



charnwood BAY **BX**

Operating & Installation Instructions



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QUICK GUIDE Your Charnwood Bay BX at a glance



Air Control	MAINTENANCE AND CLEANING				
4 3 2 1	Glass	Wipe with damp, lint free cloth. Any stubborn deposits on the glass may be removed with a proprietary stove glass cleaner or ceramic hob cleaner.			
	Throat plate	Take down once a month and clean. Sweep sooty deposits into fire.			
1. Slumber 2. Medium output 3. High output 4. Boost	Chimney	Have chimney swept twice a year. Chimney can be swept through stove.			
	Servicing	Stove should be set viced by a professional at least once a year.			

LIGHTING AND CONTROLLING THE FIRE



Add kindling and paper or firelighters. Set the air control to boost and close door



Once kindling is alight, add smaller logs. Keep air control set to boost and close door



Add larger logs once fire is established. The Air control can be reduced to medium output



Unsuitable fuels: Petroleum coke Liquid fuel Household waste Coal singles Small nuts or coal dust Wet or unseasoned wood

Congratulations on becoming the owner of a Charnwood Bay BX Stove. It is very important that you read and understand these instructions before using the stove.

Before lighting the stove check with the installer that the work and checks described in the Installation Instructions have been carried out correctly and that the chimney has been swept, is sound and free from any obstructions. The stove is not suitable for use in a shared flue system.

Remember that the stove will be hot and that it is made from hard materials - ensure that you have good balance before operating the fire. Always use the provided operating tool and gloves.

Do not use an aerosol spray on or near the stove when it is alight. There is a risk of explosion or flash ignition of the spray.

When using the stove in situations where children, aged and/or infirm persons are present a fireguard must be used to prevent accidental contact with the stove. The fireguard should be manufactured in accordance with BS 8423:2002.

The stove is suitable for intermittent operation.

FUEL

Only dry well seasoned wood should be burnt on this appliance as burning wet unseasoned wood will give rise to heavy tar deposits in the stove, on the glass and within the chimney. For the same reason hard woods (such as Ash, Beech and Oak) are better than soft woods (such as Pine and Spruce). Burning wet unseasoned wood will also result in considerably reduced outputs. The wood should be cut and split and then left to season in a well ventilated dry place for at least one year but preferably two years before use. Approximate suitable log sizes are:

480mm long and 75mm diameter

PETROLEUM COKE IS NOT SUITABLE FOR USE ON THIS APPLIANCE. ITS USE WILL INVALIDATE THE **GUARANTEE.**

This stove is not designed to burn household waste.

DOOR OPERATION

The door handle has been carefully designed so that in normal use it may be operated using bare hands. However, if you need to open the

doors when the fire is running at maximum, then the use of the glove provided may be required

Take care not to touch the doors as they will be hot when the fire is burning. Pull the door handle up to open, and push down to close. The stove should be run with the door shut.

CONTROLLING THE FIRE

The rate of burning and hence the output is controlled by the air control (see Fig. 2).

Open the air control fully when lighting or when rapid burning is required. It should not be left fully open for long periods as this can cause over-firing or excessive smoke production. For high output move the air control to the 'High Output' position' or for low burning to the fully closed position.

When the fire is burning normally the air control gives enough airwash to keep the glass clean. However, it will not always be possible to keep the glass clean with the air control fully closed.



Fig. 1 Stove controls

Fig. 2 Air control

1. Slumber

4. Boost

3. High Output





LIGHTING

On initial lighting, the stove may smoke and give off an odour as the silicon paint with which the firebox is painted reacts to the heat. This is normal and will cease after a short time, but meanwhile the room should be kept well ventilated. At first only light a small fire and burn it slowly for two hours to allow any residual moisture in the chimney to evaporate.

Fig. 3 Initial firing



Light the stove using dry kindling wood and paper or fire lighters. It is recommended that you use approximately 1kg to 1.2kg of kindling. Put the paper, or fire lighters, and kindling in the firebox and cover with a few small dry logs. Open the air control fully (see Fig. 2). Light the paper or fire lighters. The door may be left cracked open for a few minutes to assist the combustion and heat up the firebox more quickly.

Fig. 4 Building up the fire



When the kindling wood is well alight add a few more small logs and close the door, but leave the air control fully open. When the flames are established around the smaller logs, load the stove with larger logs to the required fuel load. Logs should be no more than 75mm in diameter and 480mm long. Close the door. Maintain the air control at maximum at this stage.

Fig. 5 Adding larger logs



Once long flames appear over the fire, reduce the air control to the 'high output' setting. Once the fire is well established - with each log alight at the top - the air setting can be reduced again, depending on the type of fire required. If at any stage the flames start to go out or the glass begins to discolour, a higher setting is required. To achieve this, open the air control to re-establish a consistent burn.

Fig. 6 Fire well underway



Once the fire is up to temperature the airwash system will begin to work, so allow the fire to become hot before adjusting the air control to the required setting. During the lighting period, do not leave the stove unattended. Do not leave the door open except as directed above to avoid excessive smoke.

When relighting the stove, leave the ash on the base unless it is becoming too deep, in which case some of it may be removed.

REFUELLING

Keep the firebox well filled but do not allow fuel to spill over the top of the fuel retainer.

Logs should be evenly distributed, filling the firebed to give the most pleasing flame pattern. The air control must be fully opened after

refuelling until the flames are established above the fire. It is best to refuel on to a hot bed of embers. If at this point the fire starts to die, the door must be cracked open until the fire is revived. If the fire has started to die down before refuelling, then more kindling wood must be added, the air control opened fully and the door cracked open to re-establish the firebed before adding larger logs (see suitable log sizes in Fuel section). This will avoid excessive smoke emission.

Care should be taken, especially when burning wood, that fuel does not project over the fuel retainer or damage to the glass may be caused when the door is closed. It can also cause the glass to blacken up. Maximum filling height is such that logs cannot fall from the fire when the door is opened.

In smoke controlled areas do not fill the stove above the level of the air holes in the back bricks, as overloading can cause excess smoke.

Do not operate with the door left open except as directed by the instructions as this can cause excessive smoke.

ASH CLEARANCE

For optimum wood burning, it is important to leave a layer of ash, around 1cm thick, on the base of the stove. If the ash is becoming too deep, clear the top layer of ash cleared using the scoop provided. *Fig. 7 Ash Scoop*



REDUCED BURNING

For reduced burning the fire door must be closed.

When burning wood in areas that are not smoke controlled, load some large logs on the fire and allow to burn for half an hour before closing the air control (this will help to reduce tar deposits in the chimney). Some experimentation may be necessary to find the setting most suitable for the type of fuel being used and the draw on the chimney.

MAINTENANCE

Cleaning

The stove is finished with a high temperature paint which will withstand the temperatures encountered in normal use. This may be cleaned with a damp lint-free cloth when the stove is cold. Should repainting become necessary, high temperature paints are available from your supplier or from stove shops.

Cleaning the Glass

Most deposits on the glass may be burnt off simply by running the fire at a fast rate for a few minutes. If it becomes necessary to clean the glass then open the door and allow it to cool. Clean the glass using a damp cloth and then wiping over with a dry cloth. Any stubborn deposits on the glass may be removed with a proprietary stove glass cleaner or ceramic hob cleaner. Do not use abrasive cleaners or pads as these can scratch the surface which will weaken the glass and cause premature failure

When Not in Use

If the fire is going to be out of use for a long period (for instance in the summer) then to prevent condensation, and hence corrosion, the air control should be left fully open and the fire door left ajar. It Is also advisable to sweep the chimney and clean out the fire. Spraying the inside of the door and firebox with a light oil, such as WD40, will also help to keep all internal parts working well. After long periods where the fire has been out of use, the chimney and appliance flueways should be cleaned before lighting.

Door Seals

For the fire to operate correctly it is important that the door seals are in good condition. Check that they do not become worn or frayed and replace them when necessary.

Servicing

It is recommended that the fire is serviced once a year to keep it in first class working order. After cleaning out the firebox thoroughly, check that all internal parts are in good working order, replacing any parts that are beginning to show signs of wear. Check that the door seals are in good condition and that the door seals correctly. A servicing guide is available on request. Repairs or modifications may only be carried out by the Manufacturer or their approved agents. Use only genuine Charnwood replacement parts.

THROAT PLATE AND FLUEWAY CLEANING

It is important that the throat plate and all the stove flueways are kept clean in order to prevent potentially dangerous fume emission. Check by looking up into the firebox for signs of soot or fly-ash on the throat plate and sides of the firebox. If there are signs of a build up of soot or fly-ash then cleaning is necessary. Cleaning should occur at

least once a month and more frequently if required. Let the fire out and ensure it is cold before carrying out these operations. If necessary, wear your Charnwood gloves to prevent irritation from soot deposits.

The throat plate consists of two firebrick panels which rest on the central bracket and the two side bricks. To lower, push the brick up towards the topmost corner of the stove, and lower down diagonally (see Fig. 8). Any sooty deposits should then be swept from the plate and into the fire.

Return the throat plates to their correct position by reversing the above method, ensuring they slot onto the bracket and rest securely on the side panels.

Fig. 8 Throat plate position and lowering



Lowering the throat plate



CHIMNEY SWEEPING

Where the chimney previously served an open fire, it is possible that the higher flue gas temperature from a stove may loosen soot deposits with the consequent risk of flue blockage. It is therefore recommended that the chimney be swept a second time within a month of regular use after installation.

The chimney should be swept at least twice a year. Where the top outlet is used it will generally be possible to sweep the chimney through the appliance.

First remove the fuel retainer, the throat plate and upper throat plate. Then sweep the chimney ensuring that soot is removed from all horizontal surfaces after sweeping.

In situations where it is not possible to sweep through the appliance the installer will have provided alternative means, such as a soot door. After sweeping the chimney the appliance flue outlet and the flue pipe connecting the stove to the chimney must be cleaned with a flue brush.

After clearing any soot from within the stove, replace the throat plate (see Fig. 8) and the fuel retainer.

Different types of sweep's brushes are available to suit different flueways. For prefabricated insulated chimneys the manufacturers instructions with regard to sweeping should be consulted.

TROUBLE SHOOTING

Fire Will Not Burn

Check that:

- a) the air inlet is not obstructed in any way,
- b) chimneys and flueways are clear,
- c) a suitable fuel is being used,
- d) there is an adequate air supply into the room,
- e) an extractor fan is not fitted in the same room as the stove.
 f) there is sufficient draw in the chimney. Once the chimney is warm a draught reading of at least 1.25 mm (0.05 in.) water gauge (12Pa) should be obtained.

Blackening of Door Glass

Differences in chimney draughts mean that the best settings of the air controls will vary for different installations. A certain amount of experimentation may be required, however the following points should be noted and with a little care should enable the glass to be kept clean in most situations:

a) Wet or unseasoned wood, or logs overhanging the front fence will cause the glass to blacken.

b) The airwash relies on a supply of heated air to keep the glass clean, therefore, when lighting the stove allow the firebed to become well established before closing the air control. This may also be necessary when re-fuelling the stove.

c) When re-fuelling keep the fuel as far back from the front fence as possible, do not try to fit too much fuel into the firebox.

d) Do not completely close the air control.

It is always more difficult to keep the glass clean when running the stove very slowly for long periods.

If blackening of the glass still occurs check that all flue connections and the blanking plate are well sealed. It is also important that the chimney draw is sufficient and that it is not affected by down-draught. When the chimney is warm a draught reading of at least 1.25 mm (0.05 in.) water gauge (12Pa) should be obtained. Some blackening of the glass may occur below the level of the fuel retainer. This will not obscure the view of the fire or affect its performance.

Fume Emission

Warning Note:

Properly installed and operated this appliance will not emit fumes. Occasional fumes from de-ashing and re-fuelling may occur. Persistent fume emission is potentially dangerous and must not be tolerated. If fume emission does persist, then the following immediate actions should be taken:

a) Open doors and windows to ventilate the room and then leave the premises.

 b) Let the fire out and safely dispose of the fuel from the appliance.

c) Check for flue or chimney blockage, and clean if required.

 d) Do not attempt to re-light the fire until cause of fuming has been identified, if necessary seek professional advice.

The most common cause of fume emission is flueway or chimney blockage. For your own safety these must be kept clean.

Fire blazing out of control

Check that:

a) The door is tightly closed.

b) The air control slider is fully closed.

c) A suitable fuel is being used.

d) Door seals and air slide are intact.

Chimney Fires

If the chimney is thoroughly and regularly swept, chimney fires should not occur. However, if a chimney fire does occur close the air control, and tightly close the door of the appliance. This should cause the chimney fire to go out in which case the controls should be kept closed until the stove has gone out. The chimney and flueways should then be cleaned. If the chimney fire does not go out when the above action is taken then the fire brigade should be called immediately. After a chimney fire the chimney should be carefully examined for any damage. Expert advice should be sought if necessary.

COALARM

Your installer should have fitted a CO alarm in the same room as the appliance. If the alarm sounds unexpectedly, follow the instructions given under "Warning Note" above.

IF YOU NEED FURTHER HELP

If you need further help with your Charnwood then your Installer will be able to provide the answers to most questions. Your Local Charnwood Premier Dealer has a great deal of experience and will also be able to provide helpful advice. Further help is available from the Charnwood Customer Services department who will be pleased to give advice, if necessary.

INSTALLATION INSTRUCTIONS

UNPACKING THE STOVE

The stove arrives bolted and strapped to its pallet. There must be adequate facilities for unloading and manoeuvring into position The wrapping is first removed, then the stove released from the pallet by removing 4 pallet bolts using a 10mm spanner. The pallet brackets can now be removed from the stove by tilting it and using a 13mm spanner to remove the bolts. The pallet is intended to be cut up and used for kindling fuel.

HEALTH AND SAFETY PRECAUTIONS

Please take care when installing the stove that the requirements of the Health and Safety at Work Act 1974 are met.

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

If there is a possibility of disturbing any asbestos in the course of installation then please use appropriate protective equipment.

There must not be an extractor fan fitted in the same room as the stove as this can cause the appliance to emit fumes into the room.

There must be an adequate air supply into the room in which the appliance is installed to provide combustion air. The combustion air supply must be via a permanently open vent. The requirement for minimum free area is partly dependent on the design air permeability of the house. In older properties the air permeability will be above $5.0m^3/(h.m^2)$, but in some modern properties it may be less. The vent must be positioned such that it is not liable to blockage. Minimium areas are given in the following table:

Air permeability	Minimum vent area cm²(in²)		
m ³ /(h.m ²)	Bay BX		
>5.0	not required		
<5.0	27.5 (4.3)		

A fixed ducted air supply may be used as an alternative to the traditional method of using a permanent open vent into a room to supply air for combustion.

Ducted external air supply kits are available please contact Charnwood for more information.

The ducted air kit is connected to the 100mm spigot on the underside of the stove. If the stove is installed directly on a hearth, without any additional stands, the ducted air supply will need to be set into the floor with appropriate protection. This stove is capable of intermittent operation, and is not suitable for use in a shared flue system.

In addition to these instructions the requirements of BS.8303 and BSEN 15287-1:2007 must be fulfilled. Local Authority Bylaws and

Building Regulations, including those referring to national and European Standards, regarding the installation of Solid Fuel burning appliances, flues and chimneys must also be observed.

COALARMS

Building regulations require that whenever a new or replacement fixed solid fuel or wood/biomass appliance is installed in a dwelling a carbon monoxide alarm must be fitted in the same room as the appliance. Further guidance on the installation of the carbon monoxide alarm is available in BS EN 50292:2002 and from the alarm manufacturer's instructions. Provision of an alarm must not be considered a substitute for either installing the appliance correctly or ensuring regular servicing and maintenance of the appliance and chimney system.

SPECIFICATION

The outputs in the table are based on a 45 minute re-fuelling cycle burning seasoned hardwood logs. All tests are carried out in accordance with BSEN 13240.

	Bay BX			
Output	5kW (17,061BTU/h)			
Mass	94.3kg			
Flue Gas Temperature	279°C			
Flue Gas Mass Flow	4.1g/s			
Average Refuelling Cycle	0.75hrs			
Maximum Log Size	Length 480mm Diameter 75mm			
	Side	Back		
Minimum distance from combustibles mm Uninsulated Flue	150	270		
Minimum distance from combustibles mm Insulated Flue	100	130		

CHIMNEY

In order for the appliance to perform satisfactorily the chimney height must not be less than 4 metres measured vertically from the outlet of the stove to the top of the chimney. The internal dimensions of the chimney should preferably be 150-200 mm (6"- 8") either square or

INSTALLATION INSTRUCTIONS

round and MUST NOT BE LESS THAN 150 mm (6").

If an existing chimney is to be used it must be swept and checked, it must be in good condition, free from cracks and blockages, and should not have an excessive cross sectional area. If it was previously used by an open fire then the chimney should be swept one month after installation to clear any soot falls which may have occurred due to the difference in combustion between the stove and the open fire.

If you find that the chimney is in poor condition then expert advice should be sought regarding the necessity of having the chimney lined. If it is found necessary to line the chimney then a lining suitable for Solid Fuel must be used.

If there is no existing chimney then a prefabricated block chimney or a twin walled insulated stainless steel flue to BSEN 15287-1:2007 can be used either internally or externally. These chimneys must be fitted in accordance with the manufacturers instructions and Building Regulations.

Single wall flue pipe is suitable for connecting the stove to the chimney but is not suitable for using for the complete chimney. If it is found that there is excessive draw in the chimney then a draught stabiliser should be fitted.

It is important that there is sufficient draw in the chimney and that the chimney does not suffer from down-draught. When the chimney is warm the draw should be not less than 1.25mm (0.05") water gauge (12 Pa). If in doubt about the chimney seek expert advice.

HEARTH AND FIRE SURROUND

The stove must stand on a fireproof hearth and must not be situated closer than the minimum distance from combustible materials (see specification table) to the sides or rear above hearth level unless adequately fireproofed in accordance with local building regulations. The hearth must be of fireproof material and at least 12mm (1/2in.) thick. The positioning of the stove and the size of the hearth are governed by building regulations for Class 1 appliances. These building regulations state that the hearth must extend in front of the stove by at least 225mm (9 in.) and to the sides of the stove by at least 150mm (6 in.). When the fire door is open, it extends beyond the flat front of the stove by 436mm.

If in doubt as to the positioning of the stove, expert advice should be sought either from the supplier or the local building inspector. The fireplace must allow good circulation of air around the appliance to ensure that maximum heat is transferred to the room and also to prevent the fireplace from overheating. A gap of 150mm (6") each side and 300mm (12") above the appliance should give sufficient air circulation. If a wooden mantelpiece or beam is used in the fireplace it should be a minimum of 460mm (18"), and preferably 600mm (24") from the appliance. In some situations it may be necessary to shield the beam or mantelpiece to protect it.

In order for the fire to operate correctly and to allow for access, there must be an air gap behind the appliance of at least 50mm, but

be aware that this distance will need to be greater in some cases to meet Building Regulation requirements.

The appliance should be installed on a floor with adequate loadbearing capacity. If an existing construction does not meet this requirement then please take suitable measures to achieve this. (e.g. load distributing plate.)

CONNECTIONS TO FLUES

The stove must be connected to the flue using flue pipe of 150mm

Fig. 9 Horizontal Register Plate With Top Flue Connection



(6") diameter.

This may be stainless steel, cast iron, or thick wall steel pipe. Straight lengths of Charnwood Pipe to match the stove are available if required.

The chimney may be swept through the appliance.

Horizontal lengths of flue must be kept to a minimum and should not be more in length than the flue diameter.

SOOT DOORS

It is possible to pass a 16 inch diameter sweeps brush through the appliance. Soot doors may either be in the actual brickwork of the

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INSTALLATION INSTRUCTIONS

chimney or in the register plate. Positions of soot doors are shown in Fig. 9.

PRE LIGHTING CHECK

Ensure that the throat plate is fitted in the roof of the appliance. The location and positioning of the throat plate is shown in Fig. 8.

Check that the front fence is fitted correctly and that the door closes properly.

COMMISSIONING

On completion of the installation allow a suitable period of time for the fire cement and mortar to dry out before lighting the fire. Make a layer of ash or sand on the base of the stove before lighting. Check to ensure that smoke and fumes are taken from the appliance up the chimney and emitted safely. Also check all joints and seals. On completion of the installation and commissioning please leave the operating instructions with the customer and advise them on the use of the appliance.

charnwood **S**

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CE Certificate for compliance with EN13240:2001

EN13240:2001

ROOMHEATERS FIRED BY SOLID FUEL

Model	Bay BX
EC Certificate of conformity no:	JT44-CPD-2016
Fuel type	WOOD LOGS
Space heating thermal output	5 kW
Emission of CO in combustion products:	0.10%
Mean flue gas temperature:	279°C
Energy efficiency:	81%
Minimum distance to combustible materials with Uninsulated flue Side: Rear:	150mm 270mm
Minimum distance to combustible materials with Insulated flue Side: Rear:	100mm 130mm

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CHARNWOOD BAY BX DIMENSIONS (mm)



Plan View







Standard Model











500

500

Bench Stand

CHARNWOOD BAY BX PARTS LIST

Issue A



ltem	Part No.	Description	ltem	Part No.	Description
1	001/XR010	Firebox	28	004/XR072	Air Control Plate
2#	002/BT001/A	Door Assembly	29	008/XR073	Air Control Gasket
3	006/BT018	Glass	30	004/MR044	Latch Plate
4	008/MR047	Handle Pivot Boss	31	002/XR020	Lower Hinge Bracket
5#	005/BT023	Glass Trim	32	010/XR011	Convection Casing
6	008/XR076	Door Seal	33	004/JT049	Outer Casing
7	008/FFS046	M6x20 CSK Allen Screw	34	004/MR060	Air Duct Cover
8	008/FFW027	M10 Wavy Washer	35	004/JT025	Screen Top
9	008/FFW007	M10x19 Washer	36	004/JT029	Screen Lower
10	010/MR038	Handle Assembly	37	002/MR017	Fence
11	011/MR031S	Set of Baffle Firebricks	38	010/MR078	Ash Barrier
12	011/XR030S	Set Base, Back & Side Bricks	39	010/XR098	6" Lower Flue Adaptor
13	004/XR008	Back Brick Bracket	40	010/JT096	6" Upper Flue Adaptor
14	010/XR087	Throat Plate Support Bracket	41#	002/CH12B	Flue Collar
15	004/XR025	Side Brick Bracket	42	010/MR126	100mm Spigot Assy
16	004/JT052	Rear Fixing Bracket	43	004/GR090	Fastener Retainer
17	010/JT035	Table Top Plinth	44	010/XR085	Roller
18	004/XR055	Air Slide Cover	45	008/FFP006	R-Pin
19	008/XR063	Air Box Upper Gasket	46	010/BT043	Upper Hinge Spacer
20	004/XR007	Air Control Slider	47	010/XR041	Upper Hinge Bracket
21	004/XR064	Control Rod	48	010/XR042	Hinge Spacer
22	008/FFM056	Rod End	49	008/FFR016	Hinge Pin
23	008/BR052	Felt Washer	50	012/JT011	Serial No Label
24	010/XR022	Air Slide Control Handle	51	010/XR088	Ash Scoop
25	004/XR058	Clicker Assembly	52#	010/JT034	Centre Stand
26	008/XR062	Airbox Lower Gasket	53#	010/JT070	Bench Stand
27	008/XR012	Control Knob	54#	010/JT071	Store Stand

* These items are not shown on the drawing

Please specify colour when ordering.

your premier dealer

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