



## **Aztec Classic WM Maxi Combi**



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# **INSTALLATION, OPERATION AND SERVICING INSTRUCTIONS**

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**PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLING  
AND OPERATING THIS APPLIANCE**

**TO BE RETAINED BY HOUSEHOLDER**

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# HEALTH AND SAFETY

## INFORMATION FOR THE USER, INSTALLER AND SERVICE ENGINEER

Under the Consumer Protection Act 1987 and the Health and Safety at Work Act 1974, it is a requirement to provide information on substances hazardous to health (COSHH Regulations 1998).

TR Engineering takes every reasonable care to ensure that its products are designed and constructed to meet these safety requirements when the products are properly installed and used. To fulfil the requirements, products are comprehensively tested and examined before despatch.

When working on the appliance, it is the responsibility of the user or engineer to ensure that personal protective clothing or equipment appropriate to parts that could be considered hazardous or harmful is worn.

This appliance may contain some of the items below:

### Insulation and Seals

Glass rope, mineral wool, insulation pads, ceramic fibre, and glass insulation.

When handling, avoid inhalation and contact with eyes. These may be harmful and cause irritation to the skin, eyes, nose, or throat. Use disposable gloves, face masks and eye protection.

After handling, wash hands and other exposed areas. When disposing of materials, limit dust and the risk of inhalation by using water spray. Ensure materials are securely wrapped.

Seek urgent medical attention if inhaled or ingested. Exposure to eyes and skin should be followed by immediate cleansing of the affected areas and medical attention if necessary.

### Glues, Sealants and Paints

The glues, sealants and paints used present no known hazards when the appliance is used in the manner for which it is intended.

#### Notes:

- a) Electrical safety checks should be carried out by a competent person.
- b) It is a requirement of the guarantee and any extended warranty that an annual service is carried out by a competent person.

Installation Engineers Signature

Company Name (if applicable)

Company Address

Company Tel. No.

**Please read these instructions fully before installing this appliance.  
If in doubt seek expert advice**

**These instructions should be kept in a place close to the appliance for easy reference.**

# IMPORTANT PRE-INSTALLATION NOTES

**By Fitting this Aztec Maxi Combination boiler, you agree:**

- **The Boiler has been received in good condition.**
- **You have carried out a heat loss calculation and are sure that this boiler is suitable.**
- **You have checked that the hot water flow rate is sufficient for the application.**
- **You have carried out a load and voltage test to determine the correct size of breaker to be used.**
- **You meet the requirements of the appropriate Building Regulations**

Before installation, it is imperative that the following guidelines are heeded to ensure the trouble-free and efficient operation of the boiler:

## **Ventilation and Siting**

When siting the boiler in a confined space it is essential that adequate ventilation be provided. This will ensure that air can circulate freely around the appliance keeping down the ambient temperatures. Refer to Ventilation requirements (Page 11) for further details.

Ensure that the area surrounding the boiler is kept free of items which would impede the good ventilation of the appliance (e.g., towels, linen, etc).

When siting the boiler, consider the potential requirement for future servicing. Enough space should be provided at the front of the boiler to enable an engineer to adequately service and/or replace items such as the PCB or heat exchanger. Space should also be available for the removal of the front casing panel. Please refer to siting information (Page 11) for clearance dimensions. The boiler must be sited vertically and away from strong magnetic fields.

## **Power Supply and Wiring**

The power supply to the premises must meet the minimum requirements of the unit being installed, with special attention paid to the supply current, cable size, and RCD recommendation. The supply voltage to the appliance must never drop below **207 Volts**.

## **System**

Isolation valves (supplied) must be fitted on both the flow and return pipe work. These are useful as from time to time the boiler may require draining of water, and the lengthy drawing-off process can be avoided by the astute placement of these valves.

Ensure that any isolation valves are open before first use, and that the system is full of water.

## **IMPORTANT:**

### **General Information:**

To keep your boiler running efficiently **DO NOT OBSTRUCT OR COVER** any ventilation air inlet on the appliance or the compartment where it is installed.

To keep the casing clean, switch 'OFF' the boiler at the electrical supply, and simply wipe with a damp cloth. **DO NOT** use abrasive cleaning fluids as this may damage the stove enamel paintwork.

# TR ENGINEERING LTD CUSTOMER AFTER SALES SERVICE INFORMATION

The boiler comes with a 5 Year warranty, providing the boiler is registered within 30 days from the date of installation. Register online at: [www.trianco.co.uk/product-registration](http://www.trianco.co.uk/product-registration)

Terms and Conditions apply, please see Trianco web site for details.

Please note you will require the full boiler serial number to be able to register the boiler. The serial number is located on the right-hand side of the boiler and can also be found on the box the boiler came in.

## **A step-by-step guide to reporting a fault with your appliance**

A qualified field SERVICE ENGINEER is available to attend a breakdown or manufacturing fault occurring whilst the appliance is under warranty.

The appliance must be made available for service during normal working hours, Monday to Friday (no weekend work or bank holidays accepted).

## **A charge will be made where:**

- Our Field Service Engineer finds no fault with the appliance.
- The cause of a breakdown is due to other parts of the plumbing/heating system or with equipment not supplied by TR Engineering Ltd.
- Where the appliance falls outside the warranty period (see terms and conditions enclosed).
- The appliance has not been correctly installed, as recommended (see installation, operating and servicing instructions.)

**NOTE: Over 50% of all service calls made are found to have no appliance fault.**

## **What to do in the event of an appliance fault or breakdown:**

**Step 1:** Always contact your installer in the first instance, who must thoroughly check all his work PRIOR to requesting a service visit from TR Engineering LTD.

**Step 2:** If your appliance has developed an in-warranty fault your installer should contact TR Engineering LTD for assistance from site.

## **What happens if my Installer/engineer is unavailable?**

**Step 3:** Contact TR Engineering LTD. We will provide you with the name and telephone number of our Service Agent. However, a charge may apply if the fault is not covered by the appliance warranty (payment will be requested on site by our independent Service Agent).

**PLEASE NOTE: UNAUTHORISED INVOICES FOR ATTENDANCE AND REPAIR WORK CARRIED OUT ON THIS APPLIANCE BY ANY THIRD PARTY WILL NOT BE ACCEPTED BY TR ENGINEERING LTD**

**Register your boiler online - [www.trianco.co.uk/product-registration](http://www.trianco.co.uk/product-registration)**

## **SERVICE CENTRE AND TECHNICAL SUPPORT**

Tel: 0114 257 2300 Fax: 0114 257 1419

Hours of Business

Monday to Thursday 8.30am - 5pm

Friday 8.30am - 2.30pm

# **IMPORTANT SAFETY NOTES**

## **INTRODUCTION**

The Aztec Classic WM Maxi Combination boiler is a wall mounted electric central heating boiler which incorporates an unvented cylinder and designed with smaller properties in mind. Access is required to the front of the boiler for servicing. Once the boiler is switched on it is fully controlled by an automatic management system which monitors the safety and running functions of the boiler. Designed to work on a fully pumped wet system only. The boiler produces hot water by passing water over electric heating elements housed in an insulated heat exchanger.

The boilers incorporate inverter constant temperature technology which automatically adjusts output to match demand.

**Read these instructions before installing the boiler.**

**Always switch OFF the electrical supply before removing the cover.**

**If any part of the boiler is modified, then the warranty will be invalidated.**

**We recommend that you keep these instructions in a place near your appliance for easy reference.**

**The Trianco Aztec Classic WM Maxi Combination Boiler has been designed to conform to European Directive/Standards EN60335-1:2002 +A15:2011, EN60335-2-35:2002 inc Amd 1, EN55014-1:2006 +A1:2009, EN55014-2:1997 +A2:2008.**

**THE PERSON(S) WHO INSTALLS THIS APPLIANCE, SERVICES OR CARRIES OUT ANY REMEDIAL WORK, I.E. ELECTRICAL FAULT FINDING, MUST HAVE SUITABLE ENGINEERING QUALIFICATIONS.**

**WARNING: DO NOT SWITCH ON THIS APPLIANCE IF THERE IS ANY POSSIBILITY THAT THE WATER MAY BE FROZEN.**

**THE INSTALLATION OF THIS APPLIANCE MUST MEET THE REQUIREMENTS OF THE CURRENT ISSUE FOR ELECTRICAL INSTALLATIONS IEE WIRING.**

**THIS BOILER INCORPORATES AN UNVENTED CYLINDER. UNVENTED CYLINDERS ARE A CONTROLLED SERVICE AS DEFINED IN THE LATEST EDITION OF THE BUILDING REGULATIONS AND SHOULD ONLY BE FITTED BY A COMPETENT PERSON.**

# USER INSTRUCTIONS

The Trianco Aztec Maxi Combination boiler has been designed and constructed to give years of trouble-free service and these instructions are provided to assist you in obtaining the best performance with the least trouble and cost.

The boiler is fully automatic in operation and requires little attention other than the setting of the thermostat and any external system controls such as a room thermostat.

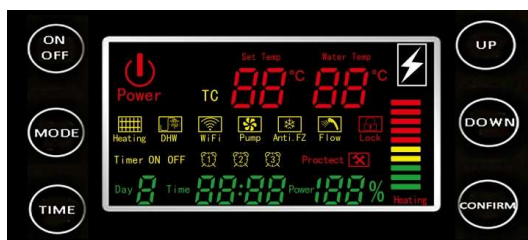
## IMPORTANT

**DO NOT COVER OR BOX IN YOUR BOILER WITHOUT MAKING SUITABLE PROVISION TO ALLOW AIR TO CIRCULATE FREELY AROUND THE APPLIANCE**

**WARNING: DO NOT ATTEMPT TO SWITCH ON THE BOILER IF THERE IS ANY POSSIBILITY THAT THE WATER INSIDE THE HEAT EXCHANGER IS FROZEN**

Before turning the boiler on, ensure the system is full of water and all valves fitted to the system are open. Switch on the power supply, the display will illuminate. Observe any error codes – Refer to table on Page 9.

## Boiler Multi-Function Display



Press ON/OFF button to turn boiler on from Standby. Power symbol illuminated.

### Setting Boiler Heating Thermostat

With the Power symbol and Heating symbol illuminated (Boiler producing Heat for the Heating circuit) Press the UP/Down key to adjust the boiler temperature. 30°C - 80°C Press the confirm key to save.

### Heating return difference Temperature setting

In standby press the mode key twice, screen shows CH, press UP/DOWN key to choose temperature differential between 5°C - 30°C Press Confirm to save.

Heating times are controlled by the external programable Wi-Fi thermostat supplied, see separate instructions for installation and operation. Alternatively, any programable room thermostat capable of **volt free** switching can be used.

Once a call from the external thermostat is received by the boiler, TC will illuminate on the display and the heating symbol will flash on the boiler display. The power band should rise and fall.

### Summer Mode

Pressing the ON/OFF button to put the boiler into standby will allow the boiler to operate in DHW mode only

### Domestic Hot Water return difference Temperature setting

In standby press the mode key once, screen shows LH, press UP/DOWN key to choose temperature differential between 5°C - 30°C Press Confirm to save. 5°C differential is recommended

### Setting Domestic Hot Water (DHW) On/Off times and Temperature.

**This must be set when the boiler is commissioned to obtain hot water.**

Repeatedly pressing the TIME button will cycle between Hours, Minutes and DHW Temperature through 3 On/Off periods. Each parameter can be changed using the UP/DOWN keys. It is recommended the DHW is set at 75°C

# USER INSTRUCTIONS

## Turning the DHW timer ON/OFF

Press and hold the time key until all three clocks flash, Press the confirm key when clocks are visible to turn on the in-built programmer or press the confirm key when all three clocks are not visible to turn the in-built timer off.

## Domestic Hot Water return difference Temperature setting

In standby press the mode key once, screen shows LH, press UP/DOWN key to choose temperature differential between 5°C - 30°C Press Confirm to save. 5°C differential is recommended.

**The boiler is supplied with a thermostatic blending valve which must be fitted on the Hot water outlet and adjusted accordingly at the time of commissioning.**

Initial domestic hot water flow rates of 10l/min will produce 130l of water blended at 40°C, a lower flow rate of 5l/min will allow for more hot water to be drawn. Hot water volume will be affected by cold water supply temperature, flow rate and boiler temperature setting.

## **In Standby Mode**

### Setting Day of Week

Press Mode Five times – Day of Week Flashes, Use UP/DOWN keys to set current Day Number.  
1 – 7 Press “Confirm” to store.

### Setting Time

Press Mode Three times – Hours Flashes, Use UP/DOWN keys to set hours. Press mode again. Use UP/DOWN keys to set minutes. Press Confirm to store.

## **Fault Deletion Function**

When a fault code shows on the display press the Confirm key to clear the fault.

## **Child Lock**

Press “CONFIRM” for 5 Seconds, all keys are locked until “CONFIRM” is pressed again for 5 seconds

## **Frost Protection**

In Standby the boiler will monitor the real time water temperature.

If the water temperature is < 5°C the boiler will run automatically until the water temperature has reached 15°C. The heating element will turn off, the pump will continue to run for 5 Minutes.

## **Cleaning Casings**

Use hot soapy water applied with a damp cloth for the enamel, then dry with a soft dry cloth.

## **Simple Maintenance**

Ensure that the natural ventilation around the boiler is not obstructed. If fitted in a compartment, ensure all ventilation grilles are clear.

The boiler has built in over temperature protection. If the water temperature exceeds 140°C the limit thermostat will activate, and the screen will be blank. The thermostat will require re-setting by a qualified person.



## FAULT FINDING

### Information codes

Code	Protection Function	Description	
<b>E2</b>	Current leakage	Moisture on circuit board or the boiler has condensation internally	Qualified engineer to remove cover and dry/inspect circuit board
<b>E3</b>	Water temperature sensor	Sensor is short circuit or open circuit	Check sensor connection. Check sensor cable and replace if required
<b>E5</b>	DHW temperature sensor	Sensor is short circuit or open circuit	Check sensor connection. Check sensor cable and replace if required
<b>E6</b>	Neutral Fault		Check Neutral Connection
<b>E9</b>	Antifreeze fault	Heating water temperature is too low	If the pipework is frozen the boiler will not be able to work.
<b>EC</b>	Display Disconnected with PCB	Display Disconnected with PCB	Check whether the cable between the display and the PCB is broken or whether the plug is loose.
<b>F1</b>	Dry Fire Protection	No water flow DHW Temperature set above 70 Degree	Fill system and vent. Press and hold TIME key for 6 seconds to re-set Lower Temperature to 70 Degree
<b>F4</b>	Low Water Pressure	System is low on water	Fill to correct pressure using filling loop
<b>F6</b>	No water Flow	Air in the system, no water or water pump not working, pump is blocked, water flow switch blocked, water flow switch is faulty	Vent system. Check system pressure. Check pump and flow switch for blockage/operation
	External earth leakage protector trip (RCD)	Display screen does NOT light up.	Check whether the leakage protector is damaged and replace it. Check whether the heater has leakage, Check whether there is leakage situation in the external input power wires
	Dry burning temperature controller trip	Display screen does NOT light up.	Check whether the temperature controller trips. If it trips, press the reset button. Check whether the waterway is blocked. Clean and unblock the pipeline. Check the flow of water pump.
	No heating	Equipment temperature does NOT rise.	Water temperature setting too low. 2. Indoor temperature control setting too low.
	No Hot Water	Power Band working	Check High Limit Thermostat on DHW Heat Exchanger Check 3 port valve is operating.
	Blank Display	High Limit Thermostat has tripped	Check High Limit Thermostat on main Heat Exchanger

# INSTALLATION

## INSTALLATION

### Regulations

Installation of the boiler must comply with the following British Standards and Regulations:

BS5449 – Forced circulation hot water central heating systems.

BS7074-Part 1: Code of practice for sealed water systems.

The Building Regulations: Part 'L' (Northern Ireland)

Current I.E.E. Regulations

Local water undertaking By-laws.

**This boiler incorporates an Unvented Cylinder. Unvented cylinders are a controlled service as defined in the latest edition of the building regulations and should only be fitted by a competent person.**

**England and Wales - Building Regulations G3**

**Scotland – Technical Standard P3**

**Northern Ireland – Building Regulation Part F**

### Health and Safety at Work Act

The installer should be aware of his responsibilities under the Act and provide where necessary, appropriate protection for persons carrying out the installation. In the interests of safety, a competent engineer should install the boiler and all wiring must be carried out in accordance with current IEE regulations.

## IMPORTANT

**ALL ELECTRICAL WORK MUST BE CARRIED OUT BY A QUALIFIED ELECTRICAL ENGINEER TO CURRENT IEE WIRING REGULATIONS.**

### UNPACKING THE BOILER

Carefully open the boiler carton, remove boiler and place in a safe place until required.

**NOTE: ALWAYS STORE THE BOILER IN A DRY PLACE PRIOR TO FITTING.**

### SITING THE BOILER

**IMPORTANT: NOT TO BE INSTALLED IN A SHOWER COMPARTMENT OR BATHROOM**

Ensure adequate clearance is allowed for making water connections. Access is required to the front of the boiler for servicing. The boiler must also be fitted in a dry well-ventilated position, which is not subject to adverse temperature conditions. (See ventilation requirements).

Care should be taken when siting the appliance to make sure adequate access is available for future servicing of the appliance. Please note that the PCB and heat exchanger assembly may require removal during such times.

The front cover is held in position by four Phillips Head screws, two at the top and two at the bottom. Clearance at the top and bottom of the boiler should be adequate to allow access with a small Phillips screwdriver.

**When removing the cover please unplug the cable between the display and main circuit board.**

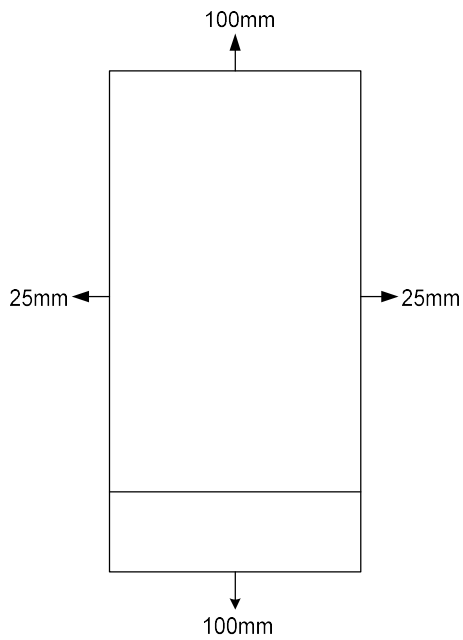
The boiler must be mounted on a suitable wall capable of bearing the weight of the boiler.

Utilise all 6 fixing points on top and bottom fixing brackets.

# INSTALLATION

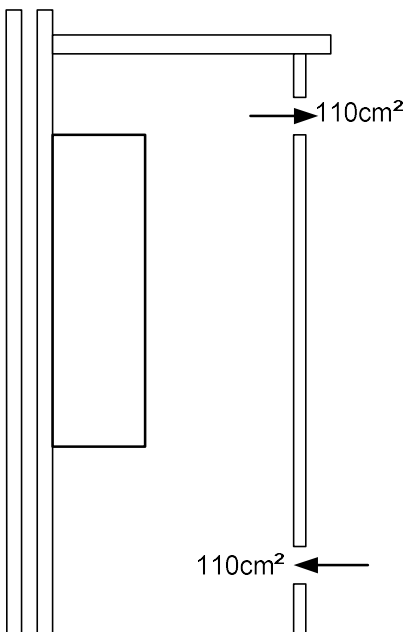
## Clearances

Please allow adequate clearance in front of the boiler for servicing and end user access.



## VENTILATION REQUIREMENTS

If the appliance is to be fitted in a confined space or compartment it is a requirement that adequate ventilation be provided to prevent the overheating of the boiler controls. Aeration of 110 cm<sup>2</sup> will be required To the compartment, in both high and low positions.



# INSTALLATION

## WATER SYSTEM

The installation must comply with the requirements of the following codes of practice.

**BS 5449** Part 1 Forced Circulation Hot Water Systems

**BS 7593** Treatment of water in domestic hot water central heating systems.

**BS EN 12828** – Heating systems in buildings: Design for water-based heating systems.

**BS EN 12831** – Heating systems in buildings: Method for calculation of the design heat load.

**BS EN 14336** – Heating systems in buildings: Installation and commissioning of water-based heating systems.

### **SUPPLIED ISOLATION VALVES MUST BE FITTED.**

Fill the system. Vent all air from system. Vent Pump. Clear any air locks and examine the system for water leaks.

### **IMPORTANT: ENSURE ALL SERVICE VALVES ARE IN AN OPEN POSITION.**

**IMPORTANT: THIS BOILER IS TO BE FITTED ON FULLY PUMPED SYSTEMS ONLY WHICH MUST INCLUDE AN AUTO-BY-PASS VALVE.**

**IMPORTANT: ALL DOMESTIC HOT WATER OUTLETS SHOULD BE RESTRICTED TO 10L/M USING THE FLOW RESTRICTOR SUPPLIED**

### **SEALED WATER SYSTEM REQUIREMENTS**

The installation must comply with the appropriate requirements of the current issue of BS4814, BS5449, BS6798 and BS7074 Part 1 and 2.

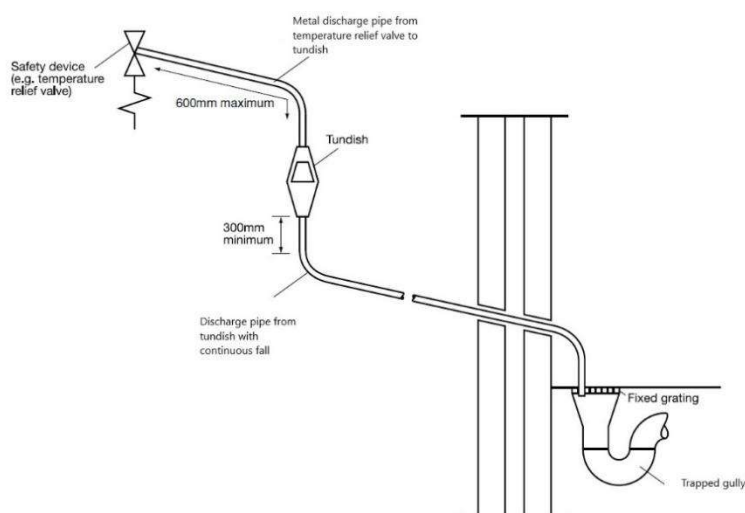
### **THERMOSTATIC BLENDING VALVE**

The boiler is supplied with a thermostatic blending valve which must be fitted on the Hot water outlet and adjusted accordingly at the time of commissioning.

# INSTALLATION

## Safety Valve Discharge Arrangement

A 3-bar safety valve is fitted within the unit. The drain must be routed to the outside of the building. The drain must not discharge above an entrance or a window or any public access area, be clear of any electrical fittings and positioned so that any discharge can be seen.



Note: The discharge will consist of scalding water and steam. Roofing felt, asphalt and non-metallic rainwater goods may be damaged by such discharges.

Position the inlet control group so that the discharge from both safety valves can be joined together via a 15mm end feed Tee. Connect the tundish and route the discharge pipe. The tundish should be installed away from electrical devices. The discharge pipework must be routed in accordance with Part G3 of schedule 1 of the Building Regulations. The discharge pipe should have:

- A vertical section of pipe at least 300mm long below the tundish.
- Be installed with a continuous fall of at least 1 in 200 thereafter.

The safety valves will only discharge water under fault conditions.

The discharge pipe should be at least one pipe size larger than the nominal outlet size of the safety device. Please follow BS6700 for sizing discharge pipework.

General guidance for sizing copper discharge pipe:

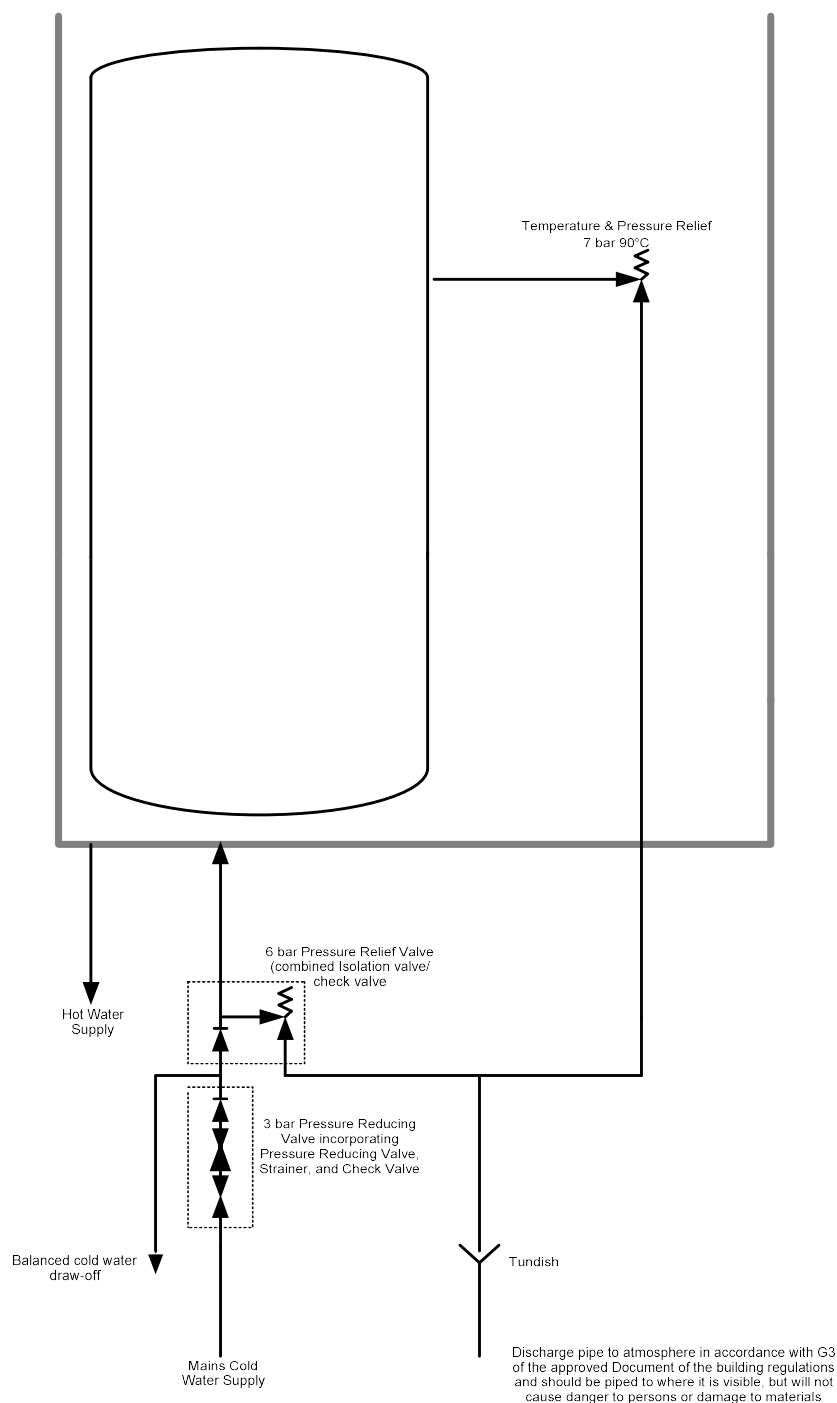
22mm Up to 9m. Deduct 0.8m for each bend from the maximum length.  
28mm Up to 18m. Deduct 1m for each bend from the maximum length.  
35mm Up to 27m. Deduct 1.4m for each bend from the maximum length.

The discharge pipe should terminate in a safe place where there is no risk to persons in the vicinity of the discharge.

# INSTALLATION

## Temperature and Pressure Relief

A 7 bar 90 degree C pressure and temperature valve is fitted to the domestic hot water vessel. This must be routed to the outside of the building.



**The 6 bar pressure Relief valve, combined isolation valve, check valve and 3bar pressure reducing valve, strainer and check valve are supplied with the boiler and must be installed into the cold mains inlet pipework to the boiler.**

# INSTALLATION

## Expansion Vessel Capacity

**Note the internal 5 litre expansion vessel might not accommodate the entire system volume.**

A second diaphragm type expansion vessel, conforming to the current issue of BS4814 might be required. The expansion vessel must be connected to the systems at a point close to the inlet side of the circulating pump. The expansion vessel volume depends on the total water system volume and the initial system design pressure. For any system, an accurate calculation of vessel size is given in the current issue of BS5449 and BS7074 Part 1.

The water content of the boiler is given in the technical specification. Note a higher initial design pressure requires a larger volume expansion vessel.

The charge pressure must not be less than the static head of the system, which is the highest point of the system above the expansion vessel.

**NOTE: Failure to ensure the correct vessel size could result in premature failure of the expansion vessel which in turn may adversely affect other components in the system i.e., circulating pump and diverter valve.**

## Capacity of Expansion Vessel

Where design information is not complete the following chart can be used for selecting the size of the vessel, it should be noted that the size given in the table take account of fault conditions.

Safety valve setting (bar gauge)	3 Bar		
Vessel charge and initial system pressure (bar gauge)	0.5	1.0	1.5
Total water content of system (litre)	Vessel volume (litre)		
25	2.3	3.3	5.9
50	4.7	6.7	11.8
75	7.0	10.0	17.7
100	9.4	13.4	23.7
125	11.7	16.7	29.6
150	14.1	20.1	35.5
175	16.4	23.4	41.4
200	18.8	26.8	47.4

## System Temperature

The normal running temperature of the heating system is 75°C, if a fault were to occur then the safety device would allow the system temperature to rise to 100°C. It is recommended that this figure be used in the calculations of vessel size.

## Pressure Gauge

A 0 to 4 bar pressure gauge is fitted within the unit.

## Drain Tapping

A drain tapping must be provided at the lowest point of the system, which will allow the entire system to be drained.

# INSTALLATION

## System Makeup

Provision can be made by pre-pressurisation of the system via a temporary hose connection and through a double check valve (non-return) and stop valve. Supplied

There must be no permanent connection to the mains water valve supply even through a non-return valve.

**Maximum Cold Water inlet pressure not to exceed 6 bar.**

## Inhibitor

If using an existing system take care to drain down the entire system including the radiators, then thoroughly clean out before fitting the boiler. Attention is drawn to the current issue of BS5449 and BS7593 on the use of inhibitors in central heating systems.

## Magnetic Boiler Filter

**To be fitted in the return pipe work close to the boiler. Failure to do so will invalidate the warranty.**

## Scale Inhibitor

**The Aztec Maxi Combination boiler MUST be fitted with an inline scale inhibitor (not supplied) on the cold feed inlet pipe. Failure to do so will invalidate the warranty.**

## Pump Setting

**The boiler is fitted with a Grundfos UPM3 Flex AS circulator**

To avoid any primary water flow issues, it is important to commission the pump to the correct setting to suit the system. Pressing the > button will change the pump performance as per the chart below.




Display	Indication	Performance in % of P1 MAX
One green LED (flashing)	Standby (only externally controlled)	0
One green LED + one yellow LED	Low performance	0-25
One green LED + two yellow LED	Medium low performance	25-50
One green LED + three yellow LED	Medium high performance	50-75
One green LED + four yellow LED	High performance	75-100

## Alarms

If the circulator has detected one or more alarms, the bi-colored LED 1 switches from green to red. When an alarm is active, the LEDs indicate the alarm type as defined in the table below. If multiple alarms are active at the same time, the LEDs only show the error with the highest priority. The priority is defined by the sequence of the table.

When there is no active alarm anymore, the user interface switches back to operation mode.

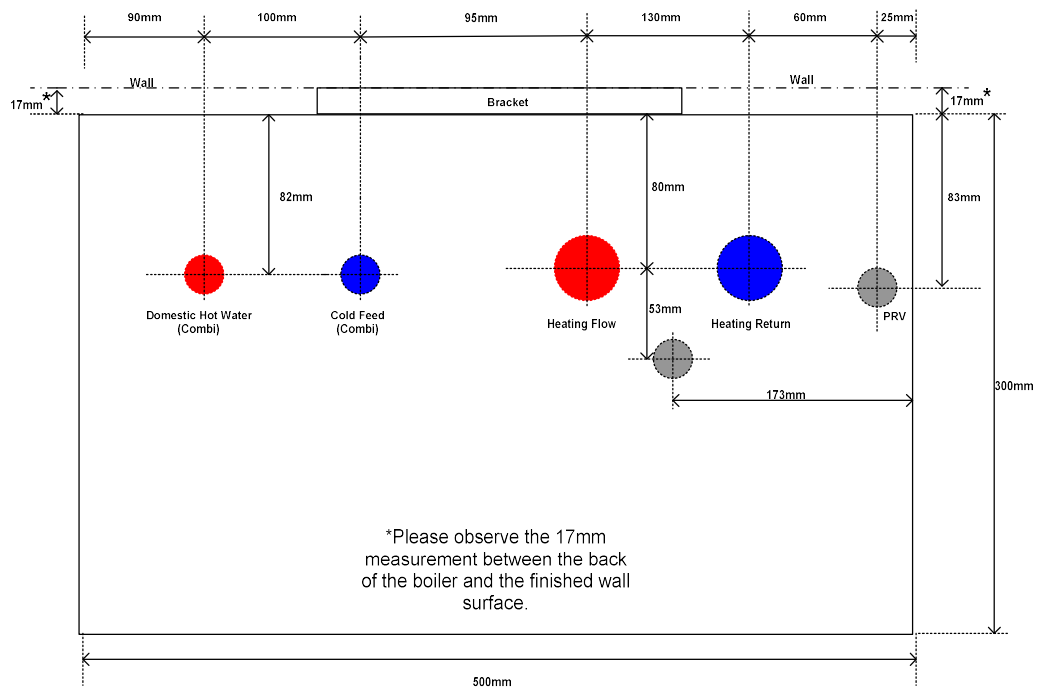
Display	Priority	Indication	Pump operation	Counter action
One red LED + one yellow LED (LED 5)	1	Rotor is blocked.	Trying to start again every 1.33 seconds.	Wait or deblock the shaft.
One red LED + one yellow LED (LED 4)	2	Supply voltage too low.	Only warning, pump runs.	Control the supply voltage.
One red LED + one yellow LED (LED 3)	3	Electrical error.	Pump is stopped because of low supply voltage or serious failure.	Control the supply voltage or replace the pump.

ALARM STATUS	
	Blocked
	Supply voltage low
	Electrical error

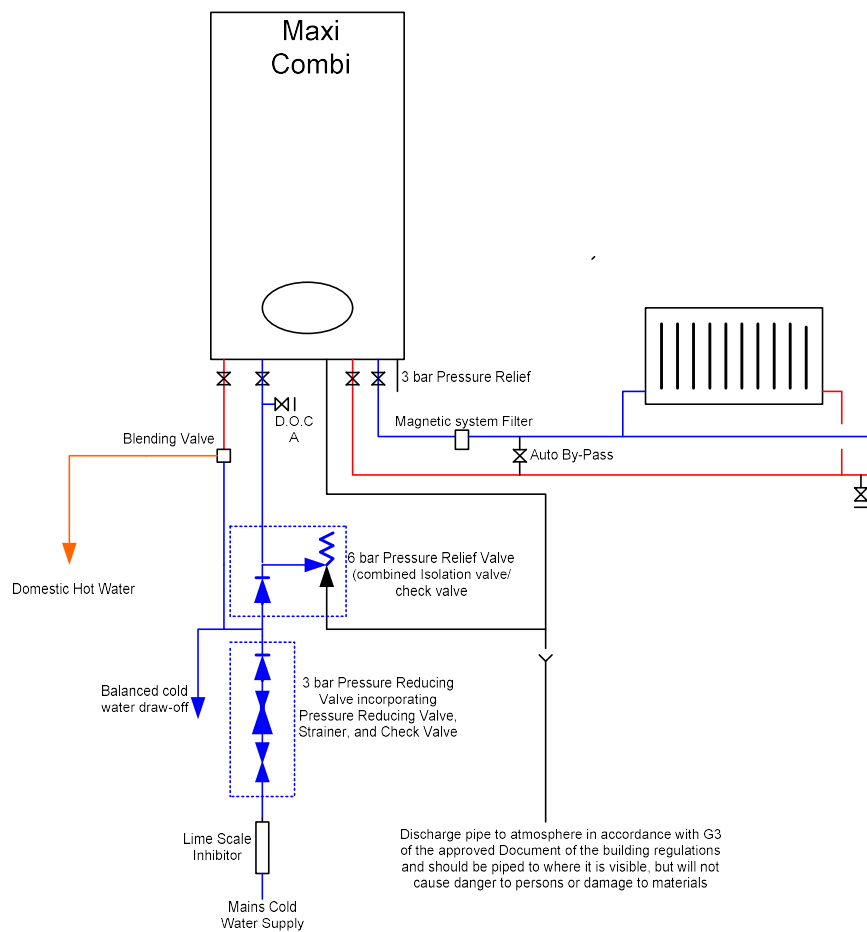


## Water Connections

### Viewed from Top



## Pipe Work Layout



# INSTALLATION

## WIRING INSTRUCTIONS

All electrical work must be carried out in accordance with current IEE wiring regulations.

Before commencing installation check power supply to property to ensure that there is enough current and voltage available for size of boiler fitted. Consider requirements of other electrical appliances. The boiler must be connected to the mains supply by means of a double pole linked switch with 3mm contact gap in both poles.

### IMPORTANT:

After completing electrical installation work preliminary safety checks should be carried out as described in BS 7671:2001

**NOTE:** RCD unit can be used as the isolating switch if mounted close enough to the boiler.

Miniature circuit breakers MCB's **MUST** be fitted between RCD unit and boiler and RCD and any external controls. Refer to technical specification. For MCB ratings refer to wiring diagram.

It is important the correct size MCB is used in the supply from the RCD to the boiler.

## ELECTRICAL CONNECTIONS

### WARNING: THIS APPLIANCE MUST BE EARTHED.

The boiler is supplied with a 3-core flexible cable which should be connected to a suitable isolator capable of handling the rated current input of the boiler. See boiler data label or technical details chart for more information.

**IMPORTANT: CORRECT POLARITY MUST BE OBSERVED WHEN BRINGING THE MAINS SUPPLY INTO THE BOILER**

## External Controls

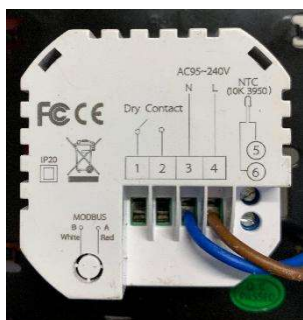
Control wiring is volt free, do not apply 230v. This will invalidate the warranty.

### THP1002 Series Wi-Fi Thermostat

The combination boiler is supplied with a Wi-Fi wall mounted thermostat which allows the end user to control the heating from a smart phone or tablet.

The thermostat requires a 230V supply connected to 3 (N) and 4 (L) and communicates with the boiler via a twin core cable.

Connect the twin core cable from the boiler to terminals 1 & 2



For further information on installing and using the thermostat please refer to the separate installation manual supplied with the thermostat.

Alternatively, any programable room thermostat capable of **volt free** switching can be used.

Once a call from the external thermostat is received by the boiler, **TC** will illuminate on the display and the heating symbol will flash on the boiler display.

# INSTALLATION

**Please check all internal joints before filling the system, connections may become loose in transit.**

## COMMISSIONING

**Please make sure the system is full of water and all isolation valves are open before turning the power on to the boiler.**

When power is first applied, the boiler will proceed to heat the internal cylinder to 75 Degree C. This is a one-off process when the boiler is turned on for the first time.

If at the time of this pre-heat the boiler displays any information codes, please see the information codes chart on page 9. The most likely problem will be due to air in the system and the code on the display will be F6.

Please confirm the code by pressing the Confirm button and let the boiler go through the initial pre-heat again.

Set the pump to speed 1 by pressing the pump speed selection button on the pump, make sure the auto air vent on the pump is open and allow the boiler to continue with the pre -heat.

If the boiler displays further information codes it might be necessary to remove the valve head from the motorised valve body by turning the fixing nut anti clockwise until loose and then gently easing the head from the valve body.

The valve can then be manually turned anticlockwise from the 3 O'clock position, 90 degrees to the 12 O'clock position when air can be heard at the pump. This will allow the air to be released into the heating system. Once the air has passed through the boiler the valve can be turned back to the 3 O'clock position. This process might have to be repeated several times to remove the air. It is important to maintain a system pressure of 1 – 1.5 Bar whilst the boiler is in pre-heat mode.



If the boiler displays the F1 code (Overheat) it will be necessary to remove the white panel to expose the circuit boards and disconnect the relay board from the main circuit board by separating the white plug. The boiler will now operate but not produce any heat. Continue with the air removal until satisfied.

Once the pre-heat is complete the boilers internal DHW programmer can be set, please see page 8 for details.

You can set 3 ON/OFF times with cylinder temperatures. The Timer must be set to ON and the current time and day must be set. It is recommended that the cylinder be set to 75 Degree C to obtain the maximum performance from the boiler.

The blending valve supplied, which **MUST** be fitted, can be set between 30 degree C and 50 Degree C.

It is recommended the DHW flow rate be no greater than 10 l/min and can be regulated using the flow restrictor provided.

Once the initial pre-heat is complete the heating can be turned on using the provided Wi-Fi thermostat or other programmable volt free room thermostat fitted.

Once the boiler has a call signal, indicated by TC on the boiler display, the boiler will run in heating mode until either the call signal is removed, or the internal cylinder drops in temperature and the boiler is in a timed-on period for DHW. The boiler works on a Hot water priority basis. When the boiler sees a drop in cylinder temperature the boiler will heat the cylinder to the set target temperature providing the boiler is in a Hot water timed on period set by the internal programmer.

While the boiler is working in Heating mode the heating flow temperature can be set by using the up and down arrows on the boiler display, press confirm button to store the required set temperature.

Please fill in the commissioning Report form found on Page 24. Failure to do so could invalidate the warranty.

## Servicing

Servicing should only be carried out by competent installers and only spare parts approved by the manufacturer may be used. Never bypass any safety devices or operate the boiler without them being fully operational.

Always isolate the boiler from the electrical supply before carrying out any work on the appliance.

An annual service should include the following:

1. Recharging of the expansion vessel
2. Inspection of all electrical connections
3. Testing of boiler thermostats.
4. Run boiler in heating and hot water modes to ensure correct operation
5. Check all safety valves to ensure they are not leaking and function correctly
6. Clean system filter
7. Check correct operation of blending valve
8. Clean blending valve filters
9. Record temperature of hot water at outlet after 1 minute of flow
10. Ensure discharge pipe discharges fully
11. Check strength of the system inhibitor

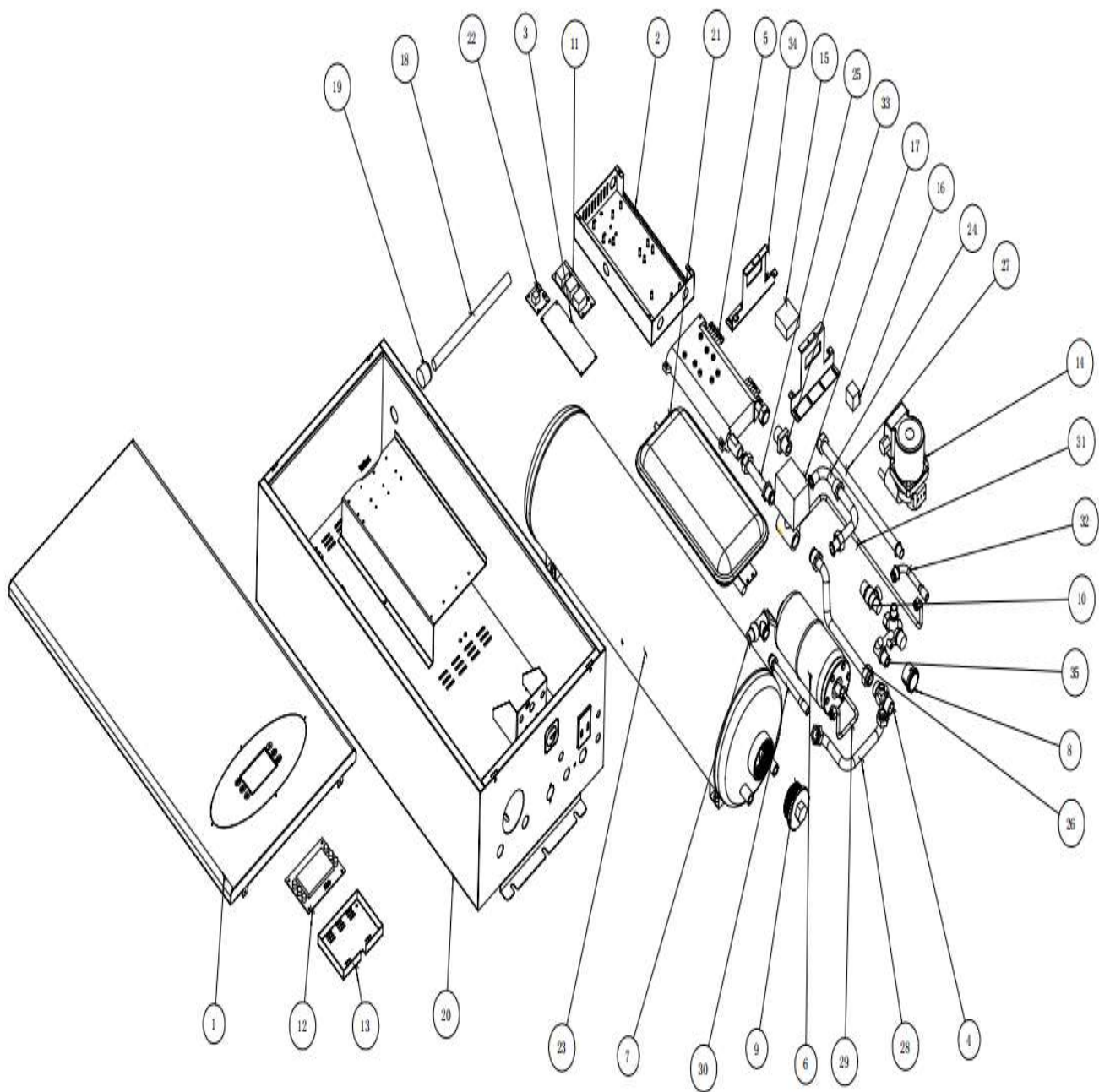
## TECHNICAL DETAILS

TECHNICAL DETAILS	UNIT	8kW	10kW	12kW
Electrical Input	kW	8	10	12
Supply Current	Amp	35	44	53
RCD Rating 30ma	Amp	40	50	63
Minimum Cable Size	mm	6	10	10
D.H.W @45°C	Ltr/min*	10	10	10
Weight	Kg	56		
Water Content	litres	40		
Width	mm	500		
Depth	mm	315		
Height	mm	950		
Mains Supply	230V 50Hz			
Max Operating Pressure	300 kPa / 3 bar			
Test Pressure	600 kPa / 6 bar			
Minimum HTG Flow Rate	8 l/min			
Boiler Flow Temperature	Adjustable between 30°C and 80°C			
Limit Thermostats	Factory set at 140°C			
CH Flow & Return	¾ BSP Male			
DHW Inlet & Flow	½ BSP Male			
Maximum Flow Temp CH	80°C			
Pressure Gauge	0 – 4 bar			
Pressure Relief Valve	3 bar			
Pump	GRUNDFOS UPM3 FLEX AS			
Expansion Vessel Htg	5Ltr charge 1.5 bar			
Expansion Vessel DHW	2Ltr charge 1.5 bar			
Available System Head	3m			
Maximum Cold Water Inlet Pressure	6 bar			
Casing Finish	Stove enamelled white			

\*Cold water inlet temperature 10°C

## BOILER SPARES

ITEM	DESCRIPTION	QTY	8Kw Combi	10Kw Combi	12Kw Combi
1	Outer Cover - 1	1			
2	Electrical Control Box	1			
3	PCB	1	225002	225002	225002
4	Heating Flow Connection	1			
5	Heat Exchanger	1	225005	225005	225005
6	2l Expansion Vessel	1			
7	Temperature & Pressure relief valve	1			
8	Pressure Gauge	1	225008	225008	225008
9	Blanking Plug	1			
10	Safety Valve 3 bar	1	225009	225009	225009
11	Expansion Board	1	225010	225010	225010
12	Display	1	225012	225012	225012
13	Display Cover	1	225013	225013	225013
14	Grundfos UPM3 Pump	1			
15	Heating Limit Thermostat	1	225021	225021	225021
16	Limit Thermostat 85°C	1			
17	3 Port Valve	1			
18	Main Supply Cable	1			
19	Cable Gland	1	225018	225018	225018
20	Boiler Case	1			
21	5L Expansion Vessel	1	225022	225022	225022
22	Valve Control Board	1			
23	40l Cylinder	1			
24	DHW Pipe	1			
25	Heating Flow Pipe 1	1			
26	Heating Flow Pipe 2	1			
27	Heating Inlet Pipe	1			
28	DHW Flow Pipe	1			
29	2l Expansion Vessel connection Pipe	1			
30	T&P Relief pipe	1			
31	5l Expansion Vessel connection Pipe	1			
32	Heating pressure Relief Pipe	1			
33	Heating Flow Switch	1			
34	Heat Exchanger Bracket	2			



# Aztec Commissioning Report

## Installation Details

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Tel: \_\_\_\_\_

Mobile No: \_\_\_\_\_

Email: \_\_\_\_\_

## Commissioning Engineer Details

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

BPEC G3 CERT No \_\_\_\_\_

Tel: \_\_\_\_\_

Mobile No: \_\_\_\_\_

Email: \_\_\_\_\_

## Commission Details

Date of Completion: \_\_\_\_\_ Date of Commission: \_\_\_\_\_

Serial Number: \_\_\_\_\_

RCD - Existing/New: \_\_\_\_\_ Size: \_\_\_\_\_

Supply Cable - Existing/New: \_\_\_\_\_ Diameter (mm): \_\_\_\_\_

Isolation valves fitted to all boiler outlets Y/N \_\_\_\_\_

Magnetic Filter Fitted to Heating circuit Y/N \_\_\_\_\_

In-line scale inhibitor fitted Y/N \_\_\_\_\_

Incoming Cold-Water Pressure \_\_\_\_\_ Bar

What is the maximum Hot water flow rate set at? \_\_\_\_\_ l/min

Has the strainer been cleaned of installation debris Y/N \_\_\_\_\_

What is the hot water temperature at the nearest outlet? \_\_\_\_\_ °C

All appropriate pipes have been insulated \_\_\_\_\_

The tundish and discharge pipework have been connected and terminated to Part G of the building regulations \_\_\_\_\_

Where is the pressure reducing valve situated \_\_\_\_\_

The hot water system complies with the appropriate Building Regulations \_\_\_\_\_

By signing you agree that you have installed the boiler in accordance with these instructions and that the boiler is working as intended.

Plumber Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Electrician Signed: \_\_\_\_\_ Date: \_\_\_\_\_

## Customer Acceptance

I confirm that I have received training and instruction on how to operate and maintain this appliance.

I understand the warranty on this product, and I have been provided with a User Manual and Operating Instructions.

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_





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TR Engineering Limited's policy is one of continuous research and development. This may necessitate alterations to this specification

June 2022