

AVON INSTALLATION MANUAL



General installation and operation manual for Docherty Avon stoves

The fireplace stoves may only be operated in accordance with this manual!
No unauthorized changes may be performed on the fireplace stoves!

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1. Introduction

Thank you for purchasing one of our fireplace stoves and congratulations on becoming the owners of a prestigious quality appliance by Docherty.

Our fireplace stoves can function as additional heating to augment the atmosphere of your home or recreational building or as the main source of environmentally-friendly heating with high heat output, clean operation and perfect combustion. All fireplace heaters produced by our company are tested in accordance with EN 13240/2002+A2/2005 or EN 13229/2002.

Please read through the manual and technical sheet thoroughly. The user is obliged to get properly acquainted with proper installation and operation of this device with regards to its safe operation. Please retain the manual and technical sheet as a reference guide so that you can brush up all the information necessary for the correct operation of your fireplace stove before each heating season.

We only provide a warranty on our products if all the instructions listed in this operation manual are adhered to.

2. Technical description

Fireplace stoves are intended for installation into various interiors (apartments, recreation buildings, restaurants). Docherty stoves are manufactured from quality construction materials – cast metal, CORTEN steel and quality construction and steel fittings, with stressed parts made of HARDOX steel. The surface of steel constructions is protected by a refractory opaque paint. Refractory paints are not anti-corrosive.

The combustion chamber is lined with chamotte fire bricks, which when in service are not connected by any paste material to prevent damage by heat dilatation.

The combustion chamber can be firmly closed by doors with special heat-resistant glass. The glass not only increases the aesthetics of the flickering flames, but also facilitates pleasant heat radiation. The glass also prevents the sparks from the burning wood and smoke from entering the room. The floor of the combustion chamber is equipped with a removable cast iron grate. Usually, a barrier is created in front of the grate to prevent the fuel falling and sliding onto the doors (front window). Stoves with a grate include an ashpan under the grate. The stove can be flued top or rear.

The stove has an inner and outer casing, the area between the casings is used for convection air heating. The upper part of the outer casing includes vents for the heated air. The outer casing may include ceramics or stone to highlight the design and improve the heat accumulation properties of the fireplace stove.

Fireplace stoves equipped with a separate intake of primary and secondary combustion air include the appropriate control elements. The primary air is taken to the burning fuel (usually through the ashpan and grate) and is used for primary combustion. The secondary air supports combustion of residual combustible gases in the exhaust, increasing the output of the appliance and significantly reduces the amount of pollutants escaping into the atmosphere. The secondary air is mostly taken to the area above the burning fuel. Its presence causes the hot air and gases to roll around the inner side of the front glass. This process simultaneously prevents the blackening of the front glass.

The secondary air also participates in the primary combustion process when the primary air intake is partially or completely sealed. Keep the primary air intake fully open at the beginning of the combustion process, when the chimney draught is still weak.

After the chimney heats up, you can partially or even completely close the primary air intake, based on the target output of the fireplace stove. It is also possible to reduce the fuelling or limit the chimney draught by attaching a draught stabiliser. This is recommended especially for a chimney draft around and above 20Pa. The fireplace and ashpan covers must always be closed except for starting operation, adding fuel and removing solid combustion remnants to prevent exhausts entering the room. Some fireplace stoves are equipped with a heat accumulation exchanger, improving the efficiency of the fireplace stoves and maximally utilizing the fuel energy.

Some fireplace stoves are manufactured with a central air intake (CAI). This allows air to flow into the combustion chamber in the fireplace stove from the exterior OR adjoining room, halls, technical rooms etc. Fireplace stoves with a CAI are not dependant on the amount of air in the heated area.

Thus, they not only contribute to a pleasant atmosphere in your home, but also reduce energy expenses (since heated air already in the room is not consumed).

Fireplace stoves with CAI are very suitable for installation into low-energy houses. It is also possible to equip the heating system of some fireplace stoves with CAI with electronic combustion regulation to increase comfort. This can additionally increase the combustion process and stoking intervals, increase operation safety and prevent uneconomic heating and over-heating of fireplace stoves (the shutter of the central air intake is controlled by a control unit and servomotor in relation to the current combustion phase and output exhaust temperature).

In all cases when using the direct air connection the installer is required to install and commission the appliance inline with current Building Regulations, manufacturer's instructions and any commissioning guidelines for a direct air kit, (example: the HETAS Direct Air Supply guidelines TN010, TN011, TN012. Details are also going to be included in the next revised standard of BS 8303). Details are available on request.

Warning: The fireplace stoves are not manufactured to provide continual heating and are intended for periodic interrupted operation, mostly due to the need to empty the ashpan when the ash has cooled down.

3. Safety regulations

Special care must be taken when installing the stove such that the requirements of the Health and Safety at Work Act are met.

A supply of sufficient amount of combustion air and room ventilation air must be ensured when the fireplace stoves are in operation, especially with another heat device running simultaneously. The regulation grate for combustion, ventilation and heating air must not be obstructed.

When stoking fuel, always open the door very slowly. You will prevent smoke and ash from escaping into the room. The fireplace stoves require casual attendance and inspection. Flammable fuels must not be used for stoking or heating! In addition, burning plastic material of any kind, wood materials with various chemical bonding agents (chipboards, etc) or unsorted domestic waste with remaining plastics is prohibited.

Make sure to prevent children from handling the fireplace stoves during heating. The stove may only be operated by an adult person! A fireguard to BS 8423:2010 should be fitted in the presence of children, aged and/or infirm persons. During heating all handles and knobs must be operated using a pair of tongs, hook or by a hand protected by a glove due to the risk of burns. Objects made from flammable materials that could be set on fire must not be stored on the fireplace stoves during operation and while hot.

Please pay special attention when handling the ashpan and when removing hot ash due to danger of burns! The hot ash must not get in contact with flammable objects -e.g. when throwing in communal waste containers.

When the fireplace stove is used only seasonally and with unfavourable draught or weather conditions, special attention must be paid when putting the stove into operation. When the fireplace stove is not in operation for a longer period of time, the flueways must be checked for obstructions before further operation.

Handling

Adequate facilities must be available for loading, unloading and site handling. This appliance is heavy and must be handled with care.

Fire Cement

Some types of fire cement are caustic and should not be allowed to come into contact with the skin. In case of contact wash immediately with plenty of water.

Asbestos

This stove contains no asbestos. If there is a possibility of disturbing any asbestos in the course of installation then please seek specialist guidance and use appropriate protective equipment.

Metal Parts

When installing or servicing this stove care should be taken to avoid the possibility of personal injury.

3.1 Safe distance:

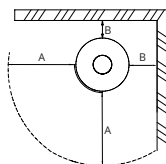
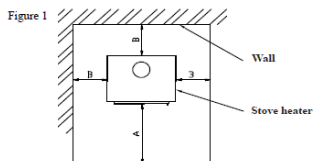
3.1.1 Safe distance of fireplace stoves from flammable materials

100mm to sides

100mm to rear

800mm in front of the centre point of door assembly

Any storage area built into the appliance must not be used to store any combustible materials. The installation must comply with current Building Regulations, National and European Standards, Local Authority byelaws and other specifications or regulations as they affect the installation of the stove. The most stringent clearances to combustibles should be applied.



Minimal distances:

A > 80cm

B > 10cm

3.1.2 Safe distance of chimneys from flammable materials and building constructions

Follow Building Regulations and Manufacturers instructions for the type of chimney, the most stringent clearances should be applied.

3.2 Floor protection

Unless the fireplace stove is installed on a 100% non-flammable floor with a superimposed hearth or change in level reference Building Regulations Document J section 2.22 – 2.30, it is necessary to place the stove on a non-flammable insulation mat, e.g. metal plate, ceramics, hardened glass, stone (at least 12mm thick) and be capable of supporting the weight of the appliance. The hearth should extend 150mm to sides and rear of the appliance and 300mm in front of the appliance.

Items made of flammable materials may not be placed on top of the hearth or at a less-than-safe distance from the fireplace stoves.

3.3 Chimney fire prevention measures:

Ordinary operation, especially with humid fuel, leads to the settling of ash and tar in the chimney. Neglecting regular checking and cleaning of the chimney in accordance with Building Regulations increases the danger of fire. We recommend that the chimney should be swept twice a year.

In case of ash or tar catching fire in the chimney, please follow this procedure:

- do not under any circumstances extinguish the fire with water as it would create an abnormal amount of steam and subsequently rip the chimney open
- if possible, the combustion chamber should be covered with dry sand, which will extinguish the fire
- close all intakes of air for combustion; if possible, cover the chimney. However, the smoke must not accumulate back in the house
- contact your nearest fire fighting brigade to assess the situation and the necessity to report it as a fire fighting emergency
- do not leave the house until the chimney is burned up; regularly check the chimney temperature and the course of combustion
- contact a chimney service engineer before starting a new fire in the stove to assess the state of the chimney and also contact the manufacturer of the fireplace stove for inspection.

4. Installation

The installation must comply with current Building Regulations, National and European Standards, Local Authority byelaws and other specifications or regulations as they affect the installation of the stove. The Building Regulations requirements may also be met by adopting the relevant recommendations in the current issues of British Standards BS 8303 and BS EN15287-1

The appliance must be fitted by an approved installer or inspected and signed off by a Building Control officer.

Note: It is a requirement where a new or replacement fixed solid fuel appliance is installed in a dwelling that a sealed carbon monoxide alarm to standard BS 50291:2001 is fitted in the room where the appliance is fitted and fixed as described in Building Regulations Document J section 2.34 – 2.36.

4.1 General

The fireplace stoves must be installed on a floor with an adequate bearing capacity. If the existing arrangement does not meet this basic requirement, necessary steps must be taken (e.g. using a hearth for distributing the load). Make sure that there is enough space and provision for cleaning and servicing the fireplace stove, connecting flue pipes and the chimney.

4.2 Chimney connection

Before installing the appliance the chimney construction should be checked to confirm that it will be suitable for the installed fireplace stove nominal output as far as design, ventilation requirements and effective height are concerned. A suitable chimney (minimum profile, chimney draft, tightness, etc.) is a basic condition for the proper functioning of the fireplace stoves. Chimney values are included in the attached technical sheet. The connecting flue pipe should not be smaller than the cross sectional area of the appliance flue gas outlet.

A draught regulator should be installed for chimneys with too strong a flue draught. Such a draught can cause problems during operation, e.g. intensive burning, high fuel consumption can also lead to permanent damage of the fireplace stove. Too weaker draught leads to glass blackening or to smoke escaping into the room when opening the door and stoking fuel.

PLEASE NOTE: SOME APPLIANCES ARE FITTED WITH A SMOKE SHUTTER/DAMPER FITTED WITHIN THE NECK OF THE APPLIANCE, IF USED TO CONTROL EXCESSIVE FLUE DRAUGHT THE POSITION TO ACHIEVE THE CORRECT FLUE DRAUGHT SHOULD BE NOTED AND NOT EXCEEDED WHEN IN NORMAL OPERATION AS THIS WILL RESULT IN PERMANENT DAMAGE TO THE APPLIANCE.

The minimum effective height of the chimney for exhaust gas from the stove is 5m.

5. Operation manual

5.1 Fuel

It is only allowed to burn wood and wood briquettes in fireplace stoves. To reach the nominal parameters of the heater, we recommend using dry logs with a diameter of 5-8 cm and length of 20-30 cm and with a humidity below 20%. Kindling/chopped pieces of wood should be used only when starting the fire.

Recommended humidity can be obtained by storing the chopped logs for at least two years in a ventilated shelter. A hand held moisture meter is a way of confirming the moisture content they are simple and easy to use.

The fireplace stove should be heated to a nominal output stated in the technical sheet, i.e. the burning of a given amount of allowed fuel per 1 hour. Long-term excessive output could damage the fireplace stove.

Never use flammable fluids, coke, coal or any of the following types of waste as fuel: chipboards, plastics, plastic bags, soaked wood or wood-shavings, saw-dust or pellets!

!!!Burning of the above mentioned material not only highly pollutes our environment but also damages the fireplace stove and the chimney!!!

5.2 Starting the fireplace stove for the first time

Before the first use all remaining stickers and transit fixings must be removed, all accessories must be taken out of the ashpan or burning chamber. Check that the baffle plates are fitted and located correctly, that the air controls are operating correctly, chamotte fire bricks and grate are set correctly (as they might have slipped from their correct positions during transport or installation). Correct any defects you might find, otherwise the proper functioning of the stove is endangered.

After siting the fireplace stove and connecting it to the chimney start heating slowly and continue for at least one hour. Leave the stove and ashpan doors open (approx 1-2mm) before and during the first heating in order to prevent the sealing material to mix/stick with the paint. The fireplace surface is covered with heat-resistant paint. During the first heating, after becoming temporarily soft, the paint will eventually become hardened. During the soft phase the paint surface is more vulnerable to being damaged by a hand or other object.

During the first heating the fireplace stove should be "heated up" with a small flame, burning only a small amount of fuel with a lower temperature. All materials must get used to the heat load. You will prevent cracks in the chamotte bricks, damage of the paint or deformation of the insert materials by a careful first heating. Hardening of the paint on the fireplace stove might be accompanied by a temporary smell, which will disappear after a while.

Make sure the room is properly well ventilated when curing the paint. Furthermore, ensure that no small animals or birds are present in the room containing paint fumes. We also recommend turning off aquarium air intakes during the first heating.

5.3 Kindling and firing

Fireplace stoves with grate - first put crumpled paper into the chamber and then lay chopped wood in it.

You can also use an appropriate suitable fire-lighter to start the fire. After starting fire, let it burn freely with all air regulation elements open. It is forbidden to use flammable liquid (oil, petroleum, etc.) for starting fire! After the fire begins to burn and the draught is strong enough, bigger logs or wood briquettes might be added without the danger of smoke. Continue stoking the amount of fuel determined based on the nominal output of the stove.

Warning: Fireplace doors must always be closed, with the exception of the first heating, stoking fuel and removing ash. When the fireplace stove is not in operation for a longer period of time, it is necessary to check that the flue pipes, chimney and combustion chamber are clear.

In general, the heating up and cooling of the fireplace appliance is accompanied by a specific sound; this is normal, it is the expansion and contraction of heated components.

5.4 Stoking fuel

In order to prevent smoke escaping into the room when stoking fuel, please follow the following procedure: Approximately 5 or 10 seconds before opening the fireplace doors open the air intake regulators and then only slightly open the stoking doors, wait for few seconds for the exhaust gas to get sucked into the chimney and only then fully open the door. When opening the stoking door, special attention must be paid to the danger of hot fire-brands falling out. After stocking fuel, close the door again. After the fuel starts burning (with clear fire), return the regulator back to its original position. The amount of stoked fuel should correspond to an hourly consumption value for the concrete fireplace stove (see the technical sheet).

Overheating can permanently damage the fireplace stove construction.

Warning: To prevent exhaust gas escaping into the room during stoking add fuel after its burning down on the glowing base of the fire.

5.5 Operation during the transition period

The chimney draft (sucking exhaust gas from the fireplace stove) might be weaker during the transition period, i.e. when the outside temperature is higher than 15°C, during rainy and humid days or during gust airs.

During this period the fireplace stove should be operated with the minimum possible fuel so that the fire, as well as the chimney draft could be improved by opening the air intakes.

Tip: During this period a so-called atmospheric plug can be created in the chimney mouth due to the draft conditions. The plug can cause smoke escaping into the room when lighting fuel. We recommend letting a piece of paper burn down preferably in the upper part of the combustion chamber before lighting the kindling. This seemingly negligible smoke is enough to break through the atmospheric plug. Afterwards you can freely light paper (or an appropriate suitable fire-lighter) and be sure that even a humid chimney is clear.

5.6 Ash removal

Make sure that the ashpan is cleaned when being half full in order to prevent the ash reaching too close to the grate and thus damaging it. At the same time the ash would block the intake of air required for burning. Removing ash from the ashpan should be carried out when the fireplace stove is cold and preferably ready for the next heating. A vacuum cleaner designed for cleaning ash with a filter for small filth can be also used for cleaning the cold ashpan.

Store the ash in closed non-flammable containers.

Warning: Make sure that the ash does not contain any glowing remains of wood that could cause fire in the waste container.

Be careful when removing hot ash!

5.7 Cleaning the glass

The cleanliness of the window is influenced not only by the using of suitable fuel, providing sufficient air intake and chimney draft but also by the method of operating the fireplace stove. In this respect we recommend stoking only one layer of fuel and distributing the fuel as evenly as possible and as far from the glass as possible. This also applies for briquettes (the distance between them should be 5 to 10 mm). If the glass becomes dirty, try increasing the burning intensity by opening the air intake and the glass will clean itself.

Sooty windows can be cleaned in cold state using newspapers or wet cloth dipped in wood ash. Usually also liquid cleaning agents are used for cleaning the stove window. But these may in some cases, depending on the composition of the cleaning agent and its interaction with combustion residues (ash particles, etc.), harm the gaskets and/or the glass-ceramics and/or the decoration colour of the fireplace viewing panel.

The producer is not responsible for damages, which are caused by attack in using of chemical agents.

6. Cleaning and maintenance

Your fireplace stove is a high-quality product and no significant defects will appear during normal operation. The fireplace stove and exhaust pipes should be checked thoroughly before and after the heating season.

Clean the fireplace stove only after it cools off!

6.1 Cleaning the fireplace stoves / disassembly of chamotte

All sediments in flue pipes and combustion space must be removed during cleaning. Remove all fallen-off parts of the chamotte lining. The integrity of the chamotte lining must be monitored also during the heating season. Spaces between individual chamotte fittings serve as a heat dilatation preventing cracking of the fittings and must not be filled by filling material as was usual with older types of solid fuel heaters. Cracked chamotte fittings are still functional until they fall out! The baffle plate should be removed during cleaning (this enables easier access to the space above them). The fireplace stove cleaning (with the exception of glass) should be done without water cleaner, i.e. using only vacuum cleaner or steel brushes.

Any modifications of the fireplace stove are unacceptable.

Use only spare parts approved by the manufacturer. Disassembly of chamotte (see the Chamotte chamber). From time to time the friction areas of the door hinge and the closing mechanism should be oiled using carbonic fat or grease designed for high temperatures. Close the fireplace stove controls when not in operation.

6.2 Cleaning the chimney

Each user of a solid fuel heater is obliged to ensure regular maintenance and cleaning of the chimney in accordance with Building Regulations. The frequency may alter with use but we recommend a minimum of twice a year when burning wood with the correct moisture content.

7. Warranty

Brand-new wood-burning stoves from Docherty Group come with a 5-year warranty. The warranty includes manufacturing or material defects and burn-through of the main body as a result of correct operation.

Any claims during the warranty period should be directed to the dealer who sold the stove. All stoves from Docherty Group come with their own individual serial number this can be found on the data plate affixed to the appliance. This may be located either on the back of the stove or within the storage area beneath the stove. Please quote stove model and serial number to your dealer in connection with any service enquiries.

In the event of warranty repairs, a signed and dated invoice must also be produced, showing the dealer's name.

The warranty does not cover dismantling, transport and reassembly of your stove.

No compensation will be granted for:

- Damage during transport
- Damage to other articles resulting from use of the stove
- Damage arising from incorrect operation or use, such as overheating – avoid this by reading the operating instructions carefully
- The directions in the operating instructions have not been followed

The stove is supplied with wearing parts (also referred to as perishable or moveable parts), which are to be replaced due to usage of the stove.

These parts are not covered by the warranty – how often they are to be replaced is individual and depends on the stove usage. These components include (but not limited to) the following: Vermiculite panels or chamotte (if fitted) - baffle plates – all seals – operational handles.

Other items not covered by the warranty include glass, ceramic tiles and soapstone. Should any of the above mentioned need replacing, new parts can be ordered from your dealer.

Grate (if fitted), electronic components (if fitted) and manual air controls carry a 24 month warranty.

The stove installation must be signed off (certified) by a registered installer, Building Control Body or local authority to validate the manufacturer's warranty. The warranty is null and void if this is not adhered to.

Regular maintenance of the stove and annual servicing and the need to have the chimney swept at least once a year to prevent overheating and premature failure of components. Proof of which must be available at any time of a warranty claim. Please see section 6 for further details on cleaning and maintenance.

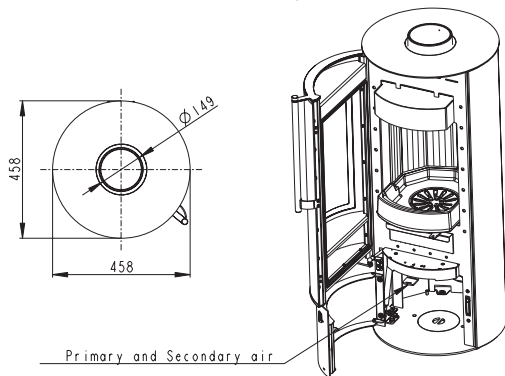
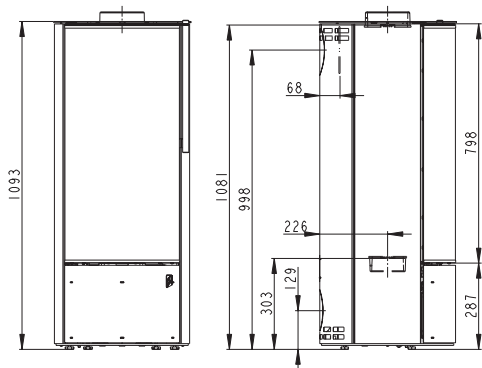
Regular maintenance, annual servicing and the requirements under Building Regulations to have the chimney swept at least once a year (we recommend twice a year) to prevent overheating and premature failure of components. Proof of which must be available at any time of a warranty claim.

Warranty claims are only accepted and processed for the purchaser.

When transferring items for warranty, the purchaser is obliged to inform and eventually document the type label of the product and a detailed description of the defect (e.g. in which mode and how the defect manifests, how long after combustion, description of operation of the item before the defect etc).

8. Technical information

Nominal output	4.9 kW
Total regulated output	2 - 9 kW
Efficiency	80%
Weight	134 kg
Flue outlet	150mm
Dimensions (mm)	H 1093
	W 458
	D 458
Average heating capacity (m ³)	30 - 135
Average wood consumption (kg/h)	1,41
Max. allowed wood batch (kg/h)	3,0
The greatest height of the filling	1/3 of the firebox
Fuel supply interval for the rated output	1 hour
Fuel delivery method	Manual
Prescribed fuel	Wood
Automatic doors	Yes
Door design	Left
Chimney draft (Pa)	12
Mass flow rate of dry flue gases (g/s)	4,8
The concentration of CO in the flue gases at O ₂ = 13%	0,056
The concentration of CO in the flue gases at O ₂ = 13% (mg/Nm ³)	694
The concentration of CO in the flue gases at O ₂ = 0% (mg/MJ)	468
Dust at O ₂ = 13% (mg/Nm ³)	39
Average flue gas temperature (°C)	237

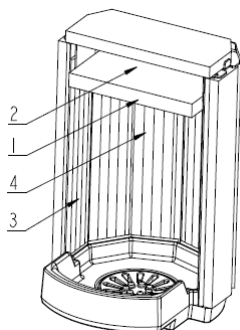


Approvals

EN 13 240/A2	✓
DIN plus	✓

Procedure for exchange of chamottes:

1. Incline and remove the ceiling chamotte – 1,2
2. Incline and remove the side chamottes - 3
3. Incline and remove the back chamottes - 4
4. Use the reverse order for re-assembly



Chamotte chamber

Cracks in the chamotte do not have any effect on the combustion and service life of the stove, however if the chamotte starts to crumble and the steel plate behind is visible and in contact with flames then the chamotte should be replaced.

Warning: When stoking logs, make sure the logs do not hit against the chamottes with any force to prevent damage!

Note: The chamotte lining is held in place by some adhesive cement for the purpose of reducing the risk to damage whilst in transit. The cement will deteriorate once the stove is in use due to the high operating temperatures within the stove. Do not attempt to remove the chamotte until you are sure they are free, loose and easy to remove. No fixing cement should be used when replacing the chamotte.

WARRANTY REGISTRATION

It's quick and easy to register your Docherty stove online.
Simply visit our website at www.docherty.co.uk and complete
the warranty registration form



www.docherty.co.uk/stove-warranty-registration

Alternatively, you can fill out the form below and post it back to Docherty Group

Warranty registration form

Please return to Docherty Group 55 Woodburn Road, Birmingham, B66 2PU

Name and address of installation:

.....

Date of installation:

Stove brand: Avon Trent Tamar Carta Monza

Name and address of installer:

.....

HETAS registration number:

Signed: Date:

Docherty Group

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