Firebird
The Future of Home Heating

Combi Xceed
Combipac Xceed
Slimline Combi

Environment | Innovation | Technology

Envirogreen™
Condensing Boiler
TECHNICAL MANUAL

This manual must remain with the householder once installation is complete

QUALITY ISO 9001:2015 NSAI Certified
OFTEC
CE
Guaranteed Irish
A A+++ ↑ D
B A+ ↑ F

elco
January 2025

CONTENTS

FOREWORD

We would like to thank you for purchasing a high efficiency Firebird condensing liquid fuel boiler with an Elco low NOx burner. This instruction manual is produced for the reference and guidance of qualified installation engineers, preferably OFTEC (Oil Firing Technical Association) registered. EU legislation governs the manufacture, operation and efficiency of all domestic central heating oil boilers. Our boilers and burners are supplied as matched units.

HEALTH & SAFETY INFORMATION

The installer should be aware of his/her responsibilities under the current, local Health and Safety at Work Act. The interests of safety are best served if the boiler is installed and commissioned by a competent, qualified engineer, preferably OFTEC trained and registered. A Building Notice may be required in England and Wales and other parts of the United Kingdom.

Under the Consumer Protection Act 1987 (UK), section 6 of the Health and Safety Act 1974 (UK) and the Safety, Health and Welfare at Work Act 2005 (ROI), we are required to provide information on substances hazardous to health.

INSULATION AND SEALS
Ceramic Fibre, Alumino - Silicone Fibre material are used for boards, ropes and gaskets. Known hazards are that people may suffer reddening and itching of the skin. Fibre entering the eye will cause foreign body irritation. It may also cause irritation to the respiratory tract.

Precautions should be taken by people with a history of skin complaints or who may be particularly susceptible to irritation. High dust levels are only likely to arise following harsh abrasion. Suitable personal protective equipment should be worn where appropriate.

Generally, normal handling and use will not give discomfort. Follow good hygiene practices, wash hands before consuming food, drink or using the toilet.

First Aid - medical attention should be sought following eye contact or prolonged reddening of the skin.

The small quantities of adhesives and sealants used in the product are cured. They present no known hazards when used in the manner for which they are intended.

THIS PRODUCT MEETS THE FOLLOWING STANDARDS:

This equipment complies with the Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.

EMC - conformity was demonstrated by meeting the following standards:

BS EN 55014-2: 2015: Electromagnetic Compatibility - Requirements for Household Appliances, Electric Tools and Similar Apparatus - Part 1: Emission

BS EN 55014-1: 2017: Electromagnetic Compatibility - Requirements for Household Appliances, Electric Tools and Similar Apparatus - Part 2: Immunity - Product Family Standard

BS EN 61000-3-2: 2019: Electromagnetic Compatibility (EMC) Part 3-2: Limits - Limits for Harmonic Current Emissions (equipment input current <16 A per phase)

BS EN 61000-3-3: 2013 + A1 2019: Electromagnetic Compatibility (EMC) Part 3-3: Limits - Limitation of Voltage Changes, Voltage Fluctuations and Flicker in Public Low-voltage Supply Systems (equipment with rated current <16 A per phase and not subject to conditional connection)

Safety - conformity was demonstrated by meeting the following standards:

BS EN 60335-1: 2012 + A2: 2019: Household and Similar Electrical Appliances - Safety - Part 1: General Requirements

BS EN 60335-2-102: 2006 + A2: 2016: Household and Similar Electrical Appliances - Safety - Part 2-102: Particular Requirements for Gas, Oil and Solid-fuel Burning Appliances having Electrical Connections

SAFETY

Safe use of Kerosene. These fuels give off a flammable vapour when heated moderately. Vapour ignites easily, burns intensely and may cause explosion. The vapour can follow along at ground level for considerable distances from open containers and spillages collecting as an explosive mixture in drains, cellars, etc.

Fuels remove natural oils and fats from the skin and this may cause irritation and cracking of skin. Barrier cream containing lanolin is highly recommended together with good personal hygiene and where necessary appropriate persona protection equipment (P.P.E.).

Gas oil may also cause irreversible damage to health on prolonged or repeated skin contact.

Always store fuels in a properly constructed and labelled tank. Always handle fuel in open air or well ventilated space away from sources of ignition and refrain from smoking.

Always drain fuel using a proper fuel retriever, funnel or mechanical siphon. Never apply heat to a fuel tank, container or pipework. Never siphon fuel through tube by mouth.

Avoid inhaling fuel vapour as this can cause light headedness and seriously impair judgement.

FUEL SPILLAGE

1. Switch off all electrical and other ignition sources.
2. Remove all contaminated clothing to safeguard against fire risk and skin damage. Wash affected skin thoroughly with soap and water and remove clothing to a safe well ventilated area and allow to air before cleaning.
3. Contain and smother the spill using sand or other suitable oil absorbent media or non-combustible material.
4. Do not allow fuel to escape into drains or water courses. If this happens, contact the relevant authorities in your area.
5. Consult local authority about disposal of contaminated soil.

FIRST AID

If fuel is accidentally swallowed:
* Seek medical attention immediately.
Do NOT induce vomiting.
If fuel is splashed into eyes:
* Wash out with running water for at least ten minutes and seek medical attention.

2 STANDARDS & REGULATIONS

To ensure the highest standards of installation & safety, it is important that the boiler is installed and commissioned by a competent, qualified engineer, preferably OFTEC trained and registered. It is the responsibility of the installer and everyone concerned with any aspect of installation, to ensure that all applicable standards and regulations are fully adhered to.

The following is a list of some of the applicable standards and regulations. Please always check for the most up to date version.

All relevant building standards and regulations for Ireland, England, Scotland, Wales and Northern Ireland.

BS 5410-1: 2019	Code of practice for oil firing. Installations up to 45kW output capacity for space heating and hot water supply purposes.
BS 5410-2:2018	Code of practice for liquid fuel firing. Non-domestic installations.
BS 799-5: 2010	Oil burning equipment. Carbon steel oil storage tanks. Specification.
BS EN 303-1: 2017	Heating boilers. Heating boilers with forced draught burners. Terminology, general requirements, testing and marking.
BS EN 12828: 2012 + A1: 2014	Heating systems in buildings. Design for water based heating systems.
BS 7074-1: 1989	Application, selection and installation of expansion vessels and ancillary equipment for sealed water systems. Code of practice for domestic heating and hot water supply.
BS 7593: 2006	Code of practice for treatment of water in domestic hot water central heating systems.
BS EN 13502: 2002	Chimneys. Requirements and test methods for clay/ceramic flue terminals.
BS EN 1856-1: 2009	Chimneys. Requirements for metal chimneys. System chimney products.
BS 8558: 2015	Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages. Complementary guidance to BS EN 806.
BS 7671: 2018	Requirements for Electrical Installations. IET Wiring Regulations.
BS EN 304: 2017	Heating boilers. Test code for heating boilers for atomizing oil burners.

Regional water supply (water fittings) regulations/ byelaws.

Regional control of pollution (oil storage) regulations.

OFTEC also publish excellent guides including:

- OFTEC Technical Book One - Safe working for oil firing and delivery technicians.
- OFTEC Technical Book Two - Domestic & light commercial servicing and commissioning.
- OFTEC Technical Book Three - Domestic and commercial requirements for oil storage & supply equipment.
- OFTEC Technical Book Four - Oil fired appliance & system installation requirements.

COPIES OF BRITISH STANDARDS MAY BE PURCHASED DIRECT FROM:

BSI (Customer Services),
389 Chiswick High Rd., London W4 4AL.
Tel.: +44 (0)345 0869001
International and EC Standards are also available from above.

OFTEC PUBLICATIONS ARE AVAILABLE FROM:
OFTEC, Oil Firing Technical Association,
Foxwood House, Dobbs Lane,
Kesgrave, Ipswich, IP5 2QQ.
www.oftec.org

BOILER INSTALLATION:

Other than special considerations for condensate removal and plume dispersal, the installation of liquid fuel fired condensing boilers is the same as for non-condensing oil fired boilers.

BS 5410-1: 2019 gives the requirements for domestic boiler and fuel storage installations.

If an appliance is to be installed inside a building or within a restricted area externally, a carbon monoxide detector alarm conforming to BS EN 50291-1: 2018 should be installed in accordance with the manufacturer's instructions.

For condensing boilers, the same requirements apply for installation with regard to cleaning and flushing and providing inhibitors, as are followed for any other boiler. Manufacturer's instructions must always be followed together with the requirements of BS EN 12828: 2012 + A1: 2014 & BS EN 12831-1: 2017 and the statutory requirements of the Building Regulations.

2 2.1 STANDARDS & REGULATIONS - CONDENSATE DISPOSAL

Firebird condensing boilers, when in condensing mode, extract more heat from the flue products and the resulting condensate which is mildly acidic, needs to be drained from the boiler via a condensate pipe to the drainage system.

Provision must be made for the removal of condensate from the boiler to an internal soil stack, waste pipe, external soil stack, gully or soak-away, as per BS 6798: 2014.

The condensate trap is provided with the boiler and situated on the front of the boiler (under the cleaning door). This should be checked at regular intervals and cleaned during annual service.

The condensate line should:
- be plastic and have a minimum diameter of 22mm dia.;
- have a fall from the boiler of 1:200 minimum;
- have as few bends as possible to reduce the risk of trapping condensate.

Copper or steel cannot be used.

CONDENSATE PIPEWORK THAT IS EXTERNAL OR IN AN UNHEATED GARAGE SHOULD NOT EXCEED 3 METERS AND SHOULD BE LAGGED WITH WATER PROOF INSULATION TO PREVENT FREEZING.

SYSTEM NO. 1 CONDENSATE TRAP

Always prime condensate trap with water.

Condensate baffle and condensate trap

Before switching on your Firebird condensing boiler, check that:

(1) The condensate drain baffle is in place.
(2) That the condensate trap is primed.
(3) The condensate discharge pipe is a corrosion resistant pipe.

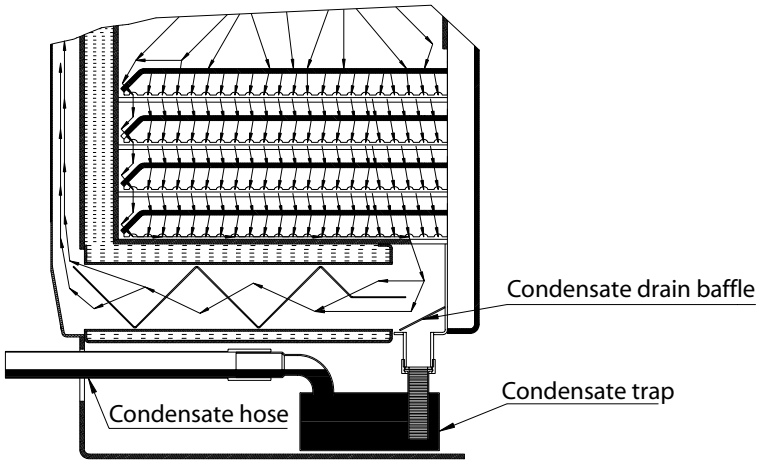


Figure 1

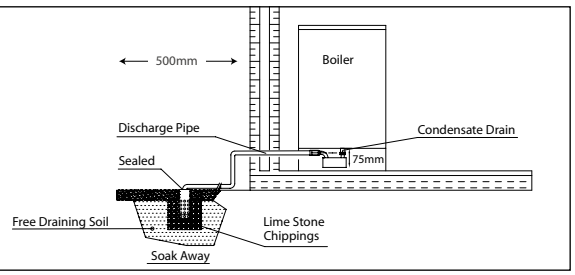


Figure 3

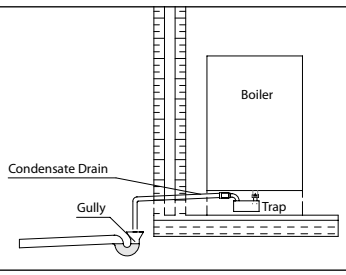


Figure 2

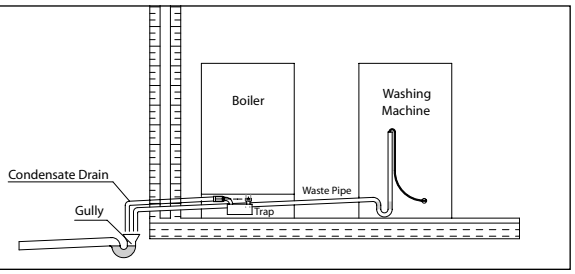
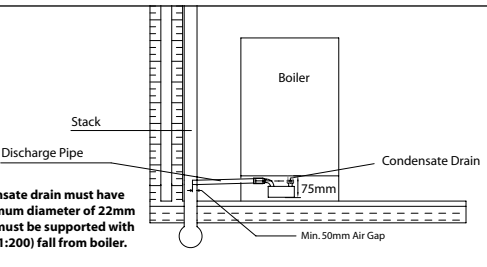
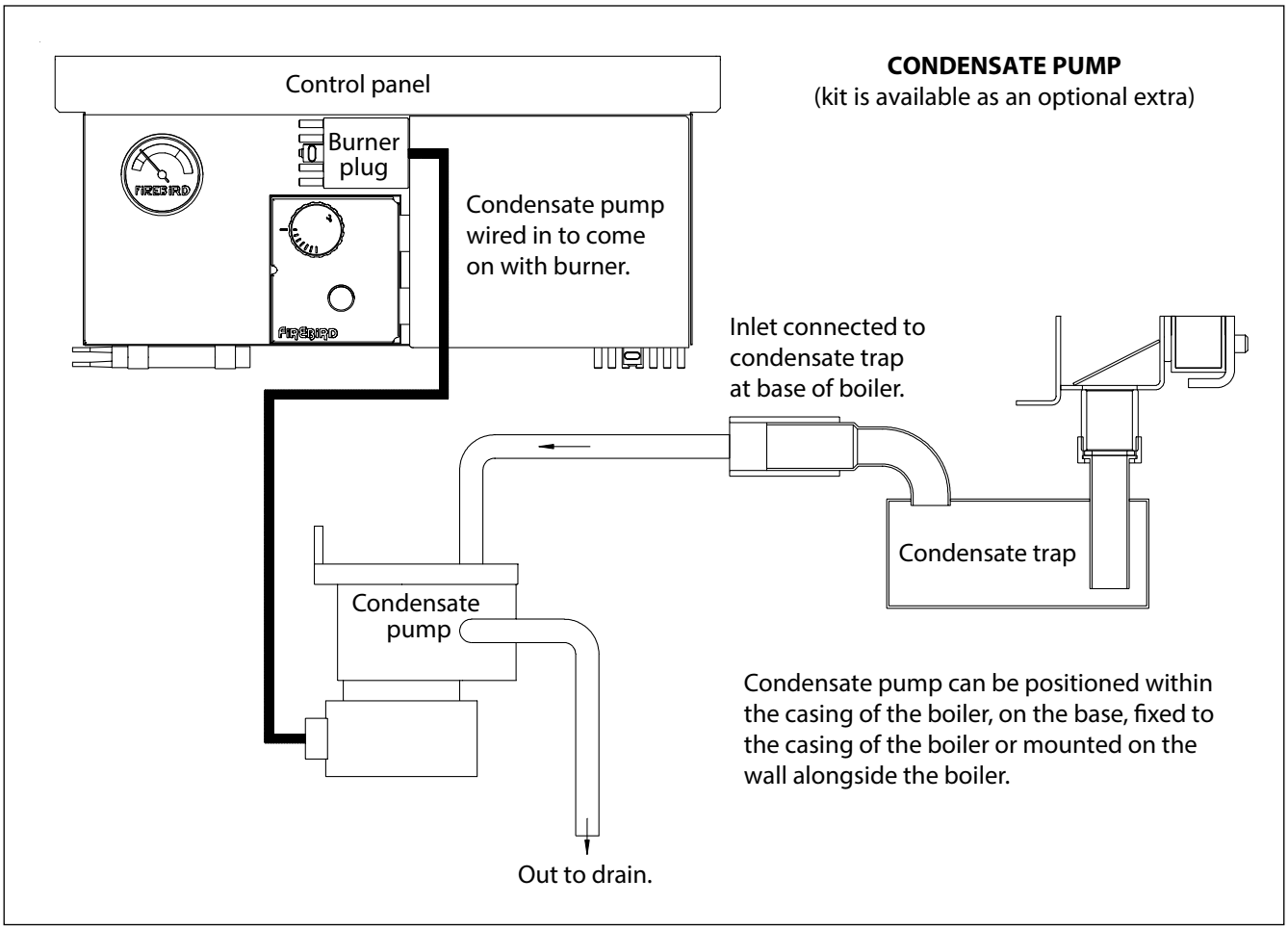


Figure 4



Ensure that the boiler combustion chamber cannot be filled through the condensate trap from another appliance (eg. washing machine) which is drained at a higher level (see Figure 2).

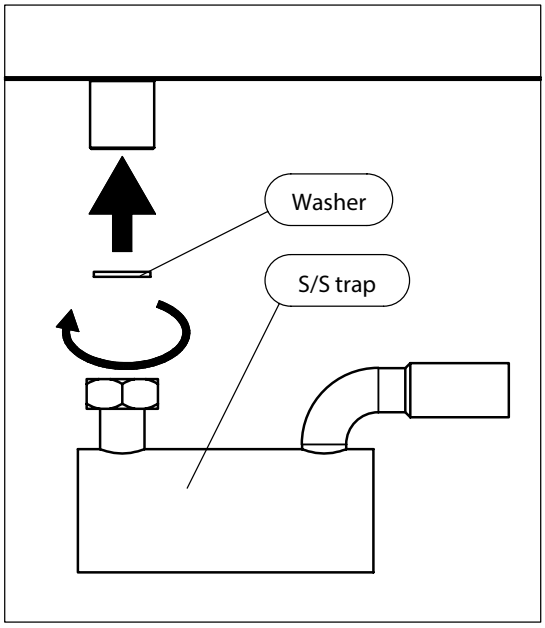
SYSTEM NO. 2 - CONDENSATE PUMP



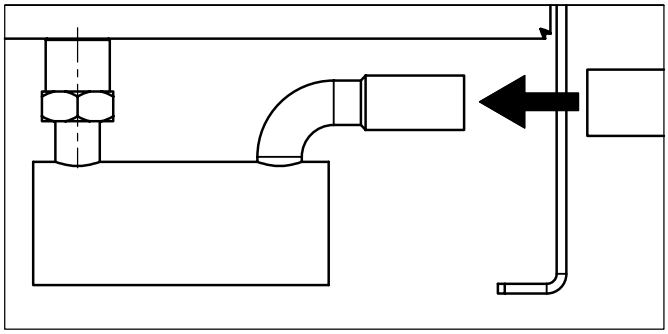
A condensate pump kit can be purchased separately if required. Sales code: ACCENVPMP

Condensate Trap Fitting

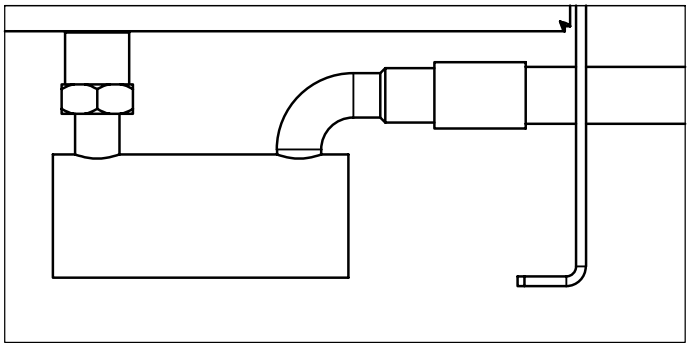
1. Push washer into trap socket and screw trap onto boiler socket in the desired direction.



2. Push flexible pipe onto trap socket.



3. Final assembly.



FLUE TERMINAL SITING

The terminal should be positioned to avoid combustion products entering the building or accumulating in stagnant pockets around buildings. The terminal must be protected by a guard if it is less than 2 metres above ground level or in a position where any person has access to it (i.e. a balcony). A heat protection shield should be fitted if the terminal is less than 850mm from a plastic or painted gutter or less than 450mm from painted eaves. Prevailing winds should be taken into account when siting a flue.

ALWAYS CHECK FOR ANY BUILDING REGULATIONS AMENDMENTS WHICH MAY HAVE BEEN ISSUED AFTER THE PUBLICATION OF THIS MANUAL

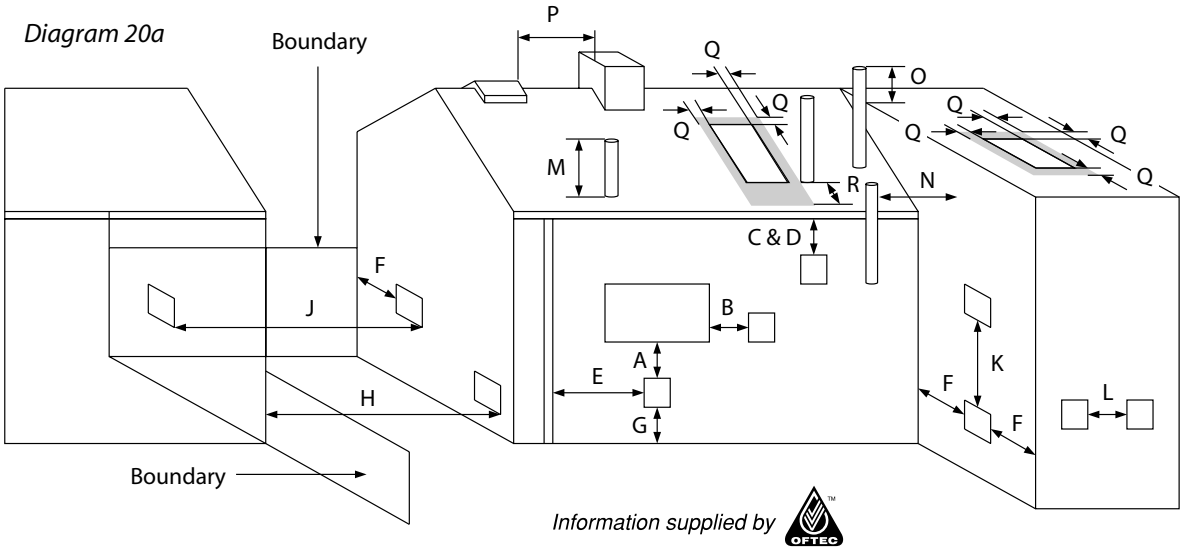
Clearances advised by BS 5410-1: 2019

Regular Appliance (Open, Low Level Discharge and Balanced) Flue Termination Clearance

The basic requirement with regard to flue positioning is that no hazard or nuisance is caused by the flue gases. Diagrams 20a and 20b show clearances advised by BS 5410-1: 2019.

Regional requirements where flue clearances differ can be found in the regional requirements section in OFTEC Book Four.

Diagram 20a



Minimum distances to terminals in millimeters as measured from the top of the chimney or the outer edge of where flue gases pass through low level discharge openings

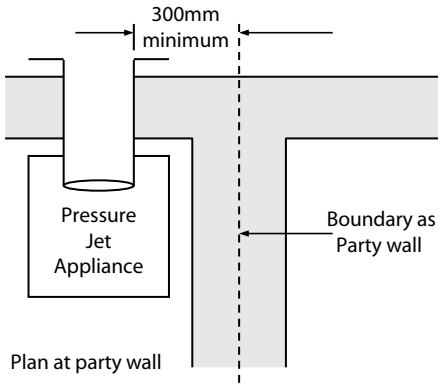
	Location	Appliance Burner Type	
		Pressure Jet	
		Condensing	
		UK	ROI & NI
A	Directly below an opening, airbrick, opening window etc.	1000mm	600mm
B	Horizontally to an opening, airbrick, opening window etc.	1000mm	600mm
C	Below a gutter, eaves or balcony with protection	1000mm	1000mm
D	Below a gutter or a balcony without protection	1000mm	1000mm
E	From vertical sanitary pipe work	300mm	300mm
F	From an internal or external corner or surface or boundary alongside the terminal	300mm	600mm
G	Above ground or balcony level	300mm	300mm
H	From a surface or a boundary facing the terminal	2500mm	2500mm
J	From a terminal facing the terminal	1200mm	1200mm
K	Vertically from a terminal on the same wall	1500mm	1500mm
L	Horizontally from a terminal on the same wall	750mm	750mm
M	Above the highest point of an intersection with the roof	600mm	600mm
N	From a vertical structure on the side of the terminal	750mm	750mm
O	Above a vertical structure less than 750mm from the side of the terminal	600mm	600mm
P	From a ridge terminal to a vertical structure on the roof	1500mm	1500mm
Q	Above or to the side of any opening on a flat or sloping roof	600mm	600mm
R	Below any opening on a sloping roof	2000mm	2000mm

NOTES: These notes form an integral part of the information shown on the previous page.

1. Terminals should be positioned to avoid products of combustion accumulating in stagnant pockets around the building, or entering into buildings.
2. Appliances burning Class D oil have additional restrictions (see OFTEC Book Four).
3. Vertical structures in N, O and P include lift rooms, parapets, dormers etc.
4. Terminating positions A to L are only permitted for appliances that have been approved for low level flue and low level balanced flue discharge when tested to BS EN 303-1.
5. Terminating positions must be at least 1.8m distant from a fuel storage tank unless a wall with at least 30 minutes fire resistance and extending 300mm higher and wider than the fuel storage tank is provided between the fuel storage tank and the terminating position.
6. Where a flue is terminated less than 1m away from a projection above it and the projection consists of plastic or has a combustible or painted surface, then a heat shield of at least 750mm wide should be fitted to protect these surfaces.
7. If the lowest part of the terminal is less than 2m above the ground, balcony, flat roof or other place to which any person has access, the terminal must be protected by a guard.
8. Notwithstanding the dimensions given in the diagram and table, a terminal should not be sited closer then 300mm to combustible material.
9. It is essential that a flue or chimney does not pass through the roof within the shaded area shown by dimensions Q and R.
10. Where protection is provided for plastic components, such as guttering, it is essential that this is to the standard specified by the manufacturer of the plastic components.

Diagram 20b

Separation Between a Boundary and Terminal at Right Angles



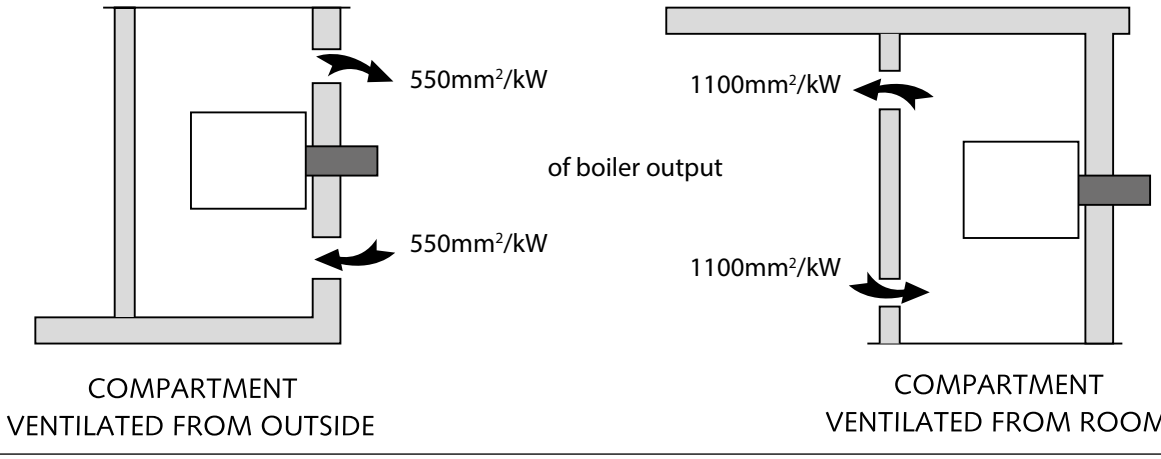
BALANCED FLUE BOILERS

The Firebird boiler may be set for room-sealed flue operation using a Firebird condensing balanced flue kit. This kit does **not** draw **combustion air** from inside the room. **It is drawn from outside, direct to the burner by an air pipe supplied with the boiler.** Flue gases are expelled through the same kit. However, if the boiler is installed in a **compartment** or **small room**, some **ventilation air** is necessary to maintain an acceptable temperature in the boiler area.

Balanced flue boiler in room does not require individual ventilation.

BALANCED - FLUE BOILERS IN COMPARTMENTS

Information supplied by OFTEC



CONDENSATE PLUME DISPERSAL

When choosing the location for a condensing boiler, special consideration must be given to the positioning of the flue terminal. Care should be taken to locate it so as to prevent either the end user or their neighbours perceiving the plume to be a nuisance.

It should be noted that the normal statutory clearances required around low level flue terminals may not be sufficient to cope with plume dispersal from a condensing boiler. The following points should be considered:

1. Plumes can extend out horizontally and can also drift out to the sides and above the terminal. Care needs to be taken, therefore, to avoid the plume reaching adjacent surfaces, particularly windows and neighbours dwellings.

2. Flue terminals need to be located where air can pass freely across them to disperse vapours.

3. The effect of the moisture generated must be considered in relation to the possible corrosion of metal parts it might reach and to the possible formation of ice on pathways in freezing conditions.

4. Keep flue terminals a minimum of 1m (horizontally) from openings in the building.

5. Do not install flue terminals directly below a window.

6. Do not install flue terminals next to a door.

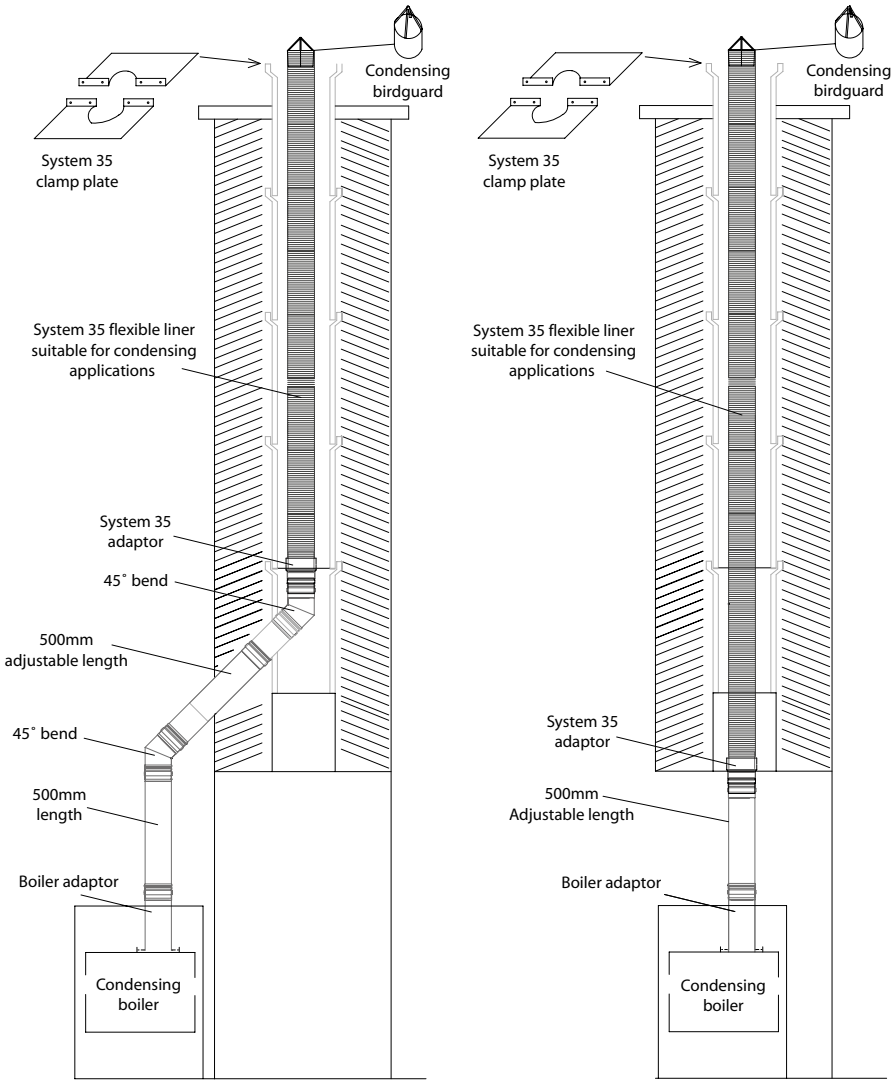
7. Do not install flue terminals within 1m of ventilated soffits or eaves.

8. Keep flue terminals at least 2.5m away from a surface or boundary facing the terminal.

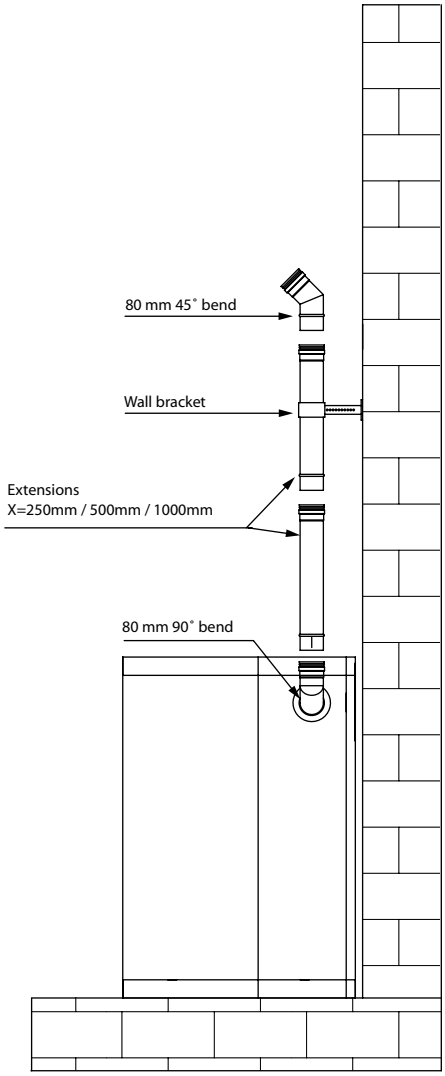
9. In certain circumstances the installation of a plume dispersal extension to the flue may be unavoidable. This takes the plume exhaust from the boiler up and away from any obstruction, door or window opening and will also prevent the risk of re circulation of the plume gasses into the air intake of the burner.

Please note that only Firebird flue kits should be used for flue installations.

CONDENSING BOILER CHIMNEY INSTALLATION



PLUME KIT



FLUE SIZE

Boiler	Diameter
12-20kW	100mm
20-26kW	100mm
26-35kW	100mm

Single wall stainless flue suitable for condensing boilers. Available in stainless steel finish or white finish

NOTE:
All brick chimney constructions must comply with current building regulations and BS 5410-1: 2019. Insulated factory made chimneys should comply with BS EN 1856-1: 2009.

FUEL STORAGE TANK SITING

Consult OFTEC Manuals

It is unlikely that a fire will start at a fuel tank. However, the stored fuel must be protected from a fire or heat source that originates nearby. For this reason fuel tanks of up to 3,500 litres should be separated from openings, other than airbricks, in the building by a minimum of 1.8m and a non-fire rated boundary by a minimum of 760mm. Where this cannot be achieved, a 30 minute fire rated barrier should be constructed between the hazard and the tank, which extends a minimum of 300mm higher and 300mm past each end of the tank. Note that a minimum separation distance should be maintained between a flue exit and fire barrier (see page 7 (flue regulations)).

Steel tanks must be mounted on brick or block piers with a waterproof membrane between the piers of the tank.

Fuel storage tanks should not be sited within 1.8m of boiler flue outlets.

Do not allow household waste or hot ashes container in vicinity of oil storage tank or boiler flue outlet.

FLEXIBLE OIL PIPE(S)

A flexible burner oil hose is supplied with the boiler which must be wholly contained within the appliance case.

Please note: A filter must not be fitted inside the boiler and all joints in the oil line must be oil tight. Soldered joints are not permissible. Before connecting to the boiler, always flush the complete oil supply line and ensure that the fuel supply is completely clean and free of any dirt or foreign matter.

OIL LINE CONFIGURATION

Refer to burner manual section on Hydraulic Systems for:

- Two pipe systems.
- Pipe sizing & distance.
- Tank heights.
- Pump priming.

OIL FILTER

The tank must have a good quality oil filter and a 10 micron secondary filter to protect the burner from contaminants.

REGULATIONS & STANDARDS

Please consult all local and regional regulations, relevant to water resources (control of pollution and oil storage) as well as OFTEC Book Three.

3 3.1 COMBI XCEED & COMBIPAC XCEED - OPERATING INSTUCTIONS

Please consult with your installer regarding the operation of your boiler. This should include timer operation/room thermostat operation and any other additional operational features. The basic features of the control panel are outlined below.

BOILER THERMOSTAT/THERMISTOR FUNCTION

The control thermostat on the boiler allows the householder to vary temperature to central heating from a low of 55˚C to 75˚C, depending on the model. Thermostats have a tolerance of ± 4˚C.

In accordance with EU boiler standards, your boiler is also fitted with a safety high limit thermostat, fixed at 110˚C. This system protects the boiler in the event of the control thermostat failing and keeps the boiler safe.

The safety high limit thermostat will shut the boiler off and will require the limit button to be pushed to restart the boiler. It is recommended to call a service engineer to establish the cause.

1. Central Heating Symbol.
2. Temperature Adjustment.
3. Hot Water Demand / Standby.
4. Central Heating Demand / Standby.
5. Lockout Signal.
6. High Limit Signal.

BOILER CONTROL PANEL INTERFACE - CENTRAL HEATING ADJUSTMENT

Minimum Central Heating Setting 55°C

Medium Central Heating Setting 65°C

Maximum Central Heating Setting 75°C

BURNER LOCKOUT

The boiler is factory fitted with a burner control box lockout safety feature which operates automatically if a fault occurs in the burner operation. Should this occur, the light on the front of the burner will illuminate.

Press the reset button a maximum of two times. If the boiler fails to light, call a service engineer who should check the following:

A. An interruption in the fuel supply (eg. empty fuel supply tank).
B. An electrical supply fault.
C. A fault with the burner or its safety control system.
D. The failure of a burner component.
E. Worn or dirty fuel nozzle.
F. Incorrect flue installation.

3.1 COMBI XCEED & COMBIPAC XCEED - OPERATING INSTUCTIONS

DOMESTIC HOT WATER PRODUCTION (PRIORITY MODE)

When there's a demand for domestic hot water, it will take precedence over central heating. This is managed through a 2 channel time clock (field supplied). Additional channels may be required if you have multiple heating zones.

HOT WATER STORE RECHARGE (NO DEMAND)

The tap symbol on the control panel is illuminated. Initially, it takes 20 – 30 minutes for the domestic hot water heat store to reach the working temperature of 65°C. This buffer store is located on the right hand side of the boiler. The domestic hot water circulating pump (left hand side) operates during this phase, transferring heat from the boiler to the buffer store. Simultaneously, the burner heats the main heat exchanger.

DOMESTIC HOT WATER (DEMAND)

Triggered when a hot water outlet is opened and the time clock is active for domestic hot water. The red flow sensor near the plate exchanger detects a drop in temperature due to cold water entry in the plate exchanger. The Printed Circuit Board (PCB) activates the domestic hot water pump. If the buffer store is below 75°C, the burner activates to heat the water. After the hot water outlet is closed, the burner and pump switch off once the buffer store recharges to 65°C.

CENTRAL HEATING DEMAND

Requires an active time clock or room thermostat (230V). The radiator symbol illuminates on the control panel, with the system temperature adjustable from 55°C to 75°C. The PCB monitors the boiler sensor and activates the heating pump (right hand side). If the boiler temperature is below 50°C, the burner activates until it reaches the set point temperature.

CENTRAL HEATING ANTI-CYCLING DELAY LOGIC

If the boiler sensor is above 50°C and there is a heat demand, the anti-cycling software delays the burner for 3 minutes. This delay is cancelled if the boiler sensor drops below 50°C within this period.

CONCURRENT DOMESTIC HOT WATER AND HEATING DEMAND

The PCB priortises hot water demand. The buffer store is maintained at 65°C. Central heating operation does not affect the temperature in the heat store. Check valves are located at the pump valves to limit circulation to/from the heat store. The boiler thermistor controls the boiler temperature in central heating mode. Regular maintenance and understanding of these operational nuances are key to the effective and efficient performance of the boiler.

TEMPERATURE FUNCTIONS

The temperature functions of the Firebird Combi boilers are intricately managed by the PCB, which monitors the temperatures through three specific thermistors, each identified by different coloured bands. These thermistors play a crucial role in regulating the boiler's operation.

THERMISTOR CONTRIBUTION TO TEMPERATURE FUNCTIONS

Thermistors Monitored by PCB

Boiler Thermistor (black band): Monitors the temperature of the boiler shell.
Heat Store Thermistor (blue band): Monitors the temperature in the buffer store.
Domestic Hot Water Flow Thermistor (red band): Measures the temperature of the incoming domestic hot water flow.

Temperature Ranges and Functions

Central Heating Control (55°C to 75°C): Monitored by the boiler thermistor (black).
Temperature adjustment by control knob for central heating between 55°C and 75°C.

Heat Store (fixed at 65°C)

Monitored by the heat store thermistor (blue).
This thermistor ensures the buffer store temperature is maintained at a fixed 65°C.

Early Alert (fixed at 78°C)

Also monitored by the heat store thermistor (blue).
An early alert system triggers the burner and domestic hot water pump if the domestic hot water flow thermistor (red) drops below 25°C or faster than 1.7°C/second in temperature. The heat store will increase to 78°C during hot water generation. Early alert will deactivate once the domestic hot water flow thermistor increases to >30°C.

Pump Overrun (fixed at 93°C)

Monitored by the boiler thermistor (black).
If the boiler temperature reaches 93°C, the burner will be deactivated and the domestic hot water pump is activated for overrun. During this phase, the central heating pump is switched off. The overrun engages the domestic hot water pump only, ensuring additional heat is moved away from the boiler.

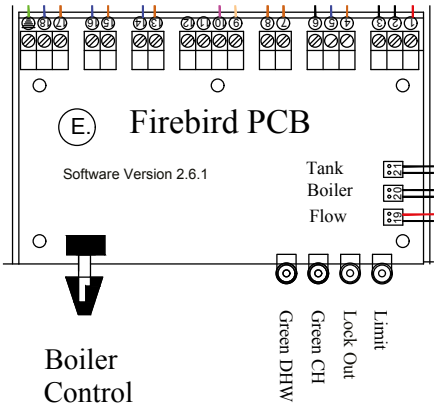
OVERRUN AND TEMPERATURE DISSIPATION

If the termparture doesn't dissipate below 93°C within 5 minutes, the domestic hot water pump will switch off. The central heating pump activates to aid in reducing the temperature. This process continues until the temperature reaches 75°C.

HIGH LIMIT THERMOSTAT FUNCTION FIXED AT 110°C

Set to activate at 110°C. A yellow LED light is illuminated on the control panel. Serves as an over temperature cut out. This is a safety mechanism to prevent the boiler from operating at dangerously high temperatures.
If the water temperature in the boiler reaches or exceeds 110°C, the high limit thermostat triggers. Upon activation, it isolates the power supply to the PCB, effectively shutting down the boiler to prevent any further increase in temperature.
The high limit thermostat required a manual reset once it has been activated. The reset is done from the rear of the control panel.

Note: It is strongly advised to contact your installer or a professional technician before attempting to reset the high limit thermostat. This is important to ensure that the underlying cause of the over temperature is identified and resolved. Simply resetting the thermostat without addressing the root cause, could lead to recurrent issues or pptential safety hazards.



LED INDICATORS ON CONTROL PANEL

The LED indicator lights on the control panel of the Firebird Combi boilers, provide essential information about the boiler's status and any issues that may arise. Understanding what each LED light signifies can help in monitoring the boiler's operation and diagnosing problems. Below is a breakdown of the LED indicator lights and their meanings.

Hot Water Active (Green):
This signifies that the boiler is currently providing hot water. A solid green light here also indicates normal operation.

Central Heating Active (Green)
This indicates that the central heating system is active. A solid green light typically means normal operation.

Central Heating & Hot Water (2 Green)
This indicates that both circuits are in standby.

Lockout (Red)
This indicates that there is a burner fault. There are several possible causes, such as fuel supply, ignition failure or other burner related faults.

High Limit Thermostat (Yellow)
This yellow light indicates that the high limit thermostat has been activated. This is a warning sign that the water temperature in the boiler has reached an ecessively high limit.

Sensor(s) Defect or Disconnection (2 Flashing Green)
If these lights are flashing, it suggests a problem with one or more sensors. This could mean that a sensor is defective or has been disconnected from the PCB sensor location.

3.2 COMBI XCEED & COMBIPAC XCEED - INSTALLER GUIDELINES

Please note the following important points before commencing installation.

Installation should only be carried out by a competent, qualified engineer, preferably OFTEC registered and familiar with the installation of the Firebird boilers referred to in this manual.

WARNING

The manufacturer cannot accept responsibility for any damage to persons, animals or property due to error in installation or in the burner adjustment or due to improper or unreasonable use or non-observance of the technical instruction enclosed with the burner, or due to the intervention of unqualified personnel.

POSITIONING THE BOILER

Compliance guide to part L now states that when installing a boiler on a new or existing system, the system should be cleaned, flushed and then protected with a suitable protection inhibitor.

Ensure that adequate clearance is available for making the water and flue connections.

The boiler is serviced from the front and a clearance of 750mm must be available at the front of the boiler.

No special hearth is required as the boiler is fully insulated, but the floor must be level and capable of supporting the weight of the boiler and its water content.

Sound levels must also be a consideration. Whilst Firebird condensing liquid fuel boilers are one of the quietest boilers on the market, some householders are particularly sensitive.

A suitable corrosion inhibitor must be added to the heating system.

UNDERFLOOR HEATING

The boiler should not be directly connected to underfloor heating, as a minimum return temperature of 40˚C is required (it can be used with underfloor heating with adequate temperature controls to ensure return values are as stated above).

PLASTIC PIPING

The boiler thermostat control and safety system is not designed, and must not be relied on, to protect plastic pipe from overheating. Additional measures must be incorporated into the system pipework for protection in these circumstances. Plastic pipe must never be connected directly to the boiler and there must be at least 1 meter of copper pipe between the boiler and the first plastic connection. If you choose to use plastic pipe anywhere on your heating circuits, please consult the plastic pipe manufacturer for their instruction on how to ensure their product never overheats. Our boiler control and safety high limit thermostats are not designed to fulfil this function. **Firebird accepts no responsibility for failure of plastic piping and fittings for whatever reason.**

PRESSURISED HEATING SYSTEM

The maximum operating working pressure is 2 bar when the system is at full operating temperature.

MAGNETIC FILTRATION

It is recommended at the time of installation of this boiler, to install a permanent effective magnetic filter on the return pipework after the last radiator on the central heating system. This will maintain maximum operational efficiency and protect the boiler from the damaging, long-term effects of "magnetite" (black iron sludge). It is essential that the filter is sized similar to the return pipework. The magnetic filter must be installed in accordance with the manufacturer's instructions and serviced annually.

HARD WATER - LIMESCALE

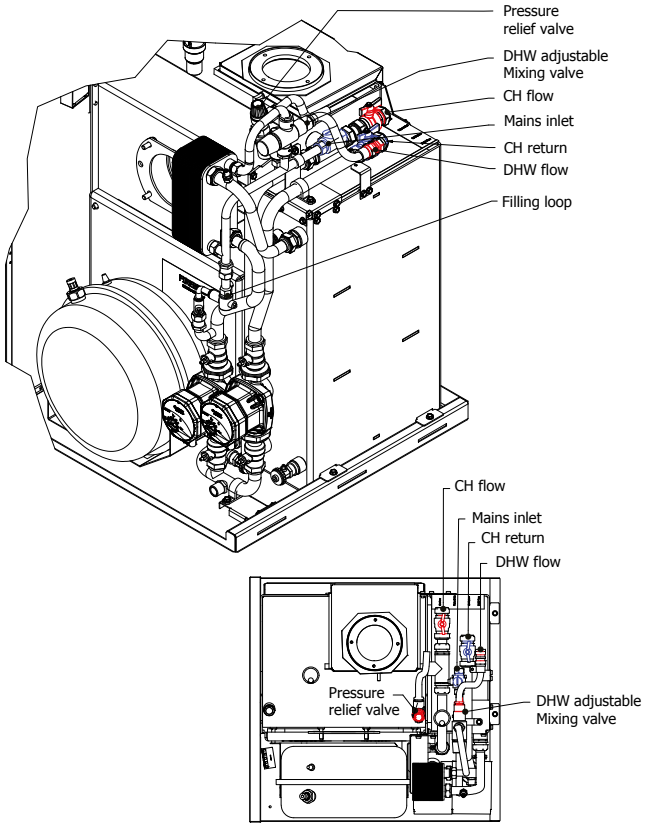
On initial fill, where it is suspected that there is a high concentration of scale products, a suitable inhibitor must be used to protect the boiler and system. Check with local water authorities if in doubt (max. 200 ppm).

EXPANSION VESSEL

Total water content of system and boiler must be calculated to determine if an additional pressure vessel is required.

PIPEWORK

Do not obstruct flue fitting with Pipework.
Connect pipework as shown below.



FILLING THE SYSTEM

The unit comes with a factory fitted expansion vessel. Should the total water volume of the system exceed the expansion provided, a second vessel should be added (see below table).

Expansion Vessel and System Requirements

Safety Valve Setting	3 bar		
Initial System Pressure	0.5 bar	1.0 bar	1.5 bar
Total Water Content of System	Total Vessel Volume **		
Litres	**Litres**	**Litres**	**Litres**
25	2.1	2.7	3.9
50	4.2	5.4	7.8
75	6.3	8.2	11.7
100	8.3	10.9	15.6
125	10.4	13.6	19.5
150	12.5	16.3	23.4
175	14.7	19.1	27.2
200	16.7	21.8	31.2
225	18.7	24.5	35.1
250	20.8	27.2	39.0

FOR FURTHER INFORMATION, CONSULT APPROPRIATE TRAINING MANUALS, BS 7074-1: 1989, EN 12828: 2012 + A1: 2014 AND ANY OTHER RELEVANT STANDARDS & REGULATIONS.

* * When calculating the size of any additional expansion vessel, remember to deduct the boiler expansion vessel volume of 12 litres from the calculated total system vessel volume required, as given in the above table.

CONNECTING FUEL SUPPLY

Using the flexible HNBR fuel hose (900mm) provided, connect the burner to the incoming oil line, which must have a remote acting fire valve. The pump is factory set for single pipe operation (see burner manual for converting to a 2 pipe system). **The flexible hose must be contained within the appliance casing.**

HNBR Flexible Fuel Hose Part Number: FE65328371.

THERMOSTAT TEMPERATURE CONTROL

Boiler Central Heating Control:	55˚C - 75˚C
Boiler Safety Limit:	110˚C
Tank (DHW) - Fixed:	65˚C
Early Alert - Fixed	87˚C
Over-run - Fixed:	93˚C

The Combipac HE has a build in frost protection (unit only).

WIRING

Electrical Supply

The boiler and controls require a 230V 50Hz mains electric supply protected with a 5A fuse.

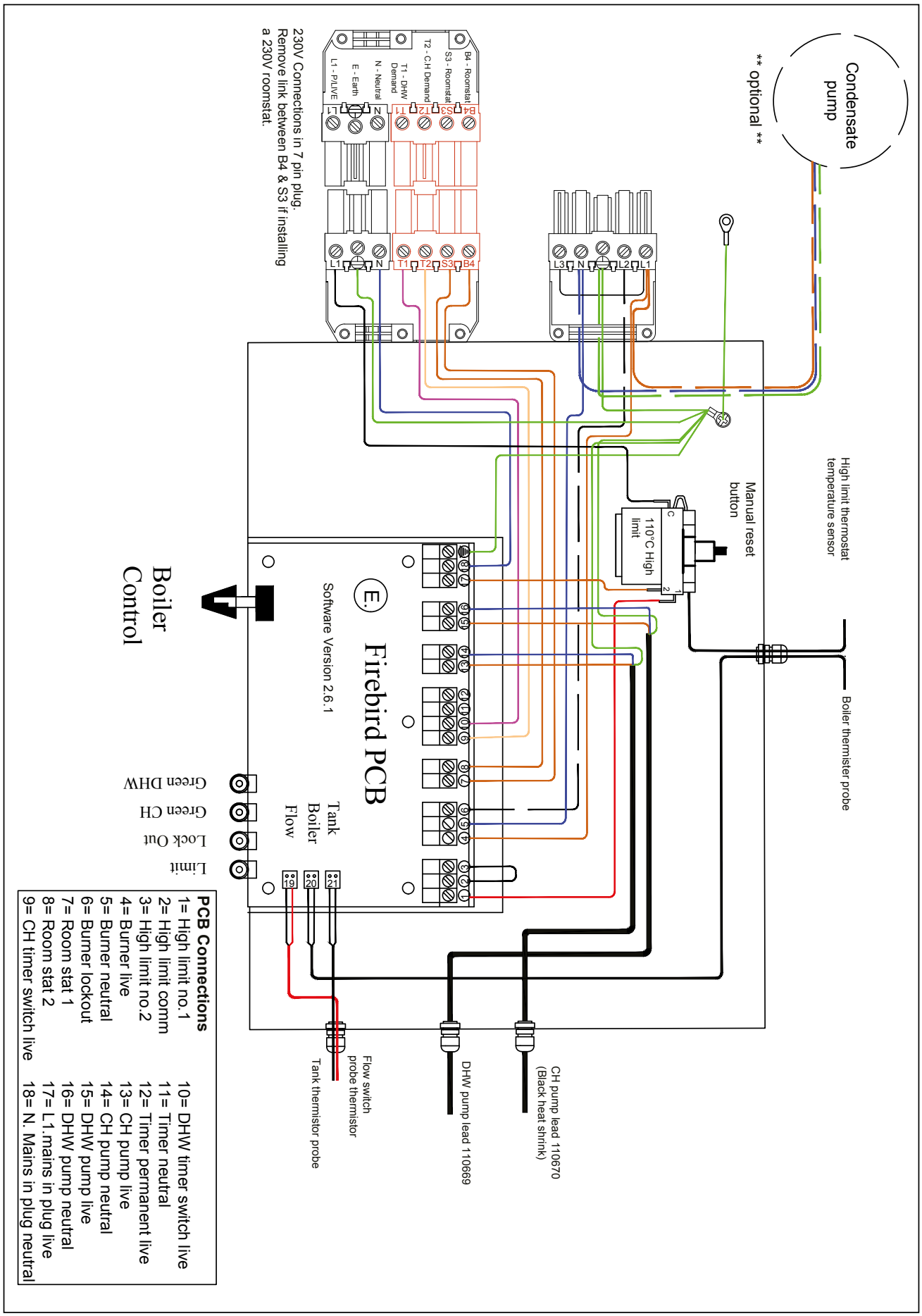
This appliance must be earthed.

A qualified electrician must carry out all electric wiring in accordance with current ETCI / IET Regulations and any local regulations which may apply.

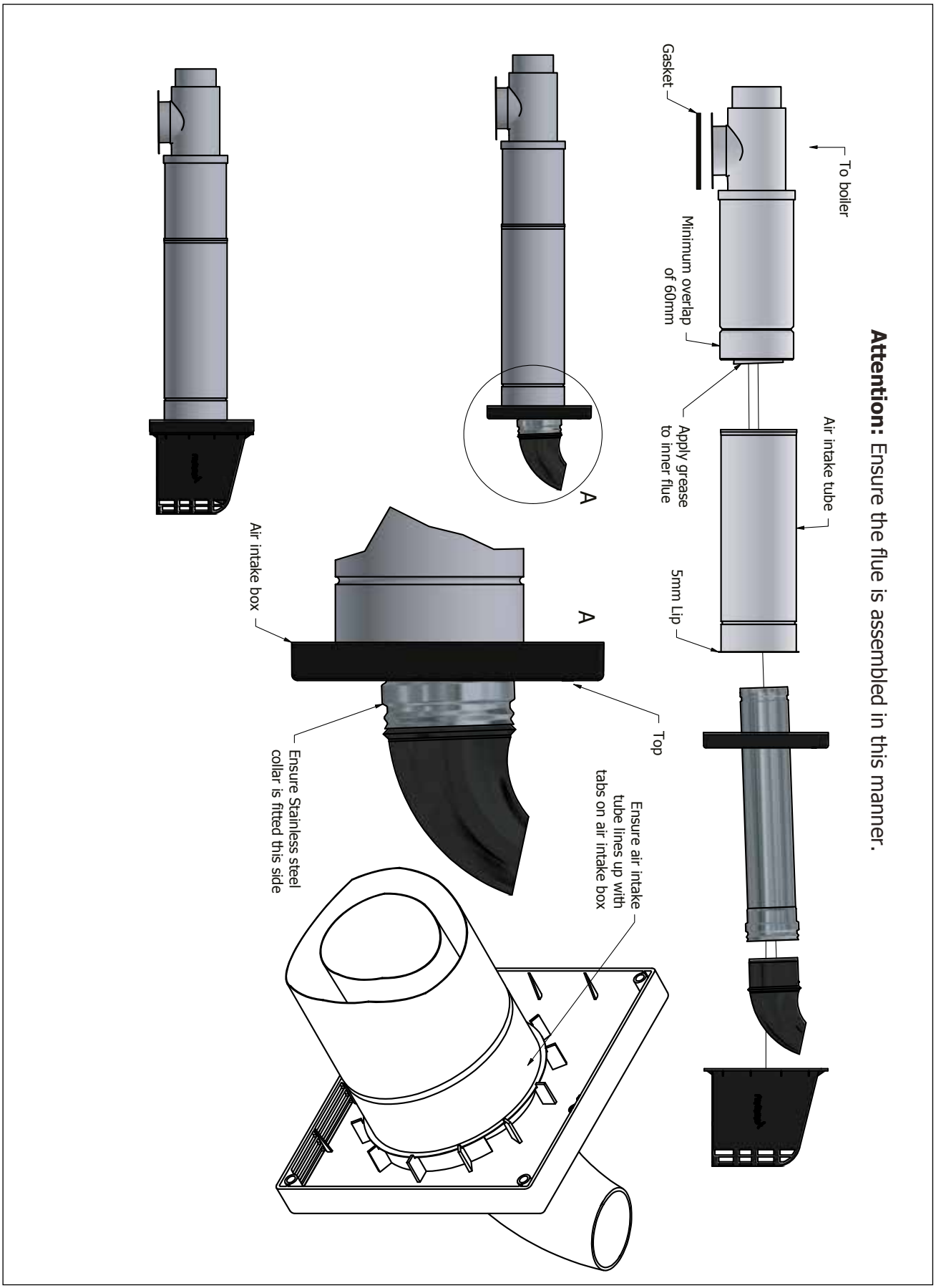
The boiler must have a permanent power supply to enable overrun and frost protection. The hot water and central heating should be timed separately.

FILLING LOOP

Ensure that the blue valves are in the closed position. Remove the blank caps. Install the rigid pipe with rubber washers on each end. Connect the filling loop between the two taps and screw on the wing nut, leaving it a little loose. Now screw the second wing nut until hand tigh, go back to the first one and tighten it up. Open both valves. Do not allow the unit to exceed 1 bar while filling and a maximum of 2 bar when the radiators are at full operating temperature. The automatic air vent will allow air to dispel from the boiler. To remove air from the storage tank, the manual air vent must be operated. When the system is full, turn off both valves, disconnect the rigid pipework and insert the blank caps. Check for leakage.


Condensate pump
** optional **
230V Connections in 7 pin plug.
Remove link between B4 & S3 if installing a 230V roomstat.
L1 - P/LIVE
E - Earth
N - Neutral
T1 - DHW Demand
T2 - C.H Demand
S3 - Roomstat
B4 - Roomstat
L1 N T1 T2 S3 B4
L3 N L2 L1
High limit thermostat temperature sensor
Manual reset button
110°C High limit
Boiler thermister probe
Firebird PCB
Software Version 2.6.1
Tank
Boiler
Flow
19 20 21
Boiler Control
Limit
Lock Out
Green CH
Green DHW
CH pump lead 110670 (Black heat shrink)
DHW pump lead 110669
Flow switch probe thermistor
Tank thermistor probe
PCB Connections
1= High limit no.1
2= High limit comm
3= High limit no.2
4= Burner live
5= Burner neutral
6= Burner lockout
7= Room stat 1
8= Room stat 2
9= CH timer switch live
10= DHW timer switch live
11= Timer neutral
12= Timer permanent live
13= CH pump live
14= CH pump neutral
15= DHW pump live
16= DHW pump neutral
17= L1.mains in plug live
18= N. Mains in plug neutral

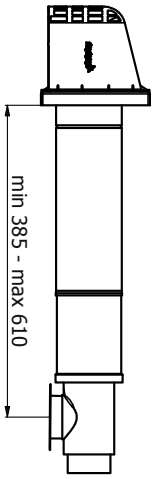
BALANCED FLUE INSTALLATION



BALANCED FLUE INSTALLATION

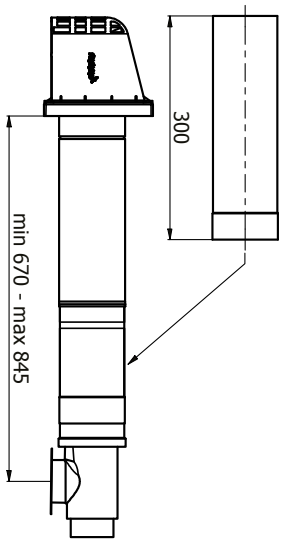
Installation Of Condensing Balanced Flue Kit With Plastic Terminal

5"/125mm Pt Condensing Balanced Flue Kit
Sales Code: CBF005KIT

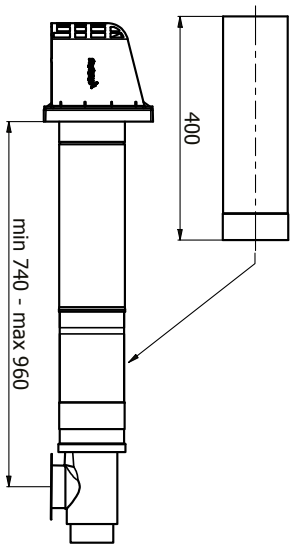


Extras

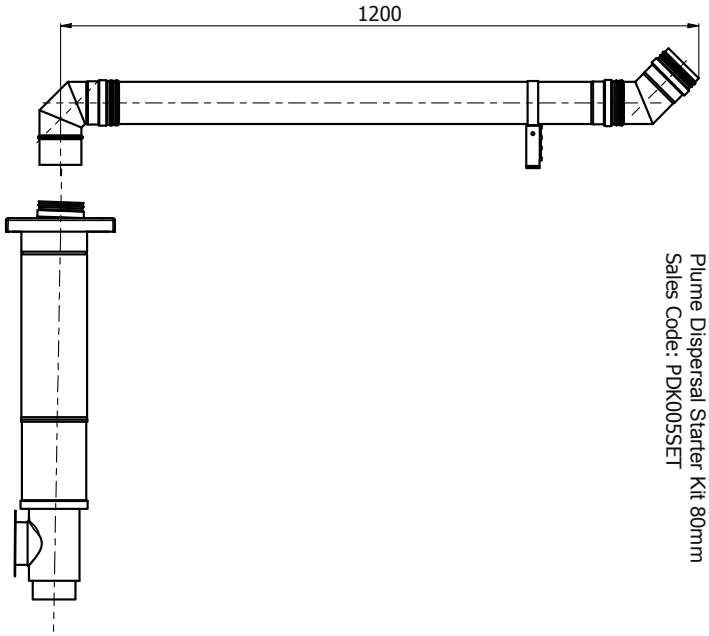
5"/125mm Condensing Extension 300mm
Sales Code:



5"/125mm Condensing Extension 400mm
Sales Code: CBF005EXT



Plume Dispersal Starter Kit 80mm
Sales Code: PDK005SET



COMBIPAC XCEED HE FLUE INSTALLATION

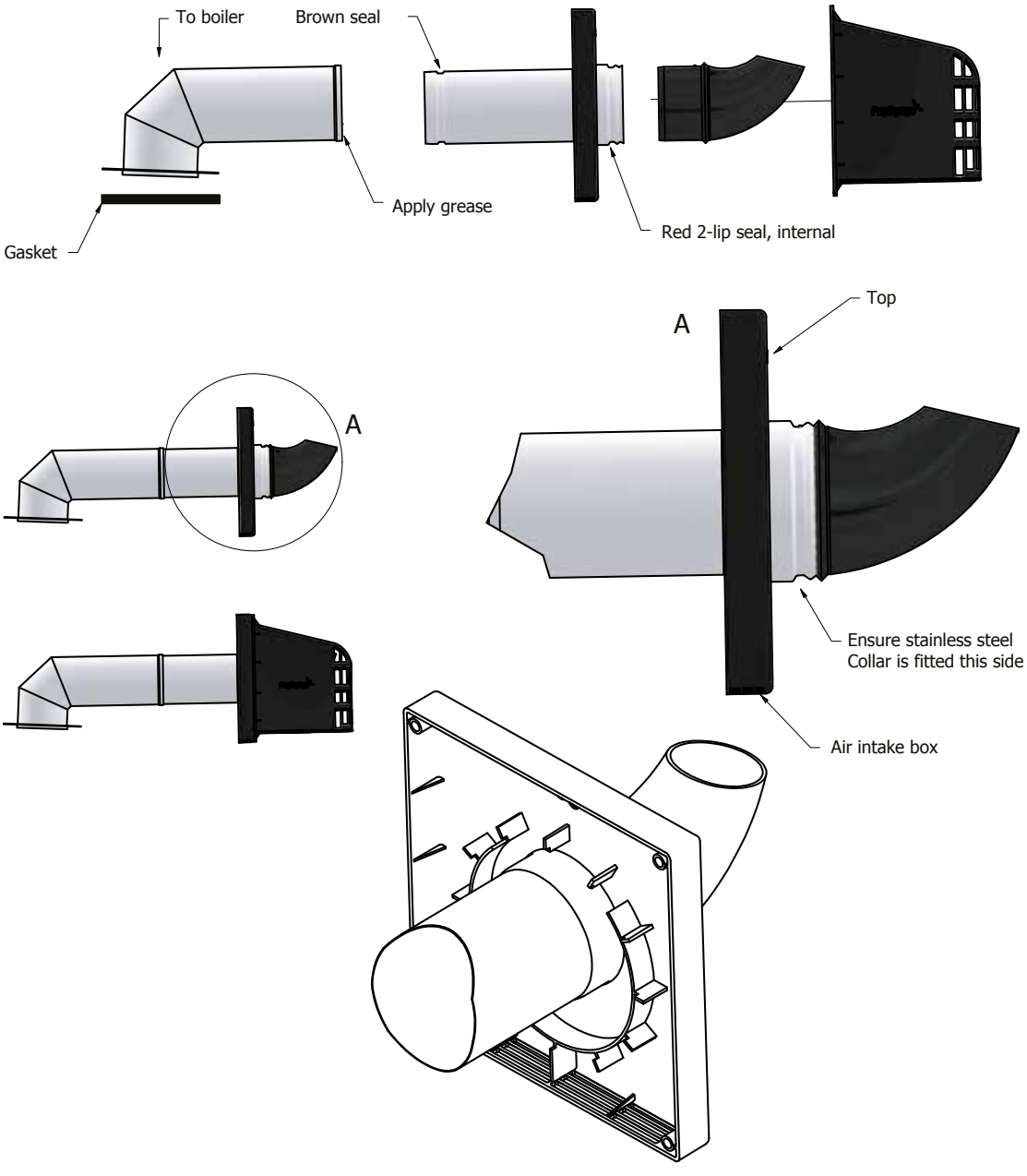
CONDENSATE PLUME DISPERSAL

When choosing the location for a condensing boiler, special consideration must be given to the positioning of the flue terminal. Care should be taken to locate it so as to prevent either the end user or their neighbours perceiving the plume to be a nuisance.

It should be noted that the normal statutory clearances required around low level flue terminals may not be sufficient to cope with plume dispersal from a condensing boiler.

INSTALLATION INSTRUCTIONS ARE SUPPLIED WITH ALL FLUE KITS

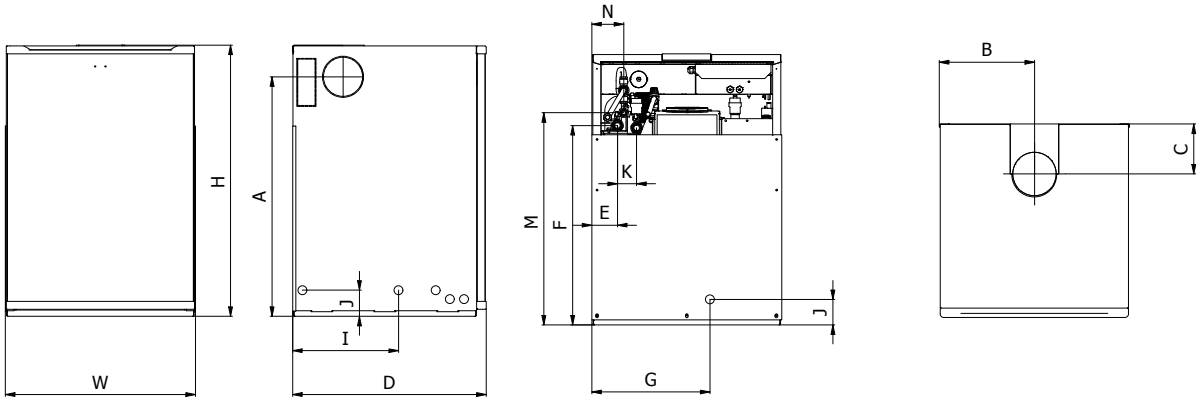
ATTENTION: ensure the flue is assembled in this manner



NOTE: Louvers on the front panel should not be obstructed.

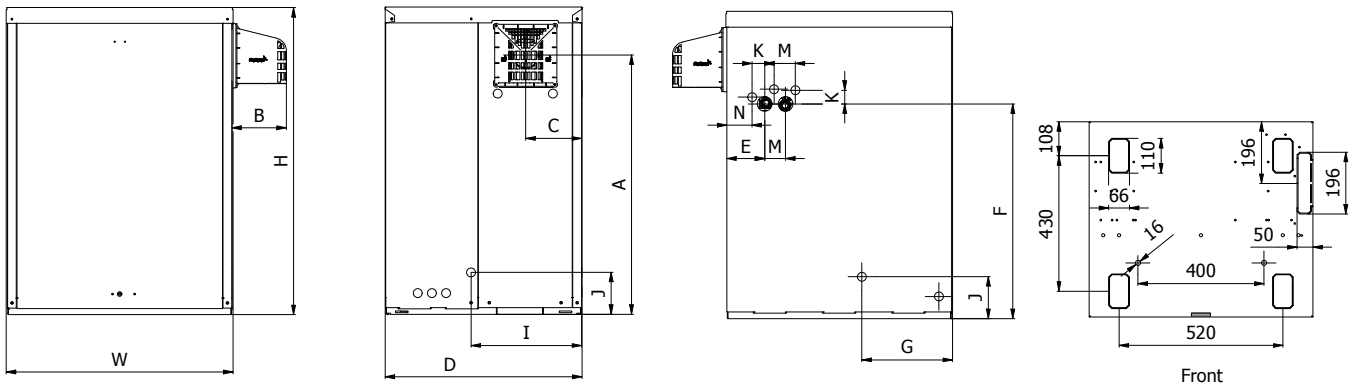
TECHNICAL DETAILS

Front View Side View Rear View Top View



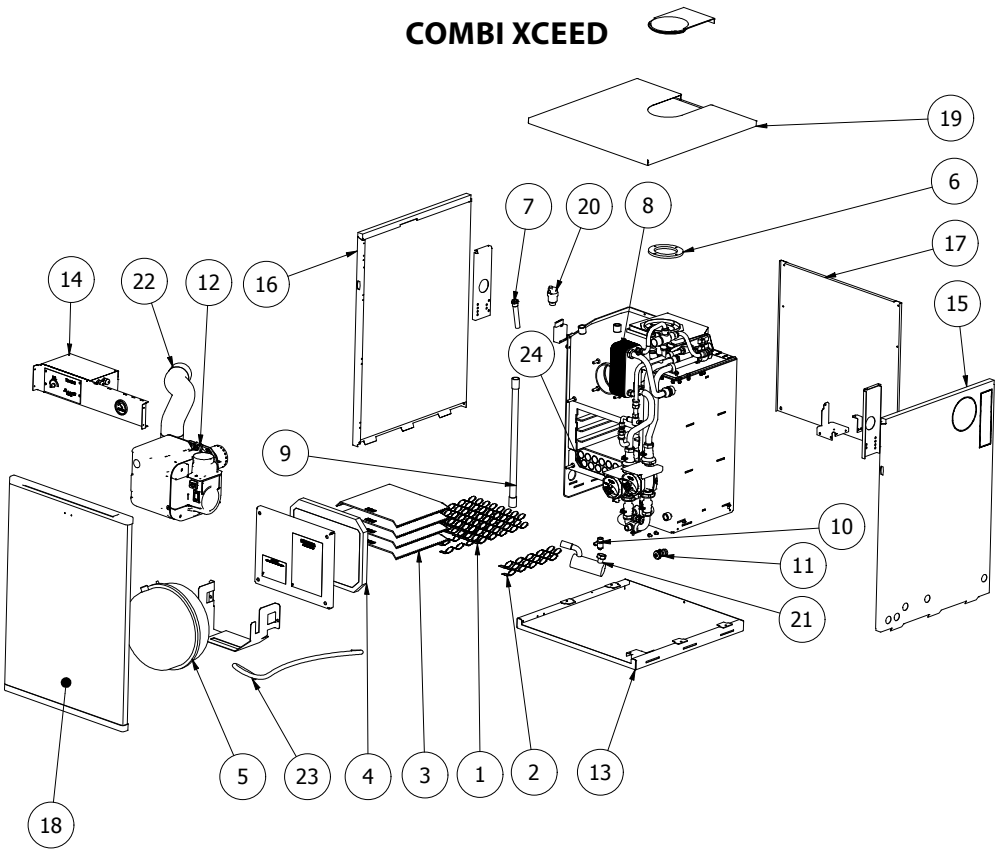
Model - Envirogreen (output range)	Weight kg	Dimensions (mm)													
		H	W	D	A	B	C	E	F	G	I	J	K	M	N
Combi Xceed 12-20kW	169	860	600	614	760	300	160	81	633	375	336	82	60	674	101
Combi Xceed 20-26kW	172	860	600	614	760	300	160	81	633	375	336	82	60	674	101
Combi Xceed 26-35kW	175	860	600	614	760	300	160	81	633	375	336	82	60	674	101

Front View Side View Back View Base



Model - Envirogreen (output range)	Weight kg	Dimensions (mm)													
		H	W	D	A	B	C	E	F	G	I	J	K	M	N
Combipac Xceed 12-20kW	185	975	720	625	822	173	177	120	681	288	351	133	40	66	80
Combipac Xceed 20-26kW	185	975	720	625	822	173	177	120	681	288	351	133	40	66	80
Combipac Xceed 26-35kW	188	975	720	625	822	173	177	120	681	288	351	133	40	66	80

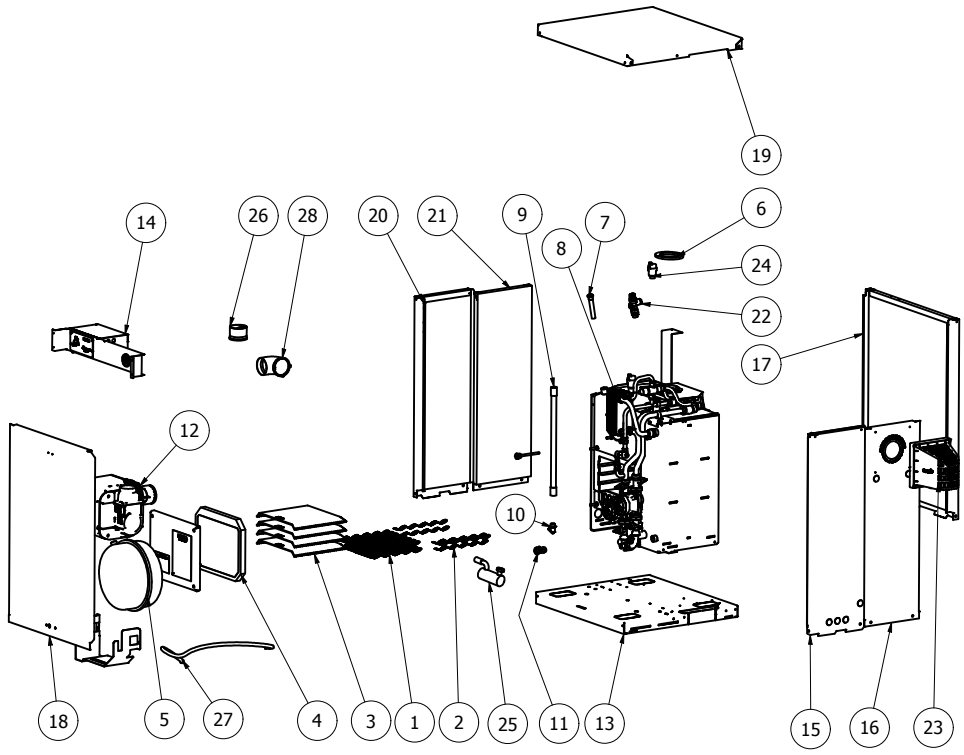
COMBI XCEED



No.	Qty	Description	12-20kW	20-26kW	26-35kW
1	4	Tube baffle	BA110907	BA110907	BA110907
2	5	Tube baffle single	BA110908	BA110908	BA110908
3	4	Smoke baffle	BA212022	BA212028	BA212122
4	1	Duroboard	ACC000DDS	ACC000DDS	ACC000DDS
5	1	Pressure vessel	ACC010PVL	ACC010PVL	ACC010PVL
6	1	Flue gasket	ACC000FRG	ACC000FRG	ACC000FRG
7	1	Stat 3 pocket	ACC003PKT	ACC003PKT	ACC003PKT
8	1	Heat exchanger	ACC031PHE	ACC031PHE	ACC031PHE
9	1	Condensate hose	ACC000FLX	ACC000FLX	ACC000FLX
10	1	Drain cock	ACC012DRC	ACC012DRC	ACC012DRC
11	1	Drain cock	ACC000DBC	ACC000DBC	ACC000DBC
12	1	Flange	FE65327290	FE65327290	FE65327290
13	1	Casing base	ACP000XBS	ACP000XBS	ACP000XBS
14	1	Control panel	ACP000XCP	ACP000XCP	ACP000XCP
	1	PC board	ACC000PCB	ACC000PCB	ACC000PCB
	1	Flow thermistor	ACC000RTP	ACC000RTP	ACC000RTP
	1	Boiler thermistor	ACC000WBP	ACC000WBP	ACC000WBP
	1	Tank thermistor	ACC000WTP	ACC000WTP	ACC000WTP
	1	Pressure gauge	ACCCOMPRG	ACCCOMPRG	ACCCOMPRG
	1	High limit stat	ACC000LMT	ACC000LMT	ACC000LMT
15	1	Casing right side panel	ACP000XCR	ACP000XCR	ACP000XCR
16	1	Casing left side panel	ACP000XCL	ACP000XCL	ACP000XCL
17	1	Casing back panel	ACP000XCB	ACP000XCB	ACP000XCB
18	1	Casing front panel	ACP000XCF	ACP000XCF	ACP000XCF
19	1	Casing top panel	ACP000XCT	ACP000XCT	ACP000XCT
20	2	Auto air vent with check valve	ACCCOXAAV	ACCCOXAAV	ACCCOXAAV
21	1	Condensate trap	ACC000TRP	ACC000TRP	ACC000TRP
22	1	Air hose	ACC000SSH	ACC000SSH	ACC000SSH
23	1	Expansion vessel flexible hose	ACCCOMHOS	ACCCOMHOS	ACCCOMHOS
24	1	Heat deflector	ACC000HTD	ACC000HTD	ACC000HTD

For burner parts refer to burner manual.

COMBIPAC XCEED



No.	Qty	Description	12-20kW	20-26kW	26-35kW
1	4	Tube baffle	BA110907	BA110907	BA110907
2	5	Tube baffle single	BA110908	BA110908	BA110908
3	4	Smoke baffle	BA212022	BA212028	BA212122
4	1	Duroboard	ACC000DDS	ACC000DDS	ACC000DDS
5	1	Pressure vessel	ACC010PVL	ACC010PVL	ACC010PVL
6	1	Flue gasket	ACC000FRG	ACC000FRG	ACC000FRG
7	1	Stat 3 pocket	ACC003PKT	ACC003PKT	ACC003PKT
8	1	Heat exchanger	ACC031PHE	ACC031PHE	ACC031PHE
9	1	Condensate hose	ACC000FLX	ACC000FLX	ACC000FLX
10	1	Drain cock	ACC012DRC	ACC012DRC	ACC012DRC
11	1	Drain cock	ACC000DBC	ACC000DBC	ACC000DBC
12	1	Flange	FE65327290	FE65327290	FE65327290
13	1	Casing base	ACP00XCPB	ACP000XCPB	ACP000XCPB
14	1	Control panel	ACP0XCPCP	ACP0XCPCP	ACP0XCPCP
	1	PC board	ACC000PCB	ACC000PCB	ACC000PCB
	1	Flow thermistor	ACC000RTP	ACC000RTP	ACC000RTP
	1	Boiler thermistor	ACC000WBP	ACC000WBP	ACC000WBP
	1	Tank thermistor	ACC000WTP	ACC000WTP	ACC000WTP
	1	Pressure gauge	ACCCOMPRG	ACCCOMPRG	ACCCOMPRG
	1	High limit stat	ACC000LMT	ACC000LMT	ACC000LMT
15	1	Fixed panel right	ACP00XFRP	ACP00XFRP	ACP00XFRP
16	1	Removeable panel WH	ACP00XRPW	ACP00XRPW	ACP00XRPW
17	1	Back panel	ACP00XCCB	ACP00XCCB	ACP00XCCB
18	1	Front panel	ACP00XCCF	ACP00XCCF	ACP00XCCF
19	1	Top panel	ACP00XCCT	ACP00XCCT	ACP00XCCT
20	1	Fixed panel left	ACP00XFLP	ACP00XFLP	ACP00XFLP
21	1	Removeable panel NH	ACP00XRPN	ACP00XRPN	ACP00XRPN
22	1	Pressure relief valve	ACCCOMMAC	ACCCOMMAC	ACCCOMMAC
23	1	Flue terminal P	ACC035PTG	ACC035PTG	ACC035PTG
24	2	Auto air vent with check valve	ACCCOXAAV	ACCCOXAAV	ACCCOXAAV
25	1	Condensate trap	ACC000TRP	ACC000TRP	ACC000TRP
26	1	Flap valve	ACC000FLP	ACC000FLP	ACC000FLP
27	1	Expansion vessel flexible hose	ACCCOMHOS	ACCCOMHOS	ACCCOMHOS
28	1	Flue valve adapter	ACC000FLA	ACC000FLA	ACC000FLA

For burner parts refer to burner manual.

TECHNICAL SPECIFICATION

HEAT OUTPUT kW	12-20	20-26	26-35
CONNECTIONS	-	-	-
Heating Flow	22 mm dia.	22 mm dia.	28 mm dia.
Heating Return	22 mm dia.	22 mm dia.	28 mm dia.
Mains Cold Feed (Copper)	15 mm dia.	15 mm dia.	15 mm dia.
Hot Water Delivery (Copper)	15 mm dia.	15 mm dia.	15 mm dia.
Drain Off Valve	½" BSP	½" BSP	½" BSP
Safety Pressure Valve Outlet (Copper)	15 mm dia.	15 mm dia.	15 mm dia.
Condensate Trap	22 mm dia. plastic pipe	22 mm dia. plastic pipe	22 mm dia. plastic pipe
CIRCULATING PUMP	Ecorcirc NGRC P/N 60BOL 1011	Ecorcirc NGRC P/N 60BOL 1011	Ecorcirc NGRC P/N 60BOL 1011
Domestic Hot Water Plate Heat Exchanger	25 plate	25 plate	31 plate
Integral Expansion Vessel Normal Capacity	12 litres	12 litres	12 litres
Expansion Vessel Pre-charge Pressure	1 bar	1 bar	1 bar
Low Pressure Water Switch?	✔	✔	✔
Filling Loop Included?	✔	✔	✔
WATER CONTENT	-	-	-
Boiler	24 litres	24 litres	24 litres
Primary Tank	20 litres	20 litres	20 litres
D.H.W. GUIDE PERFORMANCE*	Complies with EC Ecodesign Directive		
	(XLarge in all cases)		
FLUE (INDOOR BOILERS)	-	-	-
Balanced Flue Assembly	125 (5") mm dia.	125 (5") mm dia.	125 (5") mm dia.
Max. Low Level Flue Length	1.5m	1.5m	1.5m
Max. High Level Balanced Flue Length	6m	6m	6m
HEATING SYSTEM (SEALED)	Fit in accordance with BS 7074 Part 1, BS 5449, OFTEC standards and all other relevant legislation.		
Max. Operating Pressure	2 bar	2 bar	2 bar
Max. System Pressure Cold	1.5 bar	1.5 bar	1.5 bar
Min. System Pressure Cold	0.5 bar	0.5 bar	0.5 bar
Preset Pressure Relief Valve	3 bar	3 bar	3 bar
MAINS WATER SUPPLY PRESSURE	Min. 1.5 bar - Max. 2.5 bar. A non-dynamic pressure reducing valve should be fitted on the cold inlet if the cold-water mains kinetic pressure exceeds 2.5 bar.		
	*Excessive pressure may damage plumbing and boiler components. The appliance will not be guaranteed if fitted to a non-utility water supply.		
WATER QUALITY	Mains water supply only. Water supplied to the boiler must conform to the following minimum parameters:		
	Chloride Contents: Max. 200mg/l Sulphate Contents : Max. 200mg/l Combination Chloride/Sulphate Max. 300mg/l (in total).		

WATER SIDE RESISTANCE	**Flow Rate To Give A Nominal Output At 10K Differential**	**12-20kW**	**20-26kW**	**26-35kW**
	Flow Rate Measured	1642 kg/h	2135 kg/h	2874 kg/h
	Waterside Resistance	0.18 mbar	0.18 mbar	0.18 mbar
	Flow Rate To Give A Nominal Output At 20K Differential			
	Flow Rate Measured	870 kg/h	1131 kg/h	1523 kg/h
	Waterside Resistance	0.19 mbar	0.19 mbar	0.19 mbar

* where water demand exceeds this, a flow restrictor is recommended. This will ensure a water supply at an adequate temperature.

4.1 SLIMLINE COMBI - OPERATING INSTRUCTIONS

Please consult with your installer regarding the operation of your boiler. This should include timer operation/room thermostat operation and any other additional operational features. The basic features of the control panel are outlined below.

Maximum

Medium

Minimum

BOILER THERMOSTAT/THERMISTOR FUNCTION

The control thermostat on the boiler allows the householder to vary temperature to central heating from a low of 55˚C to 80˚C, depending on the model. Thermostats have a tolerance of ± 4˚C.

In accordance with EU boiler standards, your boiler is also fitted with a safety high limit thermostat, fixed at 110˚C. This system protects the boiler in the event of the control thermostat failing and keeps the boiler safe.

The safety high limit thermostat will shut the boiler off and will require the limit button to be pushed to restart the boiler. It is recommended to call a service engineer to establish the cause.

BURNER LOCKOUT

The boiler is factory fitted with a burner control box lockout safety feature which operates automatically if a fault occurs in the burner operation. Should this occur, the light on the front of the burner will illuminate.

Press the reset button a maximum of two times. If the boiler fails to light, call a service engineer who should check the following:

A. An interruption in the fuel supply (eg. empty fuel supply tank).
B. An electrical supply fault.
C. A fault with the burner or its safety control system.
D. The failure of a burner component.
E. Worn or dirty fuel nozzle.
F. Incorrect flue installation.

Before attempting to restart the boiler, the front panel and the burner cover should be removed and a visual check made for any obvious problems such as oil leaks, loose connections etc. This should be done by a service engineer.

4.2 SLIMLINE COMBI - INSTALLER GUIDELINES

Please note the following important points before commencing installation.

Installation should only be carried out by a competent, qualified engineer, preferably OFTEC registered and familiar with the installation of the Firebird boilers referred to in this manual.

WARNING

The manufacturer cannot accept responsibility for any damage to persons, animals or property due to error in installation or in the burner adjustment or due to improper or unreasonable use or non-observance of the technical instruction enclosed with the burner, or due to the intervention of unqualified personnel.

POSITIONING THE BOILER

Compliance guide to part L now states that when installing a boiler on a new or existing system, the system should be cleaned, flushed and then protected with a suitable protection inhibitor.

Ensure that adequate clearance is available for making the water and flue connections.

The boiler is serviced from the front and a clearance of 750mm must be available at the front of the boiler.

No special hearth is required as the boiler is fully insulated, but the floor must be level and capable of supporting the weight of the boiler and its water content.

Sound levels must also be a consideration. Whilst Firebird condensing liquid fuel boilers are one of the quietest boilers on the market, some householders are particularly sensitive.

A suitable corrosion inhibitor must be added to the heating system.

UNDERFLOOR HEATING

The boiler should not be directly connected to underfloor heating, as a minimum return temperature of 40˚C is required (it can be used with underfloor heating with adequate temperature controls to ensure return values are as stated above).

PLASTIC PIPING

The boiler thermostat control and safety system is not designed, and must not be relied on, to protect plastic pipe from overheating. Additional measures must be incorporated into the system pipework for protection in these circumstances. Plastic pipe must never be connected directly to the boiler and there must be at least 1 meter of copper pipe between the boiler and the first plastic connection. If you choose to use plastic pipe anywhere on your heating circuits, please consult the plastic pipe manufacturer for their instruction on how to ensure their product never overheats. Our boiler control and safety high limit thermostats are not designed to fulfil this function. **Firebird accepts no responsibility for failure of plastic piping and fittings for whatever reason.**

PRESSURISED HEATING SYSTEM

The maximum operating working pressure is 2 bar when the system is at full operating temperature.

MAGNETIC FILTRATION

It is recommended at the time of installation of this boiler, to install a permanent effective magnetic filter on the return pipework after the last radiator on the central heating system. This will maintain maximum operational efficiency and protect the boiler from the damaging, long-term effects of "magnetite" (black iron sludge). It is essential that the filter is sized similar to the return pipework. The magnetic filter must be installed in accordance with the manufacturer's instructions and serviced annually.

HARD WATER - LIMESCALE

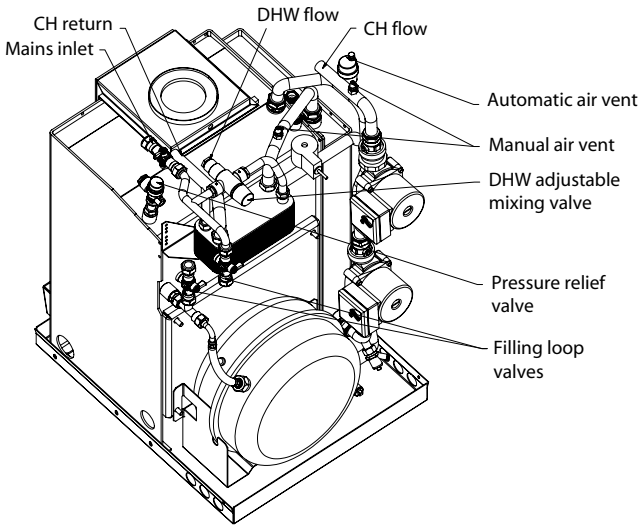
On initial fill, where it is suspected that there is a high concentration of scale products, a suitable inhibitor must be used to protect the boiler and system. Check with local water authorities if in doubt (max. 200 ppm).

EXPANSION VESSEL

Total water content of system and boiler must be calculated to determine if an additional pressure vessel is required.

PIPEWORK

Do not obstruct flue fitting with Pipework.
Connect pipework as shown below.



FILLING THE SYSTEM

The unit comes with a factory fitted expansion vessel. Should the total water volume of the system exceed the expansion provided, a second vessel should be added (see below table).

Expansion Vessel and System Requirements

Safety Valve Setting	3 bar		
Initial System Pressure	0.5 bar	1.0 bar	1.5 bar
Total Water Content of System	Total Vessel Volume **		
Litres	**Litres**	**Litres**	**Litres**
25	2.1	2.7	3.9
50	4.2	5.4	7.8
75	6.3	8.2	11.7
100	8.3	10.9	15.6
125	10.4	13.6	19.5
150	12.5	16.3	23.4
175	14.7	19.1	27.2
200	16.7	21.8	31.2
225	18.7	24.5	35.1
250	20.8	27.2	39.0

FOR FURTHER INFORMATION, CONSULT APPROPRIATE TRAINING MANUALS, BS 7074-1: 1989, EN 12828: 2012 + A1: 2014 AND ANY OTHER RELEVANT STANDARDS & REGULATIONS.

* * When calculating the size of any additional expansion vessel, remember to deduct the boiler expansion vessel volume of 12 litres from the calculated total system vessel volume required, as given in the above table.

FILLING LOOP

Connect the filling loop. Open both valves. Do not allow the unit to exceed 1 bar while filling and a maximum of 2 bar when the radiators are at full operating temperature. The automatic air vent will allow air to dispel from the boiler. To remove air from the storage tank, the manual air vent must be operated. When the system is full, turn off both valves and disconnect the filling loop.

CONNECTING FUEL SUPPLY

Using the flexible hose provided, connect the burner to the incoming oil line which must have a remote acting fire valve. **The flexible hose must be contained within the appliance casing.**

THERMOSTAT TEMPERATURE CONTROL

Boiler Central Heating Control:	55˚C - 80˚C
Boiler Safety Limit:	110˚C
Tank (DHW) - Fixed:	78˚C
Early Alert - Fixed	87˚C
Over-run - Fixed:	93˚C"

WIRING

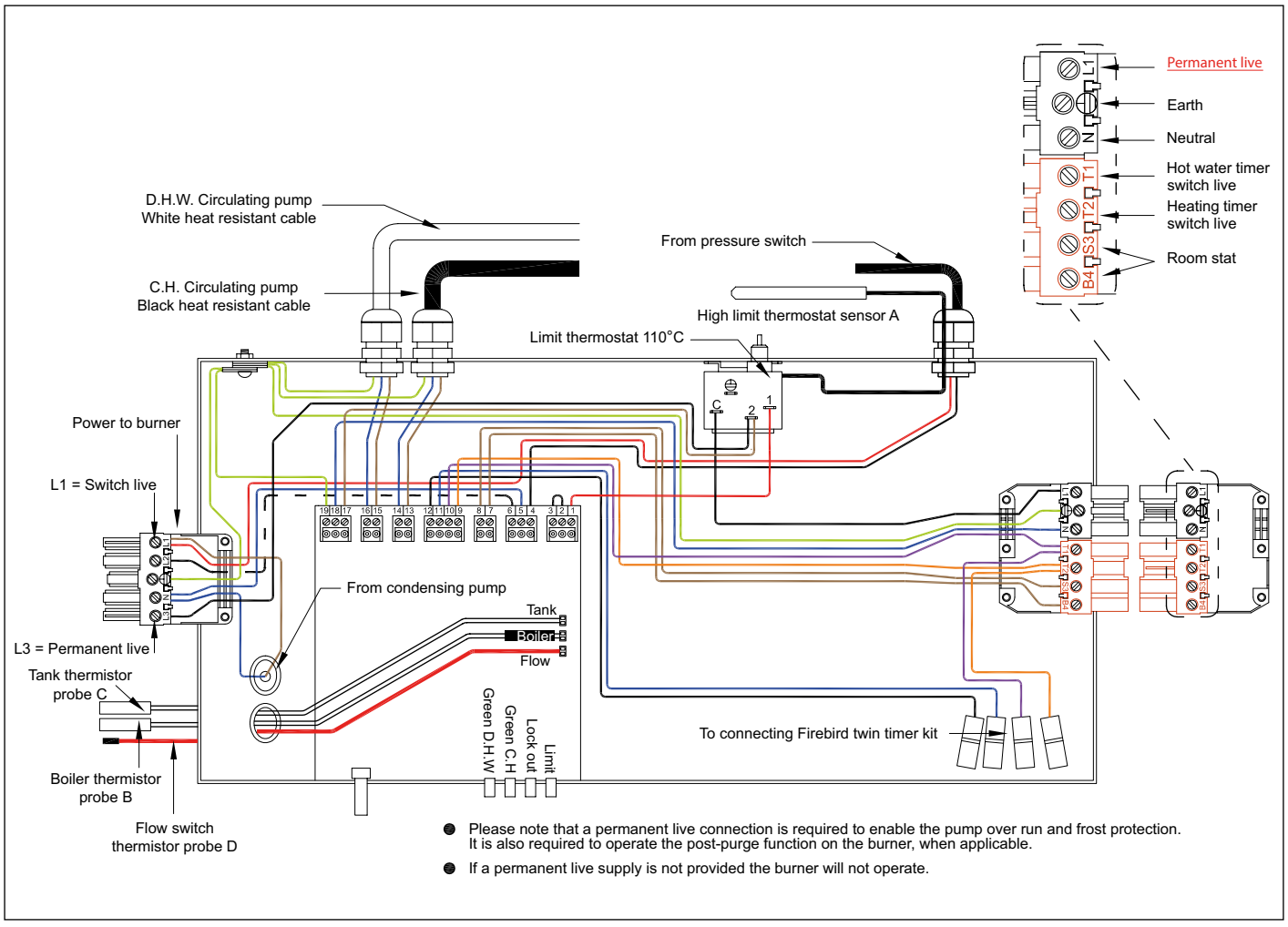
Electrical Supply

The boiler and controls require a 230V 50Hz mains electric supply protected with a 5A fuse.

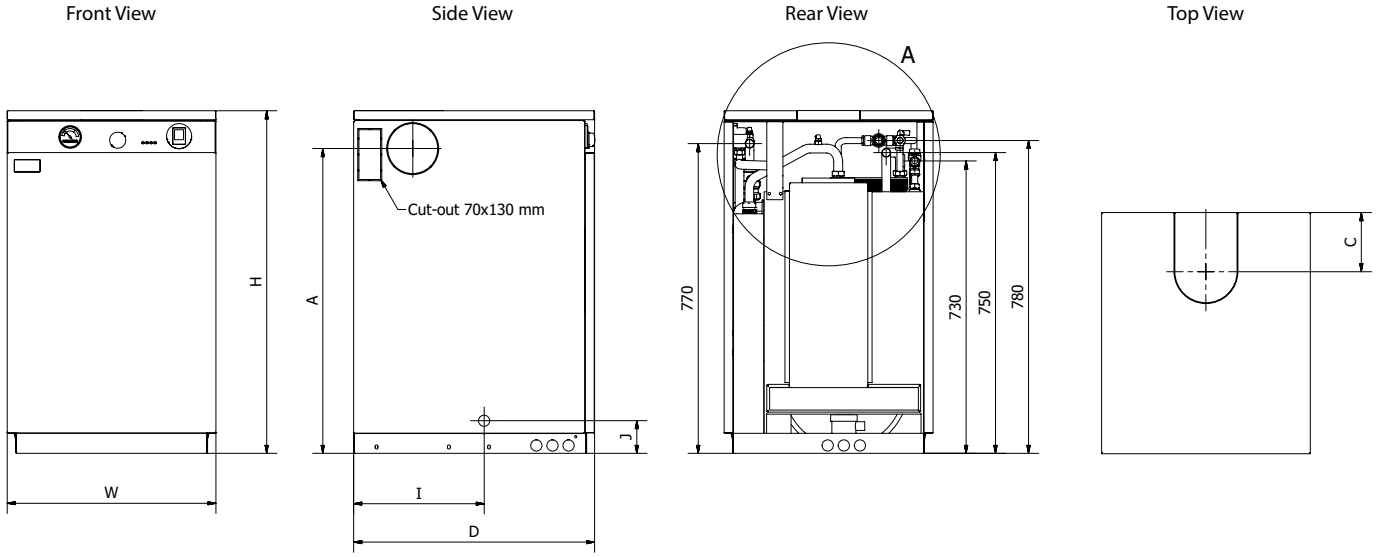
This appliance must be earthed.

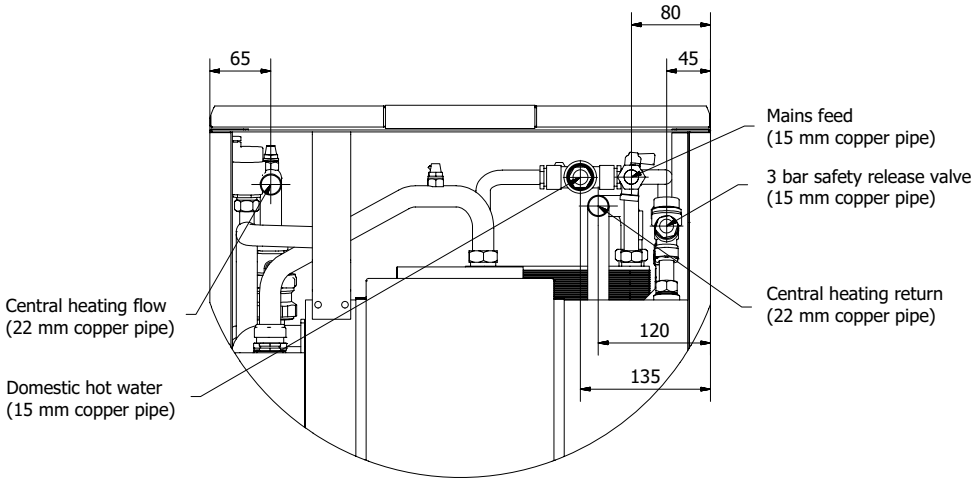
A qualified electrician must carry out all electric wiring in accordance with current ETCI / IET Regulations and any local regulations which may apply.

The boiler must have a permanent power supply to enable overrun and frost protection. The hot water and central heating should be timed separately.



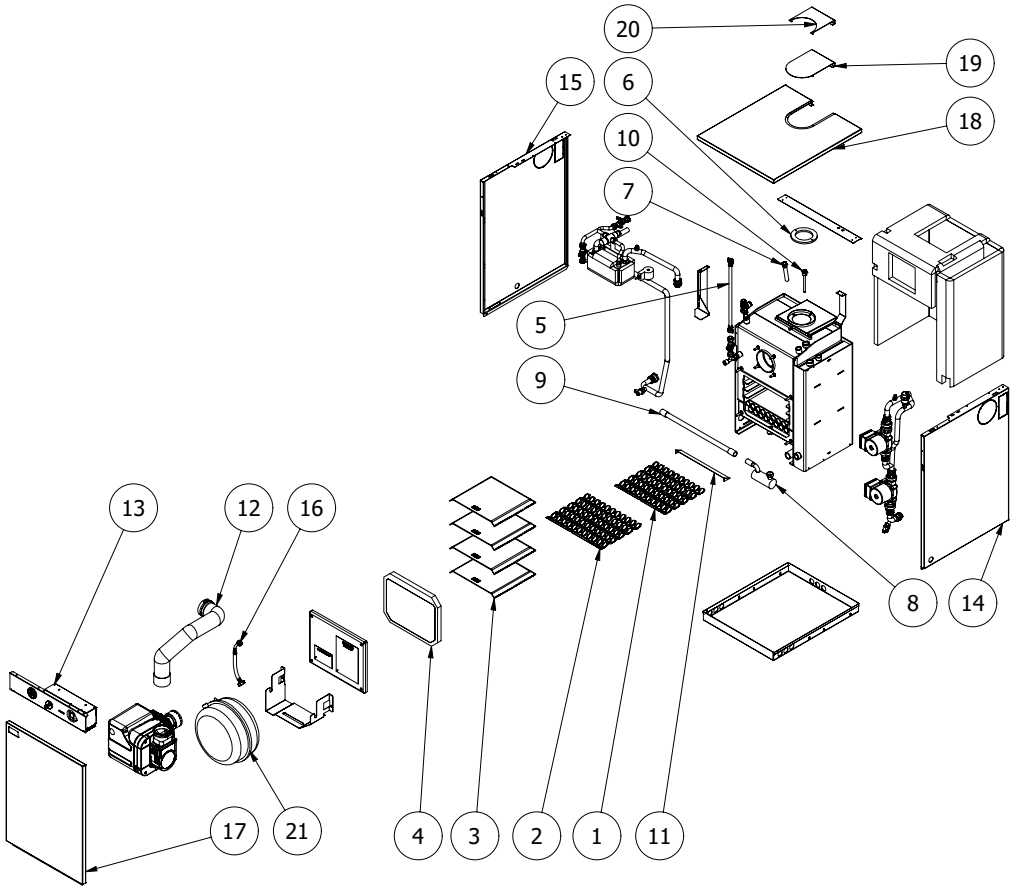
TECHNICAL DETAILS





Model - Envirogreen (output range)	Weight kg	Dimensions (mm)						
		H	W	D	A	C	I	J
Envirogreen Slimline Combi 12-20kW	165	855	520	600	760	147	325	80
Envirogreen Slimline Combi 20-26kW	168	855	520	600	760	147	325	80

SLIMLINE COMBI



No.	Qty	Description	12-20kW	20-26kW
1	4	Tube baffle	BA110907	BA110907
2	5	Tube baffle single	BA110908	BA110908
3	4	Smoke baffle	BA212022	BA212028
4	1	Duroboard	ACC000DDS	ACC000DDS
5	1	Filling loop hose	ACC000FLH	ACC000FLH
6	1	Flue gasket	ACC000FRG	ACC000FRG
7	1	Stat 3 pocket	ACC003PKT	ACC003PKT
8	1	Condensate trap	ACC000TRP	ACC000TRP
9	1	Condensate hose	ACC000FLX	ACC000FLX
10	1	Stat 1 pocket	ACC001PKT	ACC001PKT
11	1	Heat deflector	ACC000HTD	ACC000HTD
12	1	Air hose	ACC000SSH	ACC000SSH
13	1	Control panel	-	-
	1	PC board	ACC000PCB	ACC000PCB
	1	Flow thermistor	ACC000RTP	ACC000RTP
	1	Boiler thermistor	ACC000WBP	ACC000WBP
	1	Tank thermistor	ACC000WTP	ACC000WTP
	1	Relay base 11 pin	ACC000BAS	ACC000BAS
	1	230 volt relay 11 pin	ACC000RLY	ACC000RLY
	1	Pressure gauge	ACCCOMPRG	ACCCOMPRG
	1	High limit stat	ACC000LMT	ACC000LMT
14	1	Casing right side	ACP002CSL	ACP002CSL
15	1	Casing left side	ACP003CSL	ACP003CSL
16	1	Expansion vessel flexible hose	ACCCOMHOS	ACCCOMHOS
17	1	Casing front	ACP004CSL	ACP004CSL
18	1	Casing top	ACP005CSL	ACP005CSL
19	1	Top flue blank	ACP009CSL	ACP009CSL
20	1	Top half moon blank	ACP010CSL	ACP010CSL
21	1	Pressure vessel	ACC012PVL	ACC012PVL

For burner parts refer to burner manual.

4.3 SLIMLINE COMBI - TECHNICAL DETAILS

TECHNICAL SPECIFICATION

HEAT OUTPUT kW		12-20	20-26
CONNECTIONS		-	-
Heating Flow		22 mm dia.	22 mm dia.
Heating Return		22 mm dia.	22 mm dia.
Mains Cold Feed (Copper)		15 mm dia.	15 mm dia.
Hot Water Delivery (Copper)		15 mm dia.	15 mm dia.
Drain Off Valve		½" BSP	½" BSP
Safety Pressure Valve Outlet (Copper)		15 mm dia.	15 mm dia.
Condensate Trap		22 mm dia. plastic pipe	22 mm dia. plastic pipe
CIRCULATING PUMP		Ecorcirc NGRC P/N 60BOL 1011	Ecorcirc NGRC P/N 60BOL 1011
Domestic Hot Water Plate Heat Exchanger		25 plate	25 plate
Integral Expansion Vessel Normal Capacity		12 litres	12 litres
Expansion Vessel Pre-charge Pressure		1 bar	1 bar
Low Pressure Water Switch?		✔	✔
Filling Loop Included?		✔	✔
WATER CONTENT		-	-
Boiler		24 litres	24 litres
Primary Tank		11 litres	11 litres
D.H.W. GUIDE PERFORMANCE*		Complies with EC Ecodesign Directive	
in litres/min (120 litre draw-off at 35˚C Δt.)		(XLarge in all cases)	
FLUE (INDOOR BOILERS)		-	-
Balanced Flue Assembly		125 (5") mm dia.	125 (5") mm dia.
Max. Low Level Flue Length		1.5m	1.5m
Max. High Level Balanced Flue Length		6m	6m
HEATING SYSTEM (SEALED)		Fit in accordance with BS 7074 Part 1, BS 5449, OFTEC standards and all other relevant legislation.	
Max. Operating Pressure		2 bar	2 bar
Max. System Pressure Cold		1.5 bar	1.5 bar
Min. System Pressure Cold		0.5 bar	0.5 bar
Preset Pressure Relief Valve		3 bar	3 bar
MAINS WATER SUPPLY PRESSURE		Min. 1.5 bar - Max. 2.5 bar. A non-dynamic pressure reducing valve should be fitted on the cold inlet if the cold-water mains kinetic pressure exceeds 2.5 bar.	
		*Excessive pressure may damage plumbing and boiler components. The appliance will not be guaranteed if fitted to a non-utility water supply.	
WATER QUALITY		Mains water supply only. Water supplied to the boiler must conform to the following minimum parameters:	
		Chloride Contents: Max. 200mg/l Sulphate Contents : Max. 200mg/l Combination Chloride/Sulphate Max. 300mg/l (in total).	
WATER SIDE RESISTANCE	**Flow Rate To Give A Nominal Output At 10K Differential**	**12-20kW**	**20-26kW**
	Flow Rate Measured	1642 kg/h	2135 kg/h
	Waterside Resistance	0.18 mbar	0.18 mbar
	Flow Rate To Give A Nominal Output At 20K Differential		
	Flow Rate Measured	870 kg/h	1131 kg/h
	Waterside Resistance	0.19 mbar	0.19 mbar

* where water demand exceeds this, a flow restrictor is recommended. This will ensure a water supply at an adequate temperature.

COMMISSIONING

- **It is the responsibility of the installer to ensure that the boiler is properly commissioned when first used.**
- **The boiler should be commissioned by a competent, qualified engineer, preferably OFTEC registered and familiar with Firebird products.**
- **The installation certificate and the commissioning certificate within the Boiler Passport should be completed and posted to Firebird within 28 days of installation (this can also be done online on the Firebird website). A copy should be retained by the commissioning engineer.**
- **The system should be checked thoroughly.**

CHECKLIST FOR INSTALLING AND COMMISSIONING A FIREBIRD BOILER

Pre-installation check:
- Is the following documentation included with the boiler, installation manual, boiler passport, burner manufacturer's manual?
- Is the base on which the boiler is to be installed solid?
- Allow sufficient room for future servicing of the boiler.

Where does the flue terminate:
- Make sure there is no window, door or fence within 1 metre of the flue-terminal.
- If the flue terminates in a corner or into an allyway, re-circulation of the combustion gases in the air intake could occur. A plume dispersal may be required or an alternative flue arrangement might be available. Contact the Firebird technical department for advise.
- The appropriate class 1 flue must be used with a conventional flue installation. Contact Firebird if unsure.

Power supply:
- Is a timed, permanent, power supply available, via a fused spur with a 230V 50Hz mains electrical supply and a 5A fuse?

Fuel supply:
- The burner is set for 28 Second Class C2 fuel.
- A 10 micron oil filter should be placed in line with an isolating valve prior to entry to the burner.
- There must be a remote sensing fire valve.
- Verify that the fuel tank has been installed correctly as per building standards.

Boiler check:
- Baffles should be checked as they may have been disturbed during transport.
- Check that the condensate trap is fitted securely, primed with water and piped out into a suitable drain. It is easier to check the trap when the boiler door is removed.
- The combustion door should be refitted, complete with duroboard and rubber seal and then tightened.

Flue check:
- The flue must be fitted correctly, with a fall back to the boiler. Note: internal fall of 2.5˚ within the flue.
- For concentric balanced flue:
  - the cone supplied should be inserted in to the end of the flue;
  - the wall plate should be fitted with an opening for air under the flue;
  - check that the flue guard is fitted.
- When installing a Combipac HE the 90˚ bend should be fitted pointing up.

Thermostat check:
- Ensure the probes are fully inserted in the stat. pocket and the retaining clip is in place.
- Check the function of the thermostat at minimum and maximum to ensure correct operation.

Please refer to burner manual for the following sections:
- Boiler set-up.
- Burner settings.
- Flue gas analysis and fine tuning of burner.

HANDING OVER

The householder should receive:
- A clear and concise demonstration of the boiler operation and any system controls.
- This manual, the burner manufacturer's manual and any other instructions.
- OFTEC forms CD10 and CD11.
- The Boiler Passport.

The householder should be advised to:
- Service the boiler annually and to ensure that the service records in the Boiler Passport are completed.
- Read the terms and conditions of warranty.
- Keep all boiler documentation in a safe place.

A commissioning record should be completed and a copy retained by the Engineer. This can be found in the Boiler Passport.

6 SERVICING

Annual servicing must be carried out by a competent, qualified engineer, preferably OFTEC registered and familiar with Firebird products.

Do not commence service until both the electrical and fuel supply to the boiler have been safely isolated.

THE FUEL TANK

Check for oil leaks. Draw off any accumulated water and sludge from the tank by opening the drain valve. Turn off the fuel supply, remove the filter bowl and wash the element. Fit a new element if required.

THE BOILER

Remove combustion access door for access to baffles and to clean heat exchanger.

Cleaning a Firebird condensing boiler:

1. Remove all baffles, including the tubular baffles in the condensing section and clean them.

2. Remove the condensate trap and clean it, place a tray under the connection for the trap. Vacuum out any loose debris from the chamber.

3. Clean the inside of the boiler with a vacuum cleaner.

4. Refit all the baffles and the condensate trap securely.

5. System pressure should not exceed 2 bar at full operating temperature. The expansion vessel should be checked during the annual service to ensure that it is operating correctly.

Ensure the combustion door is completely sealed and there are no leaks.

Check that the condensate trap is secure in position, clean and free of combustion debris. Ensure that the condensate drain is free and not blocked.

Expansion vessel pre-charge pressure should be checked annually and set according to the system design.

THE BURNER

Please refer to the burner manual for specification and combustion check information.

OIL LINE

The oil line should be replaced annually or where an oil pipe is kinked, damaged or any doubt exists as to its integrity until the next service visit, it is recommended that it is replaced at the time of service.

Ensure service is recorded in the Boiler Passport.

7 TERMS & CONDITIONS OF WARRANTY

Firebird products are designed and manufactured to give many years of trouble free service.

The terms laid down in the warranty must be adhered to

- Firebird provides a comprehensive, conditional warranty of 5 years on the boiler shell and 2 years on all other parts from date of installation, provided installation has occurred within 12 months from date of purchase.
- The 5 year boiler shell warranty consists of parts and labour for the first 3 years and parts only for years 4 and 5.
- The warranty will only apply if the boiler is commissioned by a competent, qualified engineer, preferably OFTEC registered and is serviced annually thereafter.
- Please ensure that the commissioning certificate within the Boiler Passport is fully completed by a competent, qualified engineer, preferably OFTEC registered and is returned to Firebird within 28 days of complete installation and commissioning. The Boiler Passport is included with every boiler and can also be completed online at the following link: http://www.firebird.ie/index.php/boiler-passport.html.
- Correct commissioning will ensure that your boiler is set to operate at its maximum fuel efficiency.
- Consumable components, the nozzles and the oil hose are excluded.

TERMS & CONDITIONS OF WARRANTY

1. Warranty implies that the product shall be free from defective parts or workmanship for a period of warranty cover, which begins from the date of installation.
2. All claims under the warranty programme must be within the time limits stated on the left.
3. Installation and commissioning of the product must be in accordance with (a) instruction/technical manuals (b) all relevant standards and codes of practice.
4. A competent, qualified engineer, preferably OFTEC registered, using the correct installation and test equipment must carry out installation and commissioning.
5. This warranty does not cover special, incidental or consequential damages, injury to persons or property, or any other consequential loss.
6. Servicing of the boiler is to be carried out annually to maintain the manufacturer's warranty.
7. Firebird accepts no liability in respect of any defect arising from incorrect installation, negligence, fair wear and tear, misuse, alteration or repair by unqualified persons.
8. Firebird will not accept any liability in respect of any defect occurring to the product due to limescale build-up and or low return water temperature.
9. The warranty programme extends to reasonable labour costs EXCEPT in the case of a 5 year warranty period whereby any valid claim made after 3 years will not include labour costs.
10. Firebird's prior authorisation must be obtained before examination or repair of the product takes place.
11. Firebird will examine all claims made under the warranty programme and for any claims that are deemed invalid, the costs incurred will be borne by the owner.
12. The warranty programme only applies where the product was used for normal domestic heating purposes.
13. Any defective part removed under any or all of the warranty programmes MUST be returned to Firebird.
14. If this appliance is installed in a pressurised system, failure to correctly size the expansion vessel may damage the boiler and invalidate the warranty
15. A full set of warranty conditions and terms can be found on the Firebird website.

STATUTORY RIGHTS OF THE OWNER ARE NOT AFFECTED BY THIS WARRANTY

TECHNICAL PARAMETERS FOR BOILER SPACE HEATERS & BOILER COMBINATION HEATERS AS PER REGULATION 813/2013 (TABLE 1 - ANNEX II) (TABLE 7 - ANNEX V)

Model(s)					Envirogreen Exceed Combi Xceed & Combipac Xceed 20, 26 & 35 kW Models				
Condensing Boiler					Yes				
Low Temperature (²) Boiler					No				
B11 Boiler					No				
Cogeneration Space Heater					No				
Combination Heater					Yes				
Item	**Symbol**	**Value**	**Unit**	**Item**		**Symbol**	**Value**	**Unit**	
Rated Heat Output	*Prated*	20	kW	**Seasonal Space Heating Energy Efficiency**		η_s	92.53	%	
For boiler space heaters and boiler combination heaters: Useful Heat Output				***For boiler space heaters and boiler combination heaters: Useful Efficiency***					
At rated heat output and high temperature regime (¹)	*P 4*	20	kW	At rated heat output and high temperature regime (¹)		η_4	92.72	%	
At 30 % of rated heat output and low temperature regime (²)	*P 1*	6.0	kW	At 30 % of rated heat output and low temperature regime (²)		η_1	99.12	%	
Auxiliary Electricity Consumption				Other Items					
At Full Load	*elmax*	0.178	kW	Standby Heat Loss		*P stby*	0.073	kW	
At Part Load	*elmin*	0.062	kW	Ignition Burner Power Consumption		*P ign*	0	kW	
In Standby Mode	*P SB*	0	kW	Annual Energy Consumption		*Q HE*	62.2	kWh or GJ	
				Sound Level Power Level,Indoors		*L WA*	65	dB	
				Emissions of Nitrogen Oxides		*No x*	57	mg /kWh	
For Combination Heaters									
Declared Load Profile XL				Water Heating Energy Efficiency		η_{wh}	75.24	%	
Daily Electricity Consumption	*Q elec*	0.384	kWh	Daily Fuel Consumption		*Q fuel*	24.39	kWh	
Annual Electricity Consumption	*AEC*	108.18	kWh	Annual Fuel Consumption		*AFC*	1953	GJ	
Contact Details	Firebird Heating Solutions, Ballymakeera, Co. Cork P12 HK51, Ireland								

Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Rated Heat Output	*Prated*	26	kW	**Seasonal Space Heating Energy Efficiency**	η_s	92.57	%
For boiler space heaters and boiler combination heaters: Useful Heat Output				***For boiler space heaters and boiler combination heaters: Useful Efficiency***			
At rated heat output and high temperature regime (¹)	*P 4*	26	kW	At rated heat output and high temperature regime (¹)	η_4	95.59	%
At 30 % of rated heat output and low temperature regime (²)	*P 1*	7.8	kW	At 30 % of rated heat output and low temperature regime (²)	η_1	98.13	%
Auxiliary Electricity Consumption				Other Items			
At Full Load	*elmax*	0.184	kW	Standby Heat Loss	*P stby*	0.073	kW
At Part Load	*elmin*	0.046	kW	Ignition Burner Power Consumption	*P ign*	0	kW
In Standby Mode	*P SB*	0	kW	Annual Energy Consumption	*Q HE*	80.9	kWh or GJ
				Sound Level Power Level,Indoors	*L WA*	65	dB
				Emissions of Nitrogen Oxides	*No x*	74	mg /kWh
For Combination Heaters							
Declared Load Profile XL				**Water Heating Energy Efficiency**	η_{wh}	75.33	%
Daily Electricity Consumption	*Q elec*	0.314	kWh	Daily Fuel Consumption	*Q fuel*	24.53	kWh
Annual Electricity Consumption	*AEC*	92.49	kWh	Annual Fuel Consumption	*AFC*	19.59	GJ
Contact Details	Firebird Heating Solutions, Ballymakeera, Co. Cork P12 HK51, Ireland						

Item	**Symbol**	**Value**	**Unit**	**Item**	**Symbol**	**Value**	**Unit**
Rated Heat Output	*Prated*	35	kW	**Seasonal Space Heating Energy Efficiency**	η_s	92.56	%
For boiler space heaters and boiler combination heaters: Useful Heat Output				***For boiler space heaters and boiler combination heaters: Useful Efficiency***			
At rated heat output and high temperature regime (¹)	*P 4*	35	kW	At rated heat output and high temperature regime (¹)	η_4	91.96	%
At 30 % of rated heat output and low temperature regime (²)	*P 1*	10.5	kW	At 30 % of rated heat output and low temperature regime (²)	η_1	97.8	%
Auxiliary Electricity Consumption				Other Items			
At Full Load	*elmax*	0.165	kW	Standby Heat Loss	*P stby*	0.073	kW
At Part Load	*elmin*	0.055	kW	Ignition Burner Power Consumption	*P ign*	0	kW
In Standby Mode	*P SB*	0	kW	Annual Energy Consumption	*Q HE*	108.9	kWh or GJ
				Sound Level Power Level,Indoors	*L WA*	65	dB
				Emissions of Nitrogen Oxides	*No x*	61	mg /kWh
For Combination Heaters							
Declared Load Profile XL				**Water Heating Energy Efficiency**	η_{wh}	70.03	%
Daily Electricity Consumption	*Q elec*	0.273	kWh	Daily Fuel Consumption	*Q fuel*	26.55	kWh
Annual Electricity Consumption	*AEC*	81.77	kWh	Annual Fuel Consumption	*AFC*	21.14	GJ
Contact Details	Firebird Heating Solutions, Ballymakeera, Co. Cork P12 HK51, Ireland						

8 PRODUCT FICHE / PARAMETERS - SLIMLINE COMBI

TECHNICAL PARAMETERS FOR BOILER SPACE HEATERS & BOILER COMBINATION HEATERS AS PER REGULATION 813/2013 (TABLE 1 - ANNEX II) (TABLE 7 - ANNEX V)

Model(s)	Envirogreen Slimline Combi 20 & 26 kW Models
Condensing Boiler	Yes
Low Temperature (²) Boiler	No
B11 Boiler	No
Cogeneration Space Heater	No
Combination Heater	Yes

Item	Symbol	Value	Unit
Rated Heat Output	*Prated*	20	kW
For boiler space heaters and boiler combination heaters: Useful Heat Output			
At rated heat output and high temperature regime (¹)	*P 4*	20	kW
At 30 % of rated heat output and low temperature regime (²)	*P 1*	6.0	kW
Auxiliary Electricity Consumption			
At Full Load	*elmax*	0.178	kW
At Part Load	*elmin*	0.062	kW
In Standby Mode	*P SB*	0	kW
For Combination Heaters			
Declared Load Profile XL			
Daily Electricity Consumption	*Q elec*	0.302	kWh
Annual Electricity Consumption	*AEC*	66.3	kWh
Contact Details	Firebird Heating Solutions, Ballymakeera,Co. Cork P12 HK51, Ireland		

Item	Symbol	Value	Unit
Rated Heat Output	*Prated*	26	kW
For boiler space heaters and boiler combination heaters: Useful Heat Output			
At rated heat output and high temperature regime (¹)	*P 4*	26	kW
At 30 % of rated heat output and low temperature regime (²)	*P 1*	7.8	kW
Auxiliary Electricity Consumption			
At Full Load	*elmax*	0.184	kW
At Part Load	*elmin*	0.046	kW
In Standby Mode	*P SB*	0	kW
For Combination Heaters			
Declared Load Profile XL			
Daily Electricity Consumption	*Q elec*	0.308	kWh
Annual Electricity Consumption	*AEC*	67.7	kWh
Contact Details	Firebird Heating Solutions, Ballymakeera,Co. Cork P12 HK51, Ireland		

Item	Symbol	Value	Unit
Seasonal Space Heating Energy Efficiency	η *s*	92.53	%
For boiler space heaters and boiler combination heaters: Useful Efficiency			
At rated heat output and high temperature regime (¹)	η *4*	92.72	%
At 30 % of rated heat output and low temperature regime (²)	η *1*	99.12	%
Other Items			
Standby Heat Loss	*P stby*	0.073	kW
Ignition Burner Power Consumption	*P ign*	0	kW
Annual Energy Consumption	*Q HE*	62.2	kWh or GJ
Sound Level Power Level,Indoors	*L WA*	65	dB
Emissions of Nitrogen Oxides	*No x*	57	mg /kWh
Water Heating Energy Efficiency	η *wh*	75.15	%
Daily Fuel Consumption	*Q fuel*	26.278	kWh
Annual Fuel Consumption	*AFC*	19.5	GJ

Item	Symbol	Value	Unit
Seasonal Space Heating Energy Efficiency	η *s*	92.57	%
For boiler space heaters and boiler combination heaters: Useful Efficiency			
At rated heat output and high temperature regime (¹)	η *4*	95.59	%
At 30 % of rated heat output and low temperature regime (²)	η *1*	98.13	%
Other Items			
Standby Heat Loss	*P stby*	0.073	kW
Ignition Burner Power Consumption	*P ign*	0	kW
Annual Energy Consumption	*Q HE*	80.9	kWh or GJ
Sound Level Power Level,Indoors	*L WA*	65	dB
Emissions of Nitrogen Oxides	*No x*	74	mg /kWh
Water Heating Energy Efficiency	η *wh*	75.68	%
Daily Fuel Consumption	*Q fuel*	26.027	kWh
Annual Fuel Consumption	*AFC*	19.3	GJ

EU DECLARATION OF CONFORMITY

Manufacturer's Name: Firebird Heating Solutions

Manufacturer's Address: Údarás Ind. Estate, Ballymakeera, Co. Cork, P12 HK51, Ireland

We declare that the following products:

Firebird Envirogreen Combi Xceed 12-20kW	ECE020IXC
Firebird Envirogreen Combi Xceed 20-26kW	ECE026IXC
Firebird Envirogreen Combi Xceed 26-35kW	ECE035IXC
Firebird Envirogreen Combipac Xceed 12-20kW	ECE020EXC
Firebird Envirogreen Combipac Xceed 20-26kW	ECE026EXC
Firebird Envirogreen Combipac Xceed 26-35kW	ECE035EXC

Comply with the following Directives, including the most recent amendments and the relevant National Harmonisation legislation currently in force:

- Commission Regulation (EU) 813/2013 (Directive 2009/125/EC).
- Labelling of Energy Products EU 811/2013 (Directive 2010/30/EU)
- Low Voltage Directive (LVD) 2014/35/EU.
- Electromagnetic Compatibility (EMC) (Directive 2014/30/EU).
- Boiler Efficiency Directive 92/42/EEC.
- BS EN 60335-1:2012 + A13: 2017.
- BS EN 60335-2-102: 2006 + A2: 2016.
- BS EN 55014-1: 2017.
- BS EN 55014-2:2015.
- BS EN 304: 2018.

Testing Body: Kiwa Gastec UK and Kiwa Nederland B.V.
Kiwa Test Report No: 80602 and 80666

This declaration is issued by:

Name: Paul McGuckin
Technical Manager

Address: Ballymakeera, Co. Cork.

Date of issue: 11th December 2024

Firebird
The Future of Home Heating

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