  
2041/35/EU (Low Voltage Directive)  
2014/30/EU (EMC Directive)  
2009/125/CE Energy Related Products  
811-813-814/2013 EU regulation  
Gas Appliance Directive 90/396/EEC

Single boilers 300kW and above, must be installed in compliance with BS6644.

The product is designated with CE Number

**CE0063CR3158**



**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 XXL 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.

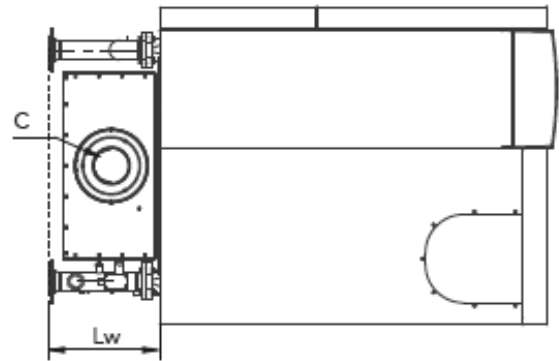
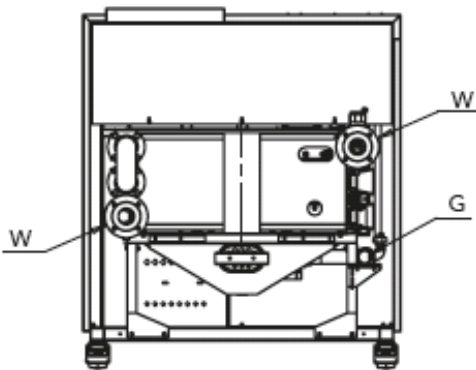
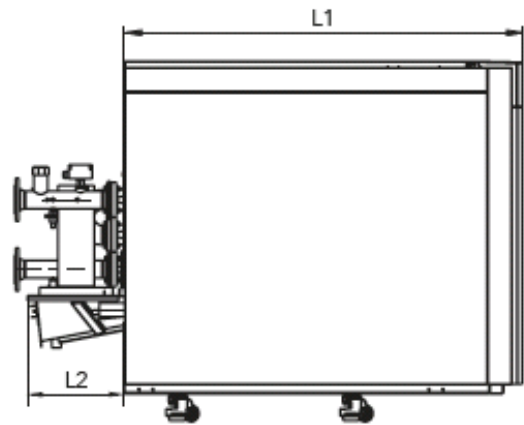
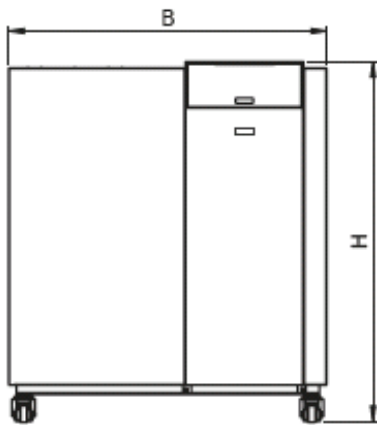
## Technical Data:

Boiler Model	Trigon XXL ECO 650	
Nominal Heat Output @ 80/60°C	615	kW
Minimum Heat Output @ 80/60°C	175	kW
Nominal Heat Output @ 40/30°C	625	kW
Minimum Heat Output @ 40/30°C	195	kW
Nominal Heat Input Full Load – Net	653	kW
Minimum Heat Input Min Load – Net	187	kW
Efficiency @ 80/60°C Full Load Net – Gross	94.1 - 84.8	%
Efficiency @ 40/30°C Min Load Net – Gross	104.1 - 93.8	%
Efficiency @30°C Return 30% Load Gross	92.7	%
Gross Seasonal Efficiency *	91.20	%
Gas Consumption max/min Nat Gas G20	59.9 – 17.2	m <sup>3</sup> /h
Gas Consumption max/min LPG G31	51.0/14.6	kg/h
Gas Inlet Pressure Nominal Nat Gas G20	20	mbar
Gas Inlet Pressure Nominal LPG G31	30	mbar
NOx Emissions (EN15502)	20	mg/kWh
BREAM Credits **	2	-
Flue Gas Temperature @ 80/60°C Full Load	153	°C
Max Permissible Flue Resistance	150	Pa
Water Pressure Max/Min	8/1.5	Bar
Maximum Temperature Set-point	90	°C
Water Flow @ ΔT 11K	13.3	lit/sec
Hydraulic Resistance @ ΔT 11K	129	kPa
Water Flow @ ΔT 20K (Nominal)	7.3	lit/sec
Hydraulic Resistance @ ΔT 20K	39	kPa
Water Flow @ ΔT 30K	4.9	lit/sec
Hydraulic Resistance @ ΔT 30K	18	kPa
Electrical Connection	400	V
Electrical Power consumption boiler	900	W
Sound Power Level	68.7	dB(A)
Weight (empty)	844	Kg
Water Content	53	Litres
<b>Dimensions</b>		
Water Connections (W)	DN65 PN16	-
Gas Connection (G)	R2"	-
Flue Gas Connection (C)	350	mm Ø
Air Intake Connection (Room sealed operation)	355	mm Ø
Condensate Connection	40	mm Ø
Boiler Length (Including   Connections)	2185	mm
Boiler Length (Excluding Connections (L1)	1710	mm
Length Chimney Plate (L2)	550	mm
Width (B)	1370	mm
Height (H)	1555	mm

\* In accordance with equation 2 in the Non-Domestic Building Services Compliance Guide

\*\* BREAM UK New Construction 2018

### Dimensions & Clearances:



Trigon XXL ECO 650 Clearances	mm
Front	1000
Rear	450
Sides (between boilers)	450
Recommended at one side of layout	800

