

MERCIAL XL-Series



EFFICIENT & LOW LIFETIME COSTS

THE LOGICAL CHOICE IN COMMERCIAL HEATING

ATAG AND TH HEATING OF COMMERCIAL PROPERTIES

HIGH EFFICIENCY TECHNOLOGY

Founded in 1948 in the Netherlands, ATAG designs and manufactures high-quality condensing boilers for both domestic and commercial purposes.

The company is a major player in the heating market and serves most of the European countries with a distinctive positioning and a consistent product range. Our core expertise is based on a proprietary platform technology.











EFFICIENCY IS AT THE HEART OF XL

THE STAINLESS STEEL HEAT EXCHANGER

ATAG's core expertise – based on a proprietary platform technology – brings up the most efficient stainless steel heat exchanger: The patented iCon XL heat exchanger guarantees seasonal efficiencies up to >96% – bringing it on pole position for both renovation and newbuild commercial properties.

By using the highest quality materials, efficient heat transfer is quaranteed. In the specially designed hydraulic chambers, water turbulence is optimised to ensure maximum heat transfer, while maintaining the lowest possible pressure drop.



DURABLE

The use of durable materials and the stainless steel iCon XL heat exchanger results in minimal maintenance intervals and maximises the operating life of the XL boiler. The three zone heat exchanger design - used in the iCon XL - consists of three combustion zones that minimise formation of NOx and CO.

STAINLESS STEEL

The stainless steel heat exchanger consists of multiple specially engineered pipes to ensure direct heat transfer and high levels of condensation. The inclined mounting position of the heat exchanger ensures quick disposal of the condensate, with the smooth pipes and specialised assembly preventing contamination.

HIGH RELIABILITY

A benefit of the XL design is the downfiring burner, which further prevents contamination, while acting as an insulator above the heat exchanger. The design of the heat exchanger, combined with the boilers' all-round reliability, allows ATAG to provide a 7 year parts and labour warranty as standard. Plus, for added peace of mind, this can be extended to 10 years (subject to terms and conditions)

COMMERCIAL HEATING IN 2 WAYS



XLW WALL MOUNTED

Boilerrange, suitable for an extensive range of commercial heating systems, delivering high power in a small footprint.

Available in standalone, in-line and back-to-back cascade systems, up to 1.6 MW.

XLF FLOOR STANDING

The floor standing XL is a new approach to boiler design. Flexible thanks to availability in either in-line or back-toback configurations for up to eight boilers, delivering heat outputs up to 1.6 MW. The system include all components necessary to complete the primary heating circuit, inclusive a built-in cascade manager specifically designed for quick, simple and effective installation.



1.1

WALL MOUNTED & FLOOR STANDING

The XL boiler is the outcome of comprehensive R&D and the use of highest quality components. This results in a boiler, which features up to two heat exchangers capable of operating independently. Thanks to this 'dual heat exchanger' design, both XL W and XL F have built-in redundancy – creating a cascade system within one boiler.

THE ALL-INCLUSIVE BOILER

This new boiler was not only developed to excel technically, but also from a practical perspective, ensuring operation and servicing is simple. Easy access to all components is possible from the front of the boiler, while two built-in modulating pumps reduce installation time and costs. For long term durability and consistent heat transfer over its lifetime, the XL also utilises a stainless steel heat exchanger to maximise efficiency and further reduce emissions.

Modbus 💽

🕼 LonWorks 🗖

CONNECTIVITY AND MONITORING

The XL allows easy integration with well-established building management systems (BMS), further optimising the overall system efficiency and is compatible with common protocols used in building automation such as Modbus and KNX.

KNX

ENERGY SAVING

By remotely monitoring and adjusting the XL boiler range on a daily basis, heating schedules are optimised and energy costs are reduced.

CASCADE MANAGEMENT

Cascade management up to 8 boilers - without need for an external controller - is inclusive, as are built-in controllers for connection and monitoring multiple heat sources. DESIGNED FOR INTEGRATION

ATAG tests and optimises all products to ensure they integrate easily and effectively.

ATAG XL W WALL MOUNTED BOILER 70 - 200 KW / 1.6 MW IN CASCADE

Powerfull wall mounted commercial boiler. Flexible thanks to the wide range of accessories and the different system configurations: In-line, in-line duo, back-to-back and back-to-back duo.

RELIABLE AND ROBUST

Robust at heart thanks to the stainless steel heatexchanger. Main advantage compared to aluminium is the boiler is four times more corrosion resistant.

With up to 2 heat exchangers 'on board', working indepently, XLW has an integrated back-up system. This results in a very high efficiency and a modulation rate of up to 1:10.

SERVICEABILTY AND PERFORMANCE

The HMI (Human Machine Interface) is placed on top at a convenient height of 1.70m and all inner parts are accessible from the front.

The engineering excellence results in keeping the heat and noise inside thanks to the full insulation of expanded propyleen. For even better efficiency rates.



XLW in a nutshell

- Flexibility and power combined
 - High output per m²
 - 70-1600 kW (cascade)
 - High modulation range of up to 1:10
 - 200 kW from a single wall hung boiler
- High efficiency
 - 2 BREEAM Credits
 - according to BREEAM UK New Construction 2018
 - Seasonal efficiency > 96%
 - Low NO, emissions GCV <24mg/kWh</p>
- Low heat loss and noise emissions

- Robust and durable
 - Stainless steel heat exchanger iCon XL
- Cascade-in-cascade
 - Integrated cascade manager
- Independently working heat exchangers
- Plug & Play
 - Compact dimensions
 - Easy to service
 - Integrated non-return valves for both water and flue
 - Built in high efficiency pump(s)

RANGE



THREE ZONE HEAT EXCHANGER DESIGN

The three zone heat exchanger design is structured into the following zones:

- NOx zone: Formation of NOx is reduced to a minimum by low resistance and a short dwell time, as well as rapid cooling of combustion gases < 1,000 °C.
- CO zone: By increasing resistance, the heat exchanger keeps the combustion gas > 600 °C for as long as possible to minimise the formation of CO.
- 3) **H₂O condensation zone**: With small and densely arranged tubes, maximum heat transfer is achieved.

BUILT IN EFFICIENCY

The new control panel is positioned at the top of the boiler to guarantee maximum durability of electronic components and easy access to all boiler parameters. A built-in cascade controller, allows quick and simple system optimisation, intuitive programming and full diagnostic capabilities. Supports up to 6 mixed heating zones, thanks to 2 additional three-zone clip-ins.





INTEGRATED INTELLIGENT PUMP

Both ATAG XL W and XL F communicate with the integrated pumps and receive feedback on its operation status. This modulating pump is constantly monitoring the flow rate and recognizes blockages, preventing damage, guaranteeing optimal working conditions and improving boiler efficiency.

TIME SAVING

By integrating the main components within the boiler, installation time, costs and space required are significantly reduced. All key components are accessible from the front of the boiler, making ongoing servicing and maintenance easy, while also reducing time on site.





HEAT AND NOISE INSIDE

A completely expanded polypropylene insulated body encases the boiler to keep heat loss to an absolute minimum for improved boiler efficiency. Besides this the high quality casing minimises noise emissions to industry leading standards.

ATAG

ATAG XL W TECHNICAL FEATURES



Double heat exchanger – 2 HEX

Models XL125W to XL210W





Type ATAG XL W			XL75W	XL105W	XL125W	XL150W	XL180W	XL210W
A	Boiler height	mm	1050	1050	1050	1050	1050	1050
A1	Boiler height with flue connection	mm	1135	1135	1135	1135	1135	1135
В	Boiler width	mm	530	530	690	690	690	690
C1/C2	Boiler depth	mm	595	675	595	595	675	675
D	Flue gas nozzle parallel	mm	345	345	345	345	345	345
E	Air intake parallel	mm	185	185	185	185	185	185
F	Flue gas nozzle	mm	150	150	150	150	150	150
G	Boiler return connection	mm	103	103	103	103	103	103
Н	Boiler flow connection	mm	243	243	243	243	243	243
I	Condensate connection	mm	345	345	345	345	345	345
J	Gas connection	mm	430	430	430	430	430	430
К	Condensate connection	mm	60	60	60	60	60	60
L	Boiler return-flow-gas	mm	75	75	75	75	75	75
М	Boiler return-flow-gas	mm	25	25	25	25	25	25

XL W		XL75W	XL105W	XL125W	XL150W	XL180W	XL210W
Seasonal space heating efficiency class ¹	-	A	-	-	-	-	-
Nominal heat output at 80/60°C	kW	65.4	90.2	110.8	130.5	155.5	180.3
Minimum heat output at 80/60°C	kW	14.6	18.1	14.7	14.6	14.6	18.1
Nominal heat output at 50/30°C	kW	71.9	98.8	121.9	142.1	170.4	196.9
Minimum heat output at 50/30°C	kW	16.1	19.8	16.1	15.9	16.0	19.7
Nominal heat input full load Net	kW	66.7	92.3	112.8	133.2	158.8	184.5
Minimum heat input full load Net	kW	14.9	18.5	14.9	14.9	14.9	18.5
Efficiency at 80/60°C full load Gross	%	98.0/88.3	97.7/88	98.2/88.5	98.0/88.3	97.9/88.2	97.7/88
Efficiency at 50/30°C min load Net/Gross	%	108.2/97.5	107.3/96.7	108.5/97.8	107.1/96.5	107.6/96.9	107/96.4
Efficiency at 30°C return 30% load Net/Gross	%	109.2/98.4	108.9/98.1	109.3/98.5	109.2/98.4	109.1/98.3	108.9/98.1
Gross seasonal efficiency ²	%	96.5	96.2	96.6	96.5	96.4	96.2
Gas consumption max/min nat gas G20	m3/h	7.06/1.57	9.77/1.95	11.94/1.57	14.10/1.57	16.80/1.57	19.52/1.95
Gas consumption max/min LPG G31	kg/h	5.46/1.22	7.56/1.51	9.24/1.22	10.91/1.22	13.01/1.22	15.11/1.51
Gas inlet pressure max/min nat gas G20	mbar	25/17	25/17	25/17	25/17	25/17	25/17
Gas inlet pressure max/min LPG G31	mbar			42.5-57.5	5 / 25-35		
NOx annual emissions (EN 15502) ³	mg/kWh	22.4	22.7	22.7	23.7	22.6	23.6
BREEAM Credits ⁴	-	2	2	2	2	2	2
Flue gas temperature at 80/60°C full load	°C	61	71	62	68	72	71
Max. permissible flue resistance	Pa	156	243	143	200	215	265
Water pressure max/min	bar	6.0/1.0	6.0/1.0	6.0/1.0	6.0/1.0	6.0/1.0	6.0/1.0
Maximum temperature setpoint	°C	90	90	90	90	90	90
Water flow at ΔT =20K	l/s	0.78	1.08	1.32	1.56	1.86	2.16
Residual head of pump at ΔT =20K	kPa	14.8	0	26.2	6.5	8.0	0
Water flow at $\Delta T=25K$	l/s	0.6	0.9	1.1	1.3	1.5	1.7
Residual head of pump at $\Delta T=25K$	kPa	37.3	16.7	47.5	32.1	34.4	15.7
Minimum water flow rate	l/s	0.17	0.22	0.18	0.17	0.17	0.22
Electrical connection	V	230	230	230	230	230	230
Electrical power consumption (230V 50Hz) boiler including pump	W	137	120	314	418	464	450
Electrical power consumption (230V 50Hz) boiler excluding pump	W	62	33	164	268	290	276
Sound power level	dB(A)	65.0	60.3	67.3	70.3	67	63.4
Weight (empty)	kg	73	80	127	127	132	140
Water content	I	9.3	13.9	16.8	16.8	21.3	25.8
Dimensions							
Water connections flow/return connections ⁵		2"	2"	2"	2"	2"	2"
Gas connection6		1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
Flue gas connection (concentric)	mm	100/150	100/150	100/150	100/150	-	-
Room sealed using separate exhaust and combustion air supply connections	mm	2x100	2x100	2x100	2x100	2x130	2x130
Condensate connection	mm	35.5	35.5	35.5	35.5	35.5	35.5
Depth	mm	595	675	595	595	675	675
Width	mm	530	530	690	690	690	690
Height (excl. connections)	mm	1050	1050	1050	1050	1050	1050

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 values are calculated on GCV

4 BREEAM UK New Construction 2018

5 With optional Water/Gas Connection Kit the connections size decreases to 1 1/2"

 $\,$ 6 With optional Water/Gas Connection Kit the connections size decreases to 1"

ATAG XL F FLOOR STANDING BOILER RA 70 - 200 KW / 1.6 MW IN CASCADE

Utilising advanced engineering capabilities, ATAG XL F is the next generation of boilers, offering powerful and durable performance, flexible installation and simple maintenance.

BUILT-IN BACK-UP

Thanks to the 'dual heat exchanger' design, the XL boilers have built-in redundancy, creating a cascade system within one boiler. The two heat exchangers are capable of working independently from each other, ensuring that a system is never left without highly efficient heating.

PLUG & PLAY

By integrating main components within the boiler, such as the pump and non return valves, installation time, costs and space required are all significantly reduced.

Thanks to the new HMI (Human Machine Interface) and a wide range of accessories, quick installations and commissioning become very simple.

With the backpack solution, single boilers can be equipped with a low loss header or plate heat exchanger to further optimize easy installation.



XLFINANUTSHELL

- High efficiency and low emissions
 - Seasonal efficiency > 96%
 - NOx emissions GCV <24mg/kWh</p>
 - High output per m²
 - Robust and durable
 - 2 BREEAM Credits
 - according to BREEAM UK New Construction 2018
 - Stainless steel heat exchanger iCon XL
 - Output 70-1600kW (cascade)
 - High modulation range of up to 1:10
 - NOx emissions undercut EU limit by 60%
 - Low heat loss and noise emissions

- Cascade-in-cascade
 - Independently working heat exchangers
 - Integrated cascade manager
- Intelligent controls
- Plug & Play
 - Compact dimensions
 - Simple to service
 - Integrated non-return valve(s) for both water and flue
 - Built in high efficiency pump(s)
 - Cargo wheels for easy positioning



NGE



THREE ZONE HEAT EXCHANGER DESIGN

By combining the highest quality materials and improved design, based on 30 years of heat exhanger experience, the ATAG XL F delivers with the new iCon XL heat exchanger excellent efficiencies during the lifetime of the boiler, as well as low maintenance schedules.

Specially designed smooth tubes ensure direct heat transfer, plus a down-firing arrangement avoids pollution of the heat exchanger. The three combustion zones minimise formation of NOx and CO. Even, the NOx emissions undercut the EU limit by 60%.

EASY CONNECTION

Built-in as standard, a non-return valve allows easy connection of the flue system, without loss of residual fan pressure.





EASY MANOEUVRING ON SITE

Integral cargo wheels, which are height adjustable and can be locked into position, allow the XL F to be easily manoeuvered into position.

LIGHTWEIGHT MATERIALS

By utilising the latest lightweight materials, ATAG XL can be easily commissioned and transported on site.

Thanks to its stainless steel heat exchanger, there are no compromises on durability and robustness. In addition, its low water content design and advanced co mbustion technology facilitate rapid heat transfer and extremely high efficiencies.





ATAG XL F TECHNICAL FEATURES

Single heat exchanger - 1 HEX

Models XL75F and XL105F



Double heat exchanger - 2 HEX

Models XL125F to XL210F



Type AT	AG XL F	XL75F	XL105F	XL125F	XL150F	XL180F	XL210F	
A	Boiler height	mm	1100	1100	1100	1100	1100	1100
A1	Boiler height with flue connection	mm	1185	1185	1185	1185	1185	1185
В	Boiler width	mm	530	530	690	690	690	690
C1 / C2	Boiler depth	mm	595	675	595	595	675	675
D	Flue gas nozzle parallel	mm	345	345	345	345	345	345
E	Air intake parallel	mm	185	185	185	185	185	185
F	Flue gas nozzle	mm	150	150	150	150	150	150
G	Boiler return connection	mm	103	103	103	103	103	103
Н	Boiler flow connection	mm	243	243	243	243	243	243
1	Condensate connection	mm	345	345	345	345	345	345
J	Gas connection	mm	430	430	430	430	430	430
К	Condensate connection	mm	15	15	15	15	15	15
L	Boiler return-flow-gas	mm	35	35	35	35	35	35
Μ	Boiler return-flow-gas	mm	130	130	130	130	130	130
Ν	Condensate connection	mm	190	190	190	190	190	190

XL F		XL75F	XL105F	XL125F	XL150F	XL180F	XL210F
Seasonal space heating efficiency class ¹	-	А	-	-	-	-	-
Nominal heat output at 80/60°C	kW	65.4	90.2	110.8	130.5	155.5	180.3
Minimum heat output at 80/60°C	kW	14.6	18.1	14.7	14.6	14.6	18.1
Nominal heat output at 50/30°C	kW	71.9	98.8	121.9	142.1	170.4	196.9
Minimum heat output at 50/30°C	kW	16.1	19.8	16.1	15.9	16.0	19.7
Nominal heat input full load Net	kW	66.7	92.3	112.8	133.2	158.8	184.5
Minimum heat input full load Net	kW	14.9	18.5	14.9	14.9	14.9	18.5
Efficiency at 80/60°C full load Gross	%	98.0/88.3	97.7/88	98.2/88.5	98.0/88.3	97.9/88.2	97.7/88
Efficiency at 50/30°C min load Net/Gross	%	108.2/97.5	107.3/96.7	108.5/97.8	107.1/96.5	107.6/96.9	107/96.4
Efficiency at 30°C return 30% load Net/Gross	%	109.2/98.4	108.9/98.1	109.3/98.5	109.2/98.4	109.1/98.3	108.9/98.1
Gross seasonal efficiency ²	%	96.5	96.2	96.6	96.5	96.4	96.2
Gas consumption max/min nat gas G20	m3/h	7.06/1.57	9.77/1.95	11.94/1.57	14.10/1.57	16.80/1.57	19.52/1.95
Gas consumption max/min LPG G31	kg/h	5.46/1.22	7.56/1.51	9.24/1.22	10.91/1.22	13.01/1.22	15.11/1.51
Gas inlet pressure max/min nat gas G20	mbar	25/17	25/17	25/17	25/17	25/17	25/17
Gas inlet pressure max/min LPG G31	mbar			42.5-57.	5 / 25-35		
NOx annual emissions (EN 15502) ³	mg/kWh	22.4	22.7	22.7	23.7	22.6	23.6
BREEAM Credits ⁴	-	2	2	2	2	2	2
Flue gas temperature at 80/60°C full load	°C	61	71	62	68	72	71
Max. permissible flue resistance	Pa	156	243	143	200	215	265
Water pressure max/min	bar	6.0/1.0	6.0/1.0	6.0/1.0	6.0/1.0	6.0/1.0	6.0/1.0
Maximum temperature setpoint	°C	90	90	90	90	90	90
Water flow at ΔT =20K	l/s	0.78	1.08	1.32	1.56	1.86	2.16
Residual head of pump at ΔT =20K	kPa	14.8	0	26.2	6.5	8.0	0
Water flow at ΔT =25K	l/s	0.6	0.9	1.1	1.3	1.5	1.7
Residual head of pump at $\Delta T=25K$	kPa	37	17	47	32	34	16
Minimum water flow rate	l/s	0.2	0.2	0.2	0.2	0.2	0.2
Electrical connection	\vee	230	230	230	230	230	230
Electrical power consumption (230V 50Hz) boiler including pump	W	137	120	314	418	464	450
Electrical power consumption (230V 50Hz) boiler excluding pump	W	62	33	164	268	290	276
Sound power level	dB(A)	65	60	67	70	67	63
Weight (empty)	kg	73	80	127	127	132	140
Water content	I	9.3	13.9	16.8	16.8	21.3	25.8
Dimensions							
Water connections flow/return connections ⁵		2"	2"	2"	2"	2"	2"
Gas connection6		1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
Flue gas connection (concentric)	mm	100/150	100/150	100/150	100/150	-	-
Room sealed using separate exhaust and combustion air supply connections	mm	2x100	2x100	2x100	2x100	2x130	2x130
Condensate connection	mm	35.5	35.5	35.5	35.5	35.5	35.5
Depth	mm	595	675	595	595	675	675
Width	mm	530	530	690	690	690	690
Height (excl. connections)	mm	1100	1100	1100	1100	1100	1100

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 values are calculated on GCV ~

4 BREEAM UK New Construction 2018

5 With optional Water/Gas Connection Kit the connections size decreases to 1 1/2"

 $\,$ 6 With optional Water/Gas Connection Kit the connections size decreases to 1"

XL BOILER CONFIGURATION POSSIBILITIES

XL W and XL F boilers are quick and simple to install with multiple configurations possible. This ensures they are perfect for a wide range of plant rooms, especially where space is at a premium.



HASSLE FREE POSITIONING

Positioning the cascade materials is simplified including the necessary flow, return and gas connection pipework along with the isolation valves. Installations from 2 to 8 boilers are possible, by combining all components needed to connect the units.

SILENT OPERATION

Full insulation made of expanded polypropylen quarantees a quiet operation and maximum efficiency. In this way, the heat is kept inside. With options for wall mounted and floor standing both free standing in-line and back-to-back arrangements, the boilers offer a variety of modular installations.



The newly developed control panel with Master-Slave function ensures the efficient use of both heat exchangers. The integrated cascade manager allows configurations up to 1.6MW.

The HMI display provides quick and easy controlling in a comfortable position. With the help of external gateways the boiler(s) can be compatible with existing BMS protocols such as MODBUS, KNX, LonWorks and BACnet.

CONFIGURATION SPECIFICATION

The flexibility in ATAG's XL can be experienced by the extensive configuration possibilities the range is offering. In this way the XL W and XL F delivers a high output in a small footprint.

XL W



XL F



ATAG XL SERVICES

As a specialist partner, you can rely on our boiler expertise, from planning right through to servicing and maintenance. Our specially trained technicians are available to help with the commissioning and maintenance of commercial boilers — offering their experience and assistance. Our engineers always work together with you in commissioning the boiler properly to achieve maximum efficiency and service life.



1. Commissioning

ATAG Commercial heating products require commissioning to ensure they operate reliably and efficiently and maintain warranty terms. ATAG Commercial offer a full range of commissioning options.

2. Training

ATAG Commercial offers free training on the XL F & XL W boilers to all our customers in Mainland UK. ATAG training can be delivered on site during commissioning with your engineers, so that the content is fully tailored to your own needs or at our Training Center in Basildon, Essex.

3. Warranty

For the XL W and XL F range of boilers, ATAG Commercial offers a comprehensive 7 years parts and labour warranty^{*}, that can be extended to 10 years when ATAG Commercial carry out regular servicing.

5. After Sales Support

Our technical advice team have a wealth of knowledge when it comes to servicing and repairing ATAG boilers. They have access to a number of boilers, allowing them to see exactly what you're seeing, which helps to quickly identify the problem as you describe it.

7. Service Team

If you need to arrange an engineer visit simply call our Service team on 01268 546770 and we will be happy to help you.

4. Service Packages

We offer full manufacturer's servicing at competitive prices with ATAG-approved engineers. If ATAG Commercial carries out the regular servicing, this could extend boiler warranty to a total of 10 years.*

6. Service Engineers

A broken boiler can cause a lot of disruption to your daily life. ATAG-approved Commercial Engineers have years of experience and a wealth of knowledge to ensure every repair is carried out as quickly as possible

8. Spare Parts

Our comprehensive range of spare parts can be purchased from nationwide stockists or directly from our Spares Department.

ATAG XL ACCESSORIES

ATAG XL offers a wide range of choices for commercial heating appliances, thanks to the deep

assortment of accessories available.





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Your ATAG Area Sales Manager:

