

Woodpecker 20 / 30 / 40 / 50kW Model
(incorporating Gerkros Boiler Management System (BMS))

User / Installation Manual



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1. Introduction

This manual is produced for the reference and guidance of Gerkros registered installation/servicing engineers and most importantly, the householder. EU legislation governs the manufacture, testing, operation, efficiency and installation of all domestic wood pellet boiler appliances. The Gerkros “Woodpecker” range of wood pellet boilers meet the essential requirements of the appropriate EU standards.

Your “Woodpecker” wood pellet boiler is a free standing boiler fitted with a highly efficient wood pellet burner controlled by the Gerkros Boiler Management System(BMS) to provide hot water for your heating circuits and domestic hot water. For domestic hot water it is recommended that a Gerkros “Dolphin Range” indirect stainless steel cylinder is used in conjunction with the wood pellet boiler. These boilers are intended for use with a fully pumped central heating system or a gravity primary system. For use in a sealed system it is the responsibility of the boiler installer to ensure that an appropriately sized expansion vessel is used and correctly installed. The “Woodpecker” is designed with the installer, service engineer and user in mind by providing easy access to all pipe tappings and simple and user friendly control panel. Timer control of the boiler can be by the BMS time clock on the controller or by a remote time clock or digital programmer in the house.

All boilers are tested and certified to meet the essential requirements of the EU Directives, in particular EN 303-5.

All finished goods also meet the essential requirements of the Low Voltage Directive (Annex 1 of Council Directive 73/23/EEC) and the EMC Emissions testing.

All Gerkros Boilers are designed and manufactured to the highest standards with only H.R.4, H.R. I5, ST 37/2 grade steel being used. All boiler shells carry a manufacturer's five-year warranty. Gerkros recommend that only the woodpellet products outlined in the “Fuel” section of this manual be used in conjunction with this product.

All Gerkros products carry a unique serial number and this number must be quoted on all service queries. All Gerkros boiler products must be commissioned by Gerkros authorised technicians. The BMS will remain locked until such time as the installation is to the requirements of Gerkros and all local bye-laws and Building Regulations. Commissioning may be arranged by sending the completed Pre-Commissioning Checklist to Gerkros. The Commissioning Report at the back of this booklet must be fully completed, signed by the householder and returned to Gerkros within 14 days of commissioning for the warranty to be put in place.

It is recommended that boilers are installed by fully qualified and experienced personnel. Damage caused to the boiler, burner or BMS by poor installation or mis-use will invalidate the warranty. Commissioning must only take place by a Gerkros authorised technician.

2. Installation Instructions

2.1 Unpacking your Woodpecker

When you receive delivery of your “Woodpecker” pellet boiler the customer should check that the following items have been included as part of the kit :

- “Woodpecker” pellet boiler c/w BMS controller
- Flue starter pipe with draught stabiliser
- Pellet Burner (complete with fixing flange with gasket (20/30kw) or holding bolts (40/50kw) and sealing rope.
- Exhaust fan with gasket.
- Ash Pan
- 1.3m long auger complete with motor
- Standard 150kg hopper complete with lid.

Any items which may have been inadvertently omitted from the delivery must be communicated to Gerkros within 5 working days.

2.2 Quick-Step Installation Guide

1. Locate the boiler as per section 2.3
2. Connect the starter flue (with draught stabiliser) onto the smoke box at the rear of the boiler. (section 2.6)
3. Position the insulated flue pipe (or elbow) roughly onto the starter flue to mark the wall/roof through which the flue will run.
4. Cut the opening for the flue pipe in the wall/roof and connect the flue to the starter pipe. Make sure the flue is well supported and is to the required height. (section 2.6).
5. Make the plumbing connections to the rear of the boiler. (section 2.5).
6. Fit the exhaust fan to the rear of the boiler connect it to the fan power cable.
7. Locate the hopper, insert the auger and fit the auger motor. fit the flexi-pipe to the auger.
8. Connect the pump power cable to the circulation pump.
9. Connect the mains power cable to the 5 amp fused spurs. (section 2.9)
10. Remove the burner from it's packaging and configure it for fitting to the burner door on the boiler (section 2.10). Connect the burner power cable to the burner.
11. Flush out the plumbing system with water.
12. Fill the system to the required pressure.
13. Turn on the Permanent Power supply to the boiler
14. Run the pump to vent out all the air from the system. (hold the ESC button for 3 seconds until the beep). To turn off the pump hold the ESC key for 3 seconds.
15. Fill the hopper with pellets. (Only EU standard pellets may be used).
16. Fill the Auger with Pellets. Press MENU. Scroll up with button 3 until you reach the LOAD menu. Press MENU to select. Press MENU again to run the Auger. This will run the auger for 10 minutes. Press ESC 3 times to return to the main screen.
17. Fill out the Pre-Commissioning checklist and return to Gerkros so a date can be arranged for commissioning by Gerkros personnel only.

2.3 Locating and Installing the Boiler

The “Woodpecker” boiler is recommended to be located in a garage or boiler house. All current building regulations (Part J – Heat Producing Appliances) must be complied with when installing heat producing appliances.

The boiler should be located on a constructional hearth of a solid, non-combustible level surface such as a concrete plint at least 125mm thick, which must be able to take the weight of the appliance when full. The constructional hearth must extend beyond the appliance as indicated in Diagram 1.

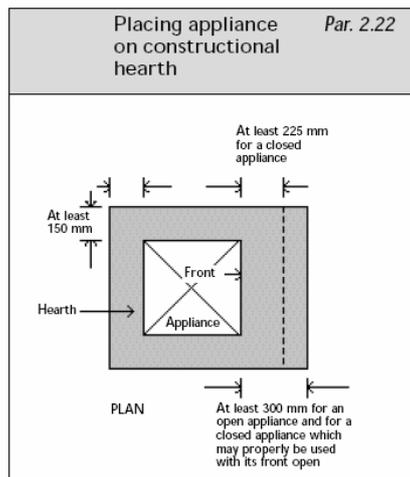


Diagram 1

Allow for adequate clearance around the boiler for connection of the pipework, allow 250mm at the back of the smoke box (to fit an exhaust fan), removal of the fan at the rear and for servicing and general maintenance Refer to Diagram 2.

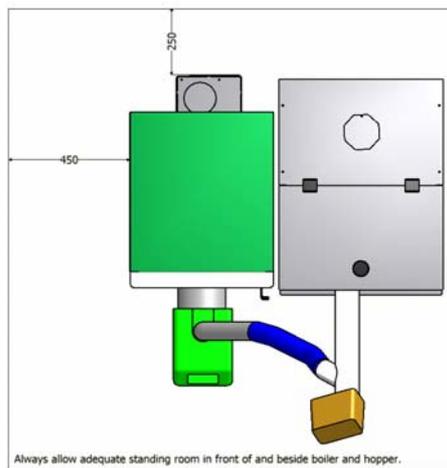


Diagram 2

2.4 Locating and Installing the Hopper / Auger

Once the hopper has been assembled the hopper should be located as per the footprint in Diagram 3.

Fit the motor onto the end of the 1.3m long auger pipe, as per assembly instructions, and fit the end of the auger into the receiving box fitted to the underside of the hopper. Move the hopper so that the outlet from the top of the auger is positioned so that a fall of 45° exists between the auger outlet and the top of the pellet inlet pipe to the burner. Secure the ends of the pellet flexi-pipe onto the auger spigot and the pellet inlet pipe adaptor of the burner with the jubilee clips provided. A slight offset on the flexi-pipe is recommended to prevent the pellets travelling too fast into the burner. It is recommended that the hopper is kept a minimum of 1/3 full at all times. This will prevent bridging of pellets in the bottom of the auger and allow for a uniform power input into the burner. Level sensors may be installed on the small hopper as an accessory at an additional charge.

The lid or cover must be closed on the hopper after every fill to prevent any foreign matter ingress into the pellet storage.

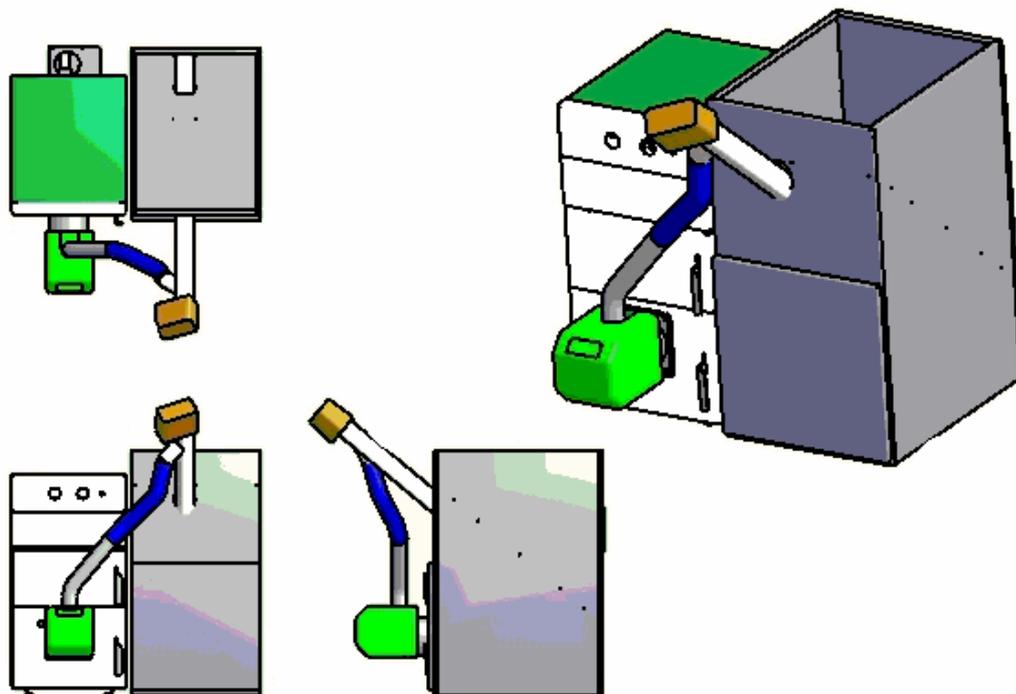


Diagram 3

2.5 Plumbing Connections

Diagram 4 indicates the water connections at the rear of the boiler for connection to your plumbing system.

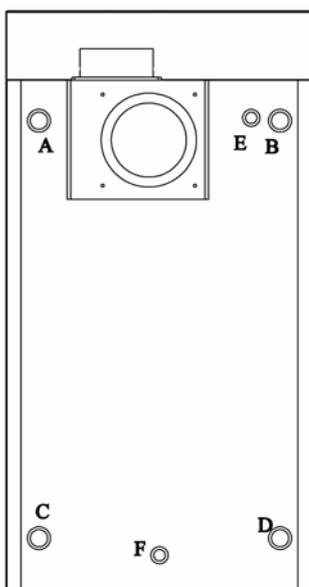


Diagram 4

A & B - 1" Flow Connections

C & D - 1" Return Connections

E - 1 x 1/2" connection (20/30 kw model)

2 x 1/2" connections (40/50 kw model)

(For use with automatic air vent and pressure relief valves.)

F - 1/2" drain connection

It is recommended that the boiler is plumbed into an open vented system (the maximum static head of water permissible is 90 ft. (27.44 metres)), but if it is being connected to a sealed system an appropriately sized expansion vessel should be used and installed as per manufacturers instructions. The expansion vessel should be sized based on a water capacity in the boiler of 65 litres in the 20/30kW model and 75 litres in the 40/50kW model. Guidance is given in the formula below for the most appropriate size of vessel :

If the system volume is known, expansion vessels can be sized with the formula:

$$V = \frac{eC}{1 - \frac{p1}{p2}} + 25\% \text{ Contingency}$$

- V The total volume or nominal size of the expansion vessel. It is not the acceptance volume. (See product description).
- C The total volume of water in the system.
- P1 The fill pressure of the system in Bars absolute (atmospheric or gauge pressure plus one Bar).
- P2 The setting of the expansion/pressure relief valve in Bars absolute (atmospheric or gauge pressure plus one Bar).
- e The expansion factor that relates to the maximum system requirements.

Expansion factor 'e'	Temperature °C
0.032485	85
0.035990	90
0.039695	95
0.0434100	100

Note : Incorrectly sized expansion vessels will invalidate the warranty.

The pump must always be placed on the return water pipe just before it enters the boiler. It is recommended that a bypass pipe between the flow and return is used. A valve should be located on the bypass to regulate the quantity of hot water returning to the boiler from the flow pipe.

If only one flow and one return is required from the boiler the other remaining flow and return connections can be plugged. Flow and return connections should be taken from opposite side of the boiler.

An automatic air vent and pressure relief valve must be connected to the ½” socket indicated “E”. On the 40/50kw boiler there are two connections to serve this purpose. Pressure relief valves should be piped to the ground or to a drain to prevent injury to technicians or the Customer.

The Woodpecker wood pellet boiler can be installed into an existing conventional plumbing system but for improved efficiency Gerkros recommend that a buffer tank is used. Buffer tanks (direct cylinders) can achieve the optimum running of the system in terms of efficiency and running costs. An indicative schematic is outlined in Diagram 5

The Customer can vent the system by running the pump by holding down the ESC button on the control panel for 3 seconds. To turn off the pump the hold down the ESC button again for 3 seconds.

The circulation pump is controlled by the controller on the boiler. It is factory set to activate at 50°C and de-activate at 47°C. The control system has in-built frost protection which will activate the pump at water temperatures less than 4°C.

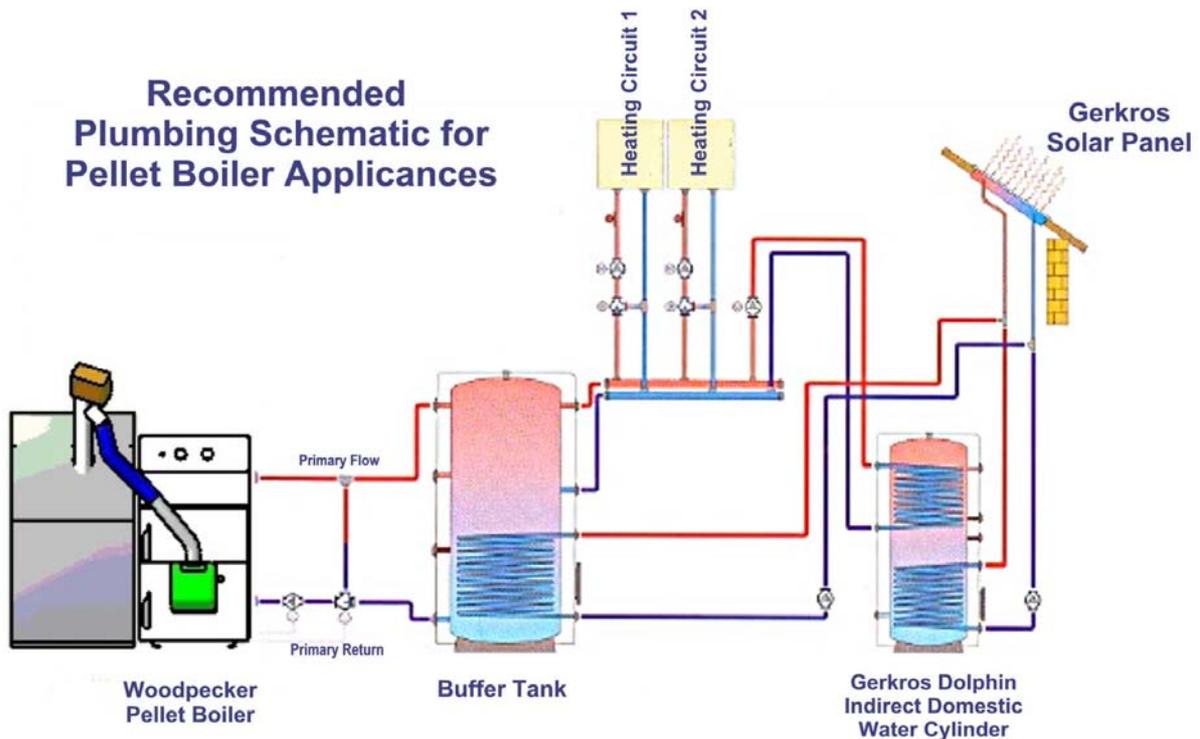


Diagram 5

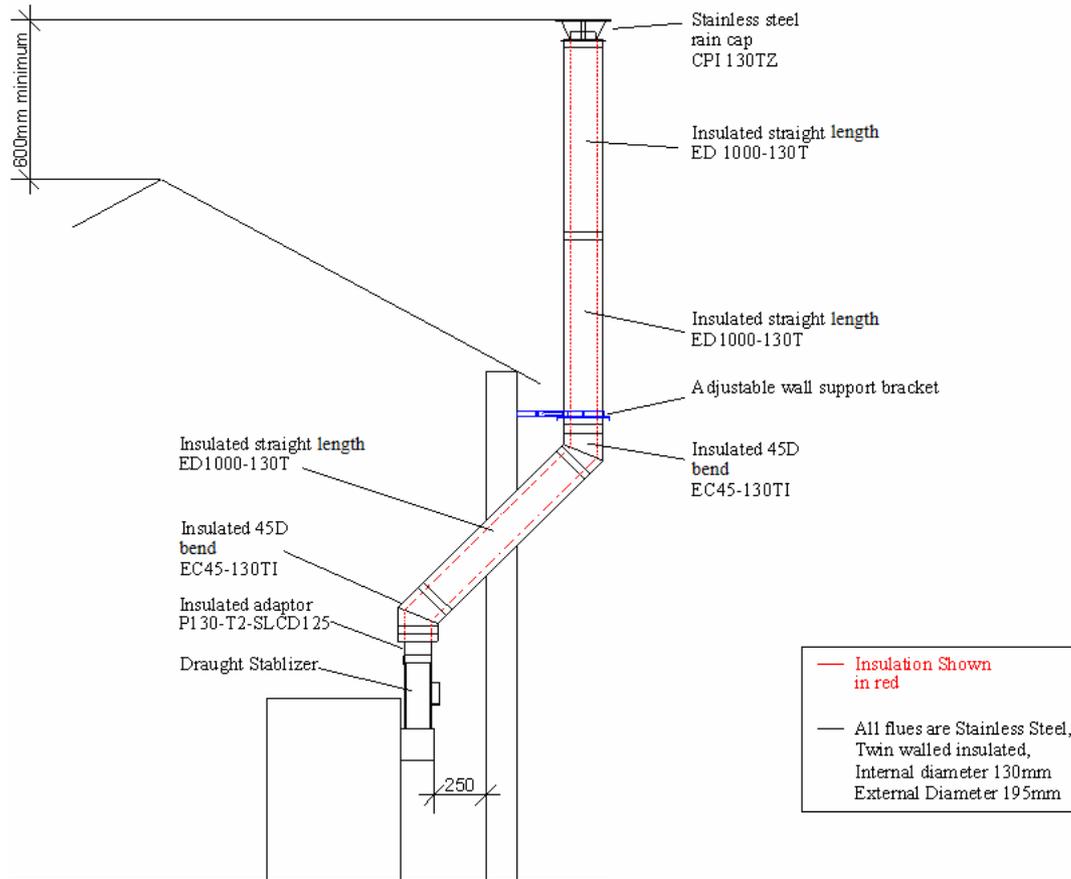
2.6 Flue Connections & Free Air Requirements

It is the responsibility of the customer to ensure that a natural draught exists in the boiler when connected to the flue (min. 10 Pa) and this will be checked by the Commissioning Engineer before the burner is run. If this is not the case then the customer must take the necessary measures to ensure a draught. A revisit by the Commissioning Engineer to complete commissioning if the flue is inadequate will incur an additional charge.

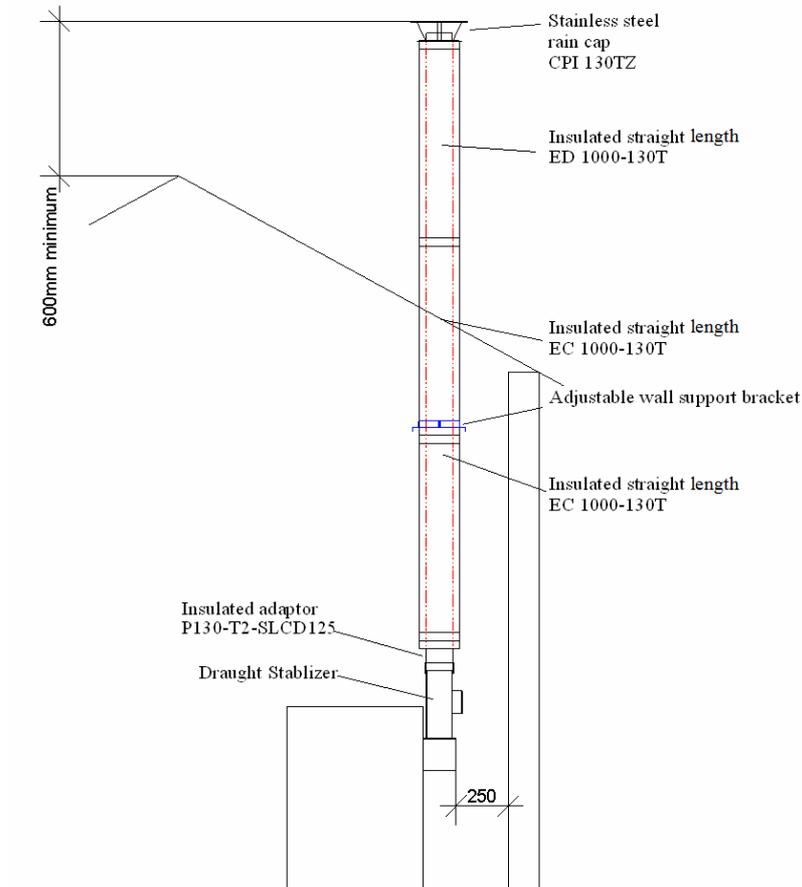
The proper draught conditions in the flue pipe is critical for the efficient working of woodpellet boilers. Gerkrös recommend that it's Therm-inox range of **5" stainless steel twin-walled insulated flue pipe** is used with its "Woodpecker" boilers. A draught stabiliser is fitted as standard to the short section of flue pipe that connects to the boiler. This will help stabilise draught in average wind conditions. The flue can exit the boiler house/garage through the roof or through the wall by using a bend on the flue. Diagram 6 indicates recommended flue layouts Installation must comply with the current Building Regulations and local by-laws. Reference should also be made to the following British Standards BS 5401 , BS 4543, BS 4876, BS 1181 and BS 715.

In order to avoid down draught, the chimney or flue must terminate in a position **at least 600mm higher than the highest point on a roof, tree or building within a distance of 9 metres (30 ft.)**. Down draughts will affect the performance of the burner and must be eliminated and will cause the safety features on the appliance to come into operation.

Diagram 6



Flue Pipe Existing Through a Wall



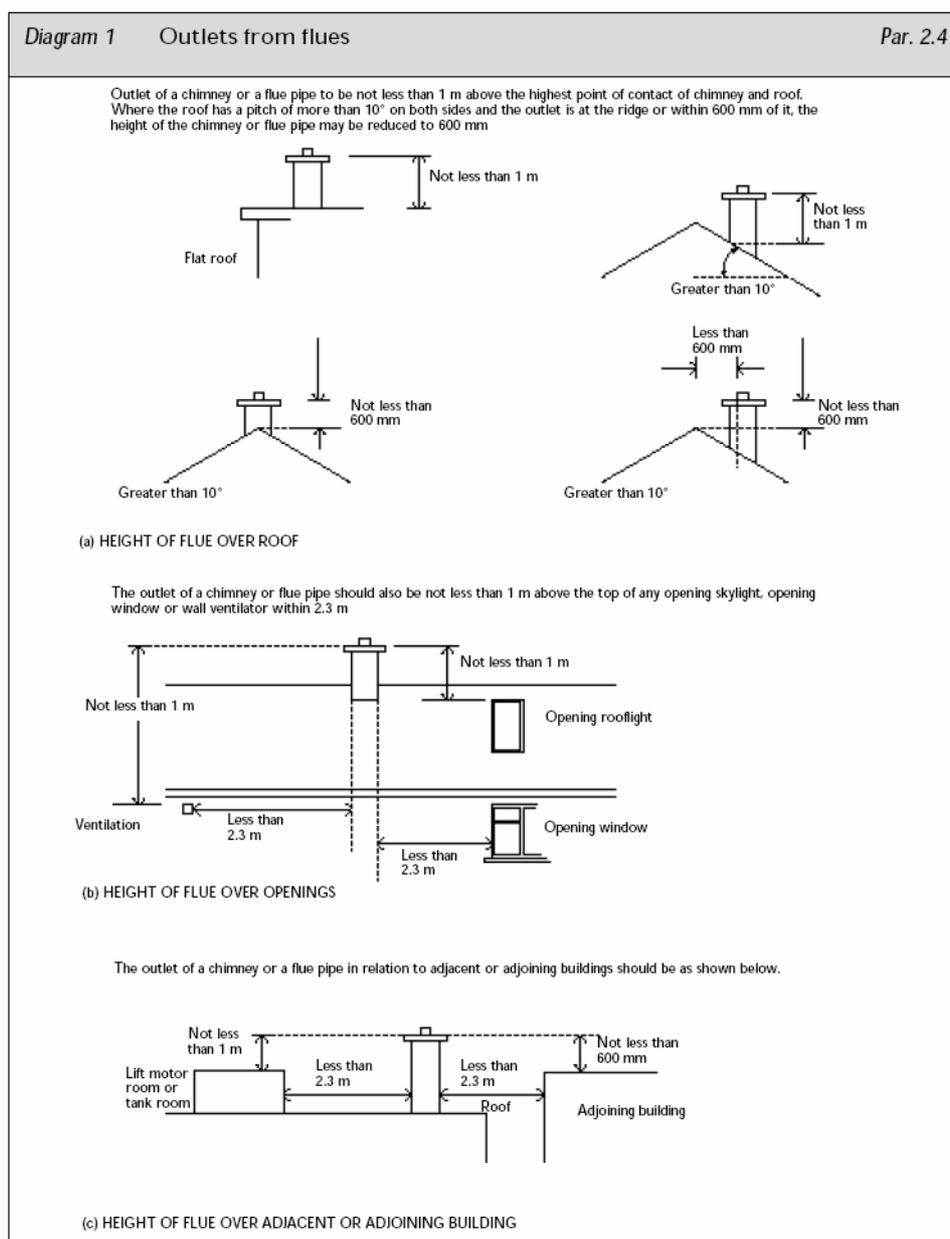
Flue Pipe Existing Through a Roof

Down Draught:

Guidance on the correct height is detailed in Diagram 7. If the proper flue height cannot be achieved the commissioning engineer may refuse to commission the boiler. Whenever possible, the flue should terminate above the apex of the roof; if this is not possible, use a cowl that is specified as anti-downdraught by the cowl manufacturer. Use as few bends as possible but when necessary 135° bends are recommended. In cases where the boiler is commissioned with a lower height flue but the necessary draught conditions are achieved on the day of commissioning, the Customer must sign the Commissioning Report stating that any issues arising from the flue not to the required height will not be covered under warranty.

The chimney or flue must have a cross-sectional area throughout its whole length that is at least the area of flue outlet of the boiler and must be sealed to the boiler with fire clay or another suitable compound.

Diagram 7



Extract from Building Regulations – Part J Heat Producing Appliances. Draught Regulation

The chimney or flue should be of sufficient height to provide draught of min. 10 Pa measured at the test hole in the top of the boiler. Draught conditions that are excessive, measured at the test hole in the top cleaning door of the boiler, due to chimney height or location should be controlled by means of the draught stabiliser fitted to the chimney to ensure a draught of not more than 40 Pa exists. In some instances where the boiler is located in exposed sites a second stabiliser may be required where natural draught exceeds 40 Pa.

The newly developed design of the regulator makes it possible to install it on the flue pipe in all possible positions, angled, vertically as well as horizontally. The regulator can be fitted the short flue section supplied with the boiler. Possible leaks can easily be sealed off with a gasket, putty or other suitable sealing substances.

Counterbalancing the flap

After installation the two screws should be loosened and the balance spindle turned to a horizontal position when the flap is closed. Tighten screws.

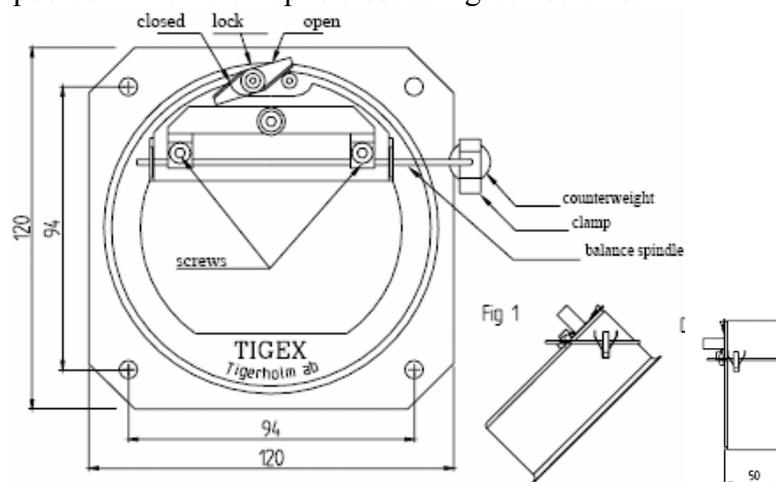
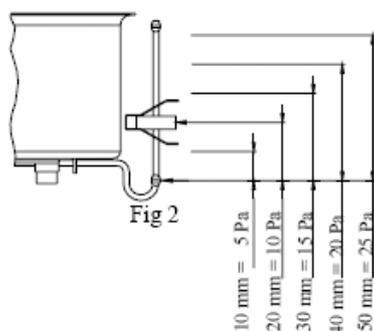


Diagram 8

Adjustment of Underpressure

Adjustment of the underpressure opening the flap is made by pressing the clamp on which the weight is fitted and move it along the spindle. The underpressure is changed approx. 1 Pa every 2mm the weight is moved, see fig. 2. The values are approximate and must be controlled with a draught indicator if exact under-pressure is required. The flap is set at approx. 10 Pa at delivery.



Opening of the flap on the regulator differs depending on the adjustment as well as the draught in the chimney. The draught varies considerably depending on the chimney, the weather and if the burner runs or not. This means that the function can vary between different installations, **e.g. the flap opens more or less when the burner is running, flutters when the burner starts or a door is being closed, etc.**

Diagram 9

External Flues:

All external flues of metal or other materials should have cleaning facilities and be well insulated to maintain the correct draught conditions.

Internal Flues:

The exposed flue pipe between the boiler flue off-take and the chimney proper (either internally or externally) must not be of asbestos. Vitreous Cast Iron, Steel or similar materials should be used and insulated. When connecting a boiler to an existing chimney, a flexible liner must be used and the space between flexible and existing flue be filled with insulation and sealed top and bottom.

Low Level Flues:

The use of low level flues is not recommended.

Choice of Materials

The materials used in the construction of chimneys and flues should be such that the construction is non-combustible, durable, resistant to temperatures likely to be encountered, to rapid changes in temperature and resistant to external and internal corrosion. Materials for lining flues should have a reasonably smooth finish and thus not unduly impede the flow of the combustion gas products. They should be resistant to potential attacks by flue gases and to spalling.

Materials used should be resistant to temperatures in excess of 300° C.

Free Air Requirements**Provision for air for combustion and ventilation:****General:**

A sufficient permanent air supply to the appliance will be required for:

- (a) Correct combustion of fuel and an effective discharge of combustion products to the open air.
- (b) The ventilation of any confined space in which an appliance is installed to prevent overheating of the appliance and any equipment in and near the appliance.
- (c) The satisfactory operation of any draught break or stabiliser which may be fitted.

It should be both the Architect's and the installer's concern that the air required for these functions be introduced so as to cause as little discomfort as possible to building occupants and thus to offer them the least temptation to obstruct ventilation.

Air for Combustion:**Ventilation air for Combustion**

Other solid fuel
appliance

A permanent air entry or opening with a total free area of at least 550 mm² per kW of rated output above 5 kW shall be provided but in no case less than 6500 mm².

Where a flue draught stabiliser is used the total free area should be increased by 300 mm² for each kW of rated output.

Example

- Boiler rating 20 kW
- Air for Combustion 550 mm²/kW
= 550 * 20 = 11,000 mm²
= 105 mm * 105 mm (4 inch square)
- Air for Combustion 850 mm²/kW
(with stabiliser)
= 850 * 20 = 17,000 mm²
= 130 mm * 130 mm (5 inch square)

This requirement will be satisfied if the room or space in which the appliance is installed has an opening or duct which is designed to allow the passage of air at all times equivalent, in total free area, to 550 square mm/kW(2.5 sq. inches per 10,000 Btu's) of the appliance rating.

If the space containing the appliance has an extraction fan fitted, the supply of air should be such that the operation of the appliance and flue is unaffected when the windows and doors are closed and the extractor fan is running.

Air for Ventilation:

For an appliance in a confined space, care should be taken to provide air for ventilation. A working guide to the minimum free area of openings to be provided in addition to that for combustion air is as follows:

- (a) Where the air is taken from a heated space, 1100 sq. mm/kW (5.0 sq. inches per 10,000 Btu's) at low level.
- (b) Where the air is taken from outside, 550 sq. mm/kW at both high level and low level (2.5 sq. inches per 10,000 Btu's)

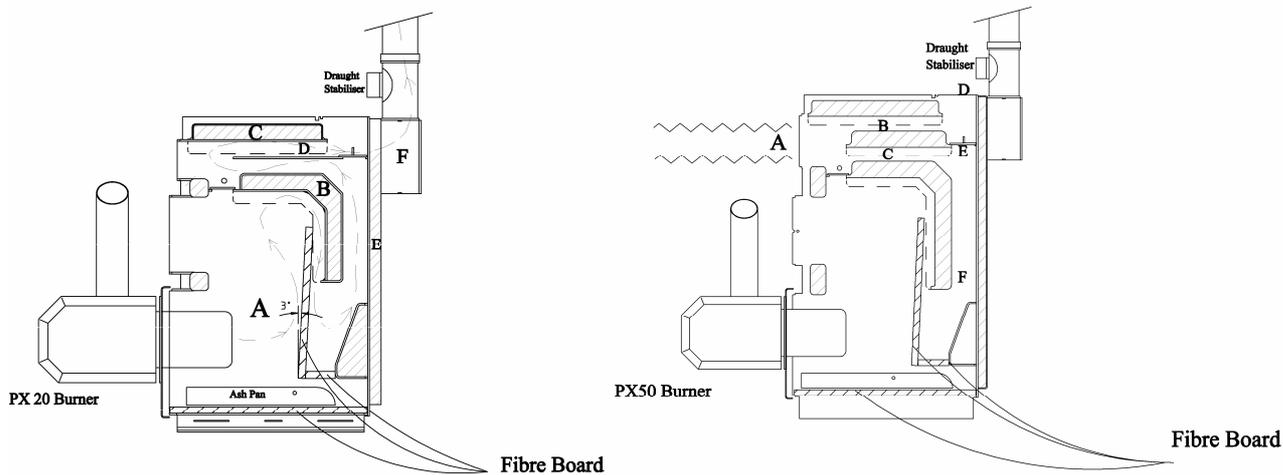
The warranty for such boilers could be affected if proper free air requirements are not provided.

Gerkrös recommend that two air vents should be provided into the room containing the appliance. One should be located at least 100mm above finished floor level and the other at high level. A single vent at high level may prevent fresh air from reaching the burner if the ambient temperature surrounding the appliance is high.

2.7 Boiler Features

The “Woodpecker” boiler is manufactured from a 5mm mild steel internal shell and 3mm external shell. The boiler has a 30mm external water jacket (E) with a main internal “L” shaped waterway (B) and a top waterway (C). Transfer fins are used on the “L” shaped waterway and the top waterway to increase the heating surface area to maximise the heat transfer to water. Within the combustion chamber (A) the passage of the flue gases is influenced by a refractory baffle in front of the burner flame. This baffle is reclined at a 3° angle to allow the gases to travel to the top of the chamber. The passage of gases is indicated by Diagram 10.

On the 20kW and 40kW model there is only one series of baffles accessed through cleaning door “A” in Diagram 5 and placed in flue gas passage way “D” and “B” respectively. In the 30kW and 50kW model there is one extra series of baffles in flueway “C” in each model. The baffle in flueway “C” can be removed for cleaning through cleaning door “A”. The back flue-way “F” is accessed through the top cleaning door “D” and by removing to the steel plate “E”.



(20/30 kW Boiler)

(40/50 kW Boiler)

Diagram 10

The ash pan in the boiler is used for the removal of ash for the boiler combustion chamber. Care should be taken when handling hot ash. Guidelines and advice is given in the Health and Safety section of this manual. To prevent excessive distortion of the ash pan it is recommended that a layer of ash is maintained in the ash pan to act as an insulating barrier.

2.8 Fuel

For the correct operation and efficient working of your wood pellet boiler system Gerkros recommend that only pellets that conform to European-wide CEN standard are used with their products . It is the responsibility of the Customer to ensure that only a quality grade pellet is used for the appliance. Issues arising for poor quality pellet and which necessitates a visit by a Gerkros technician is not covered under warranty and a call out charge will apply.

If you change your fuel brand or supplier contact your local servicing/commissioning Engineer (or Gerkros) for guidance on whether the burner needs to be adjusted. Pellets must be stored in a dry and well ventilated storage area free from moisture. Incorrect storage of pellets may degrade the pellet quality and may affect the performance of the burner.

In cases where the pellets appear to have a high fines/dust content the auger system may need to be cleaned periodically to maintain the correct feed rate of pellets to the system. Some pellet brands may require the burner to be cleaned at regular intervals to remove any residues which may be left behind.

Wood fuels that conform to the European-wide CEN standard means that the product is of the highest quality and that the consumer can have every confidence in choosing wood heating. CEN, the European Committee for Standardisation, established a Technical Committee to define standards for solid biofuels.

Recommended Specification for Wood Pellets for Domestic Heating:

Origin: Chemically untreated wood without bark

Moisture content: $\leq 10\%$

Dimensions: $\leq 6\text{ mm} \pm 0.5\text{ mm}$ and $L \leq 5 \times \text{Diameter}$ or $\leq 8\text{ mm} \pm 0.5\text{ mm}$, and $L \leq 4 \times \text{Diameter}$

Ash content: $\leq 0.7\%$

Sulphur content: $\leq 0.05\%$

Mechanical durability: 97.5% after testing

Amount of fines: $\leq 2.0\%$

Additives: $< 2\text{ w-\%}$ of dry basis

Energy density: Min. 4.7 kWh/kg.

*EU Standards : Austria: ÖNORM M1735 Sweden: SS 187120 and SS 187121
Germany: DIN 51731*

2.9 Electrical Connections

The boiler and controls require :

Permanent Live	230V 1 phase 50Hz electric supply with a 5 amp fused spur.	(Black)
Switched Live	230V 1 phase 50Hz electric supply with a 5 amp fused spur.	(Brown)
Neutral		(Blue)
Earth.		(Yellow / Green)

The 4 cables exiting the boiler at the left hand side are :

- White 4 core cable – Mains Supply
- White 3 core cable – Pump Supply
- Black cable – Auger Supply
- Grey 12 core cable – Burner Supply.

Power isolation (by means of a 5A fused spur, not a switch spur) should be provided adjacent to the “Woodpecker” so the power can be cut to all electrical components during installation and servicing. The central heating pump is controlled by the BMS controller and is preset to run at 50°C and turn off at 47°C.

Electrical installations should only be carried out by suitably qualified and certified electricians. If in doubt on any issue relating to the electrical connections on the appliance contact Gerkros Technical Support for guidance.

Only authorised Gerkros personnel may open the control panel on the boiler. Any interference with the wiring in the control panel will invalidate the warranty.

The boiler and complete plumbing system must be adequately earthed and bonded.

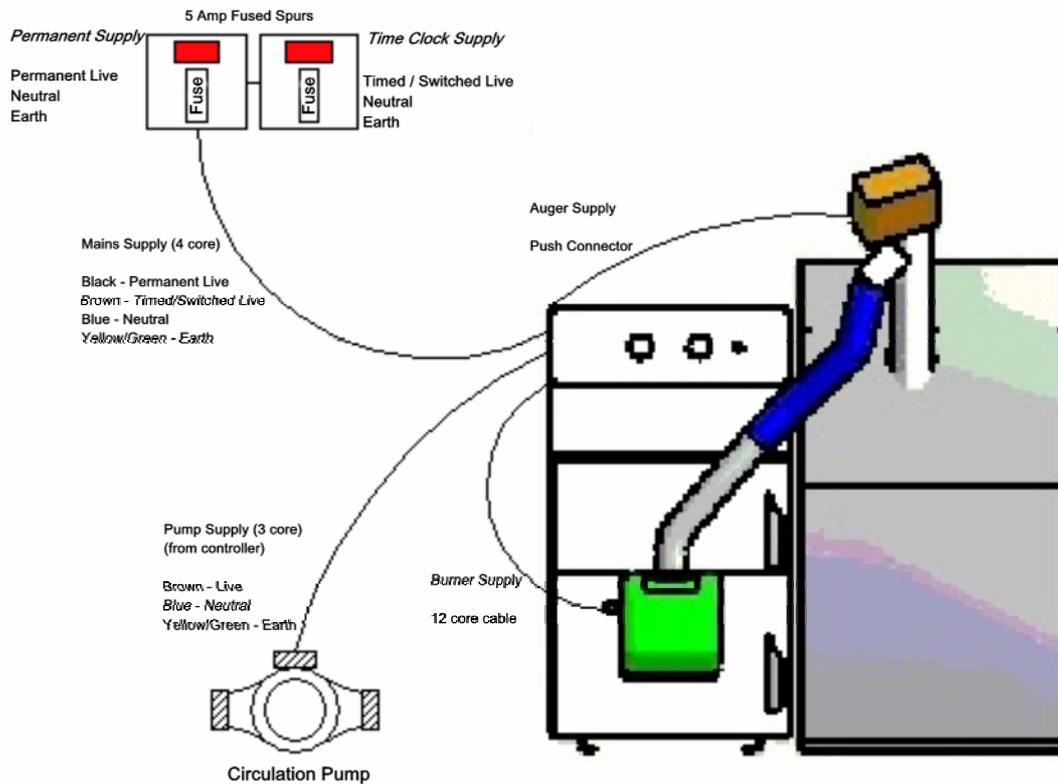


Diagram 11

2.10 Setting Up The Burner

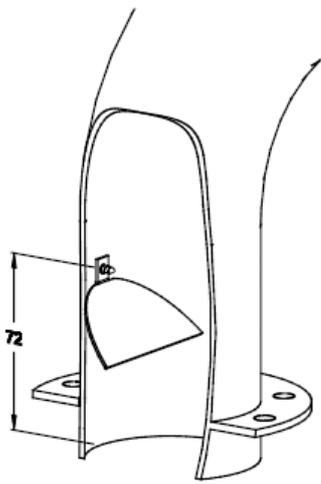
20/30kW Model

The pellet burner is to be mounted into the cast iron flange supplied with the burner. The flange is mounted to the to the bottom front door of the boiler by lining up the slots on the flange with the threaded holes on the door plate. Make sure the gasket provided is intact and is placed between the flange and the door. Secure the flange to the door with the 4 no. M8 bolts provided and tighten to ensure an adequate seal. Loosen the locking screw on the flange and insert the blast tube of the burner into the flange until the front plate is against the shoulder of the flange. Once the burner is located in a vertical position tighten the locking screw.

40/50kW Model

Remove the green cover from the burner and use the 4 M8 fixing bolts provided to secure the burner onto the bottom door of the boiler. Make sure the sealing rope provided is placed around the blast tube of the burner before tightening the bolts to make a seal between the front plate of the burner and the door face. Use the lock nuts on the bolts to make any small adjustments.

Ensure the pellet re-tarder is fitted into the stainless steel pellet feeding tube before the burner is commissioned. Remove the tube from the top of the burner by undoing the allen head screws. Insert the deflector plate into the tube so the fixing tab aligns with the screw. Tighten the screw until the deflector plate is secured in place. Make sure the deflector plate is facing downwards as indicated in the diagram.



Fit the safety thermostat to the underside of the pellet feed pipe making sure the disk face is in contact with the surface of the tube. Place the stainless steel cover over the thermostat and secure it in place with the two fixing screws provided.

Connect the power cable for the burner in onto the socket on the side of the burner and secure it with the two screws on the plug head

Diagram 12

2.11 Commissioning

Once the installation has been completed the Pre-Commissioning Checklist at the back of this manual must be sent to Gerkros and our Technical Support Team will advise the Customer on a time and date for commissioning. It is important that the Customer is present at the end of the commissioning so that the Commissioning Engineer can provide the Customer with User Instructions, Health & Safety Information and Maintenance Instructions. The Commissioning Report will also need to be signed in order to validate the Warranty.

The Commissioning Engineer may refuse to commission the boiler if items on the checklist have not been completed. Any return visits to commission the boiler will incur a re-visit charge.

Note : Only Gerkros personnel may commission this appliance. The controller is locked with a locking code on delivery and any interference with the controller hardware will invalidate the warranty.

3. Servicing / Maintenance

Important !!!!!!!

Always turn off the time clock and isolate the electrical supply to the boiler when cleaning/ servicing the boiler and burner.

Please refer to the Customer CD for Audio / Visual instruction and how to maintain the appliance.

3.1 General Maintenance for the Householder

Emptying the ash pan.

It is recommended that you observe the ash content over the first few weeks of the burners operation to determine how often the ash needs to be emptied. Generally, on average usage (5 hours daily), the ash should be emptied once every 3-4 weeks as the ash content from wood pellet is generally regarded as being approx. 0.1 – 1%. Care should be exercised when emptying the ash pan as it may be heavy or may contain hot ash. Always use heat resistant gloves when handling the ash pan. The following procedure should be followed when emptying the ash pan.

- Turn off the time clock.
- If the boiler has been running wait at least half an hour before attempting to remove and empty the ash pan.
- Disconnect the flexible pipe from the burner and open back the burner door.
- Check to see if the ash pan is cool enough to be handled with gloves.
- Carefully remove the ash pan and dispose of the ashes in a non combustible container. Never place hot ash in a plastic bag or plastic bin or in a metal bin with combustible material stored inside.
- Replace the ash pan and close the burner door securely.
- Reconnect the flexible pipe to the burner.

Burner cleaning.

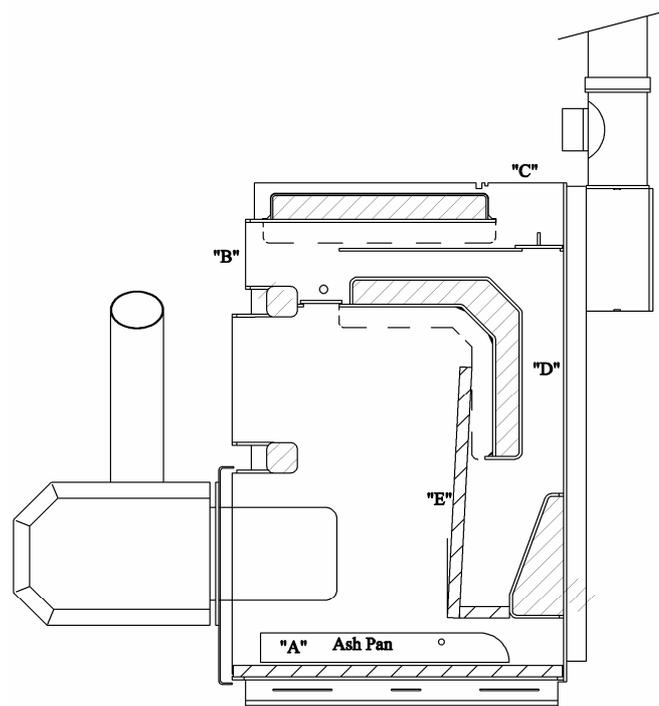
It is recommended that the burner is cleaned periodically to remove any residues which may form in the blast tube. These residues are formed from impurities which are non-combustible and may build up over time. The customer should observe the amount of residue in the blast tube when emptying the ash pan to determine how often the burner needs to be cleaned. The cleaning procedure is as follows :

- Remove the pellet stop from the front of the blast tube.
- With the tube scraper provided remove the residue from the tube.
- Replace the pellet stop carefully in the two locating holes.

Boiler cleaning.

If the flue gas temperature exceeds 250°C then there is some ash or soot preventing the heat from being transferred to the heating water in the boiler. If this is the case then the boiler surfaces must be cleaned to maintain efficiency and combustion quality. Always use heat resistant gloves when handling the ash pan and baffles. Cleaning the flueways in the boiler is done by the following procedure :

- Turn off the time clock.
- If the boiler has been running wait at least half an hour before attempting to open the burner door.
- Disconnect the flexible pipe from the burner and open back the burner door.
- Check to see if the ash pan is cool enough to be removed with gloves.(A)
- Open the center door of the boiler.
- Remove the access panel and open the two nuts which secure the cleaning door. (B)
- Remove the cleaning door and remove the baffles taking note of the orientation and arrangement of the baffles.
- Carefully remove the refractory baffles (E) in the combustion chamber. The main target board may be remove by lifting it approx 20mm and pulling out the bottom gently so it can drop to the base of the boiler.
- With a small brush or scraping tool brush the ash down into the ash pan area ensuring that all the metal surfaces of the boiler are clean.
- A vacuum cleaner may also be used to remove the ash.
- Carefully replace the refractory baffles in the combustion chamber and metal baffles in the flue gas passages.
- Replace the cleaning door, access panel and ash pan.
- Close all doors and reconnect the flexible pipe to the burner.



Internal Structure
Diagram 13

Auger Cleaning

An excessive amount of dust in the pellets could lead to a failed ignition (Er12) or the flame may die out in running mode (Er13). This is caused by the dust in the pellets collecting at the base of the hopper restricting the entry of the correct quantity of pellet into the feeder screw for transport to the burner. If the above errors appear on the display then the auger may need to be cleaned. This can be done even when the hopper is full of pellets. It can be cleaned as follows :

- Turn off the appliance at the time clock.
- Disconnect the auger motor cable from it's power supply.
- Mark the bottom of the auger pipe when it meets the front face of the hopper with a pen or marker.
- Pull the auger out of the receiving box on the base of the hopper and through the hole at the front of the hopper.
- Holding the pipe upright tap the end of the pipe on the ground until it is completely empty.
- To replace the auger push the pipe through the hole in the front of the hopper and into the receiving box.
- Using some force push the pipe into the pellets rotating it slightly until it can go no further.
- Reconnect the auger motor to it's power supply. On the control panel press MENU and scroll through the menu until you reach LOAD. Press MENU again so OFF appears on the display and press MENU again to run the auger.
- After approx 2 minutes push the pipe further into the hopper base until it can go no further.
- Repeat the above steps until the mark on the underside of the pipe meets the front face of the hopper again.

Note : *It is the responsibility of the customer to ensure that the boiler and burner are cleaned regularly and that the ash pan is emptied as often as is appropriate. Service calls for issues that have arisen due to the regular maintenance not being carried out by the customer are chargeable.*

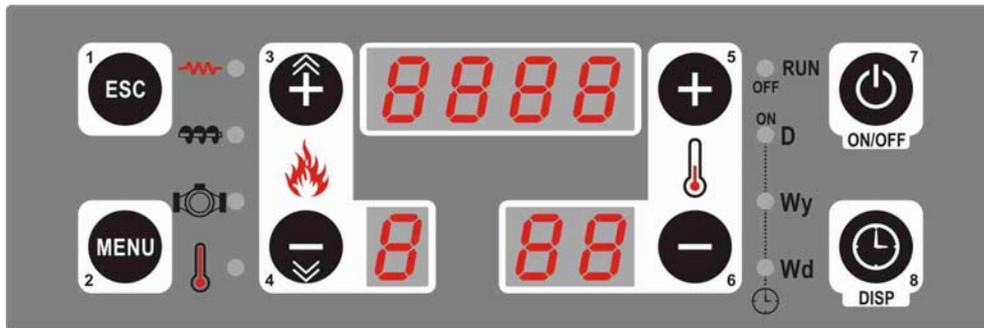
3.2 Servicing

It is recommended that the boiler and burner are serviced annually. This will involve a Gerkros registered technician undertaking a complete clean of the boiler and burner. The ignition element in the burner will be changed during the annual service. All burner and boiler components will be checked to ensure they are working satisfactorily. The boiler will be run for a short period after the service to ensure the efficiency and flue gas emissions are within the prescribed levels. The Technician may give some recommendations to the Customer on the correct operation and maintenance of the appliance.

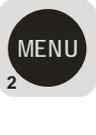
4. Boiler Controls

The BMS (Boiler Management System) controls all functions of the boiler and associated hardware (i.e. circulation pump, mini hopper auger motor, exhaust fan, etc.). The control panel display indicates the system state at which the boiler is running in real time as well as providing the Customer with a user friendly way of adjusting temperature and identifying clearly any issues which may occur system.

The control panel display is laid out as follows :



4.1 Buttons : The Buttons on the display have the following functions (note that most of the buttons have more than one function) :

BUTTON	FUNCTION		DESCRIPTION
	1	ON\OFF	Used to turn ON / OFF the boiler manually. Hold the button for 3 seconds until you hear the beep.
	2	UNBLOCK	If an error message appears on the upper display (e.g. Er12, Er01, etc.) by holding the button for 3 seconds will clear the error.
	1	MENU	By pressing once will enter the User Menu.
	2	SET	<ol style="list-style-type: none"> 1. Will select an item in the Menu. 2. Will select a parameter in a Menu so it can be modified. 3. Save data
	1	MODIFY POWER	Function <i>increase</i> and <i>decrease</i> functioning <i>Power</i> when not in automatic mode. Automatic mode is the default setting.
	2	SCROLL THROUGH MENU'S AND SUBMENU'S	In the Menu these buttons scroll up and down through the Menu's and Sub-menu's.

	3	MODIFY PARAMETER VALUES	Used to increase or decrease parameter values in Menu's and Sub-menu's
	1	STANDBY THERMOSTAT (water temperature)	Used to increase or decrease the set water temperature at which the boiler will go into Standby mode.
	1	ESC	Pressing the <i>Esc</i> button will take one step back in a Menu or Sub-Menu.
	1	CHRONO	Holding this button for 3 seconds will activate the Chrono (not recommended).
	2	DISPLAY	When not in a Menu or Sub-Menu pressing this button will display some of the system temperatures and system values.

4.2 LED's : The LED's indicate the functioning state of some of the system components :

LED	FUNCTION	DESCRIPTION
 RUN OFF	ON \ OFF	<i>Led ON:</i> System ON or BLOCKED <i>Led OFF:</i> System OFF <i>Led blinking:</i> Extinguishing mode
	ON Timer in CHRONO program	<i>Led ON :</i> time for ignition in CHRONO program
	HEATING ELEMENT	<i>Led ON:</i> Element ON
	AUGER	<i>Led ON:</i> Auger ON
	PUMP	<i>Led ON:</i> for Pump ON
	STANDBY THERMOSTAT	<i>Led ON:</i> Water temperature more than the value <i>Standby thermostat</i> . <i>Led blinking:</i> Water temperature is in the range of modulation for the burner.

	PROGRAMMING CHRONO	<i>Led ON:</i> programming CRONO Daily
	OFF Timer in CHRONO program	<i>Led ON:</i> time for extinguishing in CHRONO program
	PROGRAMMING CHRONO	<i>Led ON:</i> programming CRONO Weekly
	PROGRAMMING CHRONO	<i>Led ON:</i> programming CRONO Week End

Generally, if the boiler is being controlled with a remote time clock, i.e. in the house, the Chrono(in-built time clock) is not used and so the three Chrono should never be illuminated. If one is illuminated then press the display button (8) for 3 seconds so the light will scroll to the next setting and by repeating these steps as necessary will eventually leave all Chrono lights off.

4.3 DISPLAYS

Here is an explanation of the 3 Displays:

1. Top Display

2. Bottom Left Display

3. Bottom Right Display



1. TOP DISPLAY		
Visualisation	Measure	STATE
	<i>Time</i>	In OFF mode and alternates in running mode
	<i>Functioning state / Error</i>	In the ON mode.
	<ul style="list-style-type: none"> - Menu - Submenu - Value measures 	In the Menu and Sub-Menu's

2. BOTTOM LEFT DISPLAY		
Visualisation	Measure	STATE
	Power	In running mode.
	Parameter Code	In Menu or Sub-Menu

3. BOTTOM RIGHT DISPLAY		
Visualisation	Measure	STATE
	Temperature boiler	In running mode.
	Temperature standby thermostat	In running mode when the buttons 5 or 6 are pressed to check the set value or to change value.
	Parameter value	In a Menu or Sub-menu.

The displays can give very useful information to the User such as indicating what functioning state the boiler is running at, the water temperature, the time, error message which can be used as system diagnostics, etc.. The following sections will give a explanation of the various items of information the display will give the User.

4.4 Indication of System Functioning States

Display Indicators	
Indicator	SYSTEM STATE
	CHECK UP – On start up this acts as a pre-cleaning stage.
	IGNITION STAGE 1 – PREHEATING (Element ON)
	IGNITION STAGE 2 – PRELOAD (Auger / Element ON)
	IGNITION STAGE 3– FIXED IGNITION (Not used)
	IGNITION STAGE 4 – VARIABLE IGNITION (Fans ON / Element ON (if applicable)/ Auger on intermittently)
	IGNITION STAGE 5 – STABILISATION (Fans ON / Auger ON intermittently)
 	WORK MODE MODULATION – Water temperature is within the range to allow the burner to modulate automatically between the various power levels.
	STANDBY – The boiler has reached it's water temperature set point and the burner is in extinguishing mode.
	SECURITY (If water or flue gas temperatures rise over the safety values)
	OFF. Boiler has received the signal to shut down by the remote time clock or by the ON/OFF button.

	RECOVER IGNITION. (If the boiler is signalled to restart while in the extinguishing mode or in the event of a loss of voltage a re-ignition will take place if all safety parameters are achieved).
	BLOCK – This message will precede an error code and the boiler cannot be re-started until the system has been made safe and the error message cleared.

4.5 Error Messages

ERRORS	
DISPLAY	DESCRIPTION
	Activation <i>Safety thermostat High voltage 1</i> . This could be the water high limit thermostat on the boiler or the safety thermostat on the pellet feed pipe.
	Error activation <i>Pressure switch High voltage 2</i> Only with the Exhaust fan ON
	Water temperature MAX
	Exhaust temperature MAX
	Real time clock error
	Ignition failed. (May be due to lack of pellets, very dusty pellets, dirty photocell or failed ignition element).
	Accidental Extinguishing for: Low brightness of the flame (The photo probe reads a low light value)
	General Error



Lack of voltage. (will happen after a power cut or accidental switching off of the mains power).

Re-starting the boiler after Error Messages

If any of the above error messages appears the procedure for re-setting the system is as follows :

- Turn off the time clock.
- Check to make sure that is isn't any pellets in the blast tube of the burner. (make sure the combustion area has completely cooled down before attempting to clear tube).
- Check to make sure there are no obstructions between the auger and the burner.
- Close the burner door securely and re-attach the flexi-pipe.
- Press the ON/OFF button for 3 seconds until you hear the beep and the error should clear. The main screen should be visible , i.e. the clock and water temperature.
- Turn on the time clock and after a short time delay the burner should run through it's full start up sequence.
- **NOTE :** In the event that error's Er01 to Er05 appears it may be an indication that something more serious has occurred such as a lack of water in the boiler, chimney blockage, blockage of the flueways of the boiler , etc. Contact should be made to the Gerkros Technical Support Dept. for guidance before resetting the thermostat and clearing the error message.

4.6 User Menu

VOICE N°	User menu		DESCRIPTION AND FUNCTIONS
		SUBMENU	
1	 Menu CHRONO	 DAILY	Submenu <i>CRONO</i> programming modality DAILY
		 WEEKLY	Submenu <i>CRONO</i> programming modality WEEKLY
		 WEEK END	Submenu <i>CRONO</i> programming modality WEEK END
2			Menu <i>Clock</i>
3			Menu manual pellet load
4			Menu code (the menu is visible only if the controller is unblocked)

To enter and use the User Menu use the following buttons :

To enter user menu press button	
To scroll through submenu's press buttons	

To enter a sub-menu press button	
To enter the change function to modify a value press	
To modify parameters' values press buttons	
To save the value press button	
To exit menu or submenu press button	

Menu Chrono

This is used when a remote time clock is not being used. Gerkros recommend that a remote time clock is always used with this system.

Menu Clock

This is used to set the correct time and day of the week. The top display shows the time and the bottom left display shows the day of the week. Modify the time as follows :

- Enter the User Menu.
- Enter the Clock Menu
- Press the Menu button so the first digit starts blinking.
- Use buttons 3 & 4 to alter the digits.
- Press Menu again to save the digit and go to the next digit. Continue this procedure until all the digits are changed and so no digits are blinking.
- Use Escape (1) to go back to the main screen.

Menu Load

This menu is used if the hopper runs out of pellets and Er12 or Er13 appears. Refill the auger with pellets as follows :

- Fill the hopper with pellets
- Remove the flexi pipe from the burner and place the end into a container.

- Enter the User Menu.
- Enter the Load Menu. (The auger will be in the OFF state).
- Press Menu (2) to run the auger. The auger will run for a period of 10 minutes before it switches itself off. If pellets still haven't dropped out of the auger repeat the procedure.
- When pellets start dropping out of the auger wait for 3-4 minutes to ensure the auger is completely full before turning off the auger by pressing the ESC (1) button.
- Return to the main screen by repeatedly pressing the ESC button.

Menu Code

On delivery the control panel is locked so the appliance cannot be fired. Only the Gerkros Technician will have the unlocking code to activate the unit. Even though the appliance is locked the customer can still enter the User Menu and set the time and fill the auger with pellets. The circulation pump can also be run if the boiler is locked by pressing the ESC (1) for 3 seconds. Press the ESC (1) button for another 3 seconds to turn off the pump.

Other BMS Controller Functions

The BMS controller has other functions which are factory set to prolong the life of the appliance and associated hardware and enhanced safety features. These features include :

- 5 step power modulation to improve fuel and combustion efficiency.
- In-built frost thermostat.
- In-built anti-seize function for the circulation pump.
- Option for integrated time clock / GSM functionality.
- Run time and fuel consumption data available to the Gerkros service engineer.

5. Warranty / Call Out Policy.

Gerkros offer the following guarantees / warranties on this appliance :

- 5 year replacement warranty on the boiler shell against leaks.
- 24 months replacement warranty on all electrical components i.e., photocell, fans, thermostats, controller, display panel.
- 12 months replacement warranty on the ignition element.

The above items are covered under a parts and labour guarantee.

Exclusions

The warranty excludes all ancillary products associated with the system (e.g. flue pipes, circulation pumps, bulk hoppers and augers, plumbing and electrical system.). The ash pan, fibre board and pellet stops are regarded as a consumable item and are not covered under warranty.

The warranty does not cover Third Party damage to the product or damage caused by the plumbing (an example would be an inappropriately sized expansion vessel) or electrical system. Warranty does not cover issues arising from pellets that do not conform to O Norm standard ON 7135 or DIN Plus 51731.

Recommendations advised to the Customer to be carried out during commissioning must be completed and advised to Gerkros in order to validate the warranty.

The requirements for the flue installation, particularly in relation to draught, is the responsibility of the system owner. Compliance with Building Regulations 1997, Part J is a minimum guide.

The warranty does not cover misuse of the product or sabotage.

Call Out Policy.

All call out requests should be communicated by fax or e-mail to our Technical Support Dept. stating clearly the following information :

- The exact nature of the problem / defect and any error messages on the display.
- The boiler serial number and model.

In the event that telephone instructions can correct the problem the system user will be provided with the appropriate instructions.

If deemed necessary temporary instruction may be given to minimise the problem.

Should a service call be deemed necessary the Technical Support Dept. will schedule a visit by a Technician provided the system user agrees to pay a service call out fee if the problem / defect is deemed not to be covered under warranty.

On visiting the site the Technician will evaluate the nature of the problem and advise the system user of the issues and advise a cost for carrying out the repairs. On agreement of the costs the Technician will carry out repairs and issue a service report. Payment for the service call must be made to the Technician before they leave the property.

If the issues / defects are deemed to be covered under warranty then no charge will apply.

Maintenance contracts for our wood pellet products are available from our Customer Service Dept.

6. INSTALLATION REGULATIONS

Gerkrös insist on the highest standards of installation and safety therefore all boilers must be installed in compliance with the following regulations :

- Building Regulations – Northern Ireland
 - Part F – Conservation of Fuel and Power
 - Part L – Heat Producing Appliances
- Building Regulations – Republic of Ireland
 - Part F - Ventilation
 - Part J – Heat Producing Appliances
 - Part L – Conservation of Fuel and Energy
- Building Regulations – England & Wales –
 - Part F – Ventilation
 - Part J – Combustion Appliances & Fuel Storage Systems
 - Part L – Conservation of Fuel and Power
 - Part P – Electrical Safety
- Building (Scotland) Act 2003
 - Section 3 – Environment
 - Section 4 – Safety
 - Section 6 - Energy
- BS449 1990. Specification for forced circulation hot water central heating systems for domestic premises.
- BS5446 1990. Installation of hot water supplies for domestic purposes.
- BS1189 1989. Clay flue linings and flue terminals.
- BS7671 IEE Wiring Regulations.
- Local Water Undertaking Bylaws
- BS7593:1992 Code of Practice for treatment of water in heating systems.
- **EN 303-5 HEATING BOILERS - HEATING BOILERS FOR SOLID FUELS, HAND AND AUTOMATICALLY STOKED, NOMINAL HEAT OUTPUT OF UP TO 300 KW - TERMINOLOGY REQUIREMENTS, TESTING AND MARKING.**
- **prEN 15270 – Pellet burners for small boilers – Definitions, requirements, testing, marking.**

All appliances must be commissioned and failure to do so will invalidate the boiler/burner warranty.

Legal Requirements

Installations must comply with the current Building Regulations – Building Regulations (Northern Ireland) 2000, Building (Scotland) Act 2003, Building Act 1984 - England and Wales, Building Regulations 1997-2005 (as amended) Republic of Ireland, and local by-laws. Reference should also be made to the following British Standards BS 5410 , BS 4543, BS 4876, BS 1181 and BS 715, EN 303-5.

7. HEALTH & SAFETY INFORMATION.

Safety

- Gerkros boilers are inherently safe types of fuel burning appliance and accidents involving them are extremely rare. However, it is necessary to take certain precautions with all combustion equipment, and the guidance given in this leaflet must be acted upon.
- Gerkros products should only be installed by fully qualified and competent installers and plumbers. Connection to a well designed and maintained flue system and provision of a satisfactory combustion and ventilation air supply are very important.
- It is recommended that all boilers are serviced annually or every 1200 hours. Our Service Master control panel will give the running hours of the burner (if fitted). Poorly maintained and serviced boilers will give poor efficiency and high running costs.
- Incorrectly adjusted and badly maintained combustion equipment can emit Carbon Monoxide gas. This is colourless and odourless, and can cause death or serious injury in fairly low concentrations.

Check list

- Make sure that all fuel burning appliances have a sufficient air supply from outside the building. Have this checked .
- If wood pellet boilers are to be installed inside a garage, please refer to installation recommendations in this manual.
- Make sure that the boiler is operating efficiently and is regularly serviced by a suitably qualified service engineer.
- If there is an odd smell from the appliance, if there are any signs of soot on the boiler flue or chimney, or if anyone in the vicinity of the boiler feels drowsy or has a persistent headache - turn off the boiler and have it checked.

In case of an accident

- If you find a person ill or unconscious near any fuel burning appliance, be careful in case you also become a casualty. Open windows and doors immediately.
- Remove the casualty to fresh air.
- If the casualty is unconscious, open their airway and check breathing. If breathing has stopped, give artificial ventilation until breathing restarts and then place in the recovery position. Seek medical advice immediately
- If you cannot give artificial ventilation, get help really quickly - seconds could be vital.
- Remove casualty to hospital.

Pellet storage and supply

- Hoppers installed inside buildings must be built into a one hour fire compartment.

Service and safety

- Service Engineers are trained to ensure that your woodpellet burning equipment works safely and efficiently. A list of Service Engineers in your area is available from Gerkros. They will check that the burner is properly adjusted, that there is a sufficient air supply, that the flue is working properly.

All these matters are important to ensure that your oil fired boiler operates safely and efficiently.

Materials

Adhesives, sealants and paints used in the manufacture of the product are cured and present no known hazards when used in the manner for which they are intended. Some other materials may need further attention by people with a history of skin complaints or who may be particularly susceptible to irritation.

Ceramic Fibre Board, Mineral wool, Alumino –Silicone Fibre.

Use on the boiler . – Rigid Board, slabs, sleeves, gaskets, ropes.

Known hazards – Tempory irritation or rash to skin. High dust levels may irritate eyes and upper respiratory system.

Precautions – Avoid hard abrasion of boards. Normal handling and use of materials should not produce excessive dust levels. Use disposable gloves when handling. Avoid inhalation and contact with skin and eyes. If irritation occurs to eyes wash with plenty of fresh clean water. If irritation occurs to skin wash under running water before washing with soap and water. If inhaled remove to fresh air, drink water and clear throat and nose to remove dust fibres. If ingested drink plenty of water. If symptoms persist drink plenty of water.

Silicone sealant.

Use on boiler – Sealant and adhesive.

Known Hazards – Irritation to eyes.

Precautions – Avoid prolonged contact with skin. Avoid inhalation of vapour and contact with eyes. Use eye protection and where repeated contact is necessary use plastic/rubber gloves. Use a face mask when working in confined spaces. If irritation occurs in eyes wash with water and seek immediate medical attention. If irritation occurs with skin, wash off and wash with soap and water. If inhaled, move to fresh air.

8.

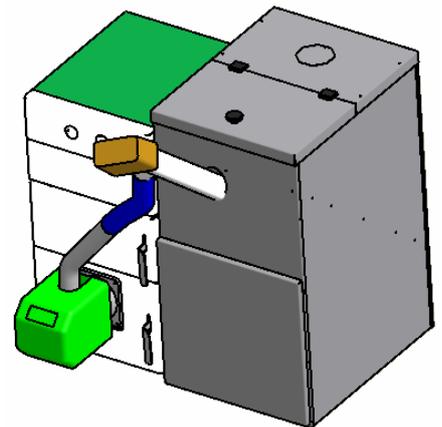
Technical Data					
Boiler Model	20	30	40	50	
Output range kW	7-20kW	10-30kW	15-40kW	21-50kW	
*Boiler dry weight (kg)	205	205	245	245	
Water capacity (litres)	65	65	75	75	
Design pressure (bar)	3	3	3	3	
Working pressure (bar)	1.5	1.5	1.5	1.5	
Flue gas temp. (C)	160 - 200				
** Efficiency (heat to water) %	85	86	87	87	
Efficiency (flue gas) %	91	92	93	93	
Draught requirement (Pa)	Minimum 15 Pa				
Max. hearth temperature (C)	50 degrees C				
Control thermostat range (C)	50 - 85 degrees C				
Limit (safety) thermostat (C)	105 degress C +/- 1 C				
Flue pipe diameter (mm)	125mm (5 inch) internal diameter				
Flow / return connections	22mm				
Electrical Supply	230/240 V ~ 50Hz Fused at 5 amp				
Pellet consumption Kg/hr	Power 1	1.6	2.3	3.4	4.8
	Power 2	2.3	3.4	4.8	5.9
	Power 3	3.4	4.8	5.9	7.1
	Power 4	3.8	5.9	7.1	9.1
	Power 5	4.6	6.9	9.1	11.4

* Excludes burner and flue pipe

** Tested to EN303-5 (class 3)

	20/30kW	40/50kW
Height (mm)	1030mm	1190mm
Width (mm)	530mm	580mm
Depth (mm)	660mm	710mm
(excluding smoke box 140mm deep)		

Hopper capacity 60 litres



**Gerkros Heating Technology,
Donaskeigh,
Tipperary.**

Tel. : 00-353-62-71105

Fax : 00-353-62-71364

e-mail : info@gerkros.ie

Website : www.gerkros.ie

Woodpecker Boiler Pre-Commissioning Checklist

Boiler Serial No. _____

Tick appropriate boiler size.

20kW 30kW 40kW 50kW

	Yes	No
Is the boiler on a non-combustable base ?	<input type="checkbox"/>	<input type="checkbox"/>
Is there sufficient access to the rear of the boiler to access pipe tappings and open the smoke panel for cleaning ?	<input type="checkbox"/>	<input type="checkbox"/>
Can the pellet burner door open fully (with the burner attached) to remove the ash pan ?	<input type="checkbox"/>	<input type="checkbox"/>
Is the pellet hopper correctly located with the flexi-pipe attached to the burner ?	<input type="checkbox"/>	<input type="checkbox"/>
Is there sufficient pellets available to commission the boiler ?	<input type="checkbox"/>	<input type="checkbox"/>
Is the pressure relief blow-off pipe piped to an external drain ?	<input type="checkbox"/>	<input type="checkbox"/>
Is the boiler wired to a permanent power supply and timed power supply ?	<input type="checkbox"/>	<input type="checkbox"/>
Are the power supplies independantly supplied from 5 amp fused spurs ?	<input type="checkbox"/>	<input type="checkbox"/>
Is the pipework behind the boiler fully earthed and bonded ?	<input type="checkbox"/>	<input type="checkbox"/>
Is there the required clearances behind and at the side of the boiler ?	<input type="checkbox"/>	<input type="checkbox"/>
Is the 5" twin walled (insulated) flue pipe connected and sealed to the boiler ?	<input type="checkbox"/>	<input type="checkbox"/>
Is the draught stabiliser fitted ?	<input type="checkbox"/>	<input type="checkbox"/>
Does the flue pipe conform to Gerkros requirements ?	<input type="checkbox"/>	<input type="checkbox"/>
Is there access in the flue so it can the flue be cleaned ?	<input type="checkbox"/>	<input type="checkbox"/>
If the commissioning Engineer cannot achieve sufficient draught with the exhaust fan does the customer agree to alter the chimney to achieve draught ?	<input type="checkbox"/>	<input type="checkbox"/>
Is the pump located on the return water connection of the boiler ?	<input type="checkbox"/>	<input type="checkbox"/>
Are the automatic air vent and pressure relief valve fitted ?	<input type="checkbox"/>	<input type="checkbox"/>
Is the system filled with water and fully vented ?	<input type="checkbox"/>	<input type="checkbox"/>
Is there a gate/lever valve on the by-pass pipe before the pump?	<input type="checkbox"/>	<input type="checkbox"/>
Does the air supply to the boiler room meet Building Reg. requirements?	<input type="checkbox"/>	<input type="checkbox"/>

Please return the completed checklist to Gerkros as soon as all items have been completed.

Commissioning can only be scheduled when the completed and signed checklist has been returned to Gerkros. Please allow a min. of 7 working days from the receipt of the checklist to have the boiler commissioned.

If any item has not been completed please include a telephone number so we can discuss the appropriate issue with you prior to commissioning.

Should the Commissioning Engineer not be able to carry out the commissioning due to the installation not being complete, a call-back charge will apply.

Customer Signiture : _____ **Print Name :** _____

Date : _____

Correspondence Address : _____

Installation Address : _____

Telephone No. : _____

Contact Telephone Numbers : Plumber _____ **Electrician** _____

Return By Fax To : 00-353-62-71364

or post to : Gerkros Heating Technology, Donaskeigh, Tipperary, Ireland.

