

## TECHNICAL SUBMISSION

### XL105F Floor Standing Ultra Low NOx Condensing Boiler

#### General Description:

The ATAG XL105F boiler is one of a range of six wall mounted, stainless steel, fully modulating, ultra-low NOx, gas fired high efficiency condensing boilers, with maximum outputs ranging between 65.4kW to 180.3kW @ 80/60°C ΔT. All ATAG XL boilers utilise a pre-mix combustion system, to provide precise gas to air mixing, resulting in extremely low environmental impact.

The ATAG XL105F is tested to the requirement of BS EN 15502, with NOx annual emissions of 22.7mg/kWh. The appliance is therefore awarded the maximum two BREEAM credits. The modulation range is from 18.1kW to 90.2kW @ 80/60°C, increasing to 98.8 kW when operating in full condensing mode. The boiler is calculated to have a Gross Seasonal Efficiency of 96.2% which meets with the efficiency criteria as set out in the Non-domestic Building Services Guide Compliance Guide 2010 Edition (with 2011 amendments).

The ATAG XL105F boilers are low water content appliance that offer compact dimensions with easy manoeuvrability. The boiler includes a comprehensive controller (HMI) that features integrated master-slave cascade functionality. Multiple boilers in a cascade installation can satisfy a large range of heat demands for commercial applications and provide security of service, with the added benefit of increased modulation ranges (turn-downs). There are additional kits to allow control of heating zones and provide hydraulic separation for the primary circuits. ATAG Commercial offer the optional communication gateway and this allows communication with building management systems using BACnet, LONworks, MODbus & KNX. Two way communication is possible allowing remedial alterations to be made from a remote location.

The boiler is supplied in one piece, with a fully insulated robust and stylish outer casing fabricated from stove enabled steel sheet, providing low standing heat loss. The boiler includes a primary modulating pump that is controlled to accurately match the flow rate requirement at the boiler heat exchanger, to the modulation rate of the burner. The combustion and primary flow systems include non-return valves for additional security of operation. The control system prevents the boiler from operating in instances where reduced, or non-flow prevents the heat generated by the burner from being transferred to the primary water



ATAG Commercial can supply a fully integrated package consisting of single, or multiple boilers that offer compact dimensions, ease of installation and peace of mind.

The ATAG XL105F boilers comes with our **Peace of Mind** assurance with either:

- A **7 year Parts and Labour warranty** providing the unit is registered with ATAG, is commissioned by an ATAG Approved Service Engineer and the unit is serviced in accordance with our terms and conditions.
- A **10 year Parts and Labour warranty** providing the unit is registered with ATAG, is commissioned by an ATAG Approved Service Engineer and an annual Service of the boiler is completed by an ATAG Service Engineer over the 10 year period.

For further details, please check our Terms and Conditions for the XLW or alternatively get in contact with our Service Department if you require more details: 01268 546770, [service@atagcommercial.co.uk](mailto:service@atagcommercial.co.uk)

**The commissioning is free of charge if done by an ATAG Service Engineer.**

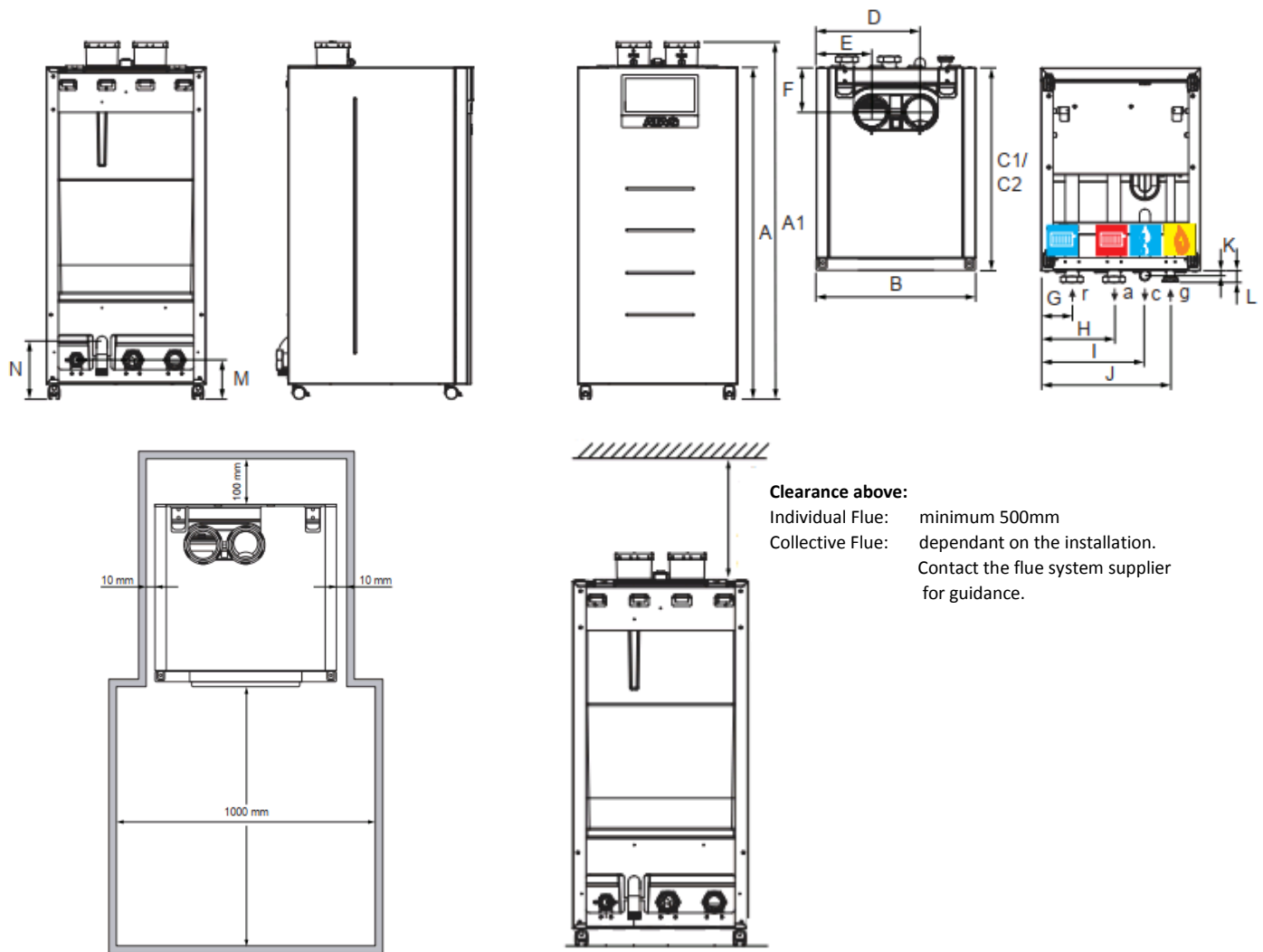
**Compliance with Standards** as appropriate with relevant sections of: Gas Appliance Directive 90/396/EEC & Boiler Efficiency Directive 92/42/EEC.

## Technical Data:

Boiler Model	ATAG XL105F	
Seasonal space heating efficiency class <sup>1</sup>	-	
Nominal heat output at 80/60°C	90.2	kW
Minimum heat output at 80/60°C	18.1	kW
Nominal heat output at 50/30°C	98.8	kW
Minimum heat output at 50/30°C	19.8	kW
Nominal heat input full load Net	92.3	kW
Minimum heat input full load Net	18.5	kW
Efficiency at 80/60°C full load Net/Gross	97.7/88.0	%
Efficiency at 50/30°C min load Net/Gross	107.3/96.7	%
Efficiency at 30°C return 30% load Net/Gross	108.9/98.1	%
Gross seasonal efficiency <sup>2</sup>	96.2	%
Gas consumption max/min nat gas G20	9.77/1.95	m <sup>3</sup> /h
Gas consumption max/min LPG G31 *	7.56/1.51	kg/h
Gas inlet pressure max/min nat gas G20	25/17	mbar
Gas inlet pressure max/min LPG G31 *	42.5 -57.5 /25 – 35	mbar
NOx annual emissions (EN 15502) <sup>3</sup>	22.7	mg/kWh
BREEAM Credits <sup>4</sup>	2	-
Flue gas temperature at 80/60°C full load	71	°C
Max permissible flue resistance	243	Pa
Water pressure max/min	6.0/0.7	bar
Maximum temperature set point	90	°C
Water flow at ΔT=20K	1.08	lit/sec
Residual head of pump at ΔT=20K	0	kPa
Water flow at ΔT=25K	0.9	lit/sec
Residual head of pump at ΔT=25K	17.0	kPa
Minimum water flow rate	0.2	lit/sec
Electrical connection	230	V
Electrical power consumption boiler 230V 50Hz Boiler including pump	120	W
Electrical power consumption boiler 230V 50Hz Boiler excluding pump	33	W
Sound Power Level	60.0	dB(A)
Weight (empty)	80	Kg
Water content	13.9	litres
<b>Dimensions</b>		
Water connections flow/return <sup>5</sup>	R2"	-
Gas connection <sup>6</sup>	R1½"	-
Flue gas connection concentric	100/150	mm
Room sealed using separate exhaust and combustion air supply	2 x 100	mm
Condensate connection	35.5	mm
Boiler depth	675	mm
Boiler width	530	mm
Boiler height (excluding connections)	1100	mm

- 1 In accordance with directive 2010/30/EU and regulation (EU) 813/2013
- 2 In accordance with equation 2 in the Non-Domestic Building Services Compliance Guide
- 3 NOx value are calculated on GCV
- 4 BREEAM UK New Construction 2018
- 5 With optional Water/Gas Connection Kit the connection sizes decrease to 1½"
- 6 With optional Water Gas Connection kit the connection size decreases to 1"

## ATAG XL105F Wall Mounted Dimensions & Clearances:



**Clearance above:**

Individual Flue: minimum 500mm  
 Collective Flue: dependant on the installation.  
 Contact the flue system supplier for guidance.

Dimensions		
Boiler height (A)	1100	mm
Boiler height with connections (A1)	1185	mm
Boiler width (B)	530	mm
Boiler depth C1/C2	675	mm
Flue Gas connection (D)	345	mm
Air intake connection (E)	185	mm
Air and flue gas connection (F)	150	mm
Boiler return connection (G)	103	mm
Boiler flow connection (H)	243	mm
Condensate Connection (I)	345	mm
Gas connection (J)	430	mm
Condensate connection (K)	15	mm
Boiler flow and return and gas connection (L)	35	mm
Boiler flow and return and gas connection (M)	130	mm
Condensate connection (N)	190	mm