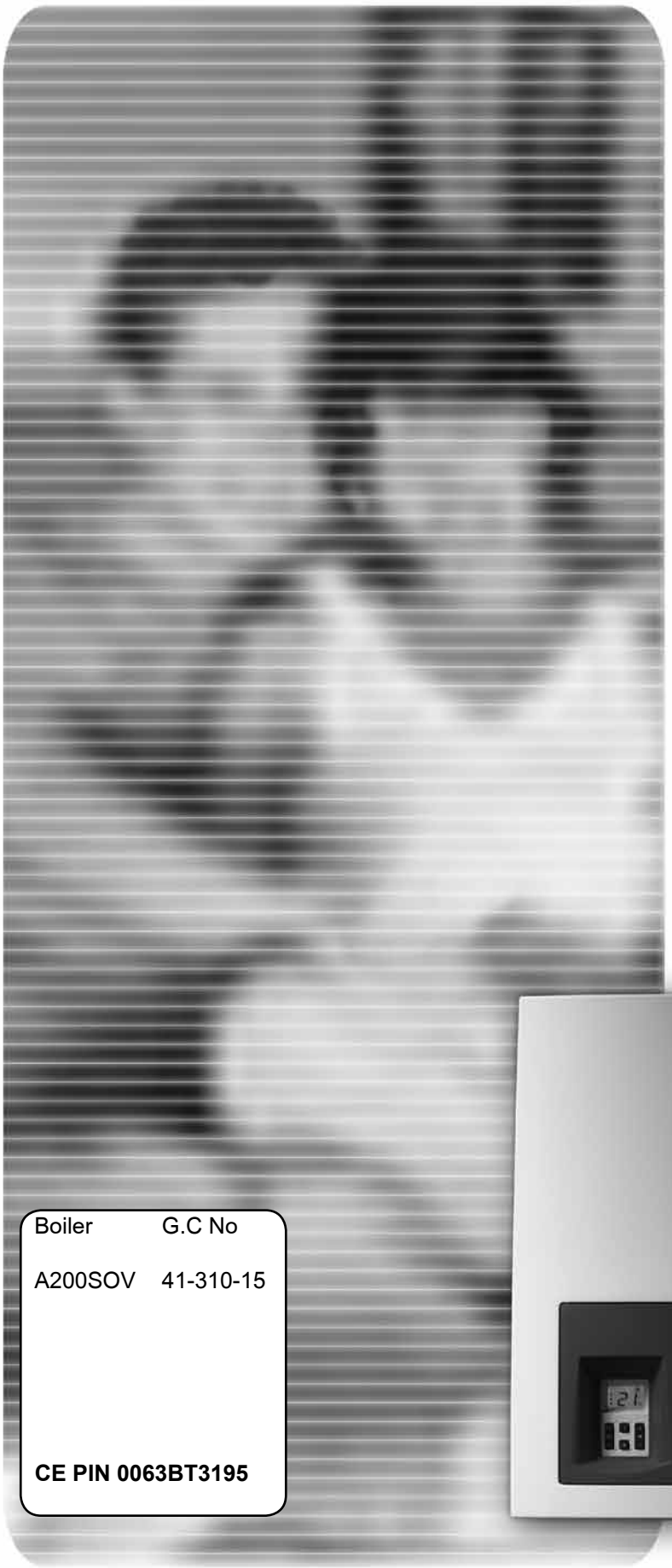
Installation & Servicing Instructions

A200SOV

Open vent heat only boiler

ATAG



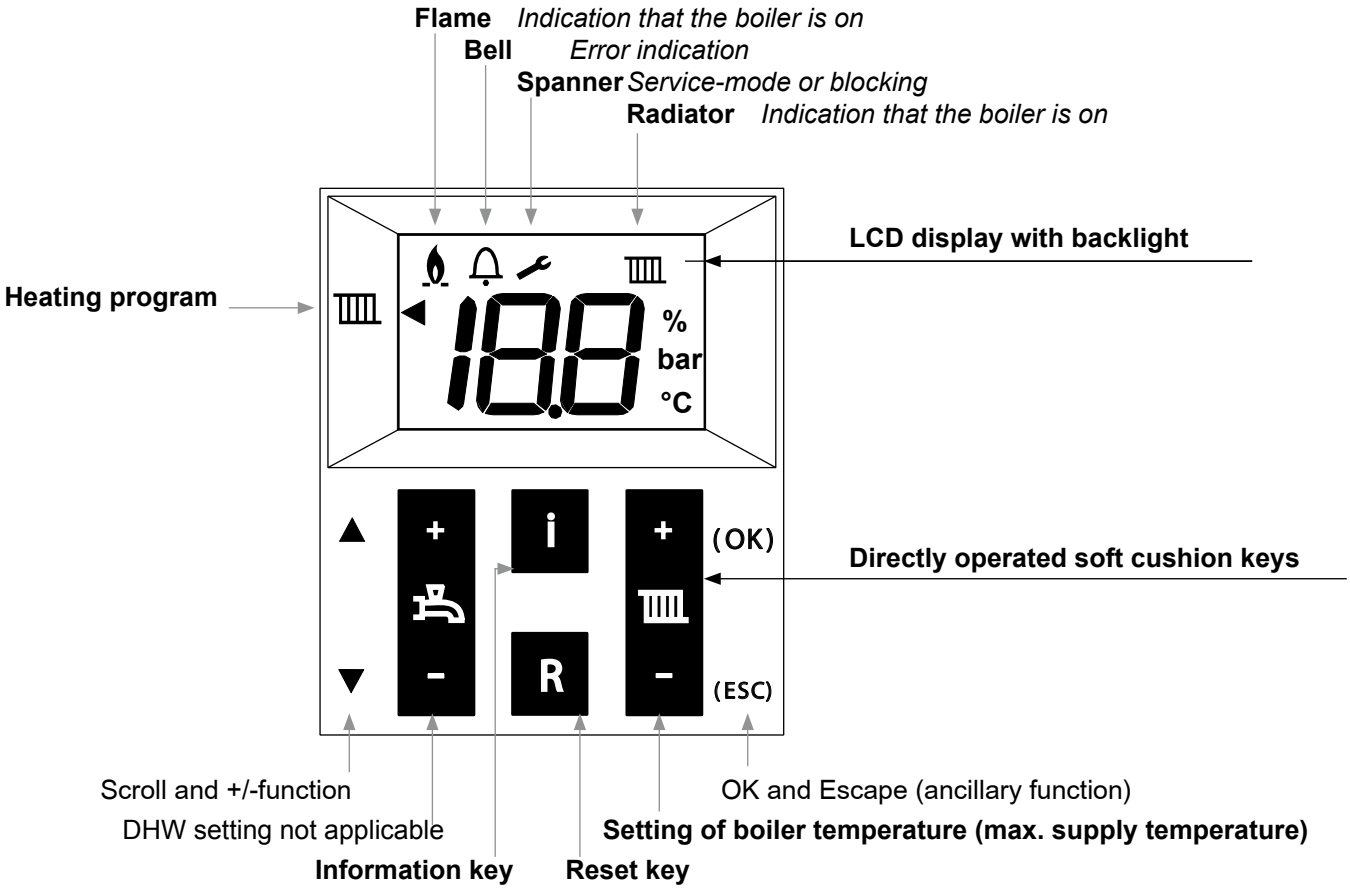
Boiler	G.C No
A200SOV	41-310-15

CE PIN 0063BT3195

These instructions to be retained by user.

ATAG Z-ready

Explanation of the control panel display and keys



Standard display read out:
The default view of the display shows the flow water temperature (°C) of the boiler.
In this case with heat request (radiator symbol) and boiler on (flame symbol)

Content

Work on the installation should only be carried out by qualified personnel with calibrated equipment.

1 Introduction

These instructions describe the functioning, installation, use and primary maintenance of ATAG central heating boilers for the United Kingdom and Ireland. Where necessary the different regulations for each country are separately described.

These instructions are intended for the use by Gas Safe Register approved contractors or registered Bord Gais installers in connection with the installation and putting into operation of ATAG boilers. It is advisable to read these instructions thoroughly, well in advance of installation. Separate instructions for use are supplied with the boiler for users of ATAG central heating boilers. ATAG is not liable for the consequences of mistakes or shortcomings which have found their way into the installation instructions or user's manual. Further, ATAG reserves the right to alter its products without prior notification.

When delivering the boiler, give the customer clear instructions concerning its use; present the customer with the user's manual and card.

Each boiler is fitted with an identification plate. Consult the details on this plate to verify whether the boiler is compliant with its intended location, e.g.: gas type, power source and exhaust classification.

On completion of the installation the installer or commissioning engineer must fill out and complete the Benchmark commission section of the boiler log book and hand to customer or end user for future record keeping. The Benchmark log book must also be filled out and completed by the service agent following each service call, and returned to the customer. A copy of the Benchmark commissioning certificate must be returned to ATAG Heating UK Ltd along with the warranty registration card to register the appliance for the standard warranty benefits

Relevant Installation, Service and User manuals:
- ATAG Monopass Flue system guide

2 Rules

The following regulations apply to installation of ATAG central heating boilers:

Legislation and Regulations.
Gas Safety (Installation and Use). All gas appliances must by law, be installed by a competent person, eg. Members of Gas Safe Register and in accordance with the current Gas Safety Regulation. Failure to install appliance correctly could lead to prosecution.
All Gas Safe Register approved contractors carry a Gas Safe Register ID Card and have a registration number. You can call Gas Safe Register direct on 01256 372300

In addition to the above regulations this appliance must be installed in compliance with the current IEE Regulations, the Building Standards (Scotland Consolidation) Regulations. Regulations and bye laws of the Local Water Authority and the Current Health and Safety Regulation.

The Benchmark Scheme
Benchmark places responsibilities on both manufacturers and installers. The purpose is to ensure that customers are provided with the correct equipment for their needs, that it is installed, commissioned and serviced in accordance with the manufacturer's instructions by competent persons and that it meets the requirements of the appropriate Building Regulations. The Benchmark Checklist can be used to demonstrate compliance with Building Regulations and should be provided to the customer for future reference.

Installers are required to carry out installation, commissioning and servicing work in accordance with the Benchmark Code of Practice which is available from the Heating and Hotwater Industry Council who manage and promote the Scheme.
Visit www.centralheating.co.uk for more information.

Ireland:
- Irish standard 813
- Domestic gas installations

The current, Electricity at Work Regulation must be complied with and also be in accordance with the relevant and current editions of the British Standards.
The ATAG A boiler is a certified appliance and must not be modified or installed in any way contrary to this Installation Manual. Manufacturers instructions must not be taken in any way as overriding statutory obligations.
These boilers must be connected according to these instructions and all installation norms in respect of the part of the boiler to be connected.

Observe the following rules of safety:
- All work on the boiler must take place in a dry environment.
- ATAG boilers may never be in operation without their housing, except in connection with maintenance or adjustments (see Chapter 13 and 14).
- Never allow electrical or electronic components to come into contact with water.

Carry out the following tasks in connection with maintenance, etc. to an already-installed boiler:
- Shut down all programs
- Close the gas tap
- Remove the plug from the wall socket

Take note of the following when maintenance or adjustments are needed:
- The boiler must be able to function during these activities; for this reason, the boiler's supply voltage, gas pressure and water pressure must be maintained. Ensure that there is not a source of potential danger during these activities.

Following maintenance or other activities; always check the installation of all parts through which gas flows (using leak-search spray).

The following (safety) symbols may be encountered in these installation instructions and on the boiler:

This symbol indicates that the boiler must be stored away from frost.

This symbol indicates that the packaging and/or contents can be damaged as a result of insufficient care taken during transport.

This symbol indicates that, whilst still in its packaging, the boiler must be protected from weather conditions during transport and storage.

KEY-symbol. This symbol indicates that assembly or dismantling, must be carried out.

ATTENTION symbol. This symbol indicates that extra attention must be paid in connection with a particular operation.

Useful tip or advice

3 Delivery package

The boiler is delivered ready for use. The delivery package is composed as follows:

- Boiler with cover;
- Automatic air vent (in boiler);
- Gas isolation valve;
- Suspension bracket;
- Cable feed through;
- Fittings consisting of plugs and screws;
- Drawing template;
- Installation instruction;
- User manual;
- Warranty Card and Benchmark logbook.

The ATAG A is mainly equipped with 230V electrical components.

The following components are not present in the boiler as a standard and should be included in the installation according to the requirements (supplied by third parties):

- Circulation pump
- Programmer, room thermostat and cylinder thermostat.

4 Boiler description

Room sealed boiler
The boiler retrieves its combustion air from the outside then discharges the flue gasses to the outside.

Condensing
Retrieves heat from the flue gasses. Water condensates on the heat exchanger.

Modulating
Higher or lower burning according to the heat demand.

Stainless Steel
Super solid kind of steel which keeps its quality for life. It will not rust or erode in contrast to composition materials, like aluminium.

The ATAG A is a room sealed, condensing and modulating CH boiler.

The boiler is equipped with a compact stainless steel heat exchanger with smooth pipes. It is a well thought-out principle using sustainable materials.
The boiler burns (natural) gas to supply heat. This heat is transferred in the heat exchanger to the water in the CH installation. The rapid cooling off of the flue gases causes condensation. This results in a very high yield. The condensation that is formed, has no negative impact on the heat exchanger and it's operation, and is removed through the internal siphon.

The boiler is equipped with an intelligent control system: CMS (Control Management System). Each boiler anticipates the heat request of the heating installation. This will cause the boiler to tune its capacity to the installation. This means that the boiler will function longer and at a low level.

The boiler has been tested according to valid CE* standards and has a CE* certificate and SEDBUK A-rating.

Statement: No banned materials including asbestos, mercury, CFC's have or will not be included in the product.

5 Mounting the boiler

The room where the boiler will be placed must always be frost free. The boiler casing is splash water tight (IPX4D) and is suitable to be installed in e.g. a bathroom.

It is NOT necessary to have a purpose provided air vent in the room or internal space in which the boiler is installed. Neither is it necessary to ventilate a cupboard or compartment in which the boiler is installed, due to the extremely low surface temperature of the boiler casing during operation. Therefore the requirements of BS 6798, Clause 12, and BS5440:2 may be disregarded.

The boiler can be mounted practically to any wall with the suspension bracket and the enclosed fixing equipment. The wall must be flat and of sufficient strength in order to be able to carry the boiler weight with its water content.
Above the boiler there must be at least 250 mm working space in order to be able to fit a coaxial flue system or a twin supply. On the left side of the boiler at least 50 mm and on the right side 10 mm must be reserved to allow fitting or removing of casing. The location of the boiler can be determined by using the template.

Before hanging the boiler remove the outer boiler casing. The cover is also the air cabinet and is attached to the rear wall with four quick fasteners (A, B, C and D) (see figure 1).

Secure the quick fasteners with the screws (A, B, C and D) at the back of the cover.

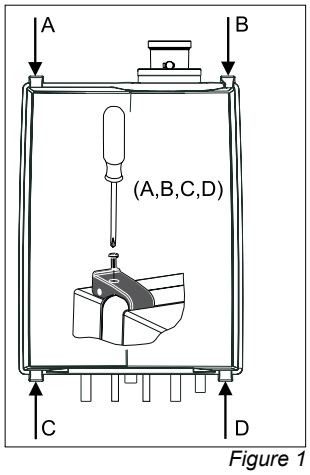
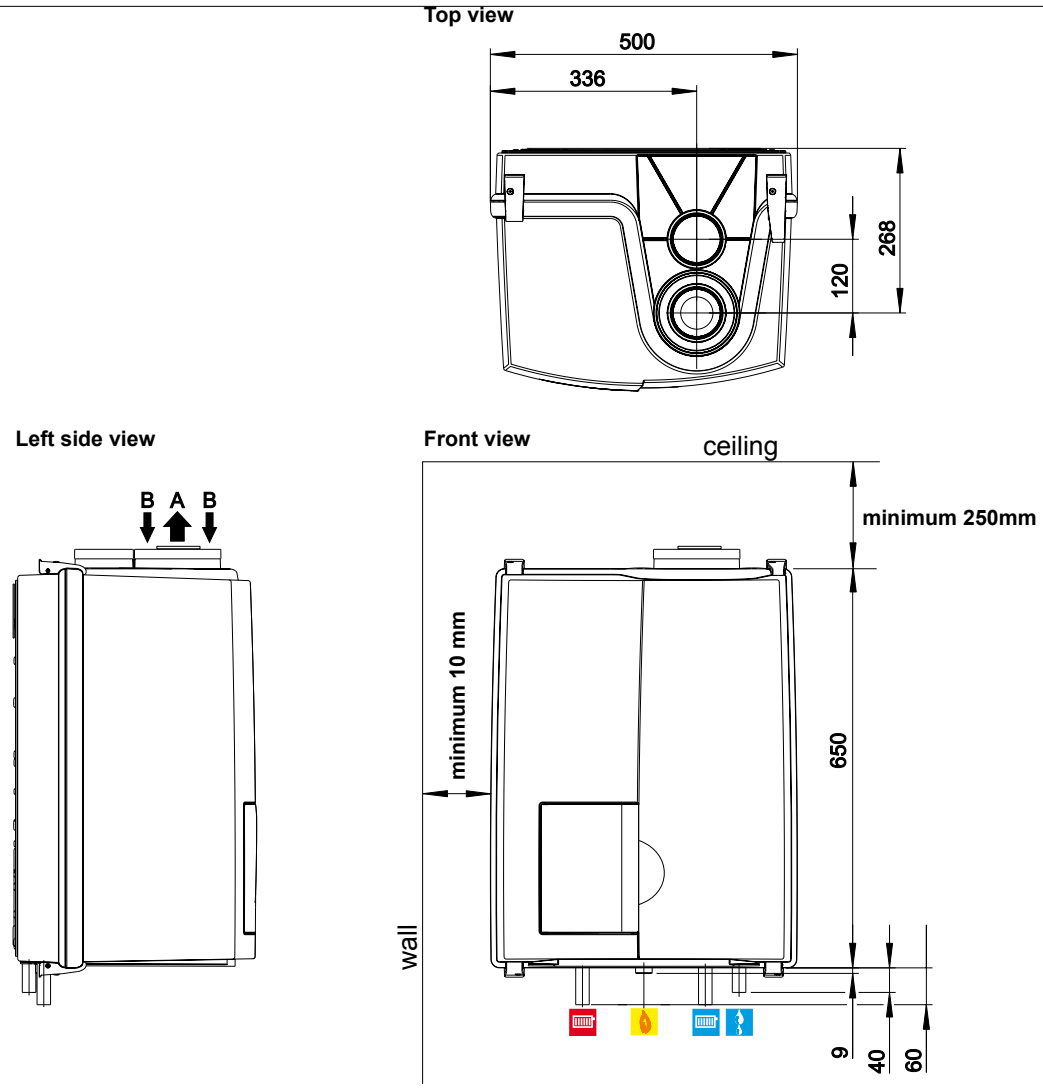


Figure 1

Lift the boiler only by the boilers rear wall.

Lifting and carrying precautions:
- Lift only a manageable weight, or ask for help.
- When lifting the boiler, bend the knees, and keep the back straight and feet apart.
- Do not lift and twist at the same time.
- Lift and carry the boiler close to the body.
- Wear protective clothing and gloves to protect from any sharp edges.

5.1 Dimensions



	keteltype		A200SOV
A/B	Flue gas / Air intake	mm	60/100
	Gas connection		½" int.
	CH Flow connection	mm	22
	CH Return connection	mm	22
	Condensate drain connection	mm	22

connection diameters tabel 2

dimensions (in mm) Figure 2

6 Connecting the boiler

The boiler has the following connection pipes;

- The central heating pipes.
  These can be connected to the installation by means of compression fittings / adapter fittings;
- The gas pipe.
  It is provided with a female thread into which the tail piece of the gas isolation valve can be screwed;
- The condensation drain pipe.
  It consists of a 22mm plastic pipe. The drain pipe can be connected to this by means of an open connection. If the open connection is fitted in a different location, then the pipe can be lengthened by means of a 32 mm PVC sleeve;
- The flue gas exhaust system and air supply system.
  It consists of a concentric connection 60/100 mm.

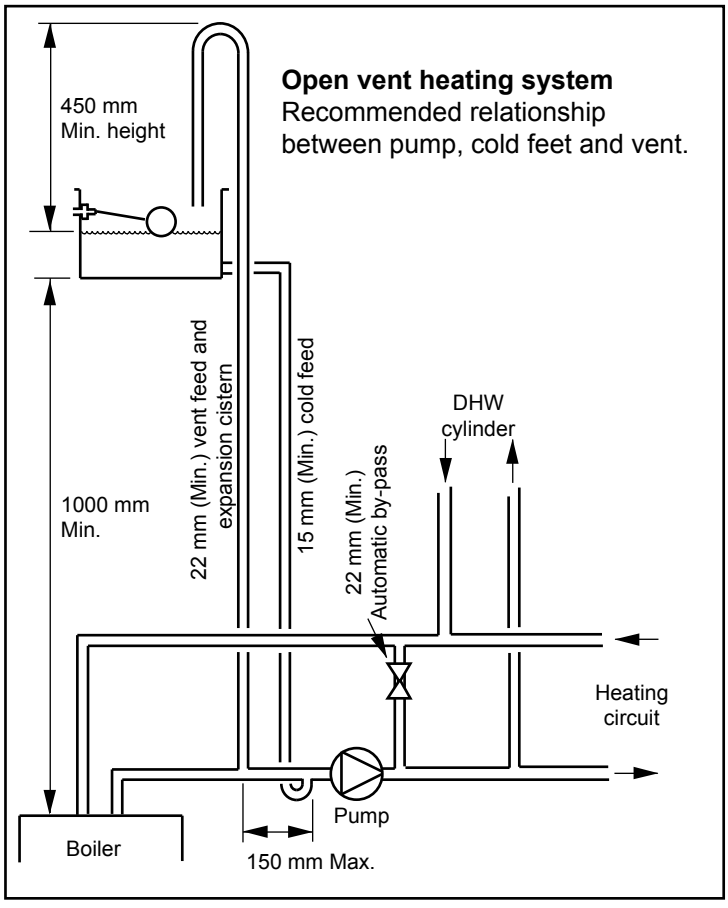
Isolation valves are not permitted to be installed on open vent boilers.

It is advisable to spray-clean all of the boiler's connecting pipes and/or to spray-clean/blow-clean the installation before connecting it to the boiler.

6.1 Open vent heating system

This boiler is only suitable for installations that have been equipped with "open" expansion tanks (Open vent).

Connect the Open vent heating system according to the current regulations.



Scheme open vent system *Figure 3*

The boiler pipes have to be connected to the installation by means of compression fittings. For connecting to thick-walled pipe (welded or fitted), adapters should be used.

When removing the plastic sealing caps from the pipes, contaminated testing water may be released.

If all, or a substantial part of the radiators have thermostatic radiator valves, a pressure regulator has to be used to prevent flow problems in the installation. The pressure regulator used should have the same diameter as the connecting diameter of the supply and return pipe of the boiler. See also chapter 5.1.

An Adey Magnaclean or Fernox TF1 filter is recommened to be installed, preferably on the return pipework as close to the boiler practitable.

Additives in the installation water are only permitted in consultation with the country distributor. ATAG Heating UK Ltd recommend the use of either Fernox or Sentinel products.

6.2 Heating systems with plastic pipes

When connecting or using an underfloor heating system, designed with plastic pipes, or plastic pipes are used elsewhere in the installation,one should ensure that the plastic pipes used comply with the DIN 4726/4729 standard. It is set out in this standard that the pipes may not have oxygen permeability higher than 0.1 g/m³.d at 40°C. If the system does not comply with this DIN standard, the underfloor heating component will have to be separated from the central heating appliance by means of a plate exchanger.

No recourse can be made to the terms of the warranty in the event of failure to observe the regulations pertaining to plastic underfloor heating pipes.

6.3 Gas connection

The appliance pipe is fitted with an internal thread, into which the tail piece of the gas isolation valve can be screwed.

United Kingdom:
The gas supply must comply to the current Gas Safety, Installation & Use Regulations.

Ireland:
- Irish standard 813
- Domestic gas installations

The connection to the appliance must include a suitable method of disconnection and a gas control cock must be installed adjacent to the appliance for isolation purposes. The nominal inlet working gas pressure measured at the appliance should be 20 mbar for Nat gas (G20).

Make sure that the gas pipe work does not contain dirt, particularly with new pipes.

LPG

When the boiler has to be converted from natural gas to LPG, ATAG provides special kits for this purpose. Special instructions are supplied with the kit.

Always check the installation of all of the parts through which gas flows (using leak-search spray)

6.4 Condensation drain pipe

ATAG Condensing boilers have the top SEDBUK band A Classification for high energy efficiency in heating and domestic hot water.

All ATAG wall hung gas fired condensing boilers contain a syphonic condensate trap to collect and realease condensate.

The amount of condensate formed is determind by the type of boilers and the water temperature produced by the boiler.

Condensate pipework.

Use plastic pipework of a diameter no less then 25mm.

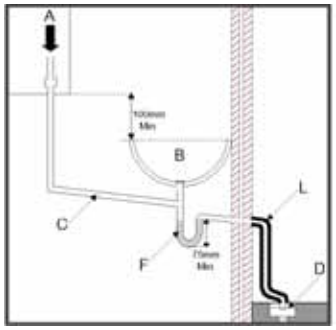
Routing of the pipework,

Wherever possible, the condensate pipework should be routed internally to prevent freezing.
The condensate pipework must fall at least 50mm per metre towards the outlet and take the shortest possible route
Support the pipe at least every 50 cm for near horizontal sections and 1 metre for vertical sections

External pipework

The pipework should be kept to a minimum and the route as vertical as possible.
Do not exceed 3 metres outside the dwelling.

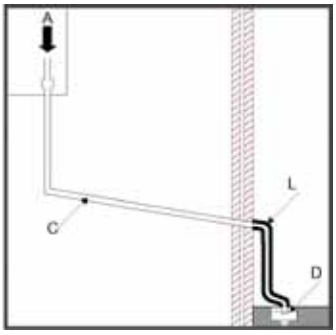
The condensate pipe must be run using suitable corrosion resistant materials (eg. plastic).



Terminate as close to the ground or drain as possible (below the grating and above the water level) while still allowing for safe dispersal of the condensate.
Connection of a condensate drainage pipe to a drain may be subject to local building controls.

Pipework subjected to extreme cold or wind chill conditions should be in a 40mm diameter pipe.

Protect all external pipework with weather resistant insulation and, if necessary, box in, to reduce the risk of freezing.

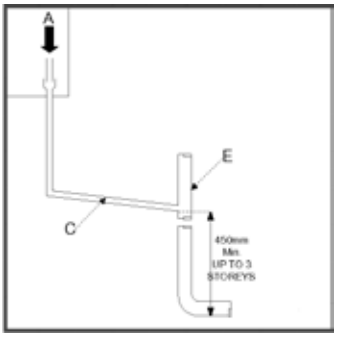


Making it safe.

Condensate pipework must not leak, freeze or block up.
Condensate traps must be filled before firing the boiler to prevent the possibility of potential harmfull flue products evacuating via the condensate route.
Do not dispose condensate into a water recovery system where it is recaimed for reuse.

Condensate can be discharged into a rainwater hopper which is part of a sewer carrying both rain water and foul water.

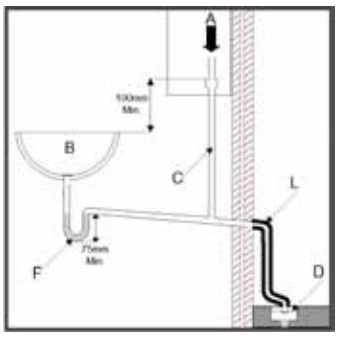
Final discharge options.



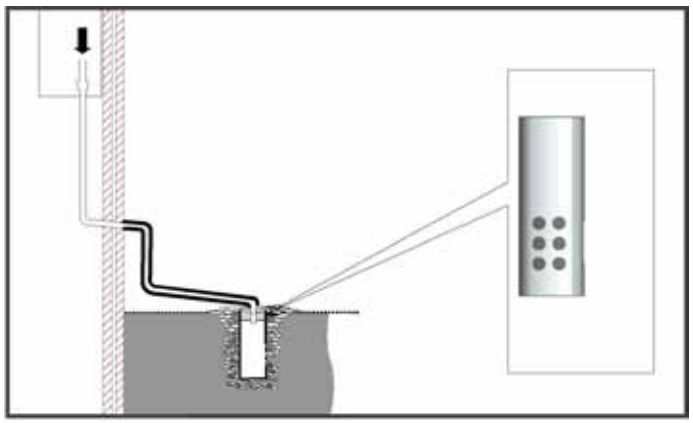
The condensate pipe can only terminate into any one of the five areas as shown in the diagrams on this page.

⚠ **Draining of the condensation water to the external rain guttering is not permitted in view of the danger of freezing.**

⚠ **Before putting the boiler into operation fill the siphon with 300 ml of water.**



A -Condensate from boiler syphon/trap
B -Sink with internal overflow
C -25mm dia. Plastic condensate pipe
D -External drain or gully
E -Internal soil and vent stack.
F -Servicable condensate trap (75mm min.)
G -300mm x 100mm dia. sealed plastic tube.
H -Ground level
J -Drainage holes facing away from the building
K -Lime stone chippings
L -Weather resistant insulation



Drain requirements *figure 4*

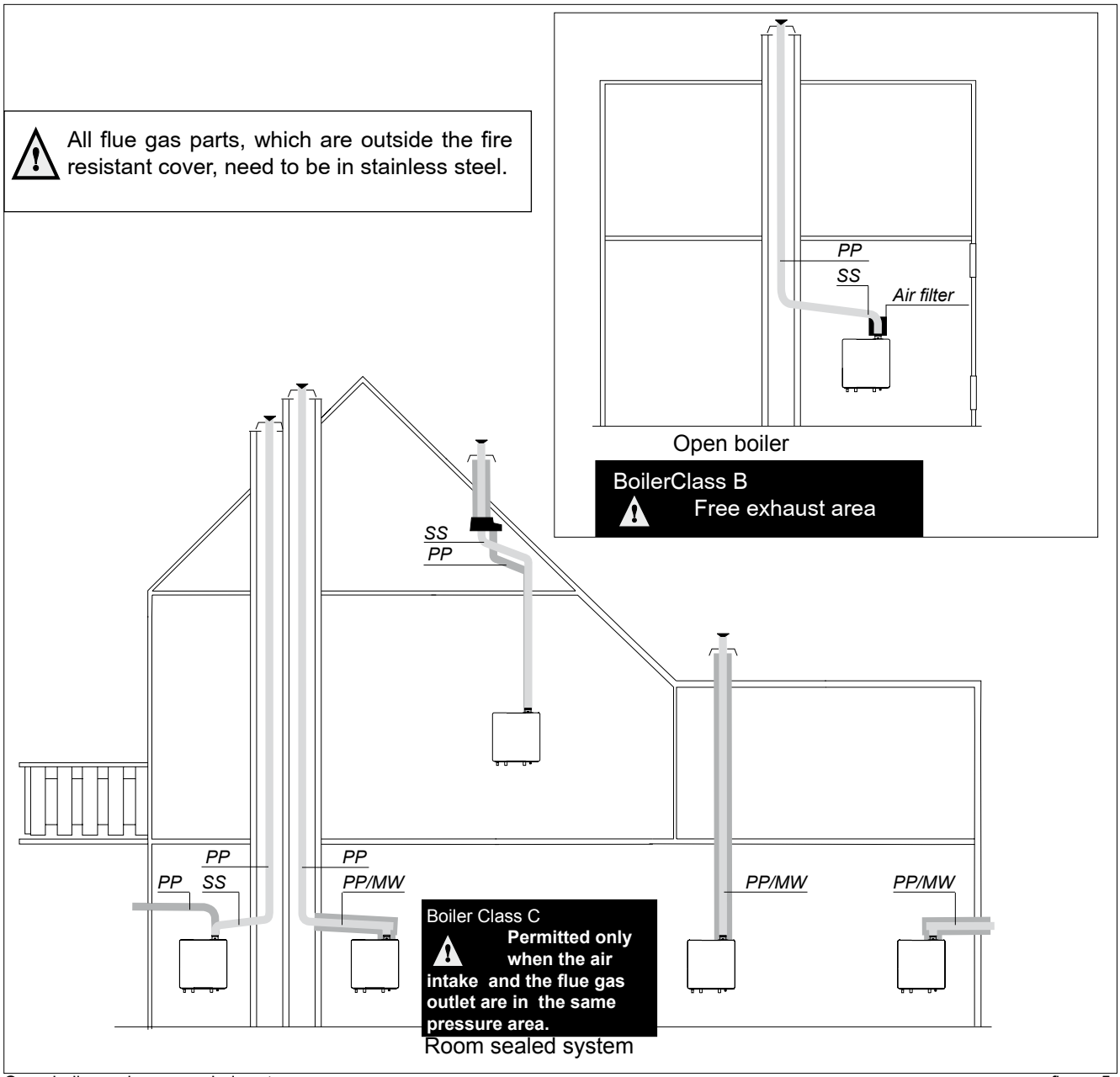
6.5 Flue gas exhaust system and air supply system

The flue gas exhaust system and air supply system consists of:
- Flue gas pipe;
- Air supply pipe;
- Roof or wall terminal.

The flue gas exhaust system and air supply system must comply with:

United Kingdom:
The flue gas outlet and air supply installation must comply with the current regulation requirements. IG UP 10 and BS 715.

Ireland:
- Irish standard is 813 section 9.10.1

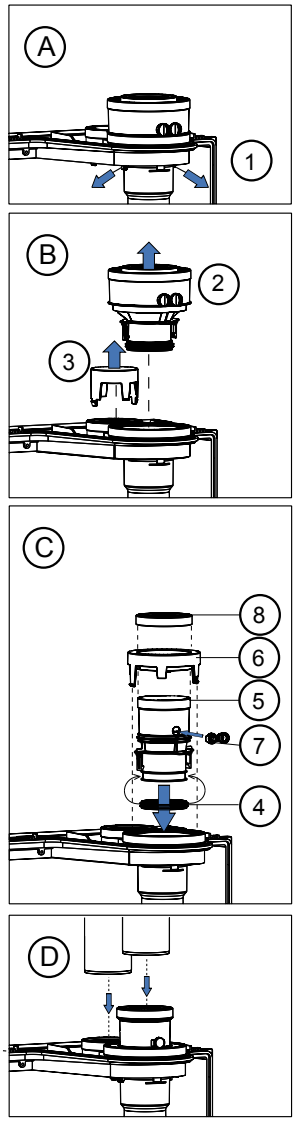


Open boiler and room sealed system figure 5

The appliance concentric connection diameter is 60/100 mm, to which the flue gas outlet and air supply system can be fitted, with or without elbow pieces. The maximum permissible pipe length is set out in Table 5.

Boiler conversion from concentric to parallel

It is also possible to use a parallel pipe connection of 2x 80mm. In this case a conversion kit 'concentric tot parallel' should be ordered. Art.nr. S4440520.



boiler conversion from concentric to parallel
figure 6

A. 1. Push the 2 clips slightly outwards.

B. 2. Pull the concentric adaptor out of the boiler.
3. Press the cover in the connection at the back from inside out.

C. 4. Pull the rubber seal around the bottom of the flue connector.
5. Push the flue connector in the boiler, in the boiler flue pipe until 'CLICK'.
6. Push the ø125mm cover over the flue connector in the ø125mm opening until 'CLICK'.
7. Push the rubber plug in open position in the O_2 measuring opening and close the stop.
8. Push the gasket around the top of the flue connector.

D. Connect the parallel flue gas and air intake system (2x ø80mm).

We suggest you design a simple flue gas system and air supply system using table 6. For further information about the available components of the flue gas and air supply system we recommend you consult the Monopass Flue system literature.

The ATAG flue gas system is meant and designed solely for the use on ATAG central heating boilers adjusted to Nat gas or LPG. The maximum flue gas temperatures are below 70°C (full load 80/60°C)
The proper operation can be influenced harmfully by changes of or adjustments to the correct set up.
Possible warranty claims will not be honoured if incorrect changes result in non compliance with the installation manual or local rules and regulations.

The flue gas systems described in this document are solely suited for ATAG central heating boilers of the ATAG boiler range. For this purpose the CE Certificate has been supplemented under the Gastec nr: 0063BR3405, 0063BQ3021, 0063AS3538 and 0063AU3110.
The flue gas system should be built up using only ATAG program products. Combination with other brands or systems without written permission from ATAG Heating is not permitted.

The terminal should be located where dispersal of combustion products is not unimpeded and with due regard for the damage or discolouration that might occur to parts of the building in the vicinity (see fig 7).

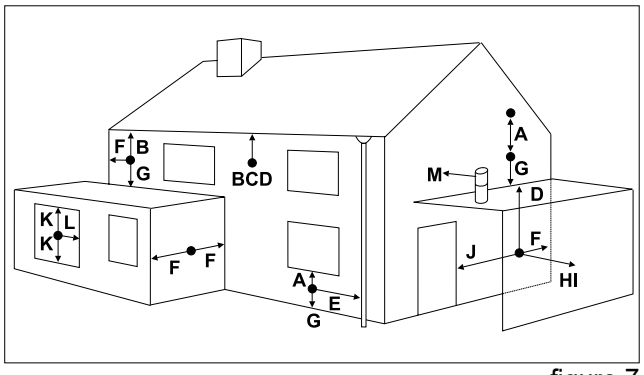


figure 7

	terminal position for fan assisted boiler		minimum distance
A	directly below an open window or other opening (e.g. air brick)	mm	300
B	below gutters, soil pipes or drain pipes	mm	75
C	below eaves	mm	200
D	below balconies or car port roof	mm	200
E	from vertical drain pipes and soil pipes	mm	75
F	from internal or external corners	mm	300
G	above ground or below balcony level	mm	300
H	from a surface facing a terminal	mm	600
I	from a terminal facing a terminal	mm	1200
J	from an opening in the car port (e.g. door window) into dwelling	mm	1200
K	vertically from a terminal on the same wall	mm	1500
L	horizontally from a terminal on the same wall	mm	300
M	horizontally from a vertical terminal to a wall	mm	300

Dimensions table 6

In certain weather conditions condensation may also accumulate on the outside of the air inlet pipe. Such conditions must be considered and where necessary insulation of the inlet pipe may be required.
In cold and/or humid weather water vapour may condense on leaving the flue terminal. The effect of such 'plumeing' must be considered.

The terminal must not be located in a place where it is likely to cause a nuisance.
For protection of combustibles, refer to IS 813 section 9.10.1. where the terminal is less than 2m (6.6ft) above a pavement or platform to which people have access (including) any balcony or flat roof. The terminal must be protected by a guard of durable material. A suitable guard is available from the country distributor.

⚠ **Where a terminal is fitted below a window which is hinged at the top, and where the hinge axis is horizontal, and the window opens outwards, the terminal shall be 1m below the bottom of the window opening.**

⚠ **If the boiler is to be located under stairs, a smoke alarm meeting the requirements of I.S. 409 or equivalent must be fitted.**

⚠ **The flue must be terminated in a place not likely to cause a nuisance.**

For horizontal sections, the outlet system should always be fitted on an incline (50 mm/m) sloping down towards the appliance so that no condensation water is able to accumulate in the outlet system. The chances of icicles forming on the roof outlet is minimised by causing the condensation water to run back towards the appliance. In the case of horizontal outlets the inlet system should be fitted on an incline sloping down towards the outside to prevent rainwater from coming in.

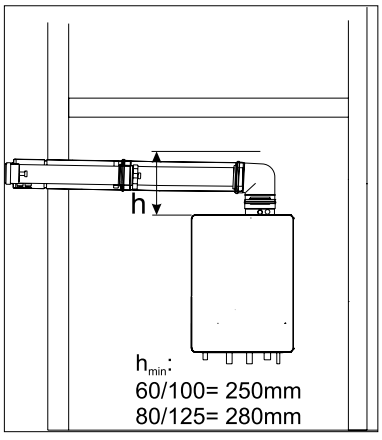
The appliance produces a white wisp of condensation (plumeing). This wisp of condensation is harmless, but can be unattractive, particularly in the case of outlets in outside walls.

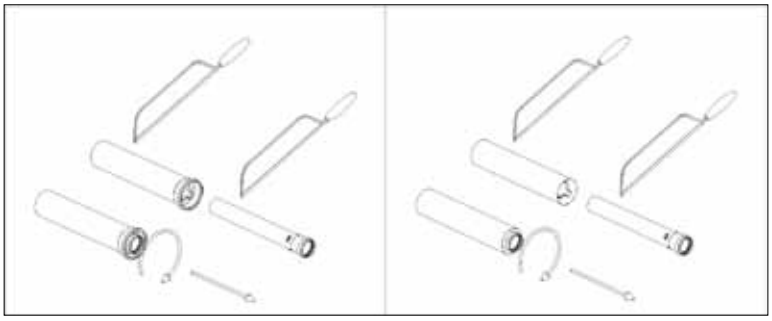
At this time there are 2 different ways of connecting the flue gas/air intake system. The flue gas duct for the 60/100, 80/125 and 100/150 are push fit connections, see figure 10.
The air intake for the 60/100 is a clamp ring connection.
These two types are not interchangeable.

Cutting the pipe goes as follows:
- Take out the inner tube by turning it until it releases from its security position;
- Cut just as much from the air intake part as from the flue gas part;
- Take off the burrs from the cutting edge to prevent cutting the seals;
- Click the pipes back together again.

  Use special grease to simplify the fitting

When mounting the flue gas system, pay attention to the flow direction. An arrow on the product points this out. It is not permitted to mount a system upside down and will lead to complaints.





Dismantlement and shorten pipes *figure 8*

6.5.1 Dimensioning of the flue gas and air intake duct

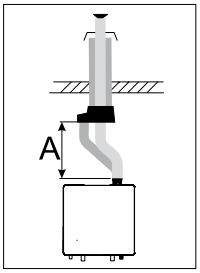
The flue diameter is determined by the total length of the run, including for the connection pipe, elbows fittings and terminal covers etc and the type and number of boilers installed into the system.

An undersized flue pipe can lead to disorders. Look at table 1 for the choice of the system and the correct diameter. The table below shows the maximum flue lengths with the different boiler outputs. A longer flue gas length can be achieved by increasing the diameter to ø 100mm.

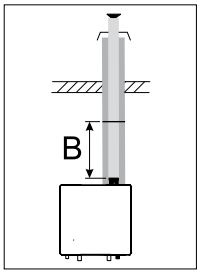
Example:
An A200SOV with a concentric flue gas system ø80/125mm has according to the table a maximum flue straight length of 30m In the system that is going to be put in there are 2 x 45° bends, so the maximum flue gas length is
30 – (2 x -1,1) = 27,8 meters.

Explanation table 1:
Two pipe flue gas system: maximum noted length = distance between boiler and terminal A
Concentric flue gas system: maximum noted length = distance between boiler and terminal B

When using bends the noted value behind every bend should be deducted from the maximum straight length.



Two pipe flue system + chimney lining ø80				
	ø80mm	A in m		
A200SOV	Maximum straight length 80	35,5		
	87° bend resistance length	-1,5		
	45° bend resistance length	-0,8		



Concentric flue system ø80/125mm				
	ø80/125mm	B in m		
A200SOV	Maximum straight length 80/125	30		
	87° bend resistance length	-2,8		
	45° bend resistance length	-1,1		

When using a concentric flue system ø60/100mm with a maximum length between 4 and 15 meters a correction must be made to the fan speed by adjusting Parameter 683 according to the table. Fill out the correction factor on the sticker below the control panel.
See chapter 'Settings' how to adjust a parameter setting.

Concentric flue system ø60/100mm				
	ø60/100mm	B in m	Correction factor fan speed See chapter 'Settings'	Par. 683
A200SOV	Maximum straight length 60/100	15	Correction factor 15 meter	6
	87° bend resistance length	-1,6	Correction factor 12 meter	4
	45° bend resistance length	-1	Correction factor 10 meter	3
			Correction factor 8 meter	2
			Correction factor 6 meter	1
			Correction factor 4 meter	0

Dimensions flue gas system and air supply system Table 5

NOTE! ADJUSTED PARAMETER SETTING FOR FAN SPEED
- See Installation instructions for more details -
Correction factor fan speed (parameter 683) .....
Adjusted by .....
Date .....

Example correction factor sticker

7 Electrical connection

The appliance complies with the CE Machinery Directive 89/392/EEC. The EC Low Voltage Directive 72/23/EEC and the EC EMC Directive 89/336/EEC.
- A 230V -50Hz mains electrical supply is required fused externally at 5A.
- A deviation on the grid of 230V (+10% or -15%) and 50Hz

The installation must continue to comply with:
United Kingdom:
- the IEE Electrical Regulations.

Ireland:
- the ECTI national rules for electrical installations

The appliance must be connected to an earthed socket. This must be visible and within reach.

The following general stipulations also apply:
- No changes may be made to the wiring of the appliance;
- All connections should be designed in accordance with the enclosed regulations.

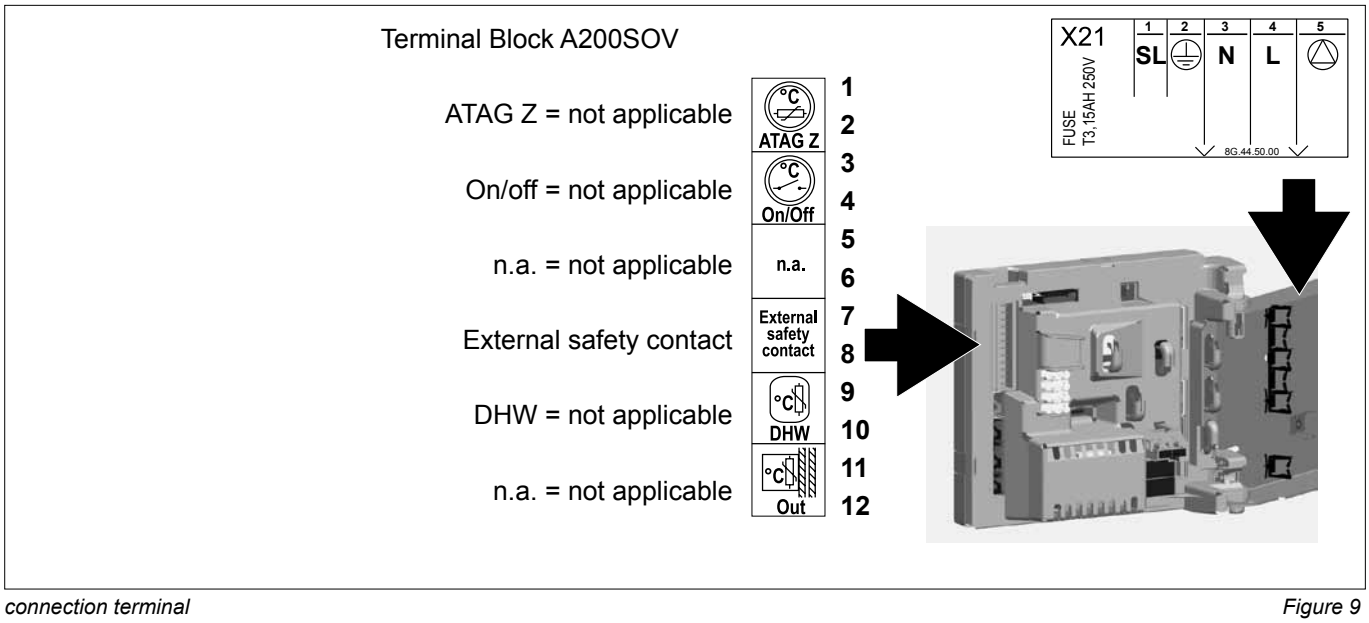
7.1 Y-plan connection

The boiler terminal X21 is for connecting the 230Volt external controls. Terminal X21 is situated apart from and behind the control unit on the hing bracket.

Connect the 230V switched live to terminal X21. **Note the polarity!**
Connect the pump switch cable to terminal X21 according to the electrical diagram.

Lead the cables from the controls along the the hing bracket and through the cable feed through in the back part of the boiler.

For more detailed questions about components that have not been supplied by ATAG, contact the vendor concerned.



connection terminal *Figure 9*

7.2 Electrical diagram

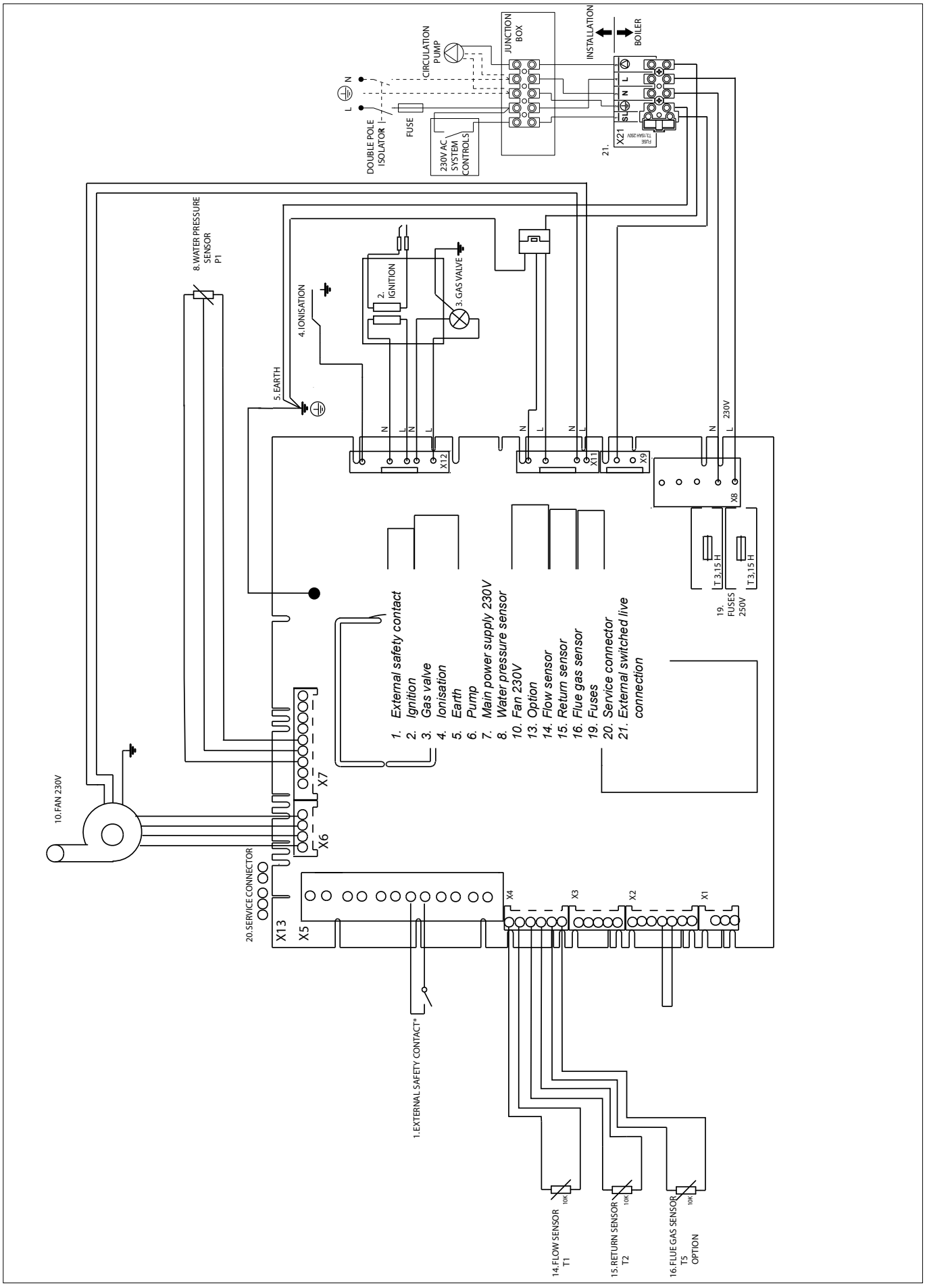


Figure 10

8 Filling the system

8.1 CH Installation

The CH installation should be filled with potable water. For filling the CH installation, use the the feed and expansion header tank. Filling is done as follows:

1 Ensure all system and boiler drain points are closed;
2 Open all isolation and motorised valves;
3 Turn on the water supply to the system header tank
4 Vent all radiators, pipework and the primary side of the hot water cylinder;
5 Check system for any visable leaks;

8.2 Gas supply

1 Open the gas isolation valve;
2 Purge the gas supply to the boiler ensuring that the boiler location is well ventilated
3 Test the gas supply for soundness as described in BS 6891.

9 Boiler controls

Before the plug is inserted into the wall socket, it helps to know the operation of the boiler in advance. On this page the controls are described in short. The next page describes the key functions and the symbols on the display.

The boiler is equipped with a self-managing control system, the so-called Control Management System. This control system takes over a large part of the manual settings, which simplifies the start-up on the installation considerably.

After filling the installation, the automating venting program is activated. The automatic venting program last for 7 minutes and stops automatically. The boiler will switch on if there is a demand from the external controls. The boiler will not operate during the 7 minute venting program.

CH controls

When the external control becomes 'live' the boiler will operate. The starting point of the gradient control is the currently existing supply temperature. A Delta-T control (25K) ensures a stable control according to heat request.
If the supply temperature is below the T-set value of 20°C the boiler will immediately start.

The ATAG A is equipped with boiler sensors of 10kOhm. The resistance value and corresponding temperature are shown in the accompanying table.

Resistance tabel sensors ATAG A	
Flow sensor T1	
Return sensor T2	
DHW sensor T3	
Flue sensor T5	
NTC10k (25°C)	
Temperature	Resistance
[°C]	[Ohm]
-10	55.047
0	32.555
10	19.873
12	18.069
14	16.447
16	14.988
18	13.674
20	12.488
22	11.417
24	10.449
26	9.573
28	8.779
30	8.059
32	7.406
34	6.811
36	6.271
38	5.779
40	5.330
42	4.921
44	4.547
46	4.205
48	3.892
50	3.605
52	3.343
54	3.102
56	2.880
58	2.677
60	2.490
62	2.318
64	2.159
66	2.013
68	1.878
70	1.753
72	1.638
74	1.531
76	1.433
78	1.341
80	1.256
82	1.178
84	1.105
86	1.037
88	974
90	915

Resistance table *table 6*

9.1 Explanation of the control keys

Hot water

Not applicable

Central heating

Setting the CH water temperature:

Briefly press + or - ; the display will show the flashing preset value;

Briefly press + or – to change the set value. Each change becomes active directly.

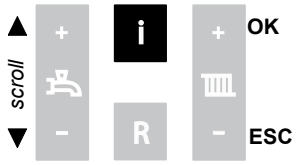
CH program OFF: Press – until the lowest value is reached and then press – again. The display is showing – and the upper ◀ is off.

Switching on works in reverse order.

Information(i)-key

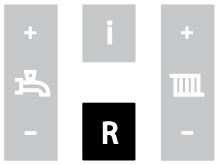
Requesting current data:

Briefly press the i-button (or the scroll key) in order to obtain the following value:



A0	=	Supply water temperature
A1	=	Return water temperature
A2	=	Hot water temperature (n.a.)
A4	=	Flue gas temperature (only if a flue gas sensor is connected)
A5	=	Outside temperature (n.a.)
A6	=	Water pressure
A9	=	Rpms of fan

To return to the standard view press ESC.



Reset key

The reset key allows the boiler to restart if a malfunction has occurred.

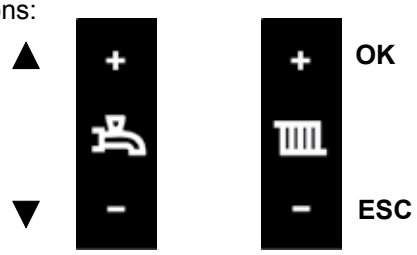
In case of a failure the 🔔 symbol is displayed with a Cx xx code.

In other cases the Reset button does not function and will not respond to operation.

See 13 for a brief overview of codes.

Some keys have ancillary functions. These ancillary functions are activated only if, according to the procedure described in Section 10.3, settings need to be changed or data retrieved from the CMS.

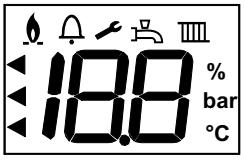
Ancillary functions:



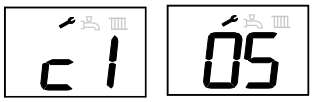
DHW KEY: Scroll function ('scrolling' through parameters)

CH key: OK and ESC function (OK= confirm, ESC= back to standard display)

10 Commissioning the boiler



Segment test



Venting program active

Standard view with divice in operation for CH

Before putting the boiler into operation make sure that the system has been filled and fully bled of any air and that the gas supply is turned on and has been purged. The boiler requires no adjustment of the burner pressure and quantity, because it is self-regulative and has been set in the factory and should not be reset.

Insert the plug into the wall socket;
There is a start-up procedure with a segment test of the display;
The lights come on and after the segment test go out again;

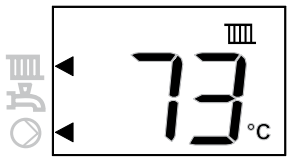
If the water pressure falls below 0,05 bar c1 18 will appear in the display;
This will disappear again the moment the water pressure is higher than 0 bar and the venting program will start (c 1 05).

This will take approx. 7 minutes and will be followed by the standard view.

10.1 CH system

The CH program is always active after start-up.
This is indicated by the upper ◀
If there is heat request, it is indicated by the radiator symbol, which will be put into operation .
The circulation pump will switch on and the boiler will switch on after 1 to 2 minutes.

10.2 Pump function



By default the boiler is set in such a manner that the pump will switch on when there is a demand from the external controls.

Danger of frost
If there is danger of frost the external control needs to be active to avoid the system freezing.

10.3 Settings

When the boiler is installed, it is in principle ready to be put into service. All settings of the control system are already programmed for a heating system with radiators/convectors with a supply temperature of 70°C. The settings are described in the parameter chapter on page 24.
There may be cases that the settings have to be changed, for example:

- Lower supply temperature

Use the parameter chapter to set the boiler according to the situation.
If in doubt, check with ATAG Heating Ltd.

To change a setting, proceed as follows:

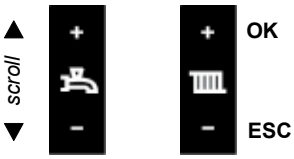
Changing the settings

STEP 1

Press the OK key for 3 seconds.
The display shows 'P6 (alternated with) 81';

STEP 2

Press the OK key for 3 seconds again.
The display shows 'on' shortly followed by 'P5 18';
You now have access to the parameter chapter.
The various parameters are described in the following pages.
To change a parameter, proceed as follows:



Basic actions:
With the Scroll keys you 'browse' through the parameters, in which you can change values
With the Esc key you can always return to the default display
With the OK key you confirm the selected parameter or set the value

STEP 3

Press the scroll key to select another parameter;

STEP 4

Press the OK key if you want to change the selected parameter;

STEP 5

Adjust the value if desired / possible with the + or - key

STEP 6

Briefly press the OK button to confirm the new setting.
The display shows the selected parameter again

STEP 7

Press the ESC key until the default display is shown again:

If during 8 minutes no key is used automatically, the default display is automatically shown on the screen.

Parameter-chapter			
PARA	**Factory**	**Description**	**Range**
518	5	Gradient speed CH	0 - 15
520	5	***Do not change***	0 - 10 K
532	24	***Do not change***	10 - 40
541	max.	Maximum power CH in % *Can only be reduced. 0 = low load*	0 - max
555		***Do not change***	
651*	1	***Do not change***	
652*	0	Quick selection CH installation:	
		CH Tmax: 85°C; Gradient: 5; Heating line 24	1
		CH Tmax: 70°C; Gradient: 5; Heating line 19	2
		CH Tmax: 60°C; Gradient: 4; Heating line 15	3
		CH Tmax: 50°C; Gradient: 3; Heating line 11	4
		This parameter copies the choosen value over CH Tmax., P518 en P532. *It is a quick selection, where the separate values will be independantly adjustable.* *After selection this parameter will always show 0.*	
680	0	Service-parameter. ***Do not change***	
681	off	Green button function Dependant of the level the factory settings at selection *b7 and OK will be set back, P651 excluded.*	on - off
682		Dynamic functions:	
	off	b0: ***Do not change*** b1 until b6: no function	
	off	b7: confirmation Service-parameter	on - off
683	0%	Correction factor fan speed for HP-system See table at flue lenghtes*. The adjusted value will increase the fan range with that percentage. Write down this value on the sticker on the boiler.*	0 - 20%
684		***Do not change***	
	* Note	When an adjustment is made and it is confirmed with OK the boiler will restart and the de-aerationprogramm will start.	

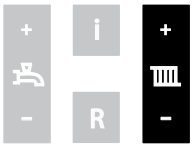
Parameter-chapter Table 6

10.4 Activating the factory setting (green key function)

To re-activate the factory settings, proceed as follows (this will undo all changed settings):
- Select P6 81, according to the procedure described in chapter 10.4;
- Select b7;
- Press OK. The screen is showing ‘off’;
- Select ‘on’;
- Press OK.
  The screen then shows P6 81 and the factory settings are active again.

11 Isolating the boiler

In some situations it may happen that the entire boiler has to be deactivated. With the function key for the heating program the boiler is put out of service.



CH program OFF: Press – until the lowest value is reached and then press – again. The display is showing -- and the upper ◀ is off.

Switching on with the + key takes place in reverse order.

ATAG recommends to leave the plug in the wall socket, so that the circulation pump is activated automatically once every 24 hours in order to prevent jamming.

If there is danger of frost it is advisable in this case to drain the boiler and/or installation.

12 Commissioning

Work on the installation should only be carried out by qualified personnel with calibrated equipment.

For maintenance of the boiler the cover has to be removed.
Unscrew the 4 locking screws from the quick fasteners, unlock the quick fasteners and remove the cover in a forward motion.

Changing settings such as the burner pressure and the setting for the amount of air is superfluous. Only in case of a failure or when replacing the gas block, venturi and/or fan, the O_2 percentage should be checked.

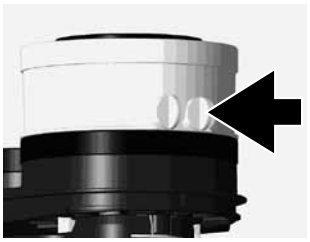
Always check all gas carrying parts for leaks (with a leak detection spray) after (maintenance) work to the boiler.

12.1 Checking the O_2

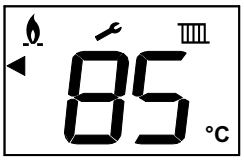
The O_2 percentage is set in the factory. This has to be checked during inspection, maintenance and in case of a failure.

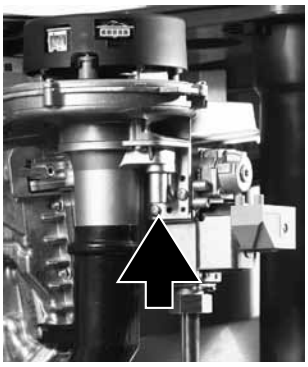
This can be verified by means of the following action:

- Set the external controls to call for heat;
- Make sure the boiler is operational and can get rid of the heat it produces;
- Calibrate the O_2 gauge;
- Place the lance of the O_2 gauge into the flue gas test point (see Figure 11);
- Press both + keys for 6 seconds.
- The display shows the supply water temperature (blinking);
  The boiler will immediately switch to the maximum heating capacity
- The correct O_2 percentage = 4,7%
- Let the measuring equipment perform the O_2 measurement.
- Adjust, if necessary, the adjustment screw to correct the O_2 value (see fig. 12).



Measuring point O_2 Figure 11





Adjustment screw O_2 Figure 12

Termination of the O_2 measurement:
- - Press the ESC key (- key). The device switches off.
  This completes the procedure.

12.2 Maintenance activities

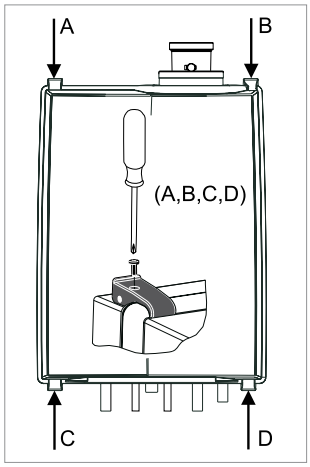


Figure 13

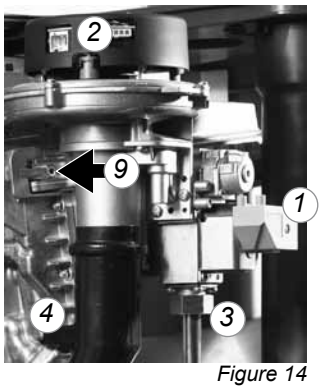


Figure 14

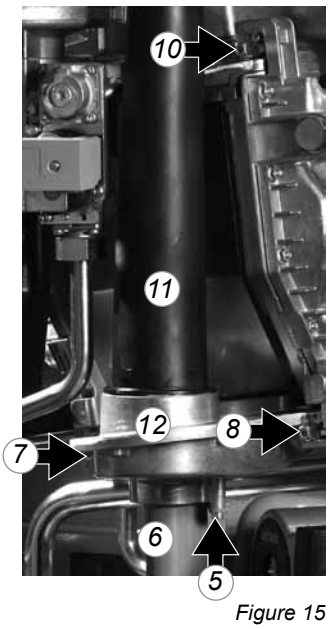


Figure 15

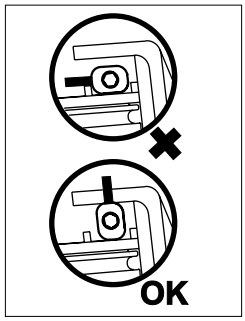


Figure 16

In order to perform maintenance, the following actions have to be taken:
- switch off the boiler;
- remove the screws from the 4 quick fasteners A, B, C and D (see fig. 13);
- unlock the 4 quick fasteners A, B, C and D and remove the cover in a forward motion.

Air box/cover

The cover also doubles as air box:
- Clean the air box/cover with a cloth and a non-abrasive cleaner;

Fan unit and burner cassette (see fig. 14, 15 and 16)
- dismantle the igniter(1) by means of the screw of the gas block;
- pull out the plug connections (2) of the fan;
- unscrew the coupling (3) of the gas block;
- replace the gas block gasket (O-ring) with another;
- unscrew the front crosshead screw (4) from the air supply damper;
- now turn the left (5) and right (6) clamp bars a quarter turn and pull these out in a forward motion. Mind the direction of rotation (red control cams);
- now remove the complete fan unit with the gas block from the heat exchanger in a forward motion;
- remove the burner cassette from the fan unit;
- check the burner cassette for wear, pollution and possible fracture. clean the burner cassette with a soft brush and a vacuum cleaner. in case of a fracture always replace the entire cassette assembly;
- replace the gasket between the burner and upper tray and the gasket between the upper tray and the heat exchanger;
- check the venturi and gas air dividing plate for pollution and clean them with a soft brush in combination with a vacuum cleaner, if necessary. If the air cabinet is heavily polluted with dust, it is likely that the fan impeller is also polluted. To clean the fan, it has to be removed from the upper tray and the venturi. Clean the impeller with a soft brush and a vacuum cleaner. Replace the gasket and take care that the new gasket is installed properly when reassembling the fan parts.

Heat exchanger
- check the heat exchanger for pollution. Clean it, if necessary, with a soft brush and a vacuum cleaner. Avoid any pollution falling down.
  Top-flushing the heat exchanger with water is not allowed.

Reassembly takes place in reverse order.

⚠ **During installation pay attention to the correct position of the clamp bars. These have to be in a vertical position.**

Ignition electrode

Replacing the ignition electrode is necessary when the pins are worn.
If the inspection hole is damaged, the entire ignition electrode has to be replaced.
It is replaced as follows:

- disconnect the plug connections on the ignition electrode;
- push the clips on either side of the electrode outwards and pull out the electrode assembly;
- remove and replace the gasket;

Reassembly takes place in reverse order.

Siphon and condensation tray (see figs. 17, 18 & 19)

- first disassemble the siphon cup (7).
  Check it for pollution. If no serious pollution is found in the siphon cup, it is not necessary to disassemble the condensation tray or clean it. If the siphon cup shows serious pollution, the condensation reservoir should be cleaned as well.
- check the O-rings of the siphon cup and replace them if necessary.
- clean the parts by rinsing them with water.
- grease the O-rings again with acid-free O-ring grease to simplify the reassembly.
- If a leakage has occurred to the siphon, replace the entire siphon;
- remove the plug from the flue gas sensor, if any.
- remove the left (8) and right (9) clamp bars by turning them a quarter of a turn. Mind the direction of rotation (red control cams).
- now pull the clamp bars forward and from underneath the condensation tray.
- slide the exhaust pipe (10) about 1 cm upwards.
- now push the condensation tray (11) gently down and take it away in a forward motion;
- replace the condensation tray gasket by a new one.
- clean the polluted condensation tray with water and a hard brush.
- Check the condensation tray for leaks.

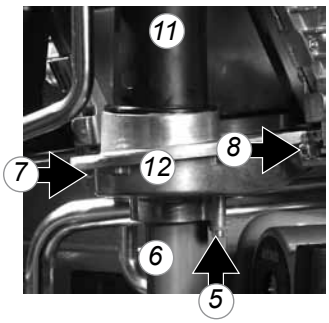


Figure 17

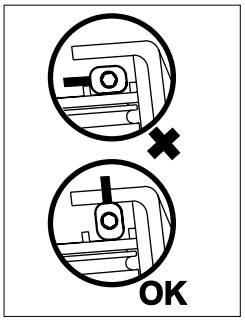


Figure 18

Reassembly takes place in reverse order.
Pay attention that the gasket seals completely all around during reassembly of the condensation reservoir.

During installation pay attention to the correct position of the clamp bars. These have to be in a vertical position.

Always replace the gaskets of the removed parts during maintenance.

Put the boiler back into operation and carry out a flue gas analysis (see page 26).

Always put back the cover after (maintenance) work and secure it with screws A, B, C and D.

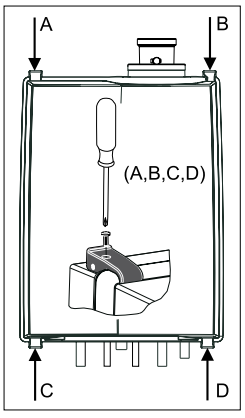


Figure 19

12.3 Maintenance frequency

ATAG advises an inspection of the boiler every year with a full service to be carried out at least every 4 years, depending on the operational hours listed in the warranty conditions.

12.4 Warranty

For the warranty refer to the Warranty Card that is supplied with the boiler.

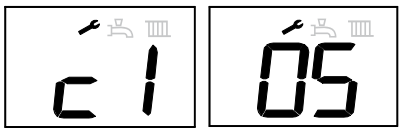
13 Error message

A detected failure is indicated on the display in blocking or error messages.

- Blocking code with spanner symbol
  Error is temporary and will cancel itself or will lock the boiler after several attempts

- Error code with bell symbol
  Error means a lock on the boiler and can only be remedied by a reset and/or intervention by a service technician.

C 20 Flow sensor error (e.g. open, short circuit, outside of range)
C 40 Return sensor error (e.g. open, short circuit, outside of range)
C 61 No bus communication (reset only possible by power interruption)
C 78 Water pressure not connected or pump failure
C1 05 Venting program active
C1 10 Safety temperature exceeded
C1 11 Maximum temperature exceeded
C1 18 Water pressure below 0,05 bar caused by empty system
C1 29 Fan error (fan does not start up)
C1 33 No flame after 5 ignition attempts
C1 51 Fan error (speed control is not achieved or is outside of range)
C1 54 Flow increases too fast, 3-T to large, return > supply



Example of display of error message

14 Technical specifications

Boiler type		ATAG A-Series Solo A200S OV
Input Hs CH	kW	20
Q_n Input Hi CH	kW	18
Efficiency class according BED		★★★★
Efficiency according EN677 (36/30°C part load, Hi)	%	109,2
Efficiency according EN677 (80/60°C full load, Hi)	%	97,9
Modulation range CH (capacity 80/60°C)	kW	4,4 - 17,6
Modulation range CH (capacity 50/30°C)	kW	4,9 - 19,3
Nox class EN483		5
CO_2 / O_2	%	9 / 4,7
Temperature class for PP flue		T100
Appliance type		B_{23} B_{33} C_{13} C_{33} C_{43} C_{53} C_{63} C_{83} C_{93}
Flue gas temp. CH (80/60°C on full load)	°C	68
Flue gas temp. CH (50/30°C on low load)	°C	31
Categories		II2H3P
Gas consumption G20 CH (DHW) (at 1013 mbar/15°C)	m^3/h	1,91
Electr. power consumption max.	W	34
Electr. power consumption part load	W	19
Electr. power consumption stand by	W	3,7
Current	V/Hz	230 +10 %-15 % / 50Hz
Degree of protection acc. EN 60529		IPX4D (IPX0D for B_{23} & B_{33})
Weight (empty)	kg	30
Width	mm	500
Height	mm	650
Depth	mm	395
Water content CH	l	3,3
Overrun time pump CH	sec	60
P_{MS} Water pressure CH min./max.	bar	0,05/3
Flow temperature max.	°C	90
CE product identification number(PIN)		0063BT3195

Boiler specifications Table 6

15 Parts of the boiler

boiler parts ATAG A

figure 20

1	Heat exchanger	13	Flue gas exhaust
2	Ignition unit	14	Combustion air supply
3	Fan unit	15	Data plate
4	Air supply damper		
5	Gas valve		
6	Automatic air vent		
8	Control Management System		
9	Control panel		

T1	Flow sensor
T2	Return sensor
P1	Water pressure sensor

G	Gas pipe
A	Flow pipe CH
R	Return pipe CH
C	Condensation pipe

CE DECLARATION OF CONFORMITY

Hereby declares ATAG Verwarming Nederland BV that,

the condensing boiler types: ATAG

A200SOV

are in conformity with the provisions of the following EC Directives, including all amendments, and with national legislation implementing these directives:

Directive		Used standards
Gas Appliance Directive		90/396/EEC EN483: 1999 EN50165: 1997
Efficiency Directive	92/42/EEC	EN677: 1998
Low Voltage Directive	73/23/EEC	EN50165: 1997 EN60335-1: 1994
EMC Directive	89/336/EEC	EN61000-3-2: 2000 EN61000-3-3: 1995 EN61000-6-1: 2001 EN61000-6-3: 2001

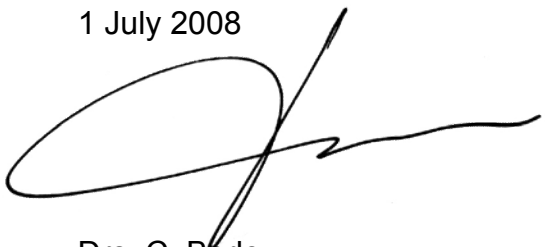
Report numbers

	GAD	ED	LVD	EMC D
ATAG A	177405	177405	177405	06C00165

and that the products are in conformity with EC type-examination certificate number E0430, as stated by KIWA-Gastec Certification BV, Apeldoorn, The Netherlands.

Date : 1 July 2008

Signature :



Full name : Drs. C. Berlo
CEO

ATAG Verwarming

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Telefoon: +31(0) 544 391777, **Fax:** +31(0) 544 391703
E-mail: info@atagverwarming.com **Internet:** http//www.atagverwarming.nl

Certificate

kiwa
Partner for progress

UK APPROVAL
Certificate Number: 0911701

Date Issued: 12th November 2009
Date Expired: 12th November 2014

Description:'A' Range of wall mounted sealed circuit and combination boilers.

Product Designation:
A200S 0V, A200S, A320S, A203C, A325C and A325EC

This is to certify that the above range of products manufactured / supplied by

ATAG VERWARMING NEDERLAND BV

1. Has been tested and found to comply with the requirements of the Water Supply (Water Fittings) Regulations 1999 for England and Wales, the Water Byelaws 2000, Scotland and the Water Regulations Northern Ireland.

This certificate must be read in conjunction with the acceptance letter for this product.

This approval is intended for compliance with the above Regulations and must not be considered equivalent to the product certification provided by Kiwa N.V

To comply with the Regulations and Byelaws all products require the correct installation. Details of the installation requirements (IRN's) can be obtained from the acceptance letter supplied with this certificate.
Applicable IRN's for this certificate – R001, R140, R360

Authorised Signature
Kiwa Quality Services Ltd

Kiwa Quality Services Ltd
The Innovation Centre
Victoria Park
Festival Drive
Ebbw Vale
Gwent
NP23 8XA

Tel 00 44 (0) 1495 356795
Fax 00 44 (0) 1495 350020
E-mail: info@kiwa.co.uk
Web: www.kiwa.co.

Certificate Issued To –

ATAG VERWARMING NEDERLAND BV
Galileistraat 27
7131PE Lichtenvoorde
Netherlands

kiwa approved product

GAS BOILER SYSTEM COMMISSIONING CHECKLIST

This Commissioning Checklist is to be completed in full by the competent person who commissioned the boiler as a means of demonstrating compliance with the appropriate Building Regulations and then handed to the customer to keep for future reference.

Failure to install and commission according to the manufacturer's instructions and complete this Benchmark Commissioning Checklist will invalidate the warranty. This does not affect the customer's statutory rights.

Customer Name _____ Telephone Number _____

Address

Boiler Make and Model _____

Boiler Serial Number

Commissioned by *(print name)* _____ Gas Safe Register Number _____

Company Name _____ Telephone Number _____

Company Address _____

Commissioning Date _____

To be completed by the customer on receipt of a Building Regulations Compliance Certificate*:

Building Regulations Notification Number *(if applicable)*

CONTROLS Tick the appropriate boxes

Time and Temperature Control to Heating	Room Thermostat and Programmer/Timer	☐	Programmable Room Thermostat	☐	Load/Weather Compensation	☐	Optimum Start Control ☐
Time and Temperature Control to Hot Water	Cylinder Thermostat and Programmer/Timer	☐					Combination Boiler ☐
Heating Zone Valves					Fitted	☐	Not Required ☐
Hot Water Zone Valves					Fitted	☐	Not Required ☐
Thermostatic Radiator Valves					Fitted	☐	Not Required ☐
Automatic Bypass to System					Fitted	☐	Not Required ☐
Boiler Interlock							Provided ☐

ALL SYSTEMS

The system has been flushed and cleaned in accordance with BS7593 and boiler manufacturer's instructions Yes ☐

What system cleaner was used?

What inhibitor was used? Quantity _____ *litres*

CENTRAL HEATING MODE Measure and Record:

Gas Rate	_____ m^3/hr	OR		_____	ft^3/hr
Burner Operating Pressure (if applicable)	_____ mbar	OR	Gas Inlet Pressure	_____	mbar
Central Heating Flow Temperature				_____	°C
Central Heating Return Temperature				_____	°C

COMBINATION BOILERS ONLY

Is the installation in a hard water area (above 200ppm)? Yes ☐ No ☐

If yes, and if required by the manufacturer, has a water scale reducer been fitted? Yes ☐ No ☐

What type of scale reducer has been fitted?

DOMESTIC HOT WATER MODE Measure and Record:

Gas Rate	_____ m^3/hr	OR		_____	ft^3/hr
Burner Operating Pressure (at maximum rate)	_____ mbar	OR	Gas Inlet Pressure (at maximum rate)	_____	mbar
Cold Water Inlet Temperature				_____	°C
Hot water has been checked at all outlets	Yes ☐		Temperature	_____	°C
Water Flow Rate				_____	*l/min*

CONDENSING BOILERS ONLY

The condensate drain has been installed in accordance with the manufacturer's instructions and/or BS5546/BS6798 Yes ☐

If the condensate pipe terminates externally has the pipe diameter been increased and weatherproof insulation fitted? Yes ☐

ALL INSTALLATIONS

If required by the manufacturer, record the following CO_2 _____ % OR CO _____ *ppm* OR CO/CO_2 Ratio _____

The heating and hot water system complies with the appropriate Building Regulations Yes ☐

The boiler and associated products have been installed and commissioned in accordance with the manufacturer's instructions Yes ☐

The operation of the boiler and system controls have been demonstrated to and understood by the customer Yes ☐

The manufacturer's literature, including Benchmark Checklist and Service Record, has been explained and left with the customer Yes ☐

Commissioning Engineer's Signature

Customer's Signature

(To confirm satisfactory demonstration and receipt of manufacturer's literature)

*All installations in England and Wales must be notified to Local Authority Building Control (LABC) either directly or through a Competent Persons Scheme. A Building Regulations Compliance Certificate will then be issued to the customer.

benchmark

Service Record

It is recommended that your heating system is serviced regularly and that the appropriate Service Interval Record is completed.

Service Provider
Before completing the appropriate Service Record below, please ensure you have carried out the service as described in the manufacturer's instructions.

Always use the manufacturer's specified spare part when replacing controls.

Service 1 Date:
Engineer Name:
Company Name:
Telephone No.
Gas Safe Register No.
Comments:

Signature:

Service 2 Date:
Engineer Name:
Company Name:
Telephone No.
Gas Safe Register No.
Comments:

Signature:

Service 3 Date:
Engineer Name:
Company Name:
Telephone No.
Gas Safe Register No.
Comments:

Signature:

Service 4 Date:
Engineer Name:
Company Name:
Telephone No.
Gas Safe Register No.
Comments:

Signature:

Service 5 Date:
Engineer Name:
Company Name:
Telephone No.
Gas Safe Register No.
Comments:

Signature:

Service 6 Date:
Engineer Name:
Company Name:
Telephone No.
Operative ID No.
Comments:

Signature:

Service 7 Date:
Engineer Name:
Company Name:
Telephone No.
Gas Safe Register No.
Comments:

Signature:

Service 8 Date:
Engineer Name:
Company Name:
Telephone No.
Gas Safe Register No.
Comments:

Signature:

Service 9 Date:
Engineer Name:
Company Name:
Telephone No.
Gas Safe Register No.
Comments:

Signature:

Service 10 Date:
Engineer Name:
Company Name:
Telephone No.
Gas Safe Register No.
Comments:

Signature:

ATAG Heating UK Ltd. • Unit 3 • Beaver Trade Park • Quarry Lane Chichester West Sussex PO19 8NY
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